

**Date and Time:** Monday 9 September 2024 18:12:00 CEST

**Job Number:** 233039428

**Documents (52)**

1. [*Seeding recipe breakthrough could boost grasslands and feed cattle*](https://advance.lexis.com/api/document?id=urn:contentItem:5HSJ-VRW1-F021-647F-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** accounting and emissions or accounting and land or accounting and forest or accounting and greenhouse gas or emissions and land or emissions and forest or emissions and greenhouse gas or land and forest or land and greenhouse gas or forest and greenhouse gas

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

2. [*Let's be thought-leaders on climate smart agriculture Ireland has an opportunity to become a global pioneer in the areas of food security and climate change*](https://advance.lexis.com/api/document?id=urn:contentItem:5K78-FM11-DYS1-00YY-00000-00&idtype=PID&context=1516831)

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3. [*-Making Coffee the World's First Sustainably Sourced Agricultural Product*](https://advance.lexis.com/api/document?id=urn:contentItem:5HHC-D221-JD3Y-Y4HK-00000-00&idtype=PID&context=1516831)

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4. [*UNCOP 21: Assessing Implications For Industries*](https://advance.lexis.com/api/document?id=urn:contentItem:5HMY-1FB1-JD33-J2KT-00000-00&idtype=PID&context=1516831)

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5. [*Saphium Biotechnology Launches "PHAbulous Philaments" on Kickstarter*](https://advance.lexis.com/api/document?id=urn:contentItem:5GJF-XVM1-JD3Y-Y42G-00000-00&idtype=PID&context=1516831)

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6. [*BLOWN AWAY: Wind farm proposals are rejected by councillors*](https://advance.lexis.com/api/document?id=urn:contentItem:5HYJ-0661-DY63-R3VN-00000-00&idtype=PID&context=1516831)

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7. [*#Agriculture: Feeding the world - MEPs survey development issues and technological options*](https://advance.lexis.com/api/document?id=urn:contentItem:5K2K-XHK1-F03R-N017-00000-00&idtype=PID&context=1516831)

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8. [*China's challenge "" the pursuit of ecological civilisation*](https://advance.lexis.com/api/document?id=urn:contentItem:5HNC-67H1-JD1P-T4D8-00000-00&idtype=PID&context=1516831)

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9. [*Monday's letters including 'Who does revamped road really benefit?'*](https://advance.lexis.com/api/document?id=urn:contentItem:5HYW-YC11-JBR2-11Y3-00000-00&idtype=PID&context=1516831)

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10. [*- University of Cambridge - Paying farmers to help the environment works, but 'perverse' subsidies must be balanced*](https://advance.lexis.com/api/document?id=urn:contentItem:5GXR-H751-F0K1-N1SR-00000-00&idtype=PID&context=1516831)

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11. [*Now is the time to lead, not plead Taoiseach*](https://advance.lexis.com/api/document?id=urn:contentItem:5HHY-NV21-DY9P-N020-00000-00&idtype=PID&context=1516831)

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12. [*ERRATUM: Implementation of INDCs another red line Africa will not cross in COP 21 negotiations, according to AMCEN Chair*](https://advance.lexis.com/api/document?id=urn:contentItem:5HK2-5Y71-JD3Y-Y20S-00000-00&idtype=PID&context=1516831)

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13. [*The billion-pound Prince: landmark figure reached by Duchy of Cornwall ROYAL FAMILY Charles gets a stipend from historic estate's earnings. By Cahal Milmo*](https://advance.lexis.com/api/document?id=urn:contentItem:5K4P-X561-JCS0-D3RS-00000-00&idtype=PID&context=1516831)

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14. [*Countryfile - 5:31 PM GMT*](https://advance.lexis.com/api/document?id=urn:contentItem:5K51-7GH1-JBH6-C0B8-00000-00&idtype=PID&context=1516831)

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15. [*RESTORE OUR BOGS, FOR PEAT'S SAKE Bord na Móna bears more responsibility than anyone for the mass destruction of peatland habitats. The organisation is changing, and its new approach is promising. But there are still challenging times ahead*](https://advance.lexis.com/api/document?id=urn:contentItem:5JS8-7G11-JC8Y-8067-00000-00&idtype=PID&context=1516831)

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16. [*Climate change will cause food production to plunge by a QUARTER and increase flooding even in dry regions, experts warn*](https://advance.lexis.com/api/document?id=urn:contentItem:5J7V-JGM1-F021-62TD-00000-00&idtype=PID&context=1516831)

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17. [*Forestry's climate control role highlighted at Farm Europe conference in Brussels*](https://advance.lexis.com/api/document?id=urn:contentItem:5HMB-PSS1-JCW9-22B0-00000-00&idtype=PID&context=1516831)

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18. [*- Kimberly-Clark Professional Partners with US Composting Council and Keep America Beautiful to Create Workplace Composting Guide*](https://advance.lexis.com/api/document?id=urn:contentItem:5JK7-5T91-F0K1-N1WP-00000-00&idtype=PID&context=1516831)

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19. [*REMEMBER THAT PROBLEM WITH THE ENVIRONMENT? The environment became an unpopular subject during the economic boom and was barely mentioned during the recession.As 'The Irish Times' launches a new Environment page (see page 6, overleaf), we ask campaigners how to reframe the message*](https://advance.lexis.com/api/document?id=urn:contentItem:5H8G-4361-JC8Y-83BD-00000-00&idtype=PID&context=1516831)

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20. [*Climate deal: Carbon dated?*](https://advance.lexis.com/api/document?id=urn:contentItem:5HM8-VWH1-F039-60DM-00000-00&idtype=PID&context=1516831)

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21. [*Evonik sees profitability gains in sustainable animal nutrition game*](https://advance.lexis.com/api/document?id=urn:contentItem:5KYT-R231-DYNP-M23H-00000-00&idtype=PID&context=1516831)

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22. [*These Brexiters will grind our environment into the dust Crucial portfolios have been given to people who are prepared to scrub Britain 's features from the map*](https://advance.lexis.com/api/document?id=urn:contentItem:5K8K-2XC1-F021-61B9-00000-00&idtype=PID&context=1516831)

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23. [*GKN sell-off overdone*](https://advance.lexis.com/api/document?id=urn:contentItem:5JJS-9JH1-JCF1-20BF-00000-00&idtype=PID&context=1516831)

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24. [*- Unilever : There is no business case for enduring poverty*](https://advance.lexis.com/api/document?id=urn:contentItem:5H07-9J71-JD3Y-Y1NF-00000-00&idtype=PID&context=1516831)

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25. [*CLIMATE CHANGE PLANS GO AHEAD*](https://advance.lexis.com/api/document?id=urn:contentItem:5K5C-7J51-JBVM-Y4JR-00000-00&idtype=PID&context=1516831)

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26. [*Mekong Hydropower Development: Potential To Spark Conflict*](https://advance.lexis.com/api/document?id=urn:contentItem:5JF4-33H1-F0J5-80Y4-00000-00&idtype=PID&context=1516831)

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27. [*Athens Summit to Protect Health and Kick-start European Climate Data Economy*](https://advance.lexis.com/api/document?id=urn:contentItem:5JW1-C031-JB72-131V-00000-00&idtype=PID&context=1516831)

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28. [*Deere Announces Second-Quarter Earnings of $ 495 Million*](https://advance.lexis.com/api/document?id=urn:contentItem:5JTM-8PC1-JD3Y-Y04H-00000-00&idtype=PID&context=1516831)

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29. [*DYING FOR THE WANT OF WATER CLIMATE CHANGE SPECIAL REPORT FROM DROUGHT-RAVAGED ETHIOPIA ; One of the effects of climate change is the predictability has changed and everything is a bit more extreme than it was in the past One of the effects of climate change is the predictability has changed and everything is a bit more extreme than it was in the past ; HELP US SURVIVE AS POLITICIANS ARGUE, HELP US SURVIVE AS POLITICIANS ARGUE, ; ETHIOPIA PAYS PRICE OF GLOBAL WARMING ETHIOPIA PAYS PRICE OF GLOBAL WARMING*](https://advance.lexis.com/api/document?id=urn:contentItem:5HHY-NV11-DY9P-N4G2-00000-00&idtype=PID&context=1516831)

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30. [*Wealth Management: Asian SRI's green shoots*](https://advance.lexis.com/api/document?id=urn:contentItem:5H4F-5071-JD1P-T2G8-00000-00&idtype=PID&context=1516831)

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31. [*Environment - Extreme weather events: pointing the finger of blame.*](https://advance.lexis.com/api/document?id=urn:contentItem:5HX1-5GV1-JD7R-X18H-00000-00&idtype=PID&context=1516831)

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32. [*London Nusantara Plantations PLC Audited Results for the Year Ended 31 December 2015*](https://advance.lexis.com/api/document?id=urn:contentItem:5JVC-FC01-JCXB-241F-00000-00&idtype=PID&context=1516831)

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33. [*How companies' responsibilities for supply chain workers are widening*](https://advance.lexis.com/api/document?id=urn:contentItem:5JS3-JVM1-F14X-V1WS-00000-00&idtype=PID&context=1516831)

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34. [*How to feed 9.7bn people? Startups take on the global food problem In the hunt for a sustainable solution to a rapidly rising population, agriculture has begun to adopt a venture capital mindset*](https://advance.lexis.com/api/document?id=urn:contentItem:5JX5-WM11-F021-64W2-00000-00&idtype=PID&context=1516831)

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35. [*How to feed 9.7bn people? Startups take on the global food problem In the hunt for a sustainable solution to a rapidly rising population, agriculture has begun to adopt a venture capital mindset*](https://advance.lexis.com/api/document?id=urn:contentItem:5JXC-B9F1-JCJY-G4VR-00000-00&idtype=PID&context=1516831)

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36. [*How to feed 9.7bn people? Startups take on the global food problem In the hunt for a sustainable solution to a rapidly rising population, agriculture has begun to adopt a venture capital mindset*](https://advance.lexis.com/api/document?id=urn:contentItem:5JX5-HSM1-F021-6497-00000-00&idtype=PID&context=1516831)

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37. [*Taking on the world*](https://advance.lexis.com/api/document?id=urn:contentItem:5J1T-PTT1-DY9P-N1CN-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** accounting and emissions or accounting and land or accounting and forest or accounting and greenhouse gas or emissions and land or emissions and forest or emissions and greenhouse gas or land and forest or land and greenhouse gas or forest and greenhouse gas

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

38. [*Namibia Monthly Briefing September 2015*](https://advance.lexis.com/api/document?id=urn:contentItem:5T1T-KKW1-DYRW-V0YY-00000-00&idtype=PID&context=1516831)

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

39. [*- Deere Announces Second-Quarter Earnings of $ 495 Million*](https://advance.lexis.com/api/document?id=urn:contentItem:5JV8-66R1-JD3Y-Y24X-00000-00&idtype=PID&context=1516831)

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40. [*- Deere Announces Second-Quarter Earnings of $ 495 Million*](https://advance.lexis.com/api/document?id=urn:contentItem:5JV8-66R1-JD3Y-Y1VK-00000-00&idtype=PID&context=1516831)

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

41. [*- Deere Announces First-Quarter Earnings of $ 254 Million*](https://advance.lexis.com/api/document?id=urn:contentItem:5J53-0951-JD3Y-Y1TB-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

42. [*- Deere Announces Second-Quarter Earnings of $ 495 Million*](https://advance.lexis.com/api/document?id=urn:contentItem:5JV8-66R1-JD3Y-Y1RS-00000-00&idtype=PID&context=1516831)

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43. [*BISICHI MINING - Final Results*](https://advance.lexis.com/api/document?id=urn:contentItem:5JKS-BSP1-DXP3-R527-00000-00&idtype=PID&context=1516831)

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

44. [*- Deere Announces Earnings of $ 351 Million for Fourth Quarter and $ 1.94 Billion for Full Year*](https://advance.lexis.com/api/document?id=urn:contentItem:5HG2-K9W1-JD3Y-Y41W-00000-00&idtype=PID&context=1516831)

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45. [*- Deere Announces Third-Quarter Earnings of $ 512 Million*](https://advance.lexis.com/api/document?id=urn:contentItem:5GS2-54G1-F0K1-N01C-00000-00&idtype=PID&context=1516831)

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46. [*Ethiopia warns Saudi Arabia , UAE of "consequences" for using Eritrean territory*](https://advance.lexis.com/api/document?id=urn:contentItem:5HHK-JPR1-JC8S-C3SP-00000-00&idtype=PID&context=1516831)

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47. [*The potential of One Belt, One Road*](https://advance.lexis.com/api/document?id=urn:contentItem:5HNC-67H1-JD1P-T4D4-00000-00&idtype=PID&context=1516831)

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48. [*Operation & maintenance - The road to climate resilience.*](https://advance.lexis.com/api/document?id=urn:contentItem:5JSY-HXK1-JD7R-X0MJ-00000-00&idtype=PID&context=1516831)

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49. [*FIDELITY JAPANESE VALUES PLC - Final Results*](https://advance.lexis.com/api/document?id=urn:contentItem:5JF8-YVW1-DXP3-R3DG-00000-00&idtype=PID&context=1516831)

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

50. [*SRI sectors in focus: Evolution of green bonds*](https://advance.lexis.com/api/document?id=urn:contentItem:5H5X-T3K1-F0GS-H2KS-00000-00&idtype=PID&context=1516831)

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

51. [*Hopes high for future of Asian SRI*](https://advance.lexis.com/api/document?id=urn:contentItem:5H5X-T3K1-F0GS-H2SB-00000-00&idtype=PID&context=1516831)

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| News | Timeline: 20 jul 2015 tot 20 jul 2016; Locatie: International; Plaats van publicatie: Europe; Taal: English |

52. [*No Headline In Original*](https://advance.lexis.com/api/document?id=urn:contentItem:5HC3-RSR1-JCG2-C12F-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

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# [***Seeding recipe breakthrough could boost grasslands and feed cattle***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HSJ-VRW1-F021-647F-00000-00&context=1516831)

Belfast Telegraph Online

January 5, 2016 Tuesday 6:36 AM GMT

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**Section:** REPUBLIC OF IRELAND

**Length:** 614 words

**Body**

Statisticians have cracked a code for a bumper crop to feed cattle with a new seeding recipe to dramatically boost grasslands.

As well offering farmers a more holistic approach to rearing beef and dairy livestock it could also drastically cut the amount of fertiliser going into soils and save them a pretty penny.

And with ***agriculture*** fingered as being the biggest contributor to carbon pollution in Ireland the varied planting and diet could also help with the sector's image ahead of a target for a 40% cut in ***emissions*** by 2030.

Dr Caroline Brophy, of NUI Maynooth, spearheaded a big data project which examined results from mixed planting at 31 sites across Europe, including three in Ireland, where different local climates and environments affect production.

Some of the best results came from planting red or white clover in with traditional pasture plants such as rye grass like lolium perenne or the dactylis glomerata, commonly known as cock's-foot or orchard grass.

"What we saw from the study was any kind of mixing gave a strong diversity effect," she said.

"Think of putting two types of species together. If one is deeper rooted than the other, it is able to go further down for nutrients and water, so you utilise the system better."

On average there was an 18% increase in yield when types of legumes, such as clover, were mixed in.

Essentially the study tests whether using a mix of plants which are fast or slow to establish and take shallow or deep roots is better than using just one heavily fertilised grass.

Dr Brophy, a lecturer in NUI Maynooth's Department of Mathematics and Statistics, is moving the study on to look at how diversity might protect against climate extremes, a growing concern even in Ireland in light of recent floods.

"If you end up with a summer without much rain or a winter that is colder, how do you cope with that? Are there effectively insurance measures you can put in place to protect yourself; so we are asking can diversity protect against climate extremes," she said.

Irish ***agriculture***, with 6.5 million cattle and 3.5 million sheep, ***accounts*** for 32.6% of Ireland's total ***greenhouse gas*** ***emissions***.

Dr Brophy explained that creating a diverse pasture is nothing knew, they are more resistant to weeds and cope better with changes in local climates like increasingly dry or wet summers.

"Diversity goes back as far as Darwin," she said.

While the project has collaboration with Teagasc Dr Brophy was keen to urge a greater connection with farmers on the ground to test planting schemes.

"I think it's happening a little bit already. If you have a system that works why try messing with it," she said.

"I don't want to put words in farmers' mouths but I think there is a a small movement towards putting legumes in among the grass. I think the farming community are open to it."

One farmer from Ardfield near Clonakilty in Co Cork, Tommy Moyles, has already seized the initiative by turning his ***land*** from tillage to pasture but allowing a strong clover content in his grass and reducing his artificial nitrogen usage from 26 tonnes to 14 since 2012.

Some of the research has been published in Ecology Letters but due to the scale of the data mined from the grassland test site there are huge possibilities to develop analysis on improving grasslands.

In the 31 site study, which also used bases in Sweden, Norway, Austria, Switzerland, Iceland and Italy, legumes like clover were separated from grasses and large fields cut up to five times in one year.

Dr Brophy has moved on to a new project on the reliability of Met Eireann weather forecasts and how they could be used for better predictions of grass growth down to weekly production.

**Load-Date:** January 5, 2016

**End of Document**



[***Let's be thought-leaders on climate smart agriculture; Ireland has an opportunity to become a global pioneer in the areas of food security and climate change***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K78-FM11-DYS1-00YY-00000-00&context=1516831)

The Irish Times

July 14, 2016 Thursday

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**Section:** OPINION; Pg. 14

**Length:** 963 words

**Byline:** Tom Arnold

**Body**

Ensuring food and nutrition security for all while avoiding climate change is one of the key challenges of the 21st century. The world population is projected to grow to 9.6 billion by 2050 from 7.3 billion now, requiring an increase of 70 per cent in food production.

Food security and climate change are interconnected. ***Agriculture*** is a contributor to and is affected by climate change. In recent years, climate smart ***agriculture*** (CSA), an approach linking ***agriculture*** and climate policies, has received attention. CSA seeks to increase ***agricultural*** productivity and incomes, build resilience to climate change and reduce ***emissions***.

In the past 18 months the Institute of International and European Affairs/Royal Dublin Society Leadership Forum has worked to identify how CSA could apply to ***agriculture*** here and how Ireland could contribute to policy on global food security and climate change.

The forum brought together key stakeholders from Government departments, State agencies, the private sector, farm organisations, and development and environmental non-governmental organisations. The outcome of this process is an independent IIEA/RDS report which will be launched today by Minister for ***Agriculture*** Michael Creed.

The report concludes that Ireland should become a global pioneer in climate smart ***agriculture***, and seek to provide policy and thought leadership at European and international level to the food security/climate change debate.

In seeking to attain such a leadership position, Ireland faces unique circumstances. Due to the structure of the Irish economy and the livestock-based ***agricultural*** sector, ***agriculture*** ***accounts*** for a higher proportion of ***greenhouse gas*** ***emissions*** here than in other EU countries. Following the abolition of the EU milk quota last year the Government is committed to expanding food production, which will increase ***emissions***. At the same time, the State faces formidable European and international targets to reduce ***emissions***.

**Climate change**

These circumstances also bring opportunities. Due to demanding EU climate targets in place since 2008, considerable innovation in policy, technology and on-farm practices has been delivered. Irish officials have been at the forefront of policy thinking on ***agriculture*** and climate change at EU and UN negotiations.

Bord Bia's Origin Green scheme brings together the Government, the agrifood sector and farmers to set and achieve measurable sustainability targets and reduce the environmental impact of food production. The Farm Carbon Navigator, developed by Bord Bia and Teagasc, promotes technologies to reduce input use, increase farm income and reduce ***emissions***.

The IIEA/RDS report seeks to build on progress made. If Ireland is to aspire to credible international leadership in this area, however, progress must be brought to a different level. The report sets out an ambitious agenda that could deliver such leadership and the benefits that would flow from it. The agenda needs to be delivered through Government policy and political commitment; implementation by the farming and agri-food sector of an ambitious CSA programme; and policy advocacy at international level.

An ambitious programme, anchored in a credible domestic policy on climate change and supported by high level political commitment, is required.

We recommend the strategic reorientation of ***agricultural*** and food policy around ***agricultural*** productivity and incomes, resilience, and ***emissions*** reduction at Irish and European level.

The Government should detail how the progressive vision of a "carbon neutral" ***agriculture*** and ***land*** use sector by 2050, to which it is committed, can be attained, with progress measured annually and reported upon.

Progress made in introducing technologies and farming practices to reduce input use, improve farm incomes and reduce ***emissions*** must be built upon.

The end of milk quotas presents an opportunity for the expansion of dairy and beef enterprises which are climate smart and economically beneficial for farmers.

There are opportunities for farmers and rural communities investing in renewable energy: financial incentives targeting citizens should be part of an innovative sustainable development policy for rural Ireland.

Policy must recognise the importance of forestry as a carbon sink in achieving Ireland's ***emissions*** targets as well as its role in building resilience against climate impacts such as flooding and in providing a secure income stream for farmers.

**Irish Aid**

The report recommends that the domestic focus on CSA leadership be complemented by mainstreaming it into our diplomacy at EU and UN level. Irish Aid should integrate climate smart ***agriculture*** into its current prioritisation of nutrition and food security, linking up with the main Irish NGOs with such programmes in developing countries.

During the next round of UN climate negotiations at COP22 in Marrakesh in November, Ireland should advocate for a specific work programme on the ***agriculture***-climate-food nexus.

The IIEA/RDS report focuses on the potential we believe exists for Ireland to play an international leadership role on CSA. If such a role can be attained Ireland could position itself as a leader in the production of sustainable and carbon-efficient food, with obvious commercial gain.

But there is another dimension: if the State can influence policy on ***agriculture*** and climate change in developing countries, backed up by proven technologies and domestic experience of mainstreaming climate change into ***agricultural*** and nutritional strategies, we will contribute to improving the life chances of tens of millions of people. Tom Arnold is director general of the Institute of International and European Affairs. He is chairman of the Irish Times Trust and a member of the Irish Times Board.

**Load-Date:** July 13, 2016

**End of Document**



[***-Making Coffee the World's First Sustainably Sourced Agricultural Product***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HHC-D221-JD3Y-Y4HK-00000-00&context=1516831)

ENP Newswire

December 2, 2015 Wednesday

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**Length:** 1054 words

**Body**

Conservation International, in partnership with Starbucks and other industry leaders, announced a call to action to make coffee the first sustainably sourced ***agricultural*** product in the world.

Today's launch of the Sustainable Coffee Challenge, at the U.N. climate negotiations in Paris, comes as ministers gather to write a new climate agreement and as momentum builds for businesses to take direct action to combat climate change.

Currently nearly half of the world's coffee is being produced according to a sustainability standard, a figure that does not yet ***account*** for a number of recent significant investments made by the sector to support farmers in their transition to more sustainable practices. Yet only 12 percent was sold as sustainable coffee in the market.

'We need a common definition of sustainability for the coffee sector,' said Peter Seligmann, chairman and ceo of Conservation International (CI). 'This will require commitments by roasters to support increased demand for sustainability. It will also require improved measurement of how far the sector has come in the sustainability journey and just how far we have to go.'

Ensuring Farmer and Family Livelihoods for Generations to Come

The Sustainable Coffee Challenge will convene industry and conservation partners to develop a common framework for sustainability in the coffee sector.

'The longevity of the coffee industry is directly linked to the social, economic and environmental conditions of coffee communities around the world, and at Starbucks we are committed to sourcing all of our coffee in the most ethical way possible that is good for the planet,' said Craig Russell, executive vice president, Starbucks Global Coffee. 'We are proud to be a part of the Sustainable Coffee Challenge, a call to action for the industry focused on creating meaningful and lasting solutions to ensure farmer and family livelihoods for generations to come.'

The Sustainable Coffee Challenge comes at a time when nearly every major coffee producing region of the world is feeling the impacts of climate change. As demand increases - with consumers drinking 600 billion cups of coffee every year - warming temperatures, drought and changing weather patterns are impacting coffee production.

In addition to stimulating economic development across the industry, the effort will benefit the lives of 25 million coffee producers, the majority of whom are small-scale farmers. The Sustainable Coffee Challenge will also provide environmental benefits, including the conservation of vital ***forests*** that help fight climate change by storing carbon dioxide from the atmosphere and protection of freshwater resources.

CI kicks off the challenge with Starbucks and these key partners: Specialty Coffee Association of America; IDH the Sustainable Trade Initiative; 4C Association; Allegro Coffee Company; Ceres; Committee on Sustainability Assessment; Counter Culture Coffee; ECOM Agroindustrial Corp. Ltd.; Finance Alliance for Sustainable Trade; Humanist Institute for Co-operation with Developing Countries; Keurig Green Mountain Inc.; Lutheran World Relief; Pelican Rouge Coffee Roasters B.V.; S&D Coffee & Tea; Solidaridad; and SustainAbility.

What Others are Saying about the Sustainable Coffee Challenge

'USAID is a strong supporter of the Sustainable Coffee Challenge and related efforts aimed at enhancing both environmental stewardship and the livelihoods of smallholder coffee farmers in developing countries. Under the U.S. Government's Feed the Future initiative, USAID partners with local governments, NGOs, researchers and private companies to support coffee farmers in a dozen countries around the world. Efforts like this to better define, measure and expand the market for sustainable coffee are most welcome.' Kathryn Garcia - chief of the Private Sector Engagement Division of USAID's Bureau for Food Security

'For all the progress made in the coffee sector of the past two decades, there is much work to be done. For all the great efforts of the standards setters, NGOs and farmers themselves, sustainability in the coffee sector will ultimately depend upon the commitment of the industry itself to drive and demand better practices. This initiative will help drive demand for sustainable coffee and in so doing can accelerate progress to an ***agricultural*** product that benefits the entire supply chain. This will be to the benefit of consumers and the entire industry, including the millions of farmers whose livelihoods depend upon coffee.' Rob Cameron - executive director SustainAbility

'Sustainable ***agriculture*** is a critical component of solving the climate challenge, and to get it right we must simultaneously raise ***agricultural*** productivity, cut ***greenhouse gas*** ***emissions***, increase climate resilience and respect the human rights of farm workers. The Sustainable Coffee Challenge offers great promise and could serve as a prototype for solving pressing sustainability challenges throughout our global ***agricultural*** system.' Mindy Lubber - president of the nonprofit sustainability advocacy organization, Ceres

'Root Capital has been working on improving farmer's livelihoods for over 15 years. The Sustainable Coffee Challenge is an effort that goes hand to hand with our mission of delivering social, environmental and financial returns.' Willy Foote - Founder and CEO Root Capital

'The Bank is constantly exploring innovative ways of partnering with key stakeholders focused on improving the living conditions and resilience of smallholders across Latin America and the Caribbean. Demand-driven efforts such as the Sustainable Coffee Challenge can certainly complement our own efforts that will be implemented through the Sustainable ***Agriculture***, Food and the Environment (SAFE) Platform.' Alejandro Escobar - lead agribusiness specialist, Multilateral Investment Fund, InterAmerican Development Bank

We commend an industry-wide effort to seek ways to make coffee sustainable. And just as we have farmers at the heart of Fairtrade America's decision making, we urge stakeholders to have them at the heart of this initiative. For us, sustainability means building a better future for farmers, their families and their communities. Hans Theyer - executive director, Fairtrade America

[Editorial queries for this story should be sent to [*newswire@enpublishing.co.uk*](mailto:newswire@enpublishing.co.uk) ]

**Load-Date:** December 2, 2015

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[***UNCOP 21: Assessing Implications For Industries***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HMY-1FB1-JD33-J2KT-00000-00&context=1516831)

Business Monitor Online

December 18, 2015 Friday

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**Length:** 3051 words

**Highlight:** The UN 2015 Paris Climate Change Conference (UN COP21) change agreement, signed on December 12 marks a historic turning point towards the global push to tackle climate change (see 'UN COP21:P First Thoughts On Paris Agreement', December 14). This analysis will assess these impacts, focusing on the power, renewables, O&;#038;G, infrastructure, mining, autos and agribusiness sectors.

**Body**

The UN 2015 Paris Climate Change Conference (UN COP21) change agreement, signed on December 12, marks an historic milestone in the global push to tackle climate change ( *see 'UN COP21:P First Thoughts On Paris Agreement', December 14)*. Although, we note that the efficacy of the agreement rests on the individual countries' implementation of climate change policy and financing availability, the changing narrative concerning efforts to address climate change produced by the deal will have wide-ranging impacts on various industries. This analysis will assess these impacts, focusing on the power, renewables, O&G, infrastructure, mining, autos and agribusiness sectors.

**Renewables: Sentiment Rising**

Sentiment towards the global renewables industry will strengthen on the back of the COP21 agreement, as the deal paves the way for increased public and private funding into the sector - in line with government targets and policies pledged to increase the adoption of renewables sources into the energy mix.

Given that the global renewables industry has suffered from deteriorating market sentiment of late - owing to falling hydrocarbon prices, uncertain financing mechanisms and faltering policy - the pro-renewables rhetoric of COP21 will help reassure investor confidence in the sector. This is evidenced by the improving share prices of global renewables stocks over the last week - highlighted below by the S&P Global Clean Energy Index, which is comprised of 30 global companies involved in the clean energy sector.

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| --- |
| COP21: Boost To Renewables Stocks |
| S&P Global Clean Energy Index, As Of December 2014 |
|  |
| *Source: Bloomberg* |

The effect the deal has on our forecasts is relatively muted, as implementation is due post-2020 and it is difficult to assess its tangible impacts at this early stage. Indeed, much depends on whether momentum is sustained over the course of the decade. That said, the positive sentiment towards the sector supports our already constructive forecasts for global renewables capacity. We expect, global non-hydro capacity to expand by nearly 80% between 2015 and 2024 - reaching nearly 1,300GW by 2024.

**Power: Gas Moving To The Fore, Asia Coal Stronghold**

The growing focus on reducing carbon ***emissions*** following the Paris agreement will provide an additional boost to gas-fired power generation in a large number of countries heavily dependent on thermal power, compounding the incentive provided by cheap natural gas prices at a global level ( *see 'Cheap Gas To Grow In 2016 Global Power Mix',December 3*). In addition, we expect the agreement to cement the emergence of a regional divide in investment into coal power between Western Europe, North America and most of Latin America on one side, and Asia and Central and Eastern Europe (CEE) on the other.

A mix of pricing dynamics, environmental regulations and strengthened public sentiment against coal will make it extremely unlikely that new coal-fired power plants are built in the western hemisphere (with the exception of some Latin American countries) over the coming ten years and beyond. Conversely, Asian and CEE countries have plans to significantly expand their coal power fleet, and we do not expect the Paris deal to alter the focus of governments in these regions on using coal-fired electricity to power their economic growth by capitalizing on cheap coal prices.

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| Asia Will Continue To Offer Opportunities To Coal Power Business |
| Share Of Coal-Fired Power Generation By Region In 2015f (LHS) And 2024f (RHS) |
|  |
| *f = BMI forecast. Source: EIA, National Sources, BMI* |

This means that international companies that provide engineering, production and construction (EPC) services for coal power plants will have to look primarily at Asia for business opportunities over the coming years, particularly as the financing environment for coal projects is brighter in Asia *(see 'Coal Financing Restrictions To Give China Business Opportunities, November 20)*. Besides the largest coal-power generators China and India, we expect to see significant demand for coal-fired power plants in Japan, Korea, Indonesia, Pakistan and Bangladesh - among other markets.

**Infrastructure: COP21 To Accelerate Tech Revolution**

While the infrastructure and construction sectors and their supply chains are large contributors to carbon ***emissions***, we believe the impact of the COP21 agreement will be extremely varied depending on markets. On the whole, the impact on developed construction markets will be acceleration of trends towards more integration of technology into the planning of buildings and the development of infrastructure. Legislation on energy efficiency within building construction is already in place in most cases and will likely be tightened and the introduction of more efficient transport monitoring systems will help increase the efficiency of existing infrastructure assets, helping to increase the use of public transport and reduce private vehicle use ( *see 'Five Key Themes For 2016: Infrastructure', December 10*).

Construction firms will have their profit margins squeezed, especially given the growing necessity to use sustainable timber, and the likely cost increases of building materials given pressure on cement and steel producers to shift to renewable sources of energy.

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| Emerging Markets Key For Industry ***Emissions*** |
| Global - Emerging and Developed Construction Industry Value Forecasts |
|  |
| *f=BMI forecast. Source: BMI* |

In developing markets the COP21 impact on construction will be less game-changing. Given the underdeveloped capacity of many construction industries in emerging markets, the costs involved in transferring to more sustainable, technically demanding and complex projects will be too great in many cases. The creation of the Global Alliance for Buildings and Construction - an international organisation aimed at mainstreaming more sustainable building methods - was noticeable for its lack of Chinese or Indian governmental representation.

Emerging markets will feel the greatest impact from climate change and there will be resultant infrastructure opportunities. For financiers, renewables projects will gain greater traction, while mitigation projects such as flood prevention and irrigation networks will be a big focus for construction. In terms of transport infrastructure, the COP21 will provide greater impetus to accelerate public transport projects in major emerging cities battling with uncontrolled urban sprawl, although we believe other factors such as urbanisation and congestion remain more pressing issues driving investment into the sector.

**Oil & Gas: Adapting To The Less Oil-Friendly Environment**

The Paris agreement **poses a long-term downside risk to our global refined fuels consumption forecasts**. A broader move to tackle climate change could accelerate the ongoing shift to higher-grade fuels use in certain countries, in conjunction with new engine designs and technologies for the transportation sector, which would decelerate growth in fuels consumption.

The EU and the US have spearheaded the introduction of fuels ***emissions*** standards in recent years. This dynamic is already in play in several emerging markets in the Asia-Pacific including the likes of China, Malaysia, Indonesia, Thailand, Vietnam and the Philippines, which are already in the process of implementing or mulling over plans to switch to Euro-IV standard fuels in the coming years. However, the impact on consumption will be limited in the short-to-medium term, as we believe it will take some time for more stringent environmental laws or fuel economy standards to pan out in these countries.

Our Autos team believes that COP21 will not accelerate the proliferation of electric vehicles, as ambitious targets have already been in place in Germany, India and China. Moreover, take up of EVs has not been as rapid as expected and the risk EVs pose to fuels consumption to the end of this decade is thus limited.

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| Rising Fuel Efficiency Long-Term Downside To Demand |
| Refined Fuels Consumption % Chg y-o-y, By Region |
|  |
| *e/f = BMI estimate/forecast. Source: National Sources, EIA, BMI* |

The agreement **also poses an upside risk to natural gas consumption growth in several regions**, as implementation of policies to reduce ***emissions*** will favor a shift to cleaner energy-sources, such as natural gas, at the expense of more polluting fuels, such as oil and coal. In North America, a combination of pricing and policy dynamics are already encouraging a switch from coal to natural gas and renewables, underpinning our positive growth outlook for gas demand. Similarly, this will provide greater impetus for the Chinese government to push forward with plans to increase domestic gas use, supporting our view for its gas demand to rebound from 2017 ( *see 'Pricing Reform Boosts Gas Consumption Outlook', November 23 2015*). O&G companies which are making strategic moves to extend their footprint in the gas market, such as Shell through its acquisition of BG, appear better placed for the long term post COP21.

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| COP21 Supporting 'Greener' Gas Power |
| Global Natural Gas-Fired Power Generation, TWh (LHS) And Share Of Total Mix |
|  |
| *f = BMI forecast. Source: EIA, BMI* |

COP21 is providing a platform for climate change policy to align globally behind a common agenda. As the operational, investment and business environment for the hydrocarbons sector evolves in the coming years and, **crucially, the narrative** *against* **the sector becomes more vociferous, policy and reputational risks for the industry will increase, taking a toll on the 'business-as-usual' model of the oil and gas sector.**

**Flexibility and adaptability will be crucial for the sector if it is to adapt to structural changes** that will come as a result of: (i) leaps in technology, (ii) changes in policy, and consequently, (iii) a less favourable price environment for hydrocarbons (oil and crude-based fuels especially) as demand moderates. The utilities sector in Europe poses a stark warning of how rapidly the dynamics of a sector can change as a result of a collapse in prices and changes in energy policymaking (Germany's *Energiewende* has left the German utilities scrambling to adapt). The coal sector is at the forefront of negative publicity with Barclays noting that the decarbonisation of investment portfolios will accelerate post COP21, as activist investors also align behind the Paris Agreement agenda against 'Big Coal'. It is unlikely that 'Big Oil' will escape similar headwinds in the coming years.

To what extent the existing O&G business model will be able to adapt when it is overtaken by events (technology leaps, policy changes, price collapses) is, in our opinion, the most pertinent strategic question for the O&G sector that has come to the fore following COP21.

**Mining: Coal In The Spotlight**

The mining sector will be one of the industries most affected by the UN COP21 deal, due to impact on the coal sector (we estimate that coal ***accounts*** for about 40% of global mining industry value). As discussed above, coal consumption was a key target of the conference, given that the combustion of coal ***accounts*** for more ***greenhouse gas*** ***emissions*** than any other fuel. In terms of time scale, we see no significant impact on coal consumption, prices or production until 2020 at the earliest. Even then, implementation of the agreements will only limit, rather than derail growth in global coal consumption and production over the next ten years.

Assuming comprehensive implementation of the agreement, we identify the main negative impacts on coal mining as follows:

**1. Low Prices**

Low coal prices are already set to limit coal mine investment in the coming years. For instance, we forecast annual average production growth of 0.9% over 2016-2019 compared to 1.8% in 2011-2015. Industry estimates suggest that around half of global coal production is unprofitable at 2015 price levels. We expect thermal coal prices to remain low going into the next decade, forecasting them at USD65.0/tonne in 2020 compared to a December 2015 price of USD52.0/tonne and a January 2011 peak of USD136/tonne. Should COP21-related policies further limit consumption growth post-2020, this could see prices trade even weaker into the 2020s, further weighing on coal mine investment.

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| Weak Coal Mine Investment Ahead |
| Global Coal Mine Production, % Chg y-o-y |
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| *Source: USGS, EIA, BMI* |

**2. Regulatory Restrictions**

Government policy will become less supportive of coal mining as the industry becomes increasingly unpopular with large portions of the electorate. Due to its association with carbon ***emissions***, coal mining has already become an easy political target and this trend would likely continue should COP21 agreements be implemented in full force. These public relations issues can materially impact coal mine investment, as illustrated by the following recent examples:

* **Local opposition to mines/infrastructure** - In the US, significant local protests in the Pacific Northwest has held up development of new rail and port export capacity for several years. While this alone is not the cause of the US coal industry's terminal decline, it has had a significant impact by preventing exports to Asia from developing into a viable support to the ailing industry.

1. **Reduced funding for coal projects** - Financial institutions are increasingly shying away from investing in coal assets. Over 2015, institutions including **Citigroup**, **Morgan Stanley** and **Allianz** announced that they would be reducing investment in coal related assets for a mixture of climate and business reasons. Should this trend gather pace, it would raise the cost for coal miners to borrow necessary capital for investment in mines, thereby hurting future output growth.

**Agribusiness: Limited Impact...For Now**

Although ***agriculture*** is a large contributor to GHG ***emissions***, we believe the sector will be relatively spared for now by the COP21 deals and potential adoption of stricter environmental regulations. This is because ***agriculture***, food production and food security are very sensitive topics in both developed and developing countries.

Currently, ***agriculture*** ***accounts*** for approximately 14% of GHG (mainly nitrous oxide and methane rather than carbon dioxide) and 25% when including forestry and other ***land*** use is included. The major drivers of the problem are deforestation, soil and nutrient management, and livestock ***emissions***. **Deforestation** will be one of the first issues to be addressed; in fact, the COP21's goal to have zero ***emissions*** by 2050 will require countries to keep large ***forests*** untouched and to improve ***land*** reconversion. On this front, Indonesia, which is a significant emitter in ***land***-use change and forestry, will be one of the most impacted countries. It will see growing scrutiny and stricter regulations in the palm oil sector regarding future plantation expansion. Although the country has made some minor attempts to limit deforestation, implementation has been very difficult and fraud widespread. Brazil has already made efforts regarding deforestation, and is likely to follow in that direction over the coming years.

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| Palm Oil And Forestry: Key Emitters In Indonesia |
| Select Countries - GHG ***Emissions*** Profile, 2013 |
|  |
| *LUCF =* ***Land*** *use change and forestry. Source: World Resources Institute* |

Beyond the agreement and the hypothetical adoption of stricter regulations under the deal, we believe there will be a slow movement towards sustainability within the sector, which will increasingly impact global agribusiness supply chains and food regulations in the coming years.

* The ***emissions*** of the **cattle and dairy sectors** may come to the fore in the coming years and lead the adoption of regulations that would increase production costs (animal feed regulations, manure management, etc.). Moreover, the potential implementation of carbon taxes in several countries (mainly in the EU and in some countries in Asia) would impact these sectors, which are large GHG emitters.

1. **Promotion of 'climate-smart' *agriculture***, with the use of 'big data', precision ***agriculture*** and organic fertilisers in order to have the most efficient input use *(see 'Agribusiness: Key Themes For 2016', December 16).* China, where fertiliser over-application has led to the severe contamination of soils, will be one of the countries that will spear-head the move to reduce fertiliser use. Meanwhile, Western countries will increasingly use technology to improve efficiency at the farm level.
2. **Promotion of the reduction of post-harvest food loss and post-retail food waste**. Laws banning retailers from wasting unsold food - such as the one passed in France in December 2015 - will probably spread in the coming years.

**Autos: Failing *Emissions* Strategies To Persist**

We believe the COP21 agreement will do little to change this fact over the next five years with governments remaining less inclined to address failing ***emissions*** strategies until after 2020. This is most obvious in policies concerning electric vehicles (EVs). Most developed nations and key developing nations, such as China and India, have announced ambitious EV stock targets by 2020 or sooner yet have failed to make the necessary progress towards these goals. For example, China will likely fail to reach its goal of having 0.5mn EVs on the road by end-2015 and we remain sceptical on its goal of achieving 5mn EVs by 2020. Germany with only 18,948 pure EVs and 107,800 hybrid vehicles, most of which are conventional hybrids, will also likely fail to reach its goal of 1,000,000 electrified vehicles on the road by 2020. Similarly, India's overly ambitious goal of having 6-7mn electrified cars on the roads by 2020, looks close to impossible with an EV stock of just 2,689 vehicles in 2014 according to the International Energy Agency (IEA).

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| Forecasted 40% Rise In Global Fleet Remains Unchanged |
| Global Vehicle Fleet, Mn Units |
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| *Source: National Sources, BMI* |

Furthermore, COP21 lacked a unified agreement on the transport industry specifically, leaving countries to make their own individual proposals on how transport ***emissions*** will be addressed and how much weight is given to transport over other industries. Thus, we believe governments have stuck to transport ***emissions*** reduction proposals that are largely in line with previous rhetoric and policies on the subject. As such, we don't see any sharp changes in transport ***emissions***-related policies over the next five years.

**Load-Date:** December 19, 2015

**End of Document**



[***Saphium Biotechnology Launches "PHAbulous Philaments" on Kickstarter***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GJF-XVM1-JD3Y-Y42G-00000-00&context=1516831)

M2 PressWIRE

July 29, 2015 Wednesday

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**Length:** 704 words

**Body**

July 28, 2015

In recent years the ingenious technology of 3D printing evolved rapidly - but the topics of waste prevention and natural plastics did not evolve at the same speed.

On this ***account*** Saphium Biotechnology produces "PHAbulous Philaments", a 3D printing filament which inherits no toxic additives. It is produced environmentally friendly, is completely compostable in soil and manufactured with natural colours only. Our filaments consist of pure PHA and so failed prints can be used as a fertilizer in your own backyard because our filaments degrade within 60 days by bacteria in your soil. Our product will be one of the first generations of pure PHA filaments on the market.

We produce our raw materials on our own with a small microbe in big steel tanks. We only need hydrogen, which is generated with photovoltaic plants and the ***greenhouse gas*** carbon dioxide to feed our little helpers.

In this process we are decreasing cost-effective the double amount of carbon dioxide ***emissions*** for every kg of PHAbulous Philaments produced and are independent of arable soil. At the moment we are at the point were we start with prototype development, but we aim to start our production in the upcoming year.

The properties of our product:

All-natural

Our filaments are made from poly-hydroxy-alkanoates (PHA), a compound naturally occurring in microbes. They tend to accumulate these PHA as energy storage molecules, when they endure periods of stress and starvation. We optimise the conditions for this microbes to produce the perfect PHA composition for a 3D printer filament. All-natural.

No toxic additives

Plastic got a bad reputation in the last years and the main reasons were toxic additives like Bisphenol A (BPA). PHAbulous Philaments do not require any poisonous chemicals added due to our new production approach. Once the PHA leaves the microbes, it is perfectly fit for use. No need for poisonous chemicals.

Compostable

As our raw material naturally occurs in soil microbes, it is also degraded by them. If you bury these PHAbulous Philaments in soil, they will degrade within 60 days in your compost pile at home or on the bottom of the sea! Soil microbes are eager for PHA and will feast on it - and improve and fertilize any soil.

Water resistant and UV stable

PHAbulous Philaments are water resistant and do not alter their appearance when exposed to sunlight.

No ***agricultural*** ***land*** needed and CO2 neutral

Employment of large quantities of resources is not needed! We save space for crops that can be used for food production. We feed our microbes on carbon dioxide and hydrogen generated by the sun and they degrade to carbon dioxide - a life cycle without any drawbacks or additional production of ***greenhouse gases***. No need for pollution!

Printing properties

The properties of our raw material are different.

\* A lower melting temperature (145°C-150°C)

\* A glass transition temperature below 0°C offers a more flexible material

\* Water and UV resistant

Our team, Saphium Biotechnology, is a well positioned-team with a background in biology, microbiology, genetics, marketing and sales. We know each other from the university of Graz and are not just working together but are good friends. At the beginning of 2015 we decided to participate in IndieBio, an accelerator for synthetic biology.

Our kickstarter compaign will be launched in the next few days. Our rewards include biodegradable pens, posters and t-shirts with the life cycle on it, our PHAbulous Philament spools and a 3D printed catapult to fight plastic waste! The most gorgeous reward is the name of the backer written in the DNA of our microbe and the protein structure will be printed.

As soon as possible we want to finish our first prototype of the PHAbulous Philaments of our first product. Our natural plastics can also be used as a common packaging material. We want to remind the world that we also have to consider the topic of nature. We are bringing back the love to plastics!

Distributed by CrowdfundingPR

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Country: Australia

Website: [*https://www.kickstarter.com/projects/phabulousphilaments/phabulous-philaments-3d-printing-natural-an*](https://www.kickstarter.com/projects/phabulousphilaments/phabulous-philaments-3d-printing-natural-an)

**Load-Date:** July 29, 2015

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[***BLOWN AWAY: Wind farm proposals are rejected by councillors***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HYJ-0661-DY63-R3VN-00000-00&context=1516831)

Dorset Echo

January 28, 2016 Thursday

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**Section:** NEWS

**Length:** 514 words

**Body**

PLANS for a wind farm near Dorchester have been rejected by councillors.

A packed meeting of West Dorset District Council's development control committee heard passionate arguments as it considered plans for the scheme on ***agricultural*** ***land*** at Slyer's Lane near Charminster.

Officers had recommended refusal of an application by developer Broadview to erect six 115-metre turbines on the site.

Case officer Andrew Martin said concerns had been raised by the Dorset AONB (Area of Outstanding Natural Beauty) team about the impact of the development on the undeveloped rural character and uninterrupted panoramic views of the surrounding area.

He said: "You are in the heart of the AONB here and the concern is that your appreciation of these special qualities will be compromised by the turbines."

Concerns were also raised about the impact of the proposed wind farm on scheduled monuments, listed buildings and conservation areas.

Mr Martin said there were positive elements to the proposed scheme.

He said: "The development would have wider environmental benefits, would deliver renewable energy and would contribute to the cutting of ***greenhouse gas*** ***emissions***."

Mr Martin said these benefits would need to be balanced against the negative impacts on the AONB, the immediate local landscape, heritage assets and potential damage to unrecorded Bronze Age barrows at the site.

He concluded: "The case for refusing this on planning grounds is almost unassailable."

More than 50 people spoke at the meeting, with strong opinions both in support and against the scheme.

Alan Rowley, vice chairman of the Dorchester Civic Society, said: "The significant harm this scheme is going to do is far outweighing the public benefit."

Dorchester resident Sam Ling said he was speaking up in support of the plans on behalf of his four-year-old son, whose generation would be the ones to feel the impacts of climate change.

He said: "My education, my responsibility as a parent and my love for where I grew up scream to me that I have to do something."

Another local resident said: "It would be lunacy to actually go against anything like this.

"It is selfish to only think about the view from one's own window."

Charminster resident Gwen Yarker spoke of the need to protect the archaeological significance of the area and Ian Gosling from the No Slyer's Lanes Turbines group raised concerns about the impact of the landscape celebrated by Thomas Hardy.

He said: "It is now accepted that decisions on planning applications must take into ***account*** any significant harm inflicted on landscapes associated with our literary heritage."

Following the public speakers and debate among councillors, Cllr Ian Gardner recommended refusal of the scheme.

He said: "We can't fall into the trap of thinking that this one particular planning application solves all our climate change problems.

"I think we have to address the damage this particular application would do and whether it's worth having that damage for this one particular site.

"I don't think that it is."

Six members voted against the application, with three voting in favour.

**Load-Date:** January 28, 2016

**End of Document**



[***#Agriculture: Feeding the world - MEPs survey development issues and technological options***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K2K-XHK1-F03R-N017-00000-00&context=1516831)

EU Reporter

June 20, 2016 Monday 10:53 AM EST

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**Length:** 850 words

**Byline:** EU Reporter Correspondent

**Body**

Jun 20, 2016( EU Reporter: [*http://www.eureporter.co*](http://www.eureporter.co) Delivered by Newstex) Could new technology help to meet the challenge of feeding a rapidly increasing global population? ©AP Images/ European Union-EP Demand for food is set to rise by 70% due to the global population growing to 9.6 billion by 2050. Feeding them all will be a serious challenge. In reports adopted during last week's plenary, MEPs stressed the need to invest in ***agricultural*** technology, while still reducing ***agriculture***'s ecological impact.

They also looked into how farmers in Africa could be helped. According to the UN's World Food Programme 795 million people in the world do not have enough food to lead a healthy active life. The vast majority of them live in developing countries. In sub-Saharan Africa one person in four is undernourished. Reducing farming's environmental impact In the EU, 10% of CO2 ***emissions*** were the result of ***agricultural*** activities in 2012, according to Eurostat[1]. If you also take into ***account*** ***land*** use and deforestation, processing, transport, packaging, retail and waste, that figure would be a lot higher. The UN Conference on Trade and Development estimates the global figure to be in the region of 43-57% in its 2013 Trade and Environment Review[2]. Dutch ALDE member Jan Huitema wrote a report[3] on innovation in European farm management, which was adopted in plenary last week. 'Farmers have the capacity and the knowledge to innovate, but are limited by obsolete legislation or rules,' he said. According to his report, precision farming can reduce the amount of pesticides, fertilizers and even water needed. In addition the environmental footprint could also be reduced by using ICT-based management systems, which for example make use of information gathered from robotics. Huiteman added: 'Many cutting-edge practices such as combating pests with insects or making green-fertilizers from waste stream are there, but European legislation sometimes still hampers those innovations. MEPs have chosen to move forward rather than remain stuck in the past.' Safeguarding genetic diversity British ECR MEP Anthea McIntyre[4] points out in her report[5], adopted during last week's plenary, that genetic diversity and the quality of plant genetic resources play a crucial role in ***agricultural*** resilience and productivity. 'The large corporations know that as well as we do, so I am sure they will bear diversity in mind right across their development programme,' she said in a statement. 'We should not lose sight of the benefits of smart farming provides, as it is ultimately designed to lower pesticide, fertiliser and water-use while optimizing yields.'Boosting ***agriculture*** in Africa The New Alliance for Food Security and Nutrition[6] was created in 2012 to invest in African ***agriculture*** and help resolve problems. The initiative involves African governments, G8 countries as well as ***agricultural*** company Syngenta and fertiliser company Yara International.German Green MEP Maria Heubuch[7] wrote a report[8] on it, which was adopted during last week's plenary. She criticised the focus on monoculture and the dependence on fertilisers in Africa, saying: 'Too much ***land*** is used to produce cash crops for export rather than food crops for local consumption. This makes African countries highly dependent on imported food and vulnerable to fluctuating prices on the world market.' Heubuch did not consider GMOs a solution: Genetic engineering is not leading to higher yields. Instead, GM crops have led to the use of more, not less pesticides.'More information Anthea McIntyre's Facebook broadcast[9] Farmers: how Parliament wants to help them earn a better living[10] Briefing: how to feed the world in 2050[11] International farm projects in Sub-Saharan Africa need ***land*** grab safeguards, MEPs warn[12] [ 1]: [*http://ec.europa.eu/eurostat/statistics-explained/index.php/****Agriculture****\_-\_****greenhouse\_gas****\_****emission****\_statistics*](http://ec.europa.eu/eurostat/statistics-explained/index.php/Agriculture_-_greenhouse_gas_emission_statistics) [ 2]:   [*http://unctad.org/en/publicationslibrary/ditcted2012d3\_en.pdf*](http://unctad.org/en/publicationslibrary/ditcted2012d3_en.pdf) [ 3]:   [*http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2016-0163+0+DOC+XML+V0//EN*](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2016-0163+0+DOC+XML+V0//EN) [ 4]:   [*http://www.europarl.europa.eu/meps/en/111011/ANTHEA\_MCINTYRE\_home.html*](http://www.europarl.europa.eu/meps/en/111011/ANTHEA_MCINTYRE_home.html) [ 5]:   [*http://www.europarl.europa.eu/sides/getDoc.do?type=TA...erence=P8-TA-2016-0251...mat=XML...guage=EN*](http://www.europarl.europa.eu/sides/getDoc.do?type=TA...erence=P8-TA-2016-0251...mat=XML...guage=EN) [ 6]:   [*https://new-alliance.org*](https://new-alliance.org)/ [ 7]:   [*http://www.europarl.europa.eu/meps/en/124848/MARIA\_HEUBUCH\_activities.html*](http://www.europarl.europa.eu/meps/en/124848/MARIA_HEUBUCH_activities.html) [ 8]:   [*http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2016-0169+0+DOC+XML+V0//EN...guage=en*](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2016-0169+0+DOC+XML+V0//EN...guage=en) [ 9]:   [*https://www.facebook.com/europeanparliament/videos/vb.178362315106/10157216012245107/?type=2...ater*](https://www.facebook.com/europeanparliament/videos/vb.178362315106/10157216012245107/?type=2...ater) [ 10]:   [*http://www.europarl.europa.eu/news/en/news-room/20160613STO31999/Farmers-how-Parliament-wants-to-help-them-earn-a-better-living*](http://www.europarl.europa.eu/news/en/news-room/20160613STO31999/Farmers-how-Parliament-wants-to-help-them-earn-a-better-living) [ 11]:   [*https://epthinktank.eu/2014/01/08/how-to-feed-the-world-in-2050/*](https://epthinktank.eu/2014/01/08/how-to-feed-the-world-in-2050/) [ 12]:   [*http://www.europarl.europa.eu/news/en/news-room/20160603IPR30208/International-farm-projects-in-Sub-Saharan-Africa-need-****land****-grab-safeguards*](http://www.europarl.europa.eu/news/en/news-room/20160603IPR30208/International-farm-projects-in-Sub-Saharan-Africa-need-land-grab-safeguards)

**Load-Date:** June 22, 2016

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[***China's challenge "" the pursuit of ecological civilisation***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HNC-67H1-JD1P-T4D8-00000-00&context=1516831)

Global Capital Euroweek

November 30, 2015

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**Section:** CHINA,EMERGING MARKET,CHINESE INFRASTRUCTURE,SRI

**Length:** 2684 words

**Byline:** GlobalCapital

**Highlight:** According to some, infrastructure in China is now so well developed that it is perhaps the Asian economy that has the least need for infrastructure investment. However, it cannot afford to slow down, not least because of the noxious state of its environment.

**Body**

In comparison to India, much of China's infrastructure is space-age. "Overall, China has done very well in building up its infrastructure over the past decade," says Paul Procee, lead urban specialist at the World Bank in Beijing. "It has done especially well in developing much of the massive transportation infrastructure it needs to keep people moving, such as highways, high speed rail networks and airports. You read mind-boggling numbers that China has used more cement in building its infrastructure over the last five years than the US has in the last 100."

In areas like airports, there are no signs of this frenetic activity slowing down. According to research published by the CAPA Centre for Aviation, at the start of 2015 there were 51 airport projects in China worth close to $60bn. The largest of these, which was given the go-ahead at the end of 2014, is Beijing's new, $13.1bn four-runway airport at Daxing.

One result of the Chinese investment boom of the last decade, says Gavin Munro, head of Asia Pacific infrastructure finance at Société Générale in Hong Kong, is that the country's infrastructure is now so well developed that it is perhaps the Asian economy that has the least need for infrastructure investment. "If you look at transportation infrastructure, for example, some of China's regional airports now probably have enough capacity for the next 50 years," he says. "In Indonesia, by comparison, the whole system is log-jammed and congestion is chronic. Anecdotally, it is sometimes cheaper for Indonesian companies to fly products in from China than ship them from islands elsewhere in Indonesia because the ports are so congested."

While China's transportation system may now be the envy of emerging and developed economies across the world, this is no reason to suppose that the country can afford to slow down its infrastructure investment programme, for several reasons. One of these is that against the backdrop of well documented slowing growth, infrastructure investment is one option open to the Chinese government as an economic stimulant. According to research published by HSBC, issuing Rmb3tr-Rmb5tr of long term bonds to jump-start infrastructure projects in China could translate into a 2%-4% impact on GDP, assuming the investment is spread over two years.

The far more significant, long term reason why China cannot afford to ease up on its infrastructure investment programme is the noxious state of its environment. According to the World Bank, China faces some of the world's most formidable environmental challenges due to the energy and resource-intensive pattern of its growth in recent years, coupled with its binding natural resources constraints. China has 22% of the world's population, but only 6.4% of its ***land*** area, 7.2% of its farmland and 5.8% of its annual water resources. The grim consequence for China and for the planet, says the World Bank, is that "the value of environmental depletion and degradation (i.e environmental externalities) in China's economy are among the highest of any country. Given the magnitude of China's environmental impacts, global environmental problems cannot be solved without China's engagement."

The impact of urbanisation

Like in India, much of China's investment requirement for green or sustainable infrastructure over the coming two decades will be driven by an unprecedented wave of urbanisation.

According to a recent World Bank report, China's cities are growing at a rate and scale never seen before in human history. At the last count, this internal migration had seen 380m people relocating from rural to urban areas over the last two decades. By 2025, more than 200m others are expected to have made the same journey.

To put this movement of people into stark perspective, the World Bank estimates that the equivalent of the population of cities such as Hamburg or Vienna is now relocating every month.

At the World Bank in Beijing, Procee says that the key difference between Chinese urbanisation and the trend in other developing economies is that in China the process has been carefully planned and managed as a component of economic strategy. "The process of modernisation and urbanisation dates back to the 1980s, when Deng Xiaoping's government started to move from being an ***agricultural*** to an industrial-based economy," says Procee. "This process is now accelerating as China moves from an economic model based on heavy industry to an innovation-led economy driven by rising productivity and higher consumption. Cities are seen as the places where this will happen more quickly and efficiently than anywhere else."

Procee says that by creating a more mobile and productive workforce, this dynamic will have what he describes as "humongous benefits for China's economy". The impact on the environment, however, may be less positive, given the pressure it will exert on roads, urban railways and other civic services.

As the World Bank's report warns, "while urbanisation will drive growth and raise living standards, it also brings tremendous environmental and service delivery challenges. Smaller cities in particular are struggling to keep pace with demand, especially for sewerage and waste disposal services."

This process is creating opportunities for investors in modern, sustainable infrastructure. The World Bank estimates that China's cities will need to spend some $5.3tr on infrastructure over the next 15 years. But it adds that by developing more efficient, denser cities, China will be able to save $1.4tr on infrastructure spending "" which is about 15% of GDP in 2014.

In the water sector, meanwhile, where China faces the dual menace of shortages and pollution, Moody's estimates the country will need to invest some Rmb4tr-Rmb5tr, which will also create substantial investment opportunities. "Given the massive investment needs, Moody's expects the government to launch further policy reforms to encourage private capital investment," the agency says in a recent update. "As the industry is highly fragmented in China, the growth opportunities will result in intensifying competition and industry consolidation."

The ecological cost of China's economic boom

While urbanisation is one reason why China will need to invest heavily in sustainable infrastructure over the next decade, a more general driver is the legacy of the boom that has metamorphosed China economically as well as socially and environmentally.

Sean Kidney, CEO of the Climate Bonds Initiative (CBI), says that lifting one billion people out of poverty probably ranks as the achievement of the millennium in terms of its socioeconomic impact, both within China and elsewhere. But he adds the significant rider that this economic transformation has come at a very high ecological cost.

High indeed. The United Nations Environmental Programme (UNEP) reports that air pollution alone in China is estimated to lead to more than a million premature deaths. According to a recent report published by the Task Force on establishing a Green Financial System in China, meanwhile, around 82% of the Chinese population depend on shallow wells and rivers for their drinking water, but 75% of these sources are already polluted. Other studies, according to the same report, have found that 19.4% of arable ***land*** in China is also heavily polluted.

In financial terms, the cost of this ecological damage is considerable. In 2003, China asked the World Bank to estimate the annual cost of environmental aid and water pollution, factoring in the impact of its damage to human health. The Bank's findings were that it amounted to an eye-watering $100bn a year, or about 5.8% of GDP at the time. A more recent study, conducted by the Asian Development Bank and Tsinghua University in 2012, calculated that economic losses resulting from illness related to air pollution in China amount to 1.2% of national GDP.

China's response to its environmental challenge

The good news is that China has taken giant strides in recent years towards tackling its environmental shortcomings. During the 11th five year plan (2006-2010), it achieved a 19.1% decline in energy intensity per unit of GDP, according to UNEP, only narrowly missing its ultra-ambitious target of 20%. Over the same period, the amount of energy required to produce a tonne of cement fell by 41%, offsetting some of the environmental impact of China's great construction boom.

In 2009, meanwhile, China pledged that by 2002 it would lower carbon dioxide ***emissions*** per unit of GDP by 40% to 45% from the levels posted in 2009. It also promised to increase the share of non-fossil fuels in primary energy consumption to about 15%, lift the country's ***forested*** area by 40m hectares, and to increase its ***forest*** stock volume by 1.3bn cubic metres compared with the 2005 levels.

China is backing its commitment to what it describes as "ecological civilisation" with substantial public and private sector investment. Take the example of its commitment to renewables in general and wind power in particular, the scale of which is hard to overstate, with China having recently pledged to build 1GW of capacity of clean energy every week between now and 2030. "In only five years," said UNEP's 2013 report, "China has gone from being a minor player in the wind power sector into the world's largest market." The Global Wind Energy Council forecasts that China's investment in wind turbines will lead to an increase in installed capacity from a projected 143GW in 2016 to 217GW by 2020 and 414GW by 2030.

Impressive progress has also been made in other renewable energy sources. According to the government's Intended Nationally Determined Contributions (INDC) announced in the run-up to the COP21 talks in Paris, China's installed capacity of hydro power is now 300GW, which is more than 2.5 times as much as in 2005. In nuclear power, it is 19.88GW, or 2.9 times the 2005 level, and in solar power it is now just over 28GW, or 400 times the 2005 total "" dwarfing even the 90-fold increase over the same period in installed capacity of on-grid wind power.

Alongside its ambitious plans for scaling up its development of wind power, China aims to increase installed capacity of solar power to 100GW by 2020 and to "proactively develop geothermal, bio-energy and maritime energy".

These are impressive objectives. "The scale of Chinese investment in renewable energy is dwarfing the rest of the world," says Kidney at the CBI. "The switch in investment from fossil fuels to renewables has been unbelievable."

Kidney also welcomes much of China's investment in its transportation systems. Granted, he says, that many of the provinces and cities have channelled investment into poorly thought-through highways that have exacerbated rather than eased China's traffic congestion. But he echoes others when he applauds the job China has done in building the world's largest high speed railway network.

Aside from being a super-efficient way of moving people across its 16,000 kilometres of track, China's ultra-modern high-speed rail network is gentle on the planet. "It is a critical low-carbon investment which takes cars off the roads and aeroplanes out of the sky," says Kidney. That is an important initiative, given that the global aviation industry already ***accounts*** for about 3.5% of the total human contribution to climate change, according to Heathrow Airport. The Intergovernmental Panel on Climate Change has estimated that at current rates of growth, this will rise to between 5% and 15% by 2050.

Anecdotal evidence suggests that the Chinese population is already breathing easier "" literally "" as a result of the measures taking to address ***emissions*** over recent years. The World Bank's Procee, a Dutchman who grew up in Brazil and has lived in Beijing for the last 5-1/2 years, says that some of the most lurid stories about urban pollution in China are outdated, or apocryphal, or both. ***Accounts*** of housewives hanging white T-shirts out to dry in the morning, and finding them jet-black by evening are, he says, a misrepresentation. "In Beijing, we don't see the black soot we used to get, now that all the city's coal-fired plants have been shut down," he says. "In the time I've been here, I have seen a considerable improvement in terms of air quality. It's true that there are some days when we have concentrations of fine particles of 300ppm [parts per million]. But that is down on the levels of five years ago."

Perhaps. But as Procee says, some cities still have hazardous measurements, with Shenyan recently recording 1,500ppm. The urban average is perilously close to levels deemed to be unsafe, and it is generally recognised that China still has a huge problem with its air quality as well as with water pollution and scarcity, which Procee says will be the country's biggest long term ecological threat.

New environmental targets

This is why China recognises that the progress it has made to date on mitigating ***greenhouse gas*** ***emissions*** represents little more than the tip of the iceberg. A clear recognition of this was made when President Xi recently announced tougher, revised targets requiring China's ***emissions*** to peak by 2030 at the latest, and for the non-fossil fuel share of the country's energy mix to rise to 20% by the same year. China has also announced that it will cap its coal use by 2020.

These targets were also specified in China's INDC statement released in June. This insisted that "China attaches great importance to addressing climate change, making it a significant national strategy for its social and economic development and promoting green and low-carbon development as an important component of the ecological civilisation process." It added that "new industrialisation, urbanisation"¦ ***agricultural*** modernisation and greenisation will be promoted in a co-ordinated manner. Resource conservation and environmental protection have become the cardinal national policy, placing mitigation and adaptation on equal footing, promoting innovation in science and technology and putting in place the necessary management and regulatory mechanisms and systems."

Among the recent pledges made by the National Development and Reform Commission (NDRC) is a commitment to the launch of China's national ***emission*** trading system in 2017, covering key industry sectors such as iron and steel, power generation, chemicals, construction materials, paper-making and non-ferrous metals. "China commits to promote low-carbon buildings and transportation, with the share of green buildings reaching 50% in newly built buildings in cities and towns by 2020 and the share of public transport in motorised travel reaching 30% in big and medium-sized cities by 2020," adds the NDRC. "It will finalise next-stage fuel efficiency standards for heavy-duty vehicles in 2016 and implement them in 2019."

Many believe that by establishing targets for attacking the ravages of climate change that would have been unimaginable a decade or so, China has manoeuvred itself into a leadership position in advance of COP21. At the historic US-China Climate Summit in Beijing in November 2014, the governments of the two superpowers paved the way for this by announcing that they would work together "to make sure international climate change negotiations"¦ reach agreement as scheduled at the Paris Conference in 2015." The US-Chinese accord was hailed by environmental groups such as Ceres, which describes itself as a non-profit organisation advocating for sustainability leadership, as a "game-changer" in the global battle against global warming.

When Premier Xi met US President Obama in Washington in September, they reaffirmed their "shared conviction that climate change is one of the greatest threats facing humanity and that their two countries have a critical role to play in addressing it".

At the same time, the China-US Joint Presidential Statement on Climate Change reaffirmed China's commitment to promoting "green power dispatch, giving priority, in distribution and dispatching, to renewable power generation and fossil fuel power generation of higher efficiency and lower ***emission*** levels."

**Load-Date:** December 21, 2015

**End of Document**



[***Monday's letters including 'Who does revamped road really benefit?'***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HYW-YC11-JBR2-11Y3-00000-00&context=1516831)

Worcester News

January 30, 2016 Saturday

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**Section:** NEWS

**Length:** 640 words

**Body**

SIR - The A4440 leading to junction seven on the M5 motorway has been extensively altered recently but not to the benefit of the people of south Worcestershire.

Road users from Malvern regularly encounter serious congestion on this route principally because of the traffic islands at the Ketch and Norton lane.

Both of these islands should have been modified to include underpasses which would have allowed motorway traffic unhindered progress to a better thought out gyratory system and on to the motorway.

Driving to the Worcester hospital the other day I came across the ultimate insult to the people of south Worcestershire.

A sign by the side of the road instructing drivers when queuing to use both lanes of the newly created dual carriageway. There has clearly been a total lack of imagination by local planners as to the needs of local drivers.

Is it too late to give serious consideration to major alterations of this road especially in view of the additional 800 new homes planned for at Newland on the outskirts of Malvern.

COUNCILLOR BRIAN REGIMBEAU

Malvern

Science must be used for ethical purposes

SIR - We hear on the national news about  the so-called "global economy".  I have yet to understand how this might exist as an entity?  Perhaps someone might enlighten me?

We also learn that "DNA editing" is now a possibility for some scientists apparently interested in discovering why some women miscarry.  It will involve experimenting on left-over human embryos after IVF.  I believe and fear that such experimentation may well lead to cloning.

I doubt that I am alone in regarding this as immoral,  highly dangerous and obscene and that there needs to be legislation to protect  the human race from other humans indulging (themselves)  in so-called "science"  (L. "scire":  to know).  Let science be used for beneficial, positive and what most of us could regard as ethical purposes.

WENDY HANDS

Upton-upon-Severn

No improvement until ring road is done

SIR - The congestion in Worcester will not improve until the ring road is completed and these days  people do not come to the city shopping. What happened to the proposed building at Shrub Hill Station and demolishing the old Co-op Building and for more shops there?

Instead of allowing John Lewis to build on ***land*** needed to improve the Royal Worcestershire hospital, any parking there would be shared by shoppers and not help the hospital.

WENDY TURBERFIELD

Worcester

We don't want these sort of people here

SIR - Shocking is the word that comes to mind reading a recent report in  national newspaper.

A 42-year-old Slovakian immigrant, with a history of violence in his homeland batters a 89-year-old with a knuckle duster!

Viktor Lakatos has served six years in Slovakia for grievous  bodily harm, yet was allowed to walk on to these shores due to the freedom of movement policy with his wife and two kids in 2012 to live on benefits and handouts ever since.

He spotted a defenceless 89-year-old outside his jewellery shop, followed him home and beat him to rob him... to top upthe benefits he received. We do not want animals like this in this country.

GB DIPPER

Leominster

Going vegan is answer to global warming

SIR - I totally agree with Councillor Neil Laurenson of Worcester Green Party when he says "we need to take serious action on climate change to secure a safe climate for ourselves now" ("The changing climate is a very real concern", Worcester News, January 14).

One of the best ways we can all do this, and protect the environment in general, is by going vegan or at least reducing our consumption of animal products.

This is because livestock and their by products ***account*** for 51 per cent of all ***greenhouse gas*** ***emissions*** and animal ***agriculture*** is responsible for considerably more of such ***emissions*** than the combined exhaust from all transportation.

PETER TALBOT

Worcester

**Load-Date:** January 30, 2016

**End of Document**



[***-University of Cambridge - Paying farmers to help the environment works, but 'perverse' subsidies must be balanced***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GXR-H751-F0K1-N1SR-00000-00&context=1516831)

ENP Newswire

September 15, 2015 Tuesday

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**Length:** 1073 words

**Body**

First analysis of effectiveness of agri-environment schemes measured at a national level suggests that they work, but are still a drop in the ocean compared to huge government subsidies received by farming industries for environmentally damaging practices.

New research suggests that offering financial incentives for farming industries to mitigate the impact ***agriculture*** has on the environment, by reducing fertiliser use and 'sparing' ***land*** for conservation, for example, actually has a positive effect on critical areas such as ***greenhouse gas*** reduction and increased biodiversity.

It has been a point of contention whether such 'cash for conservation' initiatives succeed. For the latest study, researchers aggregated investment in environmental incentives at a national level for the first time, and, by comparing them to broad trends in environmental outcomes, found that paying the ***agriculture*** industry to help the environment seems to be working.

However, the research team also mapped the proportion of global ***agricultural*** production reinvested in environmental incentives, and compared it to the proportion gifted to the industry through government subsidies. As expressed in pie charts, the results show big wedges of subsidy stacked on top of barely perceptible slivers of environmental investment.

For example, around 20% of the value of ***agriculture*** production in the EU is subsidised by the taxpayer. However, less than 1% goes towards mitigating the toll farming takes on the natural world - despite ***agriculture*** contributing more to environmental degradation than any other economic sector, say researchers.

The team describe current ***agriculture*** funding models as 'perverse subsidies': promoting negative actions in both the long and short term by being bad for the environment and costly to the economy.

They argue for a redressing of the massive imbalance between government money spent on farming subsidies, and that spent on lessening the damage farming does to the environment.

Consumption of environmental services, such as water (crop irrigation alone counts for 70% of the world's freshwater withdrawals), should be taxed, say the researchers, and any subsidies should be paid on the proviso that they are as much for protecting the ***land*** as for farming it.

'Our results show that paying farmers to do things that are good for the environment actually seems to work when averaged across national scales,' said lead author Dr Andrew Tanentzap.

'In many parts of the world, governments already provide huge subsidies to the ***agriculture*** industry; if we are paying people to be farmers, part of that payment - indeed, part of the job of a farmer - needs to be protecting the countryside as well as farming it,' he said. 'We need a shift in what it means to be a farmer.'

The work, conducted by researchers from Cambridge University's departments of Plant Sciences and Zoology, is published today in the open access journal PLOS Biology.

While national data for environmental performance is limited and difficult to quantify, the research team were able to plot investment in two key agri-environment schemes, ***land*** 'retirement' for conservation and limiting fertiliser use, against national trends for farmland bird populations and ***emissions*** from synthetic fertiliser across landmasses including the US, Canada, Australia and Europe.

They found that, broadly speaking, higher national investment in these environmentally-friendly incentive schemes over a five-year period correlated with increased levels of bird biodiversity and lower rates of gas ***emissions*** from farming.

'There's controversy around whether such environmental incentives actually work at a local scale. What we've done is average out the local effects to pull out what's happening on a very large scale, and it looks like there are benefits to paying farmers to be kinder to the environment,' said Tanentzap.

However, Tanentzap points out that paying farmers to be more environmentally-friendly won't solve the problem of food security, and if these schemes reduce crop yields it may result in increased production elsewhere: 'displacing the impacts that we are paying some farmers to mitigate'. He says that, in the worst cases, this results in further ***land*** being sucked into the ***agricultural*** churn.

'A result of many agri-environment schemes is the spreading out - or 'sharing' - of ***land*** for both farming and the natural environment. A lot of research, much of it driven by conservation scientists here in Cambridge, shows that this is less effective than simply removing the ***land*** from production - 'sparing' it for conservation.'

'The most logical solution would be to intensify production on existing ***lands***, trying to minimise environmental impacts with regulations, incentives for good environmental performance, or consumption taxes, while protecting ***land*** elsewhere for conservation,' Tanentzap said.

The researchers say that tackling the huge disparity between government subsidies and environmental incentives needs to be the first step in reducing conflict between ***agriculture*** and the natural environment, something they say has traditionally been difficult to achieve because of the power behind agri-food lobbies.

They write that while governments continue to subsidise production and famers are not ***accountable*** for the costs of their actions because associated penalties are trivial, damaging the environment will remain highly financially lucrative - with devastating consequences.

However, simply removing subsidies alone fails to reduce environmental harm, and incentives for better farming practices are still required. In the paper, researchers look at the case of New Zealand, where there are no subsidies or mitigation schemes, and much of the country has been transformed into a massive dairy farm for China as a result, says Tanentzap.

'Subsidies for production date from the post-war era, when feeding a booming population was paramount. Food security is, of course, still a major issue as populations continue to rise, but there are ways to deliver this without destroying the planet,' Tanentzap said.

'If the ***agriculture*** industry is to be subsidised, then paying farmers to protect the environment - rather than just stripping as much use from the ***land*** as possible - is something our study has shown to be effective, and something the natural world is in dire need of.'

[Editorial queries for this story should be sent to [*newswire@enpublishing.co.uk*](mailto:newswire@enpublishing.co.uk) ]

**Load-Date:** September 15, 2015

**End of Document**



[***Now is the time to lead, not plead Taoiseach***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HHY-NV21-DY9P-N020-00000-00&context=1516831)

Irish Independent

December 5, 2015 Saturday

Edition 1, National Edition

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**Section:** NEWS; Pg. 30,31

**Length:** 929 words

**Byline:** Paul Melia

**Body**

N a week when almost 150 heads of state gathered in Paris for the UN climate summit, Taoiseach Enda Kenny once again proved that all politics are local.

IAddressing the 21st Conference of the Parties (COP21), he said all countries "big and small" had to take action to address climate change, and that Ireland would play its part - as long as it didn't hamper growth in the ***agriculture*** sector.

"We don't want to see a situation where we are limited in what we can produce to find that food is being produced in other countries with inferior standards and higher ***emission*** levels," he said.

But what the Government really doesn't want to see is a situation where the country's 140,000 farming families vote for someone else come next year's General Election.

Not until after 2020 when our economy recovers will the State be in a position to meet "aggressive targets" to reduce agri ***emissions***, Mr Kenny added. Next year, it will seek lessonerous targets for the sector, pleading we are a special case.

His comments may have played well among some, but they showed that the Taoiseach is no statesman, but a local politician pandering to his constituents.

As was noted on twitter, it seems all global eco-politics are local.

Reaction was tinged with a sense of disbelief that the Taoiseach was in effect telling the world's poorest that Ireland - a first-world developed nation - was too cashstrapped to help address a problem which would profoundly impact upon those least able to cope.

"We're probably going to be dragged (into this) kicking and screaming," Trocaire's executive director Eamonn Meehan said, criticising the lack of leadership.

Satirical website Waterford Whispers News didn't hold back in a sketch about the Fine Gael leader needing surgery to remove his head from a certain part of his anatomy.

The article helpfully noted that the condition of "Headious Up Arsesus" left the afflicted "unable to perform basic tasks like putting the health of the nation and its environment ahead of a few farmers who might not vote for him if he pushes for a reduction in agri-sector pollution."

It's abundantly clear as to why farmers were being addressed by Mr Kenny in his conference speech, and not the global community.

With Fine Gael hovering at around 30pc in the opinion polls, and Labour lagging between 7pc and 9pc, the coalition is facing into a difficult General Election and needs every vote it can muster.

The powerful farming lobby will play a huge role in the formation of the next government, hence the 'not at any cost' line, a sentiment which has also come from Labour's Environment Minister Alan Kelly.

But this stance flies in the face of showing leadership and vision, and once again demonstrates that despite our image, Ireland's green credentials are seriously lacking.

Across the EU, ***agriculture*** ***accounts*** for 12pc of all ***emissions***. In Ireland, it's 33pc. Our household ***emissions*** are higher than average. Some 92pc of our energy is produced using fossil fuels, compared with 75pc across the EU, and we produce 20pc more waste per head of population than our neighbours.

The Climate Action and Low Carbon Development Bill which passed through the Oireachtas this week is welcomed, as it creates a statutory obligation to meet targets, but it doesn't go far enough.

In particular, it gives government two years to produce plans on how to tackle the ***agriculture***, transport, energy and buildings sector - work which should have started years ago.

Had we very clear and concise plans to get people out of their cars and onto public transport, and if we were heavily investing in energy-efficiency to reduce power consumption, there might be a case to be made for giving ***agriculture*** special status.

But we haven't, and we now run the risk of missing EU targets which will result in financial penalties.

There's no doubting the importance of the ***agriculture*** sector to the economy, ***accounting*** for more than 12pc of our exports and just under one-in-ten jobs.

With 139,600 farms, more than half (56.5pc) are specialist beef producers, and just over 11pc specialist dairy, according to the Central Statistics Office (CSO).

The problem is belching and farting cows produce methane which is among the most problematic of all ***greenhouse gases***. Coalition plans to ramp up production will only exacerbate the problem, regardless of how sustainably food is produced.

Output is already increasing, and the number and size of farms is also on the rise. According to the Farm Structure Survey from Eurostat, the number of holdings fell in all EU member states between 2003 and 2013 except Ireland, and there are 1,235 more farms today than a decade ago.

Each is, on average, four hectares bigger. As custodians of the ***land*** over generations, farmers do more than most to protect the environment.

But they are the very people who will be among the most affected unless climate change is tackled. It's not a question of 'if', but 'when'.

Winter rainfall is expected to increase, resulting in more flooding. There's also a risk of summer drought, and the real prospect of pests and diseases expanding their range, resulting in loss of crops.

As website [*www.uplift.ie*](http://www.uplift.ie) noted, now is the time to lead, and not to plead. Climate change poses an enormous threat to our health, wealth and well-being.

The Government's stance is doing no-one any favours, and may end up harming our ***agriculture*** sector in the long-term.

Climate change poses an enormous threat to our health, wealth and well-being. The Government's stance is doing no-one any favours, and may end up harming our ***agriculture*** sector in the long-term.

**Graphic**

Representative of indigenous peoples stage a demonstration during the World Climate Change Conference 2015 (COP21) at Le Bourget, near Paris. Right, President Hollande meets Taoiseach Enda Kenny at the opening of the conference.

**Load-Date:** December 5, 2015

**End of Document**



[***ERRATUM: Implementation of INDCs another red line Africa will not cross in COP 21 negotiations, according to AMCEN Chair***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HK2-5Y71-JD3Y-Y20S-00000-00&context=1516831)

FinancialWire

December 10, 2015 Thursday

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**Length:** 1034 words

**Body**

ADDIS ABABA, Ethiopia -- The joint Pan African lead institutions brought together African ministers; representatives of their leaders and policymakers to plan the way forward under a new climate change agreement in Paris while upholding Africa's priorities through regional solidarity on the Intended Nationally Determined Contributions (INDCs) during the 2015 United National Conference on Climate Change in Paris (COP21) Africa Day event today.

The three Pan-African institutions, including the African Union Commission (AUC); the African Development Bank (AfDB); the United Nations Economic Commission for Africa (UNECA) and the NEPAD Planning and Coordinating Agency (NPCA) brought together hundreds of African policy makers and experts attending COP 21 to enlighten them on Africa's proposed amendments to the draft Paris Agreement (especially Articles on the INDCs) now making its way through the negotiation process.

The Egyptian Minister of Environment, Dr. Khaled Fahmy who currently chairs the African Ministerial Conference on Environment (AMCEN) told the meeting that the provision of means of implementation for the INDCs is a thick red line that Africa will not cross in Paris just because "we want an agreement at all cost."

He said that the other red lines concerned the necessity to have an agreement with a real balance between adaptation and mitigation; while the other is on the legally binding aspect of the expected agreement.

"We are not in Paris to re-write the Convention but to ensure its judicious implementation", he said, charging that "all African countries having drawn up their different INDCs in accordance with the Peru outcome, the time now is for implementation; and for all to abide by it.

All parties to the COP21 including African countries are expected to express their INDCs--public declarations of post-2020 climate actions they intend to take under a new international agreement to help global mitigation ambitions, as well as adaptation goals within the context of their national priorities, circumstances and capabilities. With INDC submissions to date, global warming is expected to be maintained at 2.7 degrees Celsius, which is above the global ambition of 2 degrees Celsius increase. So far, out of the fifty-four African nations, fifty-three have submitted INDCs.

The day began with an opening session chaired by the Ethiopian Minister of Environment, ***Forest*** and Climate Change. The AU Commissioner for Rural Economy and ***Agriculture***, Mrs. Tumusiime Rhoda Peace in her opening statement, stressed that the Africa Day is not about lamenting the risks and challenges posed by climate change, but instead to serve as an opportunity for the continent to showcase to the rest of the world solutions underway to mitigate these challenges, specifically through the development of INDCs.

"The Paris Climate COP is the pinnacle of the global climate change negotiations that has historic milestone from the Africa COP in Durban COP17". It proofs the level of commitment by the global community in addressing the adverse impacts of climate change and reduction of the ***greenhouse gases***", she said.

Mr. Carlos Lopes, Executive Secretary of the UNECA, said that it is important, therefore, that Africa's Parties submission on INDCs lead to the conclusion of a new agreement under the Convention that is in full conformity with its principles and provisions, in particular those of equity and common but differentiated responsibilities and respective capabilities.

"In addition, Annex I Parties need to make "equitable and appropriate" mitigation contributions towards achieving the objective of the Convention taking into ***account*** their cumulative historical responsibility and use of atmospheric space and resources and that cumulative ***emissions*** in Africa remain extremely low", Mr. Lopes concluded.

The contributions forthcoming from developed country Parties relating to mitigation, adaptation, finance, technology and capacity are in a balanced manner in the context of a global and comprehensive agreement for the period beyond 2020.

AfDB representative, Anthony Okon Nyong, speaking on behalf of Mr. Akinwumi Adesina, AfDB President noted that "the vision of the African Heads of State and Government to embrace green growth and low carbon development for Africa's transformation outlined today are meant to propel us into a future which promotes sustainable development for generations to come."

"Africa has come with solutions on renewable energy; adaptation and loss and damage", he said.

There were two technical presentations on INDCs by the African Group of Negotiators on Climate Change and the UNECA. A Ministerial dialogue followed on INDCs showcasing Africa's readiness in addressing climate change, including its ability to deliver on its own potential with international cooperation in addition to the contribution of INDCs to the overall development of the continent. The ministerial dialogue was chaired by H.E Ambassador Ramtane Lamamra, Foreign Minister of Algeria; and vote of thanks was given by H.E Dr. Elham Ibrahim, Commissioner for Infrastructure & Energy, AUC while Ms. Olushola of the AUC served as a Master of Ceremony.

Over 500 participants attended Africa Day, which saw the participation of high level delegates from the governments of Algeria; Cameron, Egypt, Ethiopia, Malawi, Namibia, Niger, Nigeria, South Africa and Uganda, in addition to the African Group of Negotiators on Climate Change, African Union Commission, African Ministerial Conference on Environment, Pan-African Parliament, African Development Bank, East African Community, European Investment Bank, Green Climate Fund, International Labor Organization, NEPAD Planning and Coordinating Agency, Pan African Climate Justice Alliance, United Nations Development Program, and United Nations Economic Commission for Africa.

Throughout the day, leaders discussed the region's priorities with respect to climate change, while considering the status of INDCs development in Africa and their challenges and opportunities moving forward in implementation.

Distributed by APO (African Press Organization) on behalf of African Union Commission (AUC).

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**Load-Date:** December 10, 2015

**End of Document**



[***The billion-pound Prince: landmark figure reached by Duchy of Cornwall; ROYAL FAMILY Charles gets a stipend from historic estate's earnings. By Cahal Milmo***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K4P-X561-JCS0-D3RS-00000-00&context=1516831)

i-news

July 2, 2016

First Edition

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**Section:** NEWS; Pg. 31

**Length:** 801 words

**Body**

Sporting a cover photograph of the heir to the throne and his wife sheltering under umbrellas at the top of an impressive tree-lined drive, the annual review of the Prince of Wales, released by his office this week, is a thorough document.

Its 40 pages, sprinkled with pictures of Prince Charles and the Duchess of Cornwall going about their duties, revealed that the future monarch's "salary" last year surpassed £20m for the first time; that he and Camilla personally replied to 3,027 of the 63,127 letters received; and that ***greenhouse gas*** ***emissions*** from travel and domestic activities fell by a fifth to 1,266 tons.

But it was in a different royal document released this week, which unlike the review was not tweeted by Clarence House to its 555,000 Twitter followers, that a figure of an altogether different magnitude was revealed. Namely, that Prince Charles is the beneficiary of an enterprise whose assets have for the first time topped £1bn.

The organisation is the Duchy of Cornwall, the ***land***, property and treasure carved out by Edward III in 1337 to provide an income to the heir to the throne and his dependents in perpetuity.

The annual report and ***accounts*** of the Duchy, published on the same day as Clarence House's separate review, revealed the holdings of the estate, which range from most of Dartmoor to a Waitrose warehouse in Milton Keynes, are now worth £1,021,724,000 - an increase of £37m from the previous year.

The rules that govern the professionally managed Duchy mean that Charles has no direct access to, or control of, the estate's capital or assets, the £1bn does translate into gure for his rsonal wealth, en though he ays an active le in setting s "ethos".

so th not a fig per eve pla rol its Pr th su Dd Instead, the rince is paid he annual urplus from the Duchy's income, derived from commercial rents c o L d i ldi t on properties in London, including the Oval cricket ground, to profits earned by a biodigester in Dorset. Last year that was £20.47m, an increase of 3.1 per cent on the previous year. The money is used by the prince to meet the expenses of himself and the Duchess of Cornwall, and those of his sons and the Duchess of Cambridge.

The passing of the £1bn mark is a symbolic landmark in the stewardship of the Duchy's considerable assets, which cover some 53,000 hectares of ***land*** across 23 counties in England and Wales.

Royal aides said the publication of the ***accounts*** underlined the desire of Prince Charles to be candid about the source of his income as he builds on his agenda of tackling environmental issues and supporting rural communities.

An official said: "This is the Prince of Wales deciding that he wants to be transparent about his private money. All the money being ***accounted*** for here is the Prince of Wales' own money from the Duchy of Cornwall."

The organisation is providing increased information on its affairs after previously facing criticism that its dealings were too opaque. i revealed three years ago that the Duchy had spent £38m on the distribution warehouse in Milton Keynes, a purchase which was only publicly acknowledged as a result of this paper's investigation some 18 months after the deal's completion.

But when the Duchy last year spent £35m on a second Milton Keynes warehouse, it issued a press release announcing the deal.

Critics, nonetheless, argue that the Duchy continues to benefit substantially from its rather unique status in Britain's constitutional landscape - it is subject to the scrutiny of the Treasury but considers itself to be a private entity. It does not pay corporation or capital gains tax on its revenues but Prince Charles voluntarily pays income tax on the surplus he receives - totalling £5m last year.

The Duchy insisted that its balance sheet was in a "healthy position", growing its net assets by 1.3 per cent year-on-year.

As well as its growing portfolio of 14 commercial properties, it holds, among other assets, ***agricultural*** ***land*** worth £365m, including flower farms on the Isles of Scilly.

But after years of success in meeting its goal of returning to Prince Charles an above-inflation surplus, the Duchy warns heavier financial weather may lie ahead.

Alastair Martin, the Duchy's chief executive, said: "There are ongoing demands from within the estate for the capital funds we generate, with the consequence that growing the revenue surplus above inflation will be challenging."

Meanwhile, Clarence House is anxious to avoid the perception Prince Charles has suddenly acquired a huge personal fortune.

A spokeswoman said: "The Prince of Wales has no access to the Duchy's capital. The 'healthy balance sheet' is testament to HRH's successful stewardship of the Duchy over more than 45 years, and his desire to nurture and improve the estate, to pass it on to the next generation in a stronger condition."

**Load-Date:** July 1, 2016

**End of Document**



[***Countryfile - 5:31 PM GMT***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K51-7GH1-JBH6-C0B8-00000-00&context=1516831)

TVEyes - BBC 1 London

July 3, 2016 Sunday

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**Section:** U.K. NATIONAL; Lifestyle

**Length:** 696 words

**Anchors:** John Craven

**Highlight:** Countryfile reports on rural and envionmental issues in the United Kingdom. By visiting different parts of the British countryside the presenters uncover the topics of wildlife, conservation, farming, food production and social history.

**Body**

**Speech to text transcript:**[[1]](#footnote-2)1

for as far as the eye can see. This is the picturesque coast of Pembrokeshire. And every couple of years a flotilla of boats gathers here for a very special celebration of this area's marine heritage. This is just part of that flotilla, and later on I'll be going on board to discover more about it.

Helen's cooking up a seaweed-y storm in a surfer's paradise. I add it to baked beans now, I add it to porridge, I add it to everything. Porridge? Yeah. You are so in love with seaweed, it is scary. Tom's looking at why gas ***emissions*** from farms are causing such a problem. ***Agriculture*** and ***land*** use change ***account*** for between a fifth and a quarter of the world's ***greenhouse gas*** ***emissions***. And Adam's transporting some of his cattle to pastures new. It is not a simple process, moving animals - something you can't do on a whim. OK, girls. This is your new home. Pembrokeshire's spectacular shores are famously scenic - one of our landscape's richest treasures. But the coastline is cleft in two by this vast estuary, where four rivers meet and drain into the Celtic Sea. It's called the Daugleddau, and on its banks lies the Port of Milford Haven. A twisting ribbon of wide, deep water, the estuary has shaped local livelihoods and industries. It's one of the world's greatest natural harbours. It's rightly called the Haven, and for as long as there have been boats, they've found shelter on this waterway. David James of the West Wales Maritime Heritage Society takes great pride in the history of his local patch. David. Hello, John, how are you? Fine, thank you. This place has got an amazing seafaring history, hasn't it? Oh, absolutely tremendous. Legend has it the stones for Stonehenge were transported down this very waterway. And at least one prehistoric boat has been discovered in Milford. A lot of the island names have Viking names, like Skomer, Skokholm, and Hubba, a suburb of Milford Haven. And of course it's always been boat building here, shipbuilding. Oh, absolutely. There were two royal dockyards in Pembrokeshire. There was one in Milford that built seven ships for Nelson's navy. But they built a great number of ships right here in Pembroke Dock. Including five Royal yachts for Her Majesty Queen Victoria. And has the sea attracted you since you were a boy? Oh, yes, I've always pottered about on the beach and fished and sailed, and my dad's taught me seamanship, and his dad taught him seamanship, so we go back a long way in Pembroke Dock. So you're obviously very passionate about this place. Well, who cannot be passionate about Pembrokeshire? This is the best place in the world to live. But not all the vessels that pass through here are as grand as royal yachts. A little humbler are the small, local craft that the heritage society rescue and preserve. Brian King is a retired pilot who's swapped planes for boats. Hello, Brian. Some restoration work going on here. Yes. What kind of boat is it? It's a Pembroke One Design. We don't know the exact history of this one - she was donated to us - but they were built in the late '30s and they were used for racing. So what have you had to do to this one, then? Quite a lot of work. If you look in the boat there, you can see the lighter-coloured planks that have been replaced. And what's an airline pilot doing restoring boats? It's an ideal spot to get involved with boats. I've always liked woodwork and I really enjoy sailing the heritage boats, as well. And lots of new skills to learn. Lots of new skills to learn. We've got lots of different members, we've all got different skill sets. We've got about 20 people who turn up every week. The heritage society's volunteers come here for many different reasons. Luke is one of the regulars. It's easy to come here because I only live up the road. And so I can come in most days. And what sort of work do you do? Well, mending the boats, there's mowing the lawn, the angle grinder. I like it here. And there's some very interesting people here who... And intelligent conversation most of the time. THEY LAUGH

**Load-Date:** July 3, 2016

**End of Document**



[***RESTORE OUR BOGS, FOR PEAT'S SAKE; Bord na Móna bears more responsibility than anyone for the mass destruction of peatland habitats. The organisation is changing, and its new approach is promising. But there are still challenging times ahead***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JS8-7G11-JC8Y-8067-00000-00&context=1516831)

The Irish Times

May 14, 2016 Saturday

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**Section:** WEEKEND; Pg. 6

**Length:** 1247 words

**Byline:** Paddy Woodworth

**Body**

There could hardly have been a more appropriate launchpad for Bord na Móna's second five-year biodiversity action plan last month than Lough Boora Discovery Centre, in Co Offaly. This handsome building sits in the heart of the company's showpiece for its (relatively new) commitment to environmental stewardship. A noonday chorus of birdsong interrupted the speakers.

The Boora rehabilitation project earned a glowing endorsement from one of our wisest and most knowledgeable bog experts, John Feehan, when it was nominated for the *Irish Times* Best Place to Go Wild in Ireland award two years ago: "This is a true wilderness, in the sense that here nature is left to itself across a vast area of cutaway raised bog, exhibiting an ecological vitality nobody imagined when contemplating what looked like barren brown desert while the bogs were being harvested of their peat." It is enormously popular with hikers, bikers, picnickers and nature-lovers.

Feehan launched Bord na Móna's new biodiversity plan at Boora last month, and he expressed an equally lyrical and well-informed vision for the future of the company's whole estate - 80,000 hectares - "when its great machines fall silent".

But this vision, and the plan itself, are grounded on a painful past, and face difficult questions in the immediate future. No single agency or individual bears as much responsibility as Bord na Móna for the mass destruction of peatland habitats.

And the announcement last year that the company intends to continue peat extraction, and operating turf-fired power stations, until 2030 has drawn sharp criticism. Last year An Taisce won a High Court case obliging An Bord Pleanála to examine the multiple environmental effects of extraction much more closely before renewing the licence of the company's Edenderry plant.

"What Bord na Móna are doing in their biodiversity action plans is completely inadequate," Ian Lumley of An Taisce says, "since they are locked into an overall strategy that is absolutely unsustainable."

Gerry Ryan, the company's director of ***land*** and property, responds that "we understand very well that we have to transition away from peat production, but we must also preserve employment; it would not be reasonable to abandon that goal. There will be a significant reduction in production well before 2030."

**Cultural shift**

It is certainly evident that a substantial cultural shift on environmental issues has been taking place within the company. At the launch a local Bord na Móna worker recalled the derision that he and his colleagues had initially encountered in the early 1990s when they first proposed setting aside some of the Boora site for recreation and nature. Now such actions are central to company policy.

The changing attitude to the values within bogland came not just from enlightened management - the former chief executive Gabriel Darcy deserves credit for promoting the company's New Contract with Nature - but also from within the workforce itself. Indeed, the new plan pays tribute to the role of Tom Barry, who argued for bog conservation within Bord na Móna as early as the 1970s.

By 2001 the company had appointed Catherine Farrell its first in-house ecologist. In 2008 she persuaded her employer to end a long conflict with Abbeyleix citizens who objected to peat extraction from a nearby bog. The restoration project that followed became a model for co-operation between Bord na Móna and local communities.

She now leads a highly regarded team with two colleagues, David Fallon and Mark McCorry. They developed and implemented the previous biodiversity plan and drew up the new one, in consultation with a range of stakeholders, including environmental NGOs. The plan just completed has produced big advances, Farrell said at the launch.

"We have rehabilitated 12,000 hectares of our 80,000-hectare ***land*** holding," she says, "and we have restored 1,000 hectares of active raised bog."

Rehabilitation refers to the rewetting of bogs that have been stripped of turf, creating valuable new wetland habitats - and new woodlands eventually.

Restoration of active raised bogs is a much more ambitious enterprise. It seeks to re-create the complex hydrological and ecological processes through which regenerated sphagnum moss habitats will form new peat in the future.

**Last to survive**

Ireland's few active raised bogs, none of them entirely undamaged, are among the last to survive in Europe. Some of the best examples are still endangered by continuing private turf-cutting, although it is illegal on designated sites. Bord na Móna no longer extracts peat from active raised bogs.

John Feehan says the new plan represented "the cusp on a rising graph of awareness, in appreciation of the importance of the ecological processes at work on the cutaway bogs in our care, and of how to maximise the potential in that."

Feehan paints an eloquent picture of a potential future on our boglands where, though much is gone forever, "there is a mosaic of woodland and wetland and wild grassland, which . . . can spread and interconnect with other areas of new wildness to create an ecological network where our grandchildren . . . can wander and explore wild diversity and abundance of a kind we lost in our lifetime."

Perhaps the most hopeful sign for the future at the launch was the presence of three teenagers from Athlone Community College: Fiona Molloy, Louise Egan and Sarah Denby.

Their project on the ***greenhouse-gas*** dynamics of restored bogs - a topic that challenges specialists - was supported by Bord na Móna and won the Environmental Protection Agency special award at this year's BT Young Scientist & Technology Exhibition.

"We are all from ***agricultural*** backgrounds, with bogs on our farms," they say, "but we didn't realise how beautiful, and how important, bogs are till we saw an *Eco Eye* programme on rewetting. People who still cut turf don't realise this."

They rang the people mentioned in the programme, and developed their project. They are now working for bog conservation, starting with trying to persuade their parents to stop cutting turf, and promoting youth awareness through their Bog Blog (4peatssake. myfreesites.net).

"The most exciting thing," says Molloy, "is to see how quickly the sphagnum grows back on a restored bog."

**Plan 'People should monitor our progress'**

Catherine Farrell, Bord na Móna's chief ecologist, is not complacent about the prospects for the company's new biodiversity action plan, which runs until 2021. In terms of innovation, Farrell singles out the development of natural-capital ***accounting*** within the company, a system that expresses the full economic benefits of "ecosystem services" such as carbon sequestration and pollination - and of environmental costs such as carbon ***emissions*** - to inform decisionmaking.

She says that this will be a period with many challenges and opportunities, as more and more of the peatland estate comes out of production. "The public will want to know," she says, " 'What will happen to all this ***land***? Will we be able to walk there?' Or 'If it's a nature reserve, will it be full of foxes and badgers, with impacts on our farms?' "

Although she is keen to see as much ***land*** dedicated to biodiversity as possible, she does not believe in a one-size-fits-all model. She encourages local communities and stakeholders to participate in this huge change in ***land*** use. "We expect to deal with the public. People should monitor our progress against our plan. That's good quality control."

**Load-Date:** May 13, 2016

**End of Document**



[***Climate change will cause food production to plunge by a QUARTER and increase flooding even in dry regions, experts warn***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J7V-JGM1-F021-62TD-00000-00&context=1516831)

MailOnline

March 7, 2016 Monday 4:00 PM GMT

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**Section:** SCIENCE

**Length:** 1082 words

**Byline:** RUSS SWAN and VICTORIA WOOLLASTON FOR MAILONLINE

**Body**

* Experts used a combination of observations and climate models

1. They found extreme daily precipitation over the last six decades shows 'robust increases' in both wet and dry areas
2. A separate study found food production could plunge by a quarter by 2050
3. Both studies point the blame at climate change and rising temperatures

The latest climate predictions show that both wet and dry places will experience more rainfall in the future, and that rising temperatures will decimate farmland.

This will increase the chance of flooding everywhere, including regions that are currently dry, and could cause food production to plunge by a quarter.

These stark warnings come from two separate studies looking into future climate patterns.

The first was carried out by Dr Markus Donat and his team at the University of New South Wales, Sydney.

Using a combination of observations and climate models, Dr Donat found that extreme daily precipitation over the last six decades shows 'robust increases' in both wet and dry areas.

He found that precipitation extremes have increased by about 1 to 2 per cent per decade since 1950, in both wet and dry regions, and there are 'statistically significant' trends towards wetter conditions for both total precipitation and extreme events.

Critically, the steady increases in rainfall were found to be directly related to the rise in global temperature.

CLIMATE CHANGE WILL 'KILL HALF A MILLION' BY 2050

At least half a million people will die in the year 2050 as a result of the impact climate change will have on food production, according to experts.

The stark forecast is expected to occur because of changes in diet and bodyweight from reduced crop productivity.

Most of these additional deaths will be in China, India, and other low-income countries in the Pacific and Asia, but the effects on food availability will also reach into richer countries.

Writing in The Lancet, Dr Marco Springmann from the Oxford Martin Programme on the Future of Food at University of Oxford claimed climate change could cut improvements in food availability by about a third by 2050.

This would lead to around 3.2 per cent less food being available for the average person.

With temperatures expected to rise further, according to climate models, this will mean more rainfall everywhere - including places that have historically been dry.

This surprise finding overturns what was previously expected.

When analysing local rainfall patterns, Dr Donat reports that 'a wet-get-wetter, dry-get-drier pattern was not seen over most global ***land*** areas.'

Projections show the trend of increasing rainfall is expected to continue until at least the end of the 21st century.

The researchers said this is due to the increased moisture content the atmosphere can carry as it becomes warmer.

While increased rainfall in the world's drought zones may be welcomed, the researchers say this may not lead to more water being available because it could evaporate quickly.

It might, though, lead to many more cases of flooding because these regions do not have the right infrastructure to cope with extreme rainfall.

The findings are published in the journal Nature Climate Change.

In a separate study, Professor Avery Cohn, of Tufts University in Massachusetts found that food production could plunge by over a quarter by 2050 because of climate change.

Feeding the world's soaring population will become much more difficult than previously feared because two key human responses to global warming have been overlooked.

These include how much ***land*** people choose to farm and the number of crops they plant in a season.

An increase in average temperature in the Brazilian state of Mato Grosso of only one degree Celsius will lead to a nine to 13 per cent reduction in soy and corn.

Professor Cohn said: 'This is worrisome given the temperature in the study region is predicted to rise by as much as two degrees by mid-century under the range of plausible ***greenhouse gas*** ***emissions*** scenarios.'

The warning comes as the number of people on Earth is set to reach 11 billion by the end of the century - with Africans making up half.

By 2050 the global population will rise from 7.3 billion to 9.7 billion and by 2100, Africa's current population of 1.2 billion is expected to explode to 5.6 billion.

The study, also published in Nature Climate Change, focused on Mato Grosso as it's an emerging global breadbasket - supplying 10 per cent of the world's soybeans.

It used variations in temperature and rainfall across the state from 2002 to 2008 to estimate the sensitivity of the region's ***agricultural*** production to climate change.

FOOD AVAILABILITY IN 2050

A recent study reveals that, unless action is taken to reduce global ***emissions***, climate change could cut the projected improvement in food availability by about a third by 2050.

This could lead to average per-person reductions in:

- Food availability of 3.2 per cent (99 kcal per day)

- Fruit and vegetable intake of 4.0 per cent (14.9g per day)

- Red meat consumption of 0.7 per cent (0.5g per day)

The effects of climate change on food production could be responsible for around 529,000 extra deaths in 2050, the study said.

Those historical comparisons can help in making predictions about the sensitivity of ***agriculture*** to future climate change.

The study's broader implications stem from the mechanisms behind the changes in ***agricultural*** output.

Most studies of this kind look only at the extent to which climate shocks affect crop yield - the amount of product harvested from a given unit of ***land***.

But by only looking at that single variable researchers can miss critical dynamics that can affect overall output.

Professor Leah VanWey, of Brown University in Rhode Island, added: 'If you look at yields alone you're not looking at all of the information because there are economic and social changes going on as well.

'You're not taking into ***account*** farmers' reactions to climate shocks.'

Farmers could react to decreasing yields by putting less ***land*** area into production because it's simply not profitable or vary the number of crops they plant in a growing season.

Double cropping - the planting of two successive crops in the same field in the same growing season - is common in Mato Grosso.

If the weather is bad farmers may alter their decision to plant a second crop.

The scientists now will apply the reason to the US.

**Load-Date:** March 7, 2016

**End of Document**



[***Forestry's climate control role highlighted at Farm Europe conference in Brussels***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HMB-PSS1-JCW9-22B0-00000-00&context=1516831)

Irish Examiner

December 16, 2015 Wednesday

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**Section:** SUPPLEMENTS

**Length:** 166 words

**Body**

He welcomed last week s Paris agreement by 195 countries which seeks to limit global temperature increases to less than 2 degrees, and to pursue efforts to achieve 1.5 degrees through binding commitments to cut ***greenhouse gas*** ***emissions***.

Speaking at a Farm Europe conference in Brussels, he said the agreement includes particular points of importance to the ***agriculture***, food and ***forest*** sectors.

It is also appropriate that world leaders would continue to recognise that while seeking to prevent interference with climate they must do so in a manner that does not threaten food production.

Mr Coveney also noted that the Paris agreement includes recognition of the role of ***forests*** in mitigating climate change and the need to ***account*** for both ***emissions*** and removals, something the Government has been emphasising at EU and UN levels.

The commitments at Paris and in the European Council do not mean that there will be a free pass for ***agriculture*** in the global effort to fight climate change, he said.

**Load-Date:** December 16, 2015

**End of Document**



[***-Kimberly-Clark Professional Partners with US Composting Council and Keep America Beautiful to Create Workplace Composting Guide***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JK7-5T91-F0K1-N1WP-00000-00&context=1516831)

ENP Newswire

April 20, 2016 Wednesday

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**Length:** 1259 words

**Body**

ROSWELL, Ga.- Kimberly-Clark Professional, the US Composting Council (USCC) and Keep America Beautiful have introduced a free Guide to Workplace Composting to help organizations develop workplace composting programs that support sustainability, waste reduction and zero waste initiatives.

The guide provides step-by-step instructions and resources to help office buildings, manufacturing facilities, hotels, hospitals, universities and other workplaces divert organic matter - such as food scraps, used paper towels, coffee grounds and coffee filters - from landfills through composting. Composting is a landfill-free way of using decomposed organic materials to fertilize and condition soil. Compost also can reduce erosion, improve drought tolerance and help reduce the generation of ***greenhouse gases***.

'Composting closes the loop,' said Frank Franciosi, executive director of the US Composting Council. 'It increases organic matter in the soil to grow plants, trees and crops. It's a holistic approach that puts carbon back where it came from.'

Food waste is the single largest component of disposed municipal solid waste and ***accounts*** for a significant portion of U.S. methane ***emissions***, and landfills are the third largest source of methane in the United States.

In September 2015, the United States Department of ***Agriculture*** (USDA) and Environmental Protection Agency (EPA) announced the country's first-ever national food waste reduction goal, calling for a 50 percent reduction by 2030. A number of states, including California, Massachusetts, Vermont and Connecticut, have initiated bans on landfill disposal of food waste from large commercial food waste generators.

A guide for the workplace

Kimberly-Clark Professional decided to create a workplace composting guide for customers who wanted to compost its paper towels, but needed help getting started.

'We're very proud to have partnered with the US Composting Council and Keep America Beautiful to address some of the challenges that workplaces face in creating composting programs,' said Ben Jarrett, North America sustainability leader, Kimberly-Clark Professional. 'It's not hard to do. It just takes some time and planning.'

For Keep America Beautiful, which has a Recycling@Work initiative to support workplace efforts to reduce waste and improve recycling, the collaboration resulted in 'a great resource for those workplaces that are ready to add organics to their recycling programs,' said Brenda Pulley, the organization's senior vice president for recycling.

'Composting is the natural, next step for implementing a 'reduce, reuse, recycle' strategy to give our garbage another life. We want to make it easy for workplaces to implement an effective program, which is why it's so important to support them with the right tools and resources,' added Pulley.

100 percent compostable towels

Every Kimberly-Clark Professional paper towel can be diverted from landfill via composting. Before developing the guide, Kimberly-Clark Professional conducted a composting test of its Kleenex and Scott brand towels at its Roswell, Ga., headquarters. During an initial four-week period, it diverted 2,500 pounds of paper towel waste from 50 restrooms. The compost passed the US Composting Council Seal of Testing Assurance Program tests, indicating that it was suitable for use.

'Our success demonstrates that towel composting programs can be implemented at customer locations, enabling us to provide another solution to improve overall sustainability and reduce the amount of waste sent to landfill,' Jarrett said.

Kimberly-Clark Professional has a long history of innovation and environmental leadership, and has been recognized by leading environmental non-governmental organizations for its efforts. In 2015, it became the first major manufacturer in North America to produce bath tissue and towel products incorporating domestically sourced non-wood fiber. It also was the first away-from-home towel and tissue products company in North America to obtain ***Forest*** Stewardship Council (FSC) certification for a broad range of towel and tissue products, and currently holds the largest portfolio of FSC-certified towel and tissue products in North America. To learn more about Kimberly-Clark's global sustainability efforts, visit [*http://sustainabilityreport2022.kimberly-clark.com/*](http://sustainabilityreport2022.kimberly-clark.com/).

About the US Composting Council

Established in 1990, the US Composting Council (USCC) is the only national organization in the United States dedicated to the development, expansion and promotion of the composting industry. The USCC achieves this mission by encouraging, supporting and performing compost related research, promoting best management practices, establishing standards, educating professionals and the public about the benefits of composting and compost utilization, enhancing compost product quality, and developing training materials for composters and markets for compost products. USCC members include compost producers, marketers, equipment manufacturers, product suppliers, academic institutions, public agencies, nonprofit groups and consulting/engineering firms. The USCC is a non-profit 501 (6) organization that also directs the Composting Council Research and Education Foundation (CCREF), a 501 (3) charitable foundation, which administers public and private research and education activities. For more information, visit   [*www.compostingcouncil.org*](http://www.compostingcouncil.org).

About Keep America Beautiful

At Keep America Beautiful, we want to ensure that beauty is our lasting signature. A leading national nonprofit, Keep America Beautiful inspires and educates people to take action every day to improve and beautify their community environment. We envision a country where every community is a clean, green, and beautiful place to live. Established in 1953, Keep America Beautiful provides the expertise, programs and resources to help people end littering, improve recycling, and beautify America's communities. The organization is driven by the work and passion of more than 600 community-based Keep America Beautiful affiliates, millions of volunteers, and the support of corporate partners, municipalities, elected officials, and individuals. To learn how you can donate or take action, visit kab.org. Follow us on Twitter and Instagram, like us on Facebook, or view us on YouTube.

About Kimberly-Clark Professional

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**Load-Date:** April 20, 2016

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[***REMEMBER THAT PROBLEM WITH THE ENVIRONMENT?; The environment became an unpopular subject during the economic boom and was barely mentioned during the recession.As 'The Irish Times' launches a new Environment page (see page 6, overleaf), we ask campaigners how to reframe the message***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H8G-4361-JC8Y-83BD-00000-00&context=1516831)

The Irish Times

October 31, 2015 Saturday

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**Section:** WEEKEND; Pg. 5

**Length:** 2090 words

**Byline:** Sylvia Thompson

**Body**

Everybody knows the world's fossil fuels are running out. They know that more energy efficiency and renewable-energy technologies are needed. And they know using public transport, insulating their homes and avoiding energy guzzlers such as clothes driers and large vehicles will help tackle the problems, even in a small way.

But the "reduce, reuse, recycle" message became a meaningless mantra when a shopping addiction grabbed the nation. The environment issue was not taken seriously during the boom years, and was all but forgotten during the recession, as politicians grappled with budget deficits, debt burdens and international loans.

At a series of "Climate Conversations" organised in Dublin by environmental and social justice organisations earlier this year, environmental campaigners, trade unionists and policymakers discussed what had gone wrong with the environment message and what needs to be done to fix it.

Oisín Coghlan, director of Friends of the Earth Ireland for the past 10 years, says: "The concept of climate change seems intangible, remote in time and space and a blameless crime, which makes it difficult for us to act. We take our green image for granted."

Coghlan says environmental campaigners got it wrong by targeting the personal choices and responsibilities of individuals rather than governments.

"We need political leadership that would change the discourse. The big picture is not whether we allow people to buy briquettes but whether the ESB keeps burning fossil fuels to make electricity. We have to keep the remaining fossil fuels in the ground."

Green Party leader Eamon Ryan says: "We've made people feel guilty about the problem of climate change. We need to start listening to the farmers, builders and students and ask people for help rather than tell them what to do."

David Begg, recently retired general secretary of the Irish Congress of Trade Unions, believes there is a "moral, economic and political imperative" to move towards a low-carbon society.

"The future of work is dependent on environmental sustainability. There are no jobs on a dead planet. We need to create the institutions that manage the change."

Begg says, however, he is worried that the markets alone will not drive us towards a low-carbon society "and the political economy has been subordinated to the market-driven economy".

Sharan Burrow from the International Trade Union Confederation, another speaker at the Climate Conversations, echoes Begg's sentiments: "We need to organise new jobs in the green economy and fight for a just transition to new jobs and work with pension funds.

"The technological shifts will be disruptive and cause social unrest without a plan, but the business-as-usual scenario by 2020 won't work."

**Technological solutions**

Burrow reminds the audience that Germany is the only country in the world with an energy plan. It is also one of the few countries already making the transition to a low-carbon economy, with 50 per cent of its energy coming from solar/photovoltaic energy. It now has three million electricity producers (it had about 400 producers 10 years ago) and 1,000 energy co-operatives.

Climate-change scientists and industrialists remind us that the technological solutions for a low-carbon society are already here. All that's needed is the political will to embrace them.

Glen Dimplex chief executive Seán O'Driscoll says: "Every school in Ireland could be self-sufficient in energy production. They could generate heat, light and hot water and be totally self-sufficient. And when the children are on holidays, the energy could be sold back into the system to generate an income for the school."

Are messages like this one part of a new environmental agenda yet to fully emerge in this country?

Robert Watt, secretary general of the Department of Public Expenditure and Reform, adds a note of caution: "We ***account*** for 1.4 per cent of carbon ***emissions*** in Europe. The problem is that climate change is not high up on people's agenda.

"Every county in Ireland is developing an economic and social plan yet there is very little engagement for a low-carbon economy. Local authorities need to focus on their own activities - how they manage waste, water and housing, how they plan and engage with communities and businesses for adaptation and mitigation of the effects of climate change."

No matter how far the conversation drifts, policymakers and campaigners return to the urgency of responding to climate change.

Rogier Schulte, research leader in sustainable food production at Teagasc, and Andrew Doyle, chairman of the Oireachtas ***Agriculture*** Committee, argue that a total ***land***-use policy for Ireland is what is required.

"How every part of the landscape does what its best at in terms of efficient food production, clean water, bioenergy, forestry, biodiversity, waste management and carbon sequestration for climate change is the way forward."

**Back on the agenda: What must we do to address the environmental issues we still face?**

nLORNA GOLD Head of policy and advocacy at Trócaire "Big environmental concerns like climate change have fallen off the national agenda because by and large they don't affect our day-to-day lives and don't win votes. Even if more and more people accept the science, they are seen as long-term issues which we think will affect others rather than ourselves. They are put in the 'too hard, do later' box.

"We don't make the connection to ourselves. This perceived lack of concern has enabled short-term economic interests to prevail, especially coming out of recession, even when these [interests] are damaging to our environment.

"Dealing with issues like climate requires a change of mindset which firstly recognises the significant costs of inaction and then the opportunities of taking action. People need to be engaged in more honest debate.

"Countries that have done this sooner rather than later, like Sweden and Scotland, with vision and foresight, are reaping rewards economically and socially.

"Climate has become an opportunity for better policymaking and business. A truly participatory process to prepare our first national mitigation plan would be a good start." nCATHERINE MARTIN Deputy leader of

the Green Party "For the current Fine Gael-Labour coalition, protecting the environment has always been a vague aspiration, an extra, rather than a core policy priority. Because of that mindset the Government did not look to the green economy and green technology as part of a response to both the financial crisis and the environmental threat.

"Environmental issues are not a separate box of problems we can take out and deal with when it suits us - they affect not just how we treat the environment but how we treat each other.

"The green message is one of social justice and is not solely focused on renewable energies and ***emissions*** reductions: achieving real equality in our society is just as essential, because often those who are hit hardest by mismanagement of the environment are the poorest in our society.

"The next government needs to take ***emission*** reduction targets seriously, and set out to meet our 2020 goals. Environmental issues are not secondary issues, they can't take a back seat." Rogier Schulte, research leader in sustainable food production at Teagasc "The environmental message got mainstreamed in policymaking and therefore has a different sound and look to it now. Sustainability has moved from the barricades to the boardroom.

"For example, in [Department of ***Agriculture*** strategy] Food Harvest 2020 the environmental analysis was done retrospectively but for [Department of ***Agriculture*** strategy] Food Wise 2025 the environmental assessment informed the policy.

"One of the challenges of the ***agriculture*** industry is that we want to have more sustainable food production within the context of increasingly stringent environmental legislation.

"You can look at the situation from two different perspectives: you can say that ***greenhouse gases*** from ***agriculture*** have not declined in the last number of years; or you can say that we produce more food, more efficiently now with the same level of ***greenhouse gas*** ***emissions***.

"In Ireland, one plate of food is now produced with 25 per cent less carbon ***emissions*** than in 1998. Technically, both perspectives are right. We have to ask whether we want to reduce national or global ***greenhouse gas*** ***emissions***." nKATE RUDDOCK Policy and campaign manager, Friends of the Earth Ireland

"The recession came and the national agenda became about jobs at any cost. Protecting the environment was/is perceived as a luxury.

"However, it's not just the environment, it's the survival of society that is at risk. That link hasn't been fully disseminated or truly grasped by our politicians.

"On our current carbon-intensive path, we will reach dangerous global warming by the time my two little boys (six months and three years old) are in their 30s.

"An energy revolution is required with communities and people at centre stage; owning and working in clean, renewable energy and buying and selling it to/from ourselves.

"Rather than sending billions abroad to pay for fossil fuels, keep the money at home and create sustainable jobs that will protect us against a future economic crisis." nDAVID BEGG Former general secretary of the Irish Congress of Trade Unions "It is not so much that the environment fell off the national agenda but rather that we lack the institutional framework for dealing with it.

"In the past issues of major public importance - like qualifying for entry to European monetary union, for example - were dealt with through social partnership.

"Good work on the environment is being done by National Economic and Social Council but it has no wider consensus- building process to feed into.

"Just like every other small, open economy trying to balance the conflicting demands of markets and society in a sustainable way, we need institutions for reaching agreement on the choices and trade-offs that are inevitably involved."

nELAINE NEVIN National director of Eco

Unesco "Since 2008 the focus has been on the economy, and the environment has come way down the list. There is little understanding that our economy is built on a healthy society and society on a healthy environment. There is little realisation that as humans we need a healthy, biodiverse planet.

"We need more sustainably educated people who understand the interconnectedness of systems. We need greater emphasis on environmental protection in our education systems, in our workforce, in our national parliament and in local politics.

"We need to change our current economic model, which is mainly based on unlimited consumption of limited resources.

"In our current value system money is often seen as the most important thing. We need to decouple possessions and happiness and put a national focus on quality of life, not just gross domestic product. Young people often get this: they should be listened to more and be involved in decision-making." nSE

ÁN O'DRISCOLL Chief executive of Glen Dimplex "If the CO2 reduction issue is not taken seriously, Ireland will face very significant - hundreds of million of euro - of EU fines each year post-2020. We must electrify heat and transport as a matter of urgency.

"We must do it now and we cannot continue to kick the can down the road any farther. If we don't, kicking the can will become a very expensive pastime." nLAURA BURKE Director general of the Environment Protection Agency "At a time of severe economic recession, it's understandable that the political focus is on jobs and economic growth, with the aim of revisiting environmental priorities once the economy had begun to recover. However,

a clean, healthy environment is the foundation for a successful economy and society. The health, the wellbeing and the quality of life of the population all depend on a protected and well- managed environment.

"The development of key economic sectors such as tourism and the agrifood industry also depend on a clean, green Ireland.

"We need to mobilise everyone living in Ireland to place the environment at the heart of their decisions and actions every single day. Only by asking 'What is this doing to our environment?' can we build a sustainable future.

"We need to eat, work and travel. But our challenge is to do this within the planet's capacity.

"Recent World Wide Fund for Nature data shows that living like an average EU citizen requires 2.6 planet Earths to sustain us. In Ireland we live as though we had 3.2 planets at our disposal."

**Load-Date:** October 31, 2015

**End of Document**



[***Climate deal: Carbon dated?***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HM8-VWH1-F039-60DM-00000-00&context=1516831)

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**Length:** 1878 words

**Byline:** ​Pilita Clark in Paris

**Body**

If there was one sound that captured the frantic nature of the talks that led to theParis climate change deallast weekend, it was the ping of an incoming WhatsApp message.

The instant messaging smartphone app was used by dozens of delegations from the 195 countries involved in the  [*two-week negotiations*](http://www.ft.com/paris-climate-talks). Among them were the representatives from Saudi Arabia, the world’s largest oil exporter and one of the countries with most to lose from a robust accord. As haggling over the agreement spilled into a series of private meetings, delegates from more than 20 Arab nations received a stream of WhatsApp messages advising them on what to say in each session.

“A lot of it was intended to marshall the troops to make sure the Saudi position was backed up by at least one other country in the room at all times,” says one delegate who saw the messages. “Otherwise their arguments could have been viewed as those of an isolated country.”

The Saudis were deeply opposed to something that many other countries insisted should be in the pact: a goal to stop global temperatures rising more than 1.5C above pre-industrial revolution levels.

Riyadh’s unease was understandable. Temperatures have already risen by nearly 1C and meeting the 1.5C target would require heat-trapping carbon dioxide ***emissions*** from burning fossil fuels, a lifeblood of the Saudi economy, to come down much faster than if governments stuck to a 2C warming target agreed at UN climate talks in 2010.

Reaching the 2C goal means energy-related ***emissions*** would need to be cut to zero by around 2060 or 2070, according to Niklas Höhne, an author of the latest report from the UN’s Intergovernmental Panel on Climate Change. “For 1.5C, you have to be at zero at around 2050,” he says.

In the end, the Paris agreement said countries should aim to keep temperatures “well below 2C” and “pursue efforts” to limit warming to 1.5C. It was one of a series of compromises made in the final fevered hours of the COP21 talks that eventually produced a grand bargain among nations with vastly different economies on the fairest way to tackle global climate change.

The question now is, can this pact — born out of such compromises and riddled with non-binding conditions — actually deliver a big enough cut in ***emissions*** to curb temperatures that are on track to warm the world by around 3C or more by the end of this century. An increase of that size, say scientists, would intensify the risk of fierce storms, intolerable heatwaves, higher sea levels and melting ice caps.

The UN has been trying to orchestrate a global agreement to limit ***emissions*** for more than 20 years, starting with a 1992 accord struck in Rio de Janeiro. This was followed by the 1997 Kyoto protocol, a treaty that required only rich countries to cut their carbon pollution, and a failed attempt to produce a new pact at Copenhagen in 2009.

**Fuel for activists**

The Paris agreement differs from earlier efforts in several ways. Its new 1.5C target is only aspirational and meeting it would require substantial cuts in ***emissions*** and unprecedented growth in existing  [*renewable energy technologies*](http://www.ft.com/topics/themes/Renewable_Energy). But its implications will be seized on by advocates who have already translated the 2C goal into a string of campaigns highlighting the amount of coal, gas and oil that needs to stay unburned if such a target is to be met.

The same goes for another goal in the agreement to achieve a balance in the second half of the century between man-made ***greenhouse gases*** and carbon-absorbing “sinks”, such as ***forests***. Another big difference between the Paris pact and its predecessors is that it requires virtually every country in the world, not just wealthy ones, to publish a climate plan every five years, probably from 2020.

Any targets in those climate plans, such as the US goal to cut ***emissions*** by at least a quarter from what they were in 2005 by 2025, or China’s aim to get its ***emissions*** to peak by 2030, are not legally binding for signatories to the agreement. But the plans themselves are mandatory, as is a stronger UN system for monitoring countries’ ***emissions*** and assessing how they are being curbed.

We have already seen what happens when countries are merely invited to publish voluntary plans, as they were in the run-up to the Paris meeting. More than 180 nations did this, including Saudi Arabia. But it only plans to reduce ***emissions*** if its economy continues to grow and there is a “robust contribution from oil export revenues”.

Still, Riyadh did submit a plan and under the new accord, it will have to table a new one every five years that cannot be any weaker, using a more stringent set of reporting rules. The same applies to the largest emitter, China, which ***accounts*** for 27 per cent of global carbon pollution.

Like Saudi Arabia, it was reluctant to support the 1.5C target and other measures backed by a group of countries led by small island states — those most at risk as sea levels rise — that labelled itself the “high ambition coalition” at COP21.

Only a day before the agreement was adopted, Liu Zhenmin, deputy head of China’s delegation, dismissed this coalition as “a kind of performance” or stunt.

But the group included the US, the second-largest emitter. Its diplomacy under John Kerry, secretary of state and a life-long climate action advocate, led to Washington and Beijing jointly announcing climate plans late last year — a move that at the time raised hopes that a Paris agreement could be sealed.

**Breakthrough of the Big Two**

In the end the US-China relationship proved crucial to Saturday’s accord. In the tense moments before the deal was signed it almost came unstuck, but China showed that, despite its officials’ public rhetoric, it wanted the agreement to go ahead.

As France’s foreign minister, Laurent Fabius, was preparing to bang the gavel on the agreement’s adoption on Saturday, panic set in after the US delegation saw the final text, drawn up in the early hours of the morning by exhausted officials.

Unlike previous versions, which said developed countries “should” take the lead in fighting climate change, it said they “shall” undertake ***emission*** reduction targets. This was a legally problematic change for the Obama administration, which wants to sign up to the new deal by executive agreement rather than submitting it to a hostile Senate for consent.

Mr Kerry took one look and said: “We cannot do this and we will not do this, and either it changes or President [Barack] Obama and the United States will not be able to support this agreement.”

A group of developing country delegates, still nervous about the accord, seized the chance to declare they would not accept any changes.

But as envoys huddled on the conference floor to try to iron out the problem, Xie Zhenhua, China’s top climate negotiator, stepped in.

“He said, ‘Stop it now, we want this agreement, don’t play games with this, it isn’t fair’,” says Laurence Tubiana, France’s COP21 ambassador. The text was duly changed — “should” replaced “shall”. “Without Xie, we would not have had an agreement,” Ms Tubiana told the Financial Times.

The relief in the convention hall was profound. The most important immediate outcome of the Paris agreement is that it was not another flop like Copenhagen. In the aftermath of that failure governments continued to launch climate policies, but opponents were bolstered by the absence of a global agreement committing all countries to take similar action.

The paradox of UN climate negotiations, where all countries have an equal vote, is that they are destined to produce deeply compromised agreements with a limited chance of having a positive impact on lowering ***emissions***. But they can easily have a negative effect on such efforts if they fail in the way the Copenhagen conference did in 2009.

Paul Marty, a senior credit officer at Moody’s, the rating agency, says that if Paris had been another Copenhagen, it might have affected even climate policy pioneers such as the EU, home of the world’s largest carbon market and some of the earliest solar power subsidies.

“It’s likely it would have undermined the EU’s long-term decarbonisation policies and targets on the grounds that if the rest of the world isn’t doing much, why would EU economies need to make the effort,” he says.

**Declarations of intent**

The immediate impact of the agreement was mixed. France’s President François Hollande was the first leader to say his government would revise its existing climate targets before 2020 in the wake of the Paris agreement, but few other nations have shown any sign of being willing to join him.

Shares in a number of European and North American solar and wind companies ticked up on Monday; Elon Musk’s SolarCity, the biggest residential installer in the US, jumped 12 per cent.

Many market specialists said the rise was likely to be temporary. But Barclays analysts predict that the deal would “speed up the deployment of renewable and other zero and low-carbon energy sources”.

The initial response from oil and gas companies was a broad shrug, but some coal industry groups were more perturbed about its implications, and especially its 1.5C goal.

Brian Ricketts, secretary-general of Euracoal, a trade body representing the EU coal industry, says: “That 1.5C might be a target, but it means NGOs will be striving for the complete phase-out of fossil fuels very quickly, which means we will be hated and vilified in the same way slave traders were.”

It was “bizarre” to think coal companies could change their business models to adapt to such goals, he says, adding that he feared climate activists’ “mob rule” was already replacing the rule of law in some countries and the Paris agreement would exacerbate the trend.

Other coal industry executives say the accord ought to bolster their argument that tougher climate targets should translate into more support for technologies such as  [*carbon capture and storage*](http://www.ft.com/topics/themes/Carbon_Capture_and_Storage) systems that allow fossil fuels to be burnt without harming the climate.

But it may not be long before such systems are competing against newer technologies that eliminate the need for coal, oil and gas altogether.

That is the hope of Bill Gates, Microsoft’s co-founder, who announced at COP21 that he had teamed up with other billionaires to get nascent clean energy innovations out of the lab and into the market. This group will work with 20 countries, including the US and China, pledging to double their $10bn combined spending on clean energy research and development over the next five years. It is initiatives like this that could end up doing more to meet the Paris agreement’s goals than the accord itself.

Ultimately, it is impossible to know if the pact will make this century the last to be powered by fossil fuels. Even Mr Obama, one of the agreement’s strongest proponents, conceded on Saturday that global warming “is not solved because of this accord”. But it does create “the architecture for us to continually tackle this problem in an effective way”, he argued.

Perhaps that is all that can be expected from UN talks that have taken more than 20 years to get to this stage, and may take another 20 to start fixing a problem that has so far proved insoluble.

**Letter in response to this article:**

Carbon sinks will tip the market balance in favour of sustainable ***agriculture*** / From Craig Sams

**Load-Date:** December 18, 2015

**End of Document**



[***Evonik sees profitability gains in sustainable animal nutrition game***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5KYT-R231-DYNP-M23H-00000-00&context=1516831)

FeedNavigator.com

June 21, 2016 Tuesday 1:04 PM GMT+1

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**Section:** SUPPLIERS

**Length:** 756 words

**Byline:** Jane Byrne, , [*Jane.Byrne@wrbm.com*](mailto:Jane.Byrne@wrbm.com)

**Body**

**INTRODUCTION**

Feed additive innovation at Evonik has been earmarked as one of six R&D pillars that will contribute over €1 billion (bn) in additional sales by the year 2025 for the group.

**STORY**

The company said it is expanding its product portfolio accordingly to encompass healthy and sustainable animal nutrition.

Evonik’s chief innovation officer, Ulrich Küsthardt, today said the group expects the products and applications developed in the past five years to ***account*** for over 16% of sales but he did not put a timeline on that target.

Currently, that NPD constitutes around 10% of the group’s sales.

Evonik, which is active in over 100 countries, generated sales of around €13.5bn and an operating profit (adjusted EBITDA) of about €2.47bn in fiscal year 2015.

But, in March this year, it [***reported***](http://www.feednavigator.com/Suppliers/Evonik-expects-a-subdued-market-environment-and-a-decline-in-2016-earnings) that adjusted core earnings could drop by as much as 19% in 2016, with the company blaming the weak outlook on falling prices for certain feed additives.

Last year, the German chemical giant ploughed an additional half a billion euros into its innovation pipeline.

The amino acid producer said it has also streamlined its approach to R&D, which now includes a more significant portion of larger innovation projects.

New amino acid in portfolio

Some of that innovation capital was invested in the monogastric feed additives side, with last week the group announcing the launch of an L-valine product, ValAMINO.

That product, it continued, represents the fifth essential amino acid in its portfolio for use in pig and poultry feeds, and will help to reduce the use of crude protein in the diets of those animals, without any loss in terms of growth performance.

Evonik claimed this will result in lower feed costs and conservation of natural resources in ***agricultural*** feed production, which in turn, it said, reduces ***land*** use, ***greenhouse gas*** ***emissions***, and potential eutrophication and acidification.

The amino acid is said to have EU wide registration.

Fish oil replacement

Today saw the company also strongly play up its long term intention to find alternatives to fish oil for farmed fish diets as well as its goal to continue to fine tune its fishmeal replacement strategy.

Some three-quarters of the fishmeal and fish oil produced worldwide are channeled into aquaculture, representing a major strain on marine resources, said Evonik.

Christoph Kobler, who heads up the Sustainable Healthy Nutrition Product Line at the German firm, said that due to modern fish farming concepts and amino-acid products, it is already possible to achieve significant reductions in the proportion of fishmeal used in feeds.

The underlying principle behind the fishmeal replacement strategy, he said, is to selectively add amino acids such as methionine and lysine to vegetable-based feeds, improving them to the point where salmon and other marine animals can make optimum use of them.

However, the development of sustainable alternatives to fish oil is slightly more challenging.

And, as global supplies of fish oil remain static or decline and demand for aqua feed grows over the next decade, so too does the need to find alternative sources of Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), which are an essential factor for human health.

If viable fish oil alternatives can be found it “*would mean that it would be possible to entirely eliminate the use of marine resources like fishmeal and fish oil in the production of fish feed,”* said Kobler.

Last year, we reported on the tie-up between [***Evonik and DSM***](http://www.feednavigator.com/R-D/DSM-and-Evonik-in-algae-derived-omega-3-feed-joint-venture) aimed at using sustainable biotechnological methods to harness marine algae in the production of omega-3 fatty acids.

No further details were forthcoming about that project today.

Recent months have seen other producers releasing algae derived sources of DHA only replacements for use in aqua feed.

A partnership between[***Bunge Limited and TerraVia***](http://www.feednavigator.com/Manufacturers/Bunge-TerraVia-partnership-strikes-fish-oil) has generated such a product and Alltech is working on [***algae based DHA feed technology***](http://www.feednavigator.com/Manufacturers/Alltech-focused-on-algae-derived-DHA-for-fish-feed) as well.

**Shrimp feed additive**

Meanwhile, in March, production at Evonik’s Antwerp facility for its [***new methionine source, Aquavi Met-Met***](http://www.feednavigator.com/Suppliers/Shrimp-targeted-methionine-production-kicks-off-at-Evonik-s-Antwerp-site), got underway.

The product, a dipeptide comprising two methionine molecules, will initially be available for shrimps and crustaceans but its efficiency is currently being tested for other species, said the company.

Evonik said Aquavi Met-Met, which is backed by a series of feeding trials with shrimp producers in Asia and Latin America as well as studies with universities and scientific partners, is aimed at boosting the efficiency and sustainability of shrimp farming.

**Load-Date:** October 18, 2016

**End of Document**



[***These Brexiters will grind our environment into the dust; Crucial portfolios have been given to people who are prepared to scrub Britain's features from the map***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K8K-2XC1-F021-61B9-00000-00&context=1516831)

The Guardian

July 20, 2016 Wednesday 7:30 AM GMT

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**Section:** OPINION

**Length:** 1084 words

**Byline:** George Monbiot

**Body**

The more urgent the environmental crisis becomes, the less we hear about it. It exposes the economic policies of all major parties - whether neoliberal or Keynesian - as incompatible with the times in which we live. To remark on what we are doing to the living planet is to fall into cognitive dissonance. It is easier to ignore it.

This is the spirit in which our new prime minister has engaged with our greatest predicament. Climate change clashes with the economic model, so let's scrub it from the departmental register. Wildlife is collapsing and, at current rates of soil erosion, Britain has  just 100 harvests left. So let's appoint an extreme neoliberal fiercely opposed to constraints on industry as secretary of state for the environment. When the model is wrong, adjust the real world to make it fit.

Related: The fate of Britain's environment rests on a cabinet tug of war

I do not see the European Union as a lost Avalon. It brought us much that is good, such as directives that enable us to hold our governments to ***account*** for their environmental failures. But the good things it has done for the living world are counteracted - perhaps much more than counteracted - by a few astonishing idiocies. They arise from remote, unresponsive authority that is accessible to corporate lobby groups but not to mere mortals. In some respects the Brexit campaigners were right - though generally for the wrong reasons.

One of these policies is the rule that only bare ***land*** is eligible for most farm subsidies. This perverse incentive for destruction has obliterated wildlife and natural beauty across hundreds of thousands of hectares. It threatens millions more. The failure of politicians and environmental groups to campaign against this perversity - or even to mention it - is both mystifying and shameful.

Then there is the European insistence that much of our transport fuel be replaced by biodiesel. I've been inveighing against the manufacture of biodiesel from crops since 2004, and have often been mocked for it. Now we know not only that it causes much greater ***greenhouse gas*** ***emissions*** than the fuel it replaces, but also that it's a major cause of perhaps the greatest environmental disaster of the 21st century so far: the mass obliteration of the rainforests of Indonesia and Malaysia, driven in large part by palm oil production.

Leaked figures released in June suggest biodiesel now ***accounts*** for 45% of the palm oil used in Europe. With one thoughtless policy - which was designed, under a lobbying onslaught, to avert the need for tougher rules on car manufacturers - the European commission has annulled all the environmental good it has ever done.

So amid the multiple dangers of Brexit there are opportunities for a government that cares about the natural world. The obvious first step is fundamental reform of farm subsidies. At the moment, paid by the hectare, they transfer vast sums from the pockets of ordinary taxpayers into those of dukes, sheikhs and bankers while wiping the ***land*** clean of wildlife. For this service we pay £3bn in Britain: roughly the same as the NHS deficit.

I can think of two legitimate purposes for subsidies. The first is a rural hardship fund. But there is no obvious reason why farmers should be the main recipients. In England they ***account*** for 1.4% of the rural population. While many suffer from low incomes, they tend to have greater capital, skills and opportunities than most other people with small earnings. There is no more reason to favour their profession with public charity than there is to provide a fund for distressed solicitors or plumbers. Money should be disbursed according to need, not occupation.

Are the people of the lowlands to be surrounded by nothing but ***agricultural*** desert?

The second is an environmental protection fund that pays for wildlife and habitats to be restored, floods to be prevented and children and adults to be brought back into contact with nature. I would have no objection to farmers living off such subsidies. We would be paying for public services rather than public harm.

Both the environment secretary, Andrea Leadsom, and the farming minister, George Eustice, were members of the Fresh Start project, which seeks reform of the EU's common ***agricultural*** policy. It has some good ideas and some frightening ones - including a policy that would lead to the most productive areas of the country being, in effect, designated free from wildlife, while environmental subsidies are concentrated in other places. Both Leadsom and Eustice have endorsed this approach in public statements.

Are the people of the lowlands (where almost all of us live) to be surrounded by nothing but ***agricultural*** desert, without trees, hedges, birds, mammals or insects? Are our children to encounter rich wildlife only on distant holidays - if at all?

It is also clear that they are inclined to torch environmental protections. With neither incentives nor rules constraining their behaviour, the least responsible farmers will thrive while the more careful will struggle to compete. These matters are not peripheral to our lives: without soil, there is nothing.

Related: Who's who in Theresa May's new cabinet

Leadsom's leadership campaign was characterised by incompetence, grandstanding and vacuity. Her record in government is dismal. One of her officials told the Financial Times she was "the worst minister we've ever had". What does this say about the prime minister's priorities? The living planet - the biggest and most important portfolio of all - is treated by May as the government's Craggy Island.

So here is the fix we're in. We have an environment secretary whose ideology urges her to see the environment as an impediment to profit, a communities secretary whose every fibre rebels against the planning system, and an international trade secretary who used his previous post in government to connect with US corporate lobby groups. We no longer have a climate change secretary, of any description. We have a government that treats the Earth's systems, upon which our survival depends, as an afterthought, or not a thought at all.

When these people say they are defending British sovereignty, what Britain do they have in mind? A country of famous and peculiar beauty, or the same bleak monoculture that you can see from Kansas to Kazakhstan? What lovers of the nation are these, who seem prepared to scrub its features from the map?

· A fully linked version of this article can be found at Monbiot.com

Twitter: @georgemonbiot

**Load-Date:** July 20, 2016

**End of Document**



[***GKN sell-off overdone***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JJS-9JH1-JCF1-20BF-00000-00&context=1516831)

Investors Chronicle - magazine and web content

April 14, 2016

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**Section:** 0261-3115

**Length:** 920 words

**Body**

Despite some short-term turbulence, transportation needs for a global population growing in number and wealth should drive demand for GKN's market-leading technology over the long term.

As a market-leading manufacturer of parts for cars and planes, GKN (GKN) banks on strong demand for transport solutions. Naturally, the global economic slowdown has threatened these prospects, sending the group's shares into freefall in the process. Given what happened to operating margins during the last financial crisis, we appreciate these concerns, but nevertheless think the current sell-off has now gone too far. While short-term risks remain, GKN's competitive advantages in booming industries mean its shares should trade on more than 10 times current-year earnings, dropping to just nine times 2017 forecasts.

A key contributor to the recent sell-off was management's prediction of flat organic aerospace sales in 2016. With emerging market economies no longer expanding at astronomical rates, and the low oil price curbing demand for the latest range of fuel-efficient aircraft, the rate at which key clients Airbus and Boeing are doling out orders has slowed. Given how profitable GKN's aerospace arm is (it ***accounted*** for 32 per cent of last year's sales, but 41 per cent of trading profits), investors duly panicked.

We'd argue that the reaction was overdone, particularly as the outlook beyond this year is encouraging. Not only is defence spending improving - GKN's technology features on projects such as Lockheed's F35 fighter jet, but it also secured strong positions on the Airbus A350 and Boeing 737MAX.

With significant projects in the bag and plenty of benefits expected from the landmark acquisition of Fokker last October, the group appears well positioned to continue growing faster than the rest of the market.

While the 706m (GBP499m) deal to bring Netherlands-based Fokker on board increased debt, which sits alongside a GBP1.6bn pension deficit, it also left GKN in an even stronger position to supply the world's newest aircraft programmes. Following the acquisition, the group became the third-biggest provider of electrical wiring systems, and the second largest global supplier of lightweight aerostructures. As there's legislation in place requiring companies to cut ***greenhouse gas*** ***emissions***, specialising in lightweight technology looks a sure fire way to gain an advantage over competitors.

Meanwhile, management has asserted its confidence in the booming automotive business (its driveline and metallurgy divisions), which last year ***accounted*** for 59 per cent of sales and 56 per cent of profit, and expects the division to once again outpace the wider market in 2016. That news should have been well received, but judging by the plunging share price, it wasn't.

The slowdown in China is largely to blame for the gloomy sentiment, a fear that's been escalated by a number of warnings from big European car manufacturers. The People's Republic is a key region for vehicle sales, and among the most profitable areas of business for GKN's driveline and powder metallurgy segments.

But management's confidence may have good foundations, not least based on news that after a lull in February the Chinese automotive market achieved record monthly sales in March and growth of 8.8 per cent. There are several structural reasons to think GKN will continue to prosper in China, too. The soaring popularity of four-wheel drives and sport utility vehicles should also benefit GKN, which is at the forefront of making these vehicles, and also generates more profit from them as they generally require more kit.

And when gas-guzzling motors become a bigger political issue in a nation dogged with pollution problems, GKN's technology used to power electric and hybrid vehicles will be ready to step in. Management has made a big deal of investing in the inevitable switch to greener cars, which leaves it ideally placed to prosper when gasoline-powered engines eventually get phased out. Over in Europe that's already become a priority, with regulations demanding more fuel efficiency by making cars lighter. GKN is once again at the forefront of this change, thanks to its market-leading, lightweight drivetrains.

The outlook for the group's smaller ***land*** systems business, which ***accounts*** for about 8 per cent of revenues, is less convincing. Plummeting appetite for ***agricultural*** and construction products has weighed heavily on this division, forcing management to restructure its operations.

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| |GKN (GKN) |
| |ORD PRICE:|281p|MARKET VALUE:|GBP4.8bn| |
| |TOUCH:|281.1-281.4p|12-MONTHHIGH:|375p|LOW: 246p| |
| |FORWARD DIVIDEND YIELD:|3.3%|FORWARD PE RATIO:|9| |
| |NET ASSET VALUE:|109p\*|NET DEBT:|41%| |

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| --- |
| |Year to 31 Dec |Turnover (GBPbn) |Pre-tax profit (GBPm)\*\* |Earnings per share (p)\*\* |Dividend per share (p) |
| |2013|7.59|680|28.7|7.9| |
| |2014|7.46|611|28.2|8.4| |
| |2015|7.69|610|27.5|8.7| |
| |2016\*\*|8.31|661|28.6|9.0| |
| |2017\*\*|8.66|722|31.6|9.3| |
| |% change|+4|+9|+10|+3| |
| | |
| Normal market size: 7,500 |
| Matched bargain trading |
| Beta: 1.25 |
| \*Includes intangible assets of GBP1.86bn, or 108p a share |
| \*\*Haitong Research forecasts, adjusted PTP and EPS figures |

With the global population growing in number and wealth, transportation remains a key investment priority for rapidly expanding countries all over the world. As a market leader in technology for both cars and planes, we'd expect the engineer to be a big beneficiary of this structural growth and a forward PE ratio of 10 dropping to nine, along with a decent yield, does not do these prospects justice. Buy.

Buy

**Load-Date:** April 18, 2016

**End of Document**



[***-Unilever: There is no business case for enduring poverty***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H07-9J71-JD3Y-Y1NF-00000-00&context=1516831)

ENP Newswire

September 22, 2015 Tuesday

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**Length:** 688 words

**Body**

The UN launches its new Sustainable Development Goals this month - 17 'Global Goals' which aim to ensure the health, safety and future of our planet in the next 15 years.

We're backing the UN's Global Goals

Become a global citizen

With the overarching aim of ending extreme poverty, fixing inequality and injustice, and tackling climate change, 193 world leaders will be signing up to support the Goals on 25 September. It is a historic opportunity to build a better future for everyone.

For Unilever, the challenges the Global Goals aim to tackle have a huge impact on our business and are aligned with our own ambitions set out in our Unilever Sustainable Living Plan. We see the Goals as a framework for action.

Making the Goals a reality

Ben & Jerry's 100% electric car

Our sustainable living brands are already working towards making the Goals a reality. Here are just a few examples.

Ben & Jerry's is helping build a broad based social movement to pressure world to deliver the low carbon economy of the future (Goal 13 for climate action). Their campaign called 'Save our Swirled' is activating their fans to create a 100% clean energy future in partnership with AVAAZ. They have also found ways to save energy through The Chunkinator, which uses ice cream waste to create biogas, reducing ***greenhouse gases*** ***emissions*** that contribute to global warming.

Family with new toilet Domestos Toilet

Lifebuoy's vision to bring health and hygiene to a billion people though their 'help a child reach 5' programme is helping to deliver Goal 3 (good health and wellbeing). Having taught the lifesaving habit of handwashing with soap to over 257 million people, Lifebuoy is now helping save neo-natal lives.

Domestos has committed to helping 25 million people gain improved access to a toilet by 2020, and in doing so is supporting Goal 6 (clean water and sanitation). By improving sanitation, we contribute towards a basic human right, and help keep kids healthy and in school. We are improving sanitation by working with UNICEF on its global sanitation behaviour change programmes, through our Domestos Toilet Academy and through our schools programmes, focused on WASH (water, sanitation and hygiene) education and the building and maintenance of toilets.

World food day 2014

Knorr is helping to address Goal 2 (zero hunger) through its partnership with the World Food Programme and their shared ambition to create a world where everyone has access to nutritious food. Supporting Goal 15 (life on ***land***), the brand is committed to sourcing all its ***agricultural*** ingredients sustainably, for the benefit of farmers and to protect their ***land***.

Changing the way we do business

Meeting these ambitious goals will mean fundamentally changing how we do business and ***account*** for our impacts. We also know that delivering the goals can happen only if the public sector, private sector and civil society all step up and demonstrate real leadership and a willingness to work together.

We know that providing all countries with better infrastructure, a healthy, well-educated workforce and the systems for better resource management will deliver higher economic and commercial returns. There is no business case for enduring poverty.

As Unilever CEO Paul Polman says: 'We're already bringing the Global Goals to life through our sustainable living brands and their social missions.

'The challenges the goals aim to tackle have a significant impact on, and opportunity for, our business and are aligned with our own ambitions set out in our Unilever Sustainable Living Plan such as deforestation, women's empowerment, and health and hygiene,' he adds.

Play your part

We will continue to help deliver the Global Goals through our business. But supporting the Global Goals isn't just a job for businesses and politicians - we all can, and should, play our part.

The more people are aware of the Global Goals, the more successful they will be. All you need to do is chose the Goal that means the most to you, and share it with as many people as you can. Social media is a great way to do so.

[Editorial queries for this story should be sent to [*newswire@enpublishing.co.uk*](mailto:newswire@enpublishing.co.uk) ]

**Load-Date:** September 22, 2015

**End of Document**



[***CLIMATE CHANGE PLANS GO AHEAD***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K5C-7J51-JBVM-Y4JR-00000-00&context=1516831)

Irish Independent

July 5, 2016 Tuesday

Edition 1, National Edition

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**Section:** FARMING;NEWS; Pg. 16

**Length:** 184 words

**Byline:** BRUSSELS BRIEFING

**Body**

COMMISSIONER Phil Hogan also confirmed the Brexit vote would not affect the EU's upcoming climate change proposals. The Commission is due to publish two new draft laws on July 20 on how sectors such as ***agriculture*** and forestry can contribute to reaching the bloc's ***emission*** reduction targets. "We are going ahead," Mr Hogan said.

The Irish government has been lobbying EU commissioners, including energy chief Miguel Arias Cañete, to ensure the needs of Ireland's large ***agricultural*** sector are taken into ***account***.

Mr Hogan said he was "working closely" with Mr Cañete on a "European-wide response on how ***agriculture***'s contribution and the forestry contribution can play its part towards reducing ***emissions*** and meeting our international objectives" under the Paris agreement.

"***Agriculture*** will have to play its part in meeting the reduction in ***greenhouse gas*** ***emissions***," Mr Hogan said. He pointed to the October 2014 declaration by EU leaders acknowledging the "lower mitigation potential" of the ***agricultural*** sector and pledging to look at how ***forests*** could offset the sector's contribution to the climate goals.

**Load-Date:** July 5, 2016

**End of Document**



[***Mekong Hydropower Development: Potential To Spark Conflict***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JF4-33H1-F0J5-80Y4-00000-00&context=1516831)

Asia Monitor - South East Asia Vol 1

May 1, 2016 Sunday

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**Length:** 1538 words

**Highlight:** Over the past few decades, the growing need for energy and the desire for economic growth have driven regional economies in the Lower Mekong Basin to increase their pace of building up hydropower capacity along the Mekong River. This trend will continue to have complicated social, economic and environmental impacts on the countries in the region, further exacerbating the effects of climate change. As such, we believe that regional governments (particularly Vietnam) and other significant stakeholders are likely to protest more aggressively against further attempts to increase the number of dams along the river, potentially creating more hurdles to hydropower development in the region.

**Body**

*BMI View: Over the past few decades, the growing need for energy and the desire for economic growth have driven regional economies in the Lower Mekong Basin to increase their pace of building up hydropower capacity along the Mekong River. This trend will continue to have complicated social, economicand environmental impacts on the countries in the region, further exacerbating the effects of climate change. As such, we believe that regional governments (particularly Vietnam) and other significant stakeholders are likely to protestmore aggressivelyagainst further attempts to increase the number of dams along the river, potentially creating more hurdles to hydropower development in the region.*The Lower Mekong Sub-region could see a rise in conflict over the coming years as the growing need for power, as well as the desire for economic growth, drives the previously war-torn nations in the region to ramp up their hydropower capacity in the Lower Mekong River to the detriment of others.

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| Power Needs Will Continue To Increase |
| Asia - Electricity Consumption, TWh |
|  |
| *e/f = BMI estimate/forecast. Source: EIA, BMI* |

In particular, Laos' desire to become the battery of Southeast Asia by harnessing the river's hydropower potential has significant economic and social repercussions for the countries around the Lower Mekong Basin. At the same time, Cambodia's concurrent attempt to build up its hydropower capacity will further exacerbate the effects of climate change in the region, as well as intensify the environmental, social and economic issues surrounding the construction of river dams. Given Vietnam and Cambodia both have significant stakes in the Lower Mekong Basin (particularly their ***agricultural*** sectors), we believe that Laos' attempt to ramp up its hydropower capacity will face increasing objections from stakeholders and governments in the region. In particular, Vietnam's economy and its river delta, which already face high risks from climate change, will be adversely impacted by Cambodia's and Laos' plans to build dams on the river.The Mekong River is a trans-boundary waterway located in Southeast Asia which runs from the Tibetan Plateau in China, through Yunnan province, Myanmar, Thailand, Laos, Cambodia, Vietnam, and into the South China Sea. The Mekong Basin can be further divided into two parts, namely the 'Upper Mekong Basin' in Tibet, Yunnan, and Myanmar, as well as the 'Lower Mekong Basin' in Laos, Thailand, Cambodia and Vietnam. Most of the Mekong River's waterflow (80%) comes from its tributaries in the Lower Mekong Basin, which is home to more than 60mn people. According to some estimates, around 80% of the population rely directly on the river system for food, drinking water, and their livelihoods. The river system is also home to one of the most diverse biodiversities in the world, supporting over 1,000 animal species including over 560 endemic fish species.Given the vast human population and ecosystems which are dependent on the river, proposed plans to build numerous dams along the river's mainstream and tributaries have thus raised significant concerns due to potential changes in the river flow. The accumulation of major hydroelectric dams on the river and its tributaries will not only result in the loss of ***forest*** and farmlands, it will force the eviction of local communities, destroy fisheries, damage riverbeds, cause more erosion, and dramatically reduce the amount of silt and sediment transported downstream, all of which will have significant social, ecological and economic implications.

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| Disruption Of River Flow To Have Extensive Implications |
| Asia - Mekong River |
|  |
| *Source: BMI, RFA* |

**Laos: Battery Of Southeast Asia** One of Laos' key goals is to become the battery of Southeast Asia ( *see 'Laos To Drive SEA Hydropower Expansion', November 5 2015*). To do so, Laos plans to build more than 70 major dams, including seven across the entire width of the Mekong River over the next 15 years. Although its intention is to partly reduce its ***greenhouse gas*** ***emissions***, the construction of the river dams is aimed at generating income from selling electricity to Laos' neighbours, particularly Thailand. Thailand is facing notable gas supply issues as domestic gas production in Thailand is waning, forcing the government to look at alternative options to meet power demand, with a focus on Laos and Myanmar hydropower generation ( *see 'Power Development Plan Sparking Investment Opportunities', September 14 2015*).

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| Gas Production Waning |
| Thailand - Natural Gas Production, bcm |
|  |
| *e/f = BMI estimate/forecast. Sources: EIA, BMI* |

Two of the largest of Laos' major dam construction projects are the 260MW Don Sahong Dam and the 1,285MW Xayaburi Dam. The former, if built, will span a major channel of the Mekong just one and a half miles from the Cambodian border. The Cambodian government has strongly objected to the project, saying the country's food security would be threatened. However, Laos' deputy prime minister Somsavat Lengsavad dimissed the concerns of neighbouring countries by saying the dam will only utilise 15% of the river's flow. The Don Sahong Hydropower project would pose a major threat to the Mekong's upstream fish migration pattern, endanger animal species and result in a decline in the local fish population. **Cambodia: Playing Catch-Up In Hydropower** The hydro-political stakes are raised further south as the Mekong River flows into Cambodia and Vietnam. Cambodia may be a victim of Laos' efforts to construct dams along the Mekong, but it is also planning to build over 40 dams along the Mekong and its tributaries over coming years to meet growing electricity demand in the country - driven by efforts to improve rural electrification and economic development. These dams are likely to have major economic and ecological impacts further south in Vietnam and will force large-scale evictions of local communities. In particular, the construction of the 400MW Lower Se San 2 dam, which is due for completion in 2019, will block two of the Mekong's major tributaries creating a 335 square kilometres reservoir that would displace thousands of people. The project, which is at the junction of the Se San and the Srepok River, is one of the most controversial and ecologically devasting dams as the tributaries it blocks contribute the most sediment to the Mekong mainstream. Furthermore, according to a study done by the Proceedings of the National Academy of Sciences of the United States of America (PNAS), the Lower Se San 2 dam alone may result in a 9.3% decline in fish stocks throughout the entire Mekong Basin. **Vietnam: The Most Affected** The Mekong Delta in South Vietnam faces a double whammy from the construction of hydro dams upstream, as well as the ongoing effects of climate change. The building of dams on the upstream section of the river has resulted in a decrease of silt deposits downstream. Meanwhile, the delta is also shrinking due to the negative impact of climate change such as coastal erosion and rising sea level. Given the vast low lying Mekong delta is home to nearly 20 million people, ***accounts*** for more than 50% of staple food crop production, and contributes to more than one-quarter of the country's GDP, the shrinking Mekong Delta puts the entire Vietnamese economy at risk.According to Vietnam's Prime Minister Nguyen Tan Dung, the average flow of the Mekong River has been reduced 10% in the past 30 years as a result of the construction of dams along the Mekong and its tributaries. Moreover, according to experts from the Worldwide Fund For Nature (WWF), the amount of silt that is being washed downstream today has more than halved (160mn tonnes in 1990, versus 75mn tonnes today) in comparison to two decades ago. Geographically, the Mekong Delta is the result of the build up of silt brought down by the Mekong River, which historically extended the shoreline by around 80 metres per year. The result is a highly fertile area where vast quantities of staple crops are being produced, allowing Vietnam to achieve self sufficiency in rice and become the second largest regional exporter after Thailand. **Opposition To Gain Traction** Given the wide economic and social implications of hydropower dam projects on the Mekong River, we believe various governments and stakeholders in the region will contest more aggressively against subsequent attempts to construct more dams, resulting in a rise of conflict in the region. Already, in 2015, hundreds of indigenous villagers in Cambodia gathered to protest against the developers of the Lower Se San 2 dam, andwe believe such opposition movement will further gain traction over the next few years.This could have serious implications for the hydropower sector in the region; public opposition - stemming from environmental and social concerns - is a particular bottleneck for the sector. We have already seen numerous delays to hydropower projects across the Mekong region, or projects suspended or cancelled entirely - with Myanmar being a pertinent example ( *see 'Power Project Hurdles, But Gas Gaining Share', February 17*). This poses a serious threat to project realisation and will jeopordise the ambitious hydropower targets set out by the governments in the region.

**Load-Date:** May 4, 2016

**End of Document**



[***Athens Summit to Protect Health and Kick-start European Climate Data Economy***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JW1-C031-JB72-131V-00000-00&context=1516831)

PR Newswire Europe

May 26, 2016 Thursday 4:00 AM EST

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**Length:** 1279 words

**Dateline:** READING, England, May 26, 2016

**Body**

The potential of big data about the Earth's atmosphere to improve resilience andjump-start sustainable economic growth will be the focus of a crucial summit in Athenson 14-16June. The first annual Copernicus Atmosphere Monitoring Service (CAMS) General Assembly will bring together politicians, the scientific and business communities and the European Commission.

Daily forecasts of air quality and ***greenhouse gases*** produced by CAMS not only have the potential to help Governments meet pollution targets, driving health benefits and savings, but to support planning and investment in key industries such as solar energy.

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An economic reality

Climate change, pollution and severe weather events are challenging the assumptions that underpin Europe's economic and social policy. They take no ***account*** of borders and have regional and global economic impacts. Faced with this knowledge, it is incumbent on policymakers, industry and the scientific community not just to work to reduce damaging ***emissions***, but also to equip society to adapt to changes that are already inevitable.

According to the Intergovernmental Panel on Climate Change (IPCC), the Mediterranean could be one of the regions most affected by an increase in year-to-year variability in summer air temperature. A longer tourist season could bolster local revenue and flatten peaks in energy and water demand, however a higher incidence of heat waves and droughts may put pressure on water resources during the summer months.[1] [2]

Regulating air quality is also a particular challenge for policymakers due to economic and political pressures.[3] [4] Moreover, the health impacts of air pollution are much larger than was thought before.[5] The World Health Organization (WHO) estimates that in 2012 around 7 million premature deaths resulted from air pollution, more than double previous estimates. The new estimate is based on increasing knowledge of air pollution-related diseases and use of improved air quality measurements and technology. According to WHO, outdoor air pollution caused 3.7 million premature deaths in 2012.[6] Poor air quality and UV solar radiation exposure are expected to worsen because of anthropogenic climate change in central and southern Europe. That is where Copernicus comes in to monitor the composition of the atmosphere and analyse essential climate variables to build a global picture of our climate.

A global perspective to driving regional solutions

The European Union's Copernicus Earth Observation programme uses and contributes to a worldwide network of thousands of sensors on ***land***, in our oceans, and in the air, as well as a network of over 100 satellites. Together they make millions of environmental readings every day. Built on cooperation between agencies across the globe, Copernicus provides free and open access to this data via six services - ***land***, marine, emergency, security, atmosphere and climate.

For policymakers and investors looking for insight into their priorities and climate future it is a game-changing new perspective.

Companies working with ECMWF - which operates the Copernicus Atmosphere Monitoring Service (CAMS) and Climate Change Service (C3S) on behalf of the European Commission - are already developing products with applications across the health, energy, water, ***agriculture***, financial and urban planning sectors; turning data into insight. The Athens summit is the next stage on that journey, seeking to refine solutions to complex problems.

The size of the opportunity is vast: tourism, sea transport and enterprises are of vital importance to the Greek economy, whilst the proposed Project Helios could set a global benchmark for the potential of large scale solar power. Tackling problems like pollution would not only improve life expectancy and save billions of euros, but also serve to address the root cause of the climate challenge by reducing carbon ***emissions***.

The European Commission expects its Open Data Strategy to deliver a (EURO)40 billion annual boost to the EU's economy. For Greece the incentives to build on its natural resources and protect public health are both of economic and moral importance.

Notes for editors

The firstCopernicus Atmosphere MonitoringService (CAMS) General Assembly, 14-16 June 2016, Athens, Greeceis co-ordinated with support from the Research Center for Climatology of the Academy of Athens, the National Hellenic Meteorological Service and the Mariolopoulos-Kanaginis Foundation for the Environmental Sciences.

We invite journalists to attend the evening reception with the opportunity for interviews.

Registration:

[*http://atmosphere.copernicus.eu/cams-general-assembly-press-information*](http://atmosphere.copernicus.eu/cams-general-assembly-press-information)

1. ECMWF has published a COP21 briefing document on "How can big data help us live in a changing environment?" explaining the significance and potential of the Copernicus programme. Copernicus Atmosphere Monitoring Service and Copernicus Climate Change Service have both a website with further information. The COP21 briefing document can be found on both websites:

·[*http://atmosphere.copernicus.eu/news/publicity-and-promotional-material*](http://atmosphere.copernicus.eu/news/publicity-and-promotional-material)

·[*http://climate.copernicus.eu/news/publicity-and-promotional-material*](http://climate.copernicus.eu/news/publicity-and-promotional-material)

2. Copernicus is the European Commission's flagship Earth Observation programme that delivers freely accessible operational data and information services. ECMWF has been entrusted to operate two key parts of the Copernicus programme and is assisting with a third to bring a consistent standard to the measurement, forecasting and predicting of atmospheric conditions and climate change:

The Copernicus Atmosphere Monitoring Service provides daily forecasts detailing the makeup composition of the atmosphere from the ground up to the stratosphere.The Copernicus Climate Change Service (in development) will routinely monitor and analyse around 20 essential climate variables to build a global picture of our climate, from the past to the future, as well as developing customisable climate indicators in relevant economic sectors.The Copernicus Emergency Management Service supports improvements to flood forecasting and understanding of the frequency, variability and consequences of extreme weather.

3. The European Centre for Medium-Range Weather Forecasts (ECMWF) is an international organisation which specialises in numerical weather prediction and is supported by many European states.

4. The National Meteorological Services in Europe play an integral role in making Copernicus a success.

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1. IPCC (2014)[*http://www.climatechange2013.org/images/report/WG1AR5\_ALL\_FINAL.pdf*](http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf)

2. IPCC (2012)[*http://ipcc-wg2.gov/SREX*](http://ipcc-wg2.gov/SREX)/

3. IBT (2013)[*http://www.ibtimes.com/greeces-economic-crisis-leads-air-pollution-study-finds-1517266*](http://www.ibtimes.com/greeces-economic-crisis-leads-air-pollution-study-finds-1517266)

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**End of Document**



[***Deere Announces Second-Quarter Earnings of $ 495 Million***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JTM-8PC1-JD3Y-Y04H-00000-00&context=1516831)

M2 PressWIRE

May 20, 2016 Friday

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**Length:** 1814 words

**Body**

May 20, 2016

John Deere Capital Corporation

The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market.

Net income attributable to John Deere Capital Corporation was $ 69.6 million for the second quarter and $ 169.4 million year to date, compared with $ 115.9 million and $ 249.5 million for the respective periods last year. The decline for both periods was primarily due to higher losses on lease residual values, less-favorable financing spreads and a higher provision for credit losses.

Net receivables and leases financed by JDCC were $ 33.208 billion at April 30, 2016, compared with $ 32.877 billion last year.

Safe Harbor Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under "Company Outlook & Summary," "Market Conditions & Outlook," and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence and financial condition. These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.), international reaction to such programs, changes in environmental regulations and their impact on farming practices; changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms).

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates; and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results.

Customer and company operations and results could be affected by changes in weather patterns; the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters; and the spread of major epidemics.

Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators; actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***, carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise; and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates. Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results. Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products; changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; changes in demand and pricing for used equipment; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs; security breaches and other disruptions to the company's and suppliers' information technology infrastructure; and changes in company declared dividends and common stock issuances and repurchases.

Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action.

The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, to fund operations and costs associated with engaging in diversified funding activities, and to fund purchases of the company's products. If general economic conditions deteriorate or capital markets become more volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses.

The company's outlook is based upon assumptions relating to the factors described above, which are sometimes based upon estimates and data prepared by government agencies. Such estimates and data are often revised. The company, except as required by law, undertakes no obligation to update or revise its outlook, whether as a result of new developments or otherwise. Further information concerning the company and its businesses, including factors that potentially could materially affect the company's financial results, is included in the company's other filings with the SEC (including, but not limited to, the factors discussed in Item 1A. Risk Factors of the company's most recent annual report on Form 10-K and quarterly reports on Form 10-Q).

**Load-Date:** May 20, 2016

**End of Document**



[***DYING FOR THE WANT OF WATER; CLIMATE CHANGE SPECIAL REPORT FROM DROUGHT-RAVAGED ETHIOPIA ; One of the effects of climate change is the predictability has changed and everything is a bit more extreme than it was in the past One of the effects of climate change is the predictability has changed and everything is a bit more extreme than it was in the past ; HELP US SURVIVE AS POLITICIANS ARGUE, HELP US SURVIVE AS POLITICIANS ARGUE, ; ETHIOPIA PAYS PRICE OF GLOBAL WARMING ETHIOPIA PAYS PRICE OF GLOBAL WARMING***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HHY-NV11-DY9P-N4G2-00000-00&context=1516831)

Daily Record and Sunday Mail

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**Section:** NEWS; Pg. 33,34,35

**Length:** 1241 words

**Byline:** PAUL O'HARE

**Body**

THE cattle herders in the south of Ethiopia used to see devastating droughts once in their lifetimes.

Now, as the world gets warmer, it's every two or three years. And the human cost is catastrophic.

Global warming is a problem the Ethiopians did not create. But the Ethiopians could pay the price - in human lives.

Because of the extreme weather afflicting the country and a series of failed rains, up to 20million people are at risk of not having enough to eat next year.

FACTS Evolutionary Chris estimates that between 18 per per cent of could be on path to extinction.

And if the rains don't come in the new year, the government say they will need £400million to save thousands of people from starving to death.

Village elder Kalicha Kanchoro, 78, has been predicting the weather in the Oromia region of Ethiopia for more than six decades.

And as he sat on the edge of an underground well in the village of Web, he painted a grim picture of the human cost of the changes we have caused on our planet.

Kalicha said: "What I have observed, going back more than 10 years, is that the rainy seasons are becoming shorter and the dry seasons are becoming longer.

"There are challenges and problems continually.

"Long ago, you would see a drought once every 50 years. Today it's every time there is a shortage of rain. It's happening every two to three years.

"That means the climate has TURN TO PAGE 34 of failed at FACTS Evolutionary biologist Chris Thomas estimates that by 2050, between 18 per cent and 35 per cent of all species could be on the path to extinction.

FROM PAGE 33 totally changed. The seasons have displaced each other."

The Record met Kalicha as we visited projects to help local people which are supported by the Scottish Catholic International Aid Fund.

And Patricia Wall, SCIAF's representative in Ethiopia, agrees with his grim assessment of the cost of climate change.

She told us: "One of the effects is that the predictability has changed.

"Everything is a bit more extreme than it was in the past."

As Kalicha and Patricia spoke, world leaders 3500 miles away in Paris were trying to thrash out a universal, legally binding deal on how every country in the world will confront climate change.

And Kalicha had a message he wanted to deliver to the United Nations climate conference.

He said: "I want them to see the challenges of the world, especially concerning food security. And I want them to consider the impact of climate change."

Kalicha learned from his father how to forecast the weather by looking at the positions of the stars.

He predicts when the rain will fall, and how heavy it will be.

The first dry season started this month and runs until February. Then comes the rainy season from March to May, another dry season from June to August and a second rainy season from September to November.

But many fear next year's spring rains will fail, like this year's did.

And for Kalicha's people, who rely on their cattle for survival, that is literally a matter of life and death.

He explained: "The animals depend on the pasture. When there is no rain and no pasture, they die.

"In a very serious drought, 30,000 to 40,000 animals will die.

"When animals die, people become poorer and they die. That is the reality of climate change."

In recent times, the government and aid groups have been there to help save lives. In Web, SCIAF supported a cash-for-work scheme which enabled locals to build a path to the well where we met Kalicha.

The levels atmosphere dioxide, global 40 per than at the In the dry seasons, up to 3000 people and 4000 animals rely on it. Some walk seven miles to use it.

The well is a lifeline for the locals, who believe it will never run dry. But on its own, it is not enough.

The ***land*** is already terribly dry. On our epic road trip through the country, we saw many strips of scorched earth where rivers had been.

FACTS in our of carbon causes warming, are higher the start of industrial And Kalicha, a father of three, fears for the world his 22 grandchildren will revolution inherit. He said: "If drought becomes prolonged, disaster will increase and the lives of people and animals will be lost. This is the big fear I have."

Some in the west, where we bear a heavy responsibility for the warming of the planet, find it convenient to ignore the weight of scientific evidence and deny that humans are causing climate change. Kalicha has a message for them too.

He said: "Don't try to do things that create more challenges for climate change. If people do not consider nature and keep their environment, they will lose it."

Ethiopia entered the west's consciousness in 1984 when it was devastated by the famine that inspired Live Aid. The country has been transformed since those dark days, and the government and aid agencies will do everything in the coming months to help those in need.

But in SCIAF's office in the capital Addis Ababa, Patricia admits there are always problems to address. And she believes climate change is making those problems worse. She said: "You have increasing droughts in some parts and increasing flooding in others.

"Mostly, you have rain-fed ***agriculture***. So in drought areas, you have less rainfall and less productivity."

When rains fail, people in the country face a daily struggle to find water and build emergency stocks.

Patricia said: "You find people having to travel six to seven hours to collect water in some places. And they are using up stored seeds they had kept for later in the year.

they are using up stored seeds they had kept for later in the year.

"We anticipate the problems will be even greater in 2016 because of the series of failed rains. We've had a failed spring rain and a failed summer rain.

"We anticipate the problems will be even greater in 2016 because of the series of failed rains. We've had a failed spring rain and a failed summer rain.

"They are also talking about a failed rain in spring 2016. We are seeing people move more into a crisis situation."

"They are also talking about a failed rain in spring 2016. We are seeing people move more into a crisis situation."

Around 15million people are in Around 15million people are in need now. That is expected to rise to 20million, almost a fifth of need now. That is expected to rise to 20million, almost a fifth of the population, early next year.

And Ethiopia is harbouring an estimated 700,000 refugees from neighbours including Somalia, Eritrea and South Sudan.

For Ethiopia and other poor nations, much depends on Paris.

It is time to deliver. Critics say world leaders have collectively failed to address global warming since the first climate summit in 1995.

SCIAF are calling for a rapid cut in ***greenhouse gas*** ***emissions***, and for rich countries to give more than £100billion to help poor nations face the challenges of climate change.

Patricia said: "It's no longer and us and them. We need to step up and be ***accountable*** and there must be a sense of justice in how it's addressed.

"Carbon ***emissions*** didn't come from the Horn of Africa."

. For more information about SCIAF, go to [*www.sciaf.org.uk*](http://www.sciaf.org.uk) to The terribly road FACTS The levels in our atmosphere of carbon dioxide, which causes global warming, are 40 per cent higher than at the start of the industrial revolution

'THE CLIMATE HAS TOTALLY CHANGED. THE SEASONS HAVE DISPLACED EACH OTHER'

When there is no rain, there is no pasture and the animals die. Then the people die When there is no rain, there is no pasture and the animals die. Then the people die KALICHA

**Graphic**

VANISHING WATER Local people working beside a lake which is drying up observed, going back more than £400million to save thousands ofTHIRSTY ***LAND*** Paul sees the effects of the droughtIT'S TIME FOR JUSTICE PatriciaFRAGILE WAY OF LIFE Millions of people in Ethiopia rely totally on their cattleTHREATENED Kalicha says 40,000 cattle could die if there is a severe droughtPICS: SIMON MURPHYTHIS IS REAL Kalicha wants the rich west to see what climate change is doingTREk Some Ethiopians spend seven hours every day getting hold of waterWATER OF LIFE But wells like this one cannot protect the people against drought

**Load-Date:** December 5, 2015

**End of Document**



[***Wealth Management: Asian SRI's green shoots***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H4F-5071-JD1P-T2G8-00000-00&context=1516831)

Global Capital Euroweek

September 23, 2015

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**Length:** 2194 words

**Byline:** Asiamoney

**Highlight:** Socially responsible investment is not yet moving the needle in Asian wealth management, but the time when it could do so is getting closer. SRI assets might still be low, but interest is rising. Generational change could be the driver, as Ellen Sheng reports.

**Body**

When Norway's $870bn sovereign wealth fund made headlines in August for excluding four Asian companies because of environmental concerns over their involvement in Indonesian palm oil production, it sparked talk that green or socially responsible investing might finally be getting its time in the limelight.

Decisions made by the fund, which also excludes 50 other companies such as Rio Tinto, Walmart and British American Tobacco, are closely watched by other participants in socially responsible or sustainable investing. The asset class has been slowly gaining traction worldwide. Assets invested based on sustainable principles have increased to $21.4tr in 2014, up from $13.3tr in 2012, according to the Global Sustainable Investment Alliance, although there is no single definition of what constitutes sustainable investing.

The Global Sustainable Investment Alliance is made up of several sustainable investment organisations around the world, including Eurosif, a leading European group. But while sustainable investing is gaining steam in Europe and North America, it is notably lagging in Asia, where only 0.8% of total invested assets are managed according to sustainable criteria, the Alliance found. That contrasts with nearly 60% in Europe.

Despite the tiny base, interest in sustainable investing is nonetheless growing in Asia. The Association for Sustainable &amp; Responsible Investment in Asia (ASrIA), in its 2014 Asia Sustainable Investment Review, found that sustainable investments in Asia, excluding Japan, totalled $44.9bn in 2013, representing a 22% compound annual growth rate since 2011 (see table below).

Focus on returns

There are plenty of sceptics who say that green investing has too many hurdles to overcome to really become popular in Asia. That feedback is heard in the area of wealth management. Private bankers say investors in the region are singularly focused on achieving strong returns.

"People are just so focused on getting a good return. It's not that they're disinterested in the environment but if someone said you can invest in a regular way or in a sustainable way but with a little less return, they won't sacrifice that return," says Stuart Leckie of Stirling Finance in Hong Kong, an independent research and consulting firm focused on the pension fund and asset management industries.

Leckie estimates that about 50% of private banking clients in Europe invest, at least in part, in a sustainable way. He puts that level in Asia at perhaps 10%-20%.

Federico Burgoni, Boston Consulting GroupOthers agree with that broad theory. "Investors in Asia are really pragmatic. They don't care if it's green or yellow or orange, they just care about the returns from their funds," says Federico Burgoni, partner and managing director at consulting firm Boston Consulting Group in Singapore.

"The reality is I've seen all these products fail miserably," he adds, likening green or sustainable investing to other specialty products such as Islamic or Shariah funds. Shariah funds, which cannot invest in gambling and alcohol-related businesses, for example, have failed to take off in a big way even in Muslim countries, says Burgoni. He adds that they are most popular in Bangladesh and Malaysia, where institutional investors buy into them to satisfy government requirements.

"The moment you put boundaries up you're lowering the return, by definition. This is why I'm not so sure [green investing] will make a dent," he says.

Baby steps

Private banking client interest in sustainable investment varies widely across Asia, however. Bankers say most of the interest is in developed economies such as Japan, Hong Kong or Singapore. Investors in developing economies are far less interested.

This seems fairly predictable; environmental concerns are frequently considered to be a luxury that not everyone can afford. "These are topics that you start to care about when you reach a certain level of wealth," says Burgoni.

The biggest markets for sustainable investments are Malaysia, Hong Kong, South Korea and Singapore, according to surveys conducted by ASrIA. The fastest growing are Indonesia, Singapore and Hong Kong.

In Indonesia and Singapore, interest is driven in part by government policy. In Indonesia, it is in fact a push towards Islamic funds that is backing a trend for socially responsible investing.

Singapore, meanwhile, is positioning itself as a centre for technology and sustainable investing. The city-state has good reason to put the environment top of its agenda. The annual smog that envelops the city every August and September caused by the burning of farmland in Indonesia to clear ***land*** for palm oil production has been worse than usual in 2015 because of the El Nino weather effect, which has created drier conditions and bigger conflagrations.

Enid Yip, chief executive of Bank J Safra Sarasin in Hong Kong, a Swiss private bank owned by the Brazilian Safra Group, says that although interest and awareness of socially responsible investing is more prevalent in developed markets, there has nonetheless been some growth in sustainable strategies worldwide, with the scope expanding dramatically.

"SRI investments now extend coverage to include not just resource-related themes but also companies that are actively involved in protecting/preserving the environment," she says. "It also used to be quite rare to see emerging-market names in these investments, but that investible universe is expanding. The concept is more globally embraced than it used to be."

50 shades of green

Socially responsible investing can take numerous forms. One of the most basic methods is simply to screen certain industries or companies, as the Norwegian Oil Fund has done by excluding companies involved in palm oil production. Another form is "ESG integration", in which investment managers combine environmental, social and governance factors with financial analysis.

Exclusionary screening is the most common method in Europe and North America, but in Asia ESG integration is more popular, according to ASrIA, which also set up the Asia Investor Group on Climate Change. ESG integration ***accounts*** for 44% of sustainable investment assets in the region, or $23.4bn, says ASrIA. By comparison, exclusion/negative screening makes up 31%, or $16.6bn. But exclusion and negative screening, which has increased 53% since the start of 2012, is the fastest-growing strategy in Asia, followed by ESG integration, which grew 42%.

ESG screening more often than not focuses more on labour conditions. More than 70% of institutional investors surveyed by Oxfam, an international confederation of 17 organisations focused on alleviating poverty, said they were concerned about labour protection, labour and human rights in purchasing and supply management. That's not surprising, given headlines about factory fires in Bangladesh or suicides in Chinese tech factories.

The popularity of ESG screening in Asia is leading to demand for better disclosure. Oxfam's study, which was released this month, found that 64.2% of investors felt that the Hong Kong Stock Exchange should make ESG disclosure mandatory "" by making it compulsory for companies to fully disclose information on their ESG performance, for example.

The exchange's standards are much laxer than those in Europe or New York, as it only requires companies to report on six environmental aspects and 12 social aspects "" and also does not require listed companies to make disclosures related to human and labour rights in corporate supply chains. The Hong Kong Exchange is currently conducting a consultation exercise to beef this up, however.

India's Ministry of Corporate Affairs, the Philippines Securities Exchange Commission, the Vietnam State Securities Commission and the Singapore Exchange have imposed more stringent reporting requirements on companies relating to sustainable practices over the past couple of years. South Korea passed several new bills requiring listed companies to disclose ESG information.

Green bond growth

In addition to screening companies, another method of sustainable investing is actively putting money into renewable or green energy companies such as solar or wind power. "Sustainability themed investing" is the fastest growing strategy, says ASrIA, growing at CAGR of 56%.

Green bonds fall into this category, and this is one area where Asia has seen notable progress in 2015, not least because of the emergence of India and China as new markets. India saw its debut green bonds, which included a Rp3.15bn ($50m) bond from Yes Bank that was issued privately to the International Finance Corporation (IFC), which then issued the first green masala bond to back its investment.

And in September, CLP Wind Farms issued India's first corporate green bond, a Rs6bn issue that comprised three, four and five year notes.

Meanwhile, Xinjiang Goldwind Science &amp; Technology in July issued China's first green bond, accredited by DNV, a Norwegian-German appraiser. Regulators in China are preparing official green bond issuance regulations and guidelines.

In March of this year, The Asian Development Bank (ADB) sold its first green bond, raising $500m, saying that more than 30% of the notes were sold to Asian buyers. The World Bank, meanwhile, which has issued more than 100 green bonds totalling $8.4bn since 2008, also says it has diversified its Green Growth Bonds programme to target investors in Asia this year.

The World Bank's green bonds finance projects in member countries that meet specific criteria for low carbon and climate resilient growth through projects such as renewable energy installations, energy efficiency projects, new technologies in waste management and ***agriculture*** that reduce ***greenhouse gas*** ***emissions*** as well as financing for ***forest*** and watershed management and infrastructure.

Total issuance of green bonds worldwide reached $30.5bn in 2014, according to the ADB, double the amount in 2013. The ADB also estimated that, since 2010, total bonds issued by renewable energy companies (not necessarily green-labelled bonds) increased to $18.3bn from $5.2bn, most coming from mainland China.

Given the growing number of local issuers, it's not surprising that some local investors are starting to take notice. Sustainable investment funds are becoming more popular. There are now more than 500 such funds in Asia, up from 404 in 2011, according to ASrIA. Hurdles still exist, though. Despite repeated talk of making more such funds available through Hong Kong's Mandatory Provident Fund, there is only one sustainable fund there, offered by AIA, out of all the 450 funds on the MPF platform.

Untapped potential

Back to private banking, and the picture is less rosy. Many private bankers say they have seen little or no interest in socially responsible investing from their clients, but research suggests a very different picture "" and that there is a lot of untapped potential.

According to the 2015 Asia-Pacific Wealth Report from CapGemini and RBC Wealth Management, Asia's wealthy investors put more emphasis on having a more positive influence on society than wealthy investors elsewhere. Nearly a quarter, or 24.3%, of respondents throughout the region said they were seeking advice on how to achieve social impact goals, the report found.

Moreover, wealthy investors are leaning heavily on their wealth managers for advice on the topic. Of those investors getting advice on social impact, about half said they were considering their wealth managers to be their primary source of advice. There does appear to be much room for improvement, however, as 66.5% of respondents said they want more social impact support from wealth managers.

CapGemini suggests that private banks are in a good position to tap this demand. High net worth individuals are seeking ways to measure the outcomes of their investing. They are also seeking help in identifying opportunities. There could be opportunities for collaboration "" the Singapore-based Impact investment Exchange Asia, for example, offers platforms for social enterprises to raise capital as well as advisory services.

Private banks are stepping up their socially responsible investing and philanthropy departments. Banks such as UBS Wealth Management and Credit Suisse Private Bank have dedicated philanthropy advisory teams.

A big part of what's driving interest in socially responsible investing is the upcoming wealth transfer. Though many of Asia's wealthy are still amassing their fortunes, aging entrepreneurs are starting to look to the next generation to pass on their businesses and wealth. Almost two thirds of Asia's billionaires are now over 60 years old. Hong Kong's ultra-wealthy are expected to transfer $375bn over the next 30 years, while in Singapore the ultra-wealthy are expected to pass on $110bn, according to a research report in January by Wealth-X and US wealth adviser National Financial Partners Corp.

That generational change could be the driver that Asian socially responsible investment needs, according to figures from CapGemini. Only 55% of high net worth individuals over 40 years old expressed an interest in social impact. For those below 40, the figure was 67%.

**Load-Date:** October 12, 2015

**End of Document**



[***Environment - Extreme weather events: pointing the finger of blame.***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HX1-5GV1-JD7R-X18H-00000-00&context=1516831)

Water Power & Dam Construction

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**Section:** Pg. 42

**Length:** 2491 words

**Highlight:** The maturing science of event attribution is helping researchers analyse and communicate the possible influence of human induced climate change on extreme weather events. Improved understanding will help operators of energy and water infrastructure plan more effectively for the future, and minimise the risks associated with weather related disasters. Suzanne Pritchard reports.

**Body**

Identifying human fingerprints on extreme weather events has been the focus of the science community for well over a decade. The increasing sophisticated field of event attribution is seeking to gather evidence and demonstrate how human influences on our global climate have changed the likelihood of extreme weather events.

Information about how human actions impact extreme events is critical for decision making. Such knowledge will not only help to minimise the human, economic and environmental costs of weather related disasters, but will help water resource managers and operators of hydropower plants and dams in their day to day operations. There is now greater appreciation of the fact that climate change is increasing uncertainties for those who plan and operate global energy and water infrastructure.

A collection of research papers which study the cause of extreme weather events around the world has just been released by the American Meteorological Society. Dr Peter Stott is the Head of Climate Monitoring and Attribution at the Met Office Hadley Centre in the UK. "Year on year this report provides a growing evidence base that human influence on the climate is changing the likelihood of some types of extreme weather around the world," he says. "It is important to remember that natural variability is still an important factor in virtually all events and this research helps us to better understand how the two interplay."

The compilation of papers, called Explaining Extreme Events, have been published on an annual basis since 2012. This new 2014 edition is the biggest ever in terms of events and geographical areas studied: 32 papers looking at 28 different events from all continents. Some of the authors demonstrate how extreme weather is linked to human influence on the climate, while others conclude that natural influence is the dominant factor.

A link between global warming and the exceptional UK rainfall experienced during the winter of 2013/14 was shown by Nikolaos Christidis and Peter A Stott from the UK's Met Office (1). As the authors explain this winter period was characterised by an 'exceptional' clustering of vigorous storms driven by the North Atlantic jet stream, the latter of which gained momentum from a sequence of low pressure systems and was 30% stronger than in recent decades.

Tidal surges were triggered across coastal parts of the country by this succession of deep depressions, with the highest average rainfall being recorded over the entire UK ***land*** area since 1931. This sustained rain event occurred over saturated ground and culminated in widespread floodplain inundations, pronounced river flows, and record accumulated runoff totals. Consequent coastal erosion and extended flooding led to more than £560M of damage to transport infrastructure and business and residential properties.

"Here we find some evidence for a human-induced increase in extreme winter rainfall in the United Kingdom," Christidis and Stott concluded. They explain that under the same weather pattern of a persistent westerly flow, extreme rainfall over ten consecutive UK winter days is now seven times more likely in a warming climate, than in a world without manmade ***greenhouse gas*** ***emissions***.

Complex case

In contrast to extreme rainfall, drought is often considered a complex case in event attribution. Easy answers are sometimes elusive due to the many meteorological, hydrological and societal factors that combine to cause water shortages.

As Otto et al (2) explain in their paper focusing on water shortages in Southeast Brazil, the region experienced remarkable dry conditions from January 2014 to February 2015 - a period that includes two rainy seasons. Previous major droughts have occurred in the region and following the 1953-4 event the largest water supply system for Sao Paulo (Cantareira) was constructed. Just over 60 years later Cantareira sank to 5% of water volume capacity in January 2015: only capable of supplying water to 5.3M of its usual 8.8M local population.

The authors concluded that their multi-method analysis of the 2014-5 events showed that hydro-meterological hazard risk "has likely not increased due to human-induced ***greenhouse gas*** ***emissions***". Instead it was "more likely driven by water use changes and accelerated population growth".

However a word of caution is given for the future as Sao Paulo sits on the edge of the boundary between decreasing and increasing precipitation. "It is possible the wet-dry boundary will shift leaving Sao Paulo's precipitation future uncertain. Hence, while the recent drought impacts were most likely not driven by an increase in hydro-meteorological hazard, there is a risk that this may not hold in an even warmer world," Otto et al warn.

Rainfall deficit

The Levant region in the Middle East is no stranger to drought. During the 2014 rainy season it experienced persistent rainfall deficit, having experienced a previous drought event in 2007-8. In their paper, Bergaoui et al (3) summarise the human cost of water shortages: "While the extent to which the 2007/08 drought in the Levant region destabilised the Syrian government continues to be debated, there is no questioning the enormous toll this extreme event took on the region's population. The movement of refugees from both the drought and war affected regions into Jordan and Lebanon ensured that the anomalously low precipitation in the winter of 2013/14 amplified impacts on already complex water and food provisions."

In summary the authors discuss "the uniquely persistent" drought that occurred in the Southern Levant rainy season of 2014.This was described as an unprecedented event during the critical January to February wet period when reservoirs and groundwater systems usually recharge and snowpack accumulates to support summer stream flows. Furthermore, modelling showed that anthropogenic climate change made the drought about 45% more likely.

The impact of drought on the region has been far reaching. As the authors state: "The consequent external stresses that came with this drought, such as crop failures, degraded grazing ***land***, and over pumping of non renewable groundwater, suggest that water and ***agriculture*** authorities in the southern Levant region should have additional fail-safes in place going into the future."

Close interaction

Research such as that gathered above from scientists around the globe can but help to improve confidence in the ability to detect the role of human induced climate change, and its consequent impacts on people, the economy and environment. Indeed scientists are beginning to realise that event attribution is more than just a tool to communicate the impacts of a changing climate to the public, it can be a valuable tool for decision makers and their future plans.

The American Meteorological Society's report believes that the science of event attribution can help build situational awareness of our weather and climate system, and support educated planning decisions. It believes that a robust and reliable situational awareness informs risk reduction

For example water resource managers and other agencies dealing with drought in the US West have said that they find event attribution work useful as it helps show why long-term planning should ***account*** for a changing climate. Indeed all droughts are different and decision makers are interested in what ingredients went into any particular drought, how it evolved, and whether it could have been predicted. This is especially beneficial for improving early warning systems.

Decision makers have also shown interest in attribution for floods. As was the case when the US National Oceanic and Atmospheric Administration was asked by the Army Corps of Engineers to carry out an in-depth assessment of the 2011 Missouri River Basin flood to inform their planning.

It is acknowledged that the science of event attribution is evolving, but the vision is to provide users with an improved understanding of how changes in climate extremes can be relevant and applied to improved decision making.

Looking to the future, the editors of this special report say that: "Close interactions between attribution scientists and the user community will be essential to fully exploit the value of this research to society."

FREE SATELLITE DATA FOR CLIMATE CHANGE ADAPTION

New global temperature data published by the EU's Copernicus satellite programme has shown that the 12 month period to the end of October 2015 was the warmest on record. The monthly snapshot from this earth monitoring programme helped to highlight the potential for 'big data' to help industries such as energy and water adapt to the changing environment.

The Copernicus programme utilises the EU's Sentinel satellite network, thousands of ***land*** and marine based sensors, millions of readings every hour and a century long archive of data. This will enable it to generate the most up to date view of the global environment and predict future changes on timescales of just a few days to decades in advance.

Copernicus is already providing data that help the Intergovernmental Panel on Climate Change to assess the risks associated with climate change. The huge volume of data on the earth's atmosphere and climate that underpins the programme is now being put, free of charge, into the hands of governments, industries, data innovators and the public.

Dr Vincent-Henri Peuch, Head of the Copernicus Atmosphere Monitoring Service, said: "Data harnessed by Copernicus and available free of charge is going to transform how governments, industries - and all of us - are able to adapt to changes in our environment. It will dramatically reduce the uncertainties faced by those planning and operating our energy and water infrastructure."

Those involved believe that Copernicus' ability to harvest and interpret data will transform the confidence with which governments and industrial sectors such as energy and water take decisions, and has the potential to change our day to day relationship with the atmosphere and climate through new products and services.

For the energy sector, the programme will:

- Help identify the most profitable and sustainable sites for wind farms, hydroelectric dams and solar panels.

- Enable risk assessments to manage the impact of wind, waves and dust on energy infrastructure.

- Allow assessment of the potential yield of renewable technology to help countries manage electricity supply and plan grid connections.

For the water sector, Copernicus will:

- Help identify areas most at risk of drought or flooding to protect property, infrastructure and ensure security of supply.

- Allow policy makers to assess the potential impact of ice melt on low-lying coastal areas.

- Enable the strategic planning of water intensive industries such as ***agriculture***.

Climate Change is one of six Copernicus services which include an early warning flood system that provides operational flood forecasting, giving an understanding of the frequency, variability and consequences of extreme weather.

More information about all of the Copernicus Services is available at [*http://copernicus.eu*](http://copernicus.eu)

RAINFALL RESEARCH HELPS SUPPORT LOCAL DECISION MAKING

New research by the University of Warwick and the London School of Economics in the UK has identified changes in the shape of rainfall across Europe. Professor Sandra Chapman of the University of Warwick, and co-authors Professor Nicholas Watkins and Dr David Stainforth from the London School of Economics, have published new research demonstrating how the variability in the way it rains makes it intrinsically difficult to identify the character of local climate change.

In places such as Scotland, the Dordogne, Tuscany and the Low Countries, changes are evident despite the variability. The research team has looked at 63 years' worth of European rainfall data and found location-specific changes in the character of rainfall that are sometimes big enough to pick out directly from the local observations.

"We have found that in many places in Scotland the rain on heavy rainfall days has increased by over 50%. However, in some places in the Highlands this rain has shifted from light rain days so overall it's not much wetter but when it does rain it is more intense," says Sandra Chapman. "In other Scottish locations the change reflects an increase in the total amount of rain and snow overall. We have also found that in south west France it is drier with less rain on all types of rainy days but in Tuscany it is drier with heavy rainfall in particular being reduced."

The researchers say that knowing the change in average rainfall is not enough to understand the change in intense rainfall. In fact changes in variability often have a greater impact on extremes.

As David Stainforth from the London School of Economics said: "This work demonstrates how the impacts of climate change are complicated and local. As a consequence it is likely that individuals will have different perspectives on anthropogenic climate change if their views are based mainly on personal experiences of weather rather than on the underlying fundamental science."

The research team say that this study, and an earlier related one on temperature differences by the same team, provides a new source of information to support local decisions made in the context of climate change and relating to flood protection, water provision and ***agricultural*** planning.

The research is presented in the paper Limits to the Quantification of Local Climate Change, by S. C. Chapman, D. A. Stainforth, and N. W. Watkins published in the journal Environmental Research Letters on 16 September 2015. [*http://iopscience.iop.org/1748-9326/10/9/094018*](http://iopscience.iop.org/1748-9326/10/9/094018)

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**Load-Date:** January 21, 2016

**End of Document**



[***London Nusantara Plantations PLC Audited Results for the Year Ended 31 December 2015***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JVC-FC01-JCXB-241F-00000-00&context=1516831)

London Stock Exchange Aggregated Regulatory News Service (ARNS)

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**Length:** 1643 words

**Body**

23 May 2016

LONDON NUSANTARA PLANTATIONS PLC

("London Nusantara" or the "Company")

Audited Results for the Year Ended 31 December 2015

CHAIRMAN'S STATEMENT

I am pleased to present the Company's audited financial results for the year

ended 31 December 2015. With no operating business the company made a pre-tax

loss for the year of GBP165,706 (2014: GBP168,065). Cash at bank at the end of

December 2015 was GBP191,097 (2014: GBP372,476). During the year, the Company

completed an investment of GBP111,772 in 404 hectares of ***land*** suitable for oil

palm, as reported in our year end 2014 financial statement. Our net assets

stood at GBP292,067 (2014: GBP447,773).

The Company to date remains as an ISDX Growth Market investment vehicle seeking

to identify and secure potential acquisition opportunities within the

***agriculture*** sector, primarily in oil palm plantations and also vacant ***land***

suitable for oil palm cultivation.

Principal Activities and Review of the Business

The principal activity of the Company is to invest in companies, or assets, in

the ***agriculture*** sector primarily in oil palm plantations and/or vacant ***land***

suitable for oil palm cultivation. The Company has continued in this activity

since listing on ISDX in June 2014.

We are pleased to report that, the two parcels of ***land*** (404 hectares), via our

investment in Next Oasis Sdn. Bhd. is currently in the final stages of being

cleared and planted with young oil palm trees. Our joint venture partner, Fima

Corporation Berhad, has intimated that the planting is targeted to be completed

by the middle of 2016.

The year 2015 has been a difficult one domestically and globally with the drop

in crude oil, slowdown of the Chinese economy and Yuan devaluation and other

commodity prices, including palm oil. Palm oil prices dipped to a 6½-year low

of RM1,860, (approximately GBP320). During the year we have been actively

involved in negotiations with a number of estate owners, but faced difficulty

in raising conventional debt and equity to finance our acquisitions. However,

on a more positive note, there has been a marked increase of oil palm estates

up for sale at relatively lower prices, approximately 20%-30% lower from the

boom years, giving rise to mergers & acquisitions opportunities. We plan to

take advantage of this window to acquire an income generating oil palm estate

in 2016. We also intend to capitalise on the joint venture business model as it

allows us to tap into the experience of more established players, possibly

working together to raise conventional bank loans to finance acquisitions.

Our plan is to embark on an aggressive fund raising exercise in 2016 in

conjunction with a potential acquisition of a mature oil palm estate.

Financial Review

The audited results for the year show a loss of GBP165,706. The Company's primary

expenses are largely to maintain its listing status and other expenses related

to business development incurred in identifying potential investment targets

and fund raising expenses. In addition to the above, the company-incurred a

foreign exchange loss of GBP44,955 due to the severe depreciation of the Ringgit

vs. other major currencies, namely, against the Dollar and British Sterling.

Despite this we also recorded a revenue of GBP8,651 from interest received from

our treasury fund placements.

The Directors consider the results for the year to be satisfactory despite the

adverse conditions faced during 2015.

The Directors do not recommend the payment of a dividend for the year ended

31 December 2015.

Industry Outlook 2016

As anticipated, 2015 saw palm oil prices plummeting to historic lows while the

rest of the commodities in Malaysia merely stayed afloat. Palm oil, like many

major commodities in the world, was affected by sluggish demand due to slow

growth in global economy, high-stockpile, currency fluctuation and geopolitical

issues. The palm oil market was further mired in a downturn cycle as the

benchmark Malaysian palm oil prices slumped to a 6½-year low at RM1,860,

(approximately GBP320) in mid-August 2015. This was mainly due to China

intervening in currency markets and devaluing the Yuan by nearly 2 per cent

resulting in a shockwave in the foreign exchange, capital and commodity

markets.

However, concerns on the potential dent to production and hence supply from the

effects of drought in South East Asia due the strengthening of El Nino weather

phenomenon, weak Ringgit and India's record demand, the benchmark for November

2015 contract on the Bursa Malaysia Derivatives Exchange rebounded to RM2,050

(approximately GBP353). The rebound was also supported by the Malaysian

government's announcement of an incentive payment scheme for the early

replanting of old oil palm trees and a statement reinforcing both Malaysia and

Indonesia's commitment to their respective biodiesel mandate, helped to

stabilise prices which ended the year at RM2,200 (approximately GBP379).

2015 Review

2015 was indeed a challenging year for oil palm as prices fluctuated violently

especially in the third quarter, as apart from the weak fundamentals of

sluggish demand due to slow growth in global economy, high-stockpile and

currency fluctuation, China's intervention in the currency market not only

affected the foreign exchange and capital markets but also put a dampener on

the commodity market as well. The Malaysian crude palm oil ("CPO") prices did

not surpass RM2,302 (approximately GBP397 per tonne whilst recoding an average

monthly low of RM1,975 (approximately GBP340) in August 2015. The year averaged

at RM2,172 (approximately GBP374) compared to RM2,382 (approximately GBP410) in

2014.

The supply perspective showed a marginal increment at 19.96 million tonnes of

CPO production as compared to the 2014 production of 19.66 million tonnes of

CPO. The demand side also showed a marginal increase from the previous year's

performance with India maintaining its position as the largest destination of

Malaysian palm oil exports.

Among the major key developments that took place in the industry during the

year was the establishment of the Council of Palm Oil Producing Countries by

Malaysia and Indonesia. Both countries announced their commitments to

sustainable palm oil practices, ensuring price stability in palm oil prices,

harmonize stock management, improve competitiveness as well as create demand

for biodiesel mandates.

To ensure consumption is sustained the Malaysian B7 Biodiesel mandate, a blend

of 7% palm oil (palm, methyl and ester) and 93% diesel aimed at meeting

Malaysia's obligations in reducing ***greenhouse gas*** carbon ***emissions*** as well as

stabilising palm oil prices by creating greater internal demand, is to be fully

implemented as a mechanism to manage the palm oil stock. Similarly, the

Indonesian B15 biodiesel mandate is expected to boost local palm oil

consumption. Both countries are committed to enhance their respective

biodiesel mandate to B10 and B20 respectively.

Analysts are in agreement that that the palm oil sector for 2016 will be

greatly influenced by the vagaries of the El Nino weather phenomenon, the full

impact of which is still not apparent. Malaysian palm oil production is

estimated at 20 million tonnes for 2016. However, with a full blown El Nino,

analyst predict it would negatively impact production by approximately 5%.

Conversely, stock is expected to go below the 2.0 million tonnes level.

Indonesia is also expected to show a similar trend with production maintaining

the 2015 level of approximately 34.0 million tonnes for 2016. On the demand

side, the world's population is expected to grow by 100 million in 2016 to 7.42

billion. Of this, 30% of the population is between the age group of 15 to 50

years old and will form the main demand drivers. The World Economic Outlook

predicted an economic growth of 3.4% up from the forecasted 3.1% for 2015.

India is expected to maintain its position as the biggest destination whilst

continuous and growing demand from Japan, South Korea and Philippines will prop

up prices.

Meanwhile palm oil is becoming a major force in Central America and Eastern

Europe. China, although is expected to have a higher carry-over stock, would

see an increase in imports due to demands from its food industry.

Palm oil prices in Q1-2016 saw a welcomed spike to RM2,600 (approximately

GBP456) from RM2,300 (approximately GBP403) in January only to recede to the

current level of RM2,450 (approximately GBP429) on ***account*** of weakening crude

oil prices. For 2016, analysts have forecasted a wider range of price mobility

of between RM2,300 (approximately GBP403) to RM3,200 (approximately GBP561)

averaging at RM2,500-2,600 (approximately GBP438 -GBP456) per tonne CPO.

China's rebalancing of its economic activity away from investments and

manufacturing to consumption and services will have an impact on global market

if the transition is slow. A further drop in the energy market would also put

a strain on other commodity producers. Further US Dollar appreciation and

geopolitical shocks would also put a dampener on a pick-up on economic

activities.

While crude has come off near six-year lows hit in January 2016, prices are

still down about 50% from their highs reached in June 2014. The anticipated

increase in biodiesel would help garner a more supportive outlook as it may

translate to more stocks being blended into biofuel.

Therefore it's predicted the CPO price outlook for 2016 is expected to average

RM2,500 (approximately GBP438) per tonne compared with RM2,380 (approximately

GBP417) per tonne in 2015. CPO prices can be traded within a low of RM2,200

(approximately GBP386) per tonne and a high of RM2,700 (approximately GBP473)

per tonne this year.

Principal Risks and Uncertainties

The principal risks and uncertainties lie in the investments the Company holds.

The ***agriculture*** sector means that returns are influenced by external factors

**Load-Date:** May 23, 2016

**End of Document**



[***How companies' responsibilities for supply chain workers are widening***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JS3-JVM1-F14X-V1WS-00000-00&context=1516831)

just-food global news

May 13, 2016 Friday 8:22 AM GMT

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**Length:** 1552 words

**Byline:** Ben Cooper

**Body**

Oxfam's Behind the Brands campaign reflects the increased responsibility global food companies are now expected to assume for working conditions, wages, safety and workers' rights in their ***agricultural*** supply chains. Ben Cooper reports.

In Oxfam's latest Behind the Brands scorecard, which evaluates the ***agricultural*** sourcing policies of the world's ten largest food and beverage companies, the NGO gives credit for progress made over the three years since its campaign began. However, it also underlines how expectations of food companies are changing, not least regarding the wages, rights and working conditions of those working in its supply chains.

Three of the seven issues by which Oxfam rates food companies – women, farmers and workers – reflect directly how company policies affect the people working in their ***agricultural*** supply chains.

The criteria Oxfam is judging – from gender discrimination to child labour and safe working conditions to the living wage – are workplace responsibilities companies have already had to take assume for their own workforce. The expectation now is that they have very similar responsibilities for a far larger constituency of workers, employed by entities and in locations well outside their direct control.

Of the seven social and environmental issues assessed on the Behind the Brands scorecard, Oxfam notes the strongest progress has been on ***land*** rights, ***greenhouse gas*** ***emissions*** and gender equality. However, the two areas with most direct relevance to workers and working conditions – farmers and workers – were among the areas of least improvement.

For Erinch Sahan, acting head of the private sector team at Oxfam GB, the lack of progress on issues such as wages and working conditions comes down to the economic power imbalance between the buying companies and farmers. "If the prices that they're paying for commodities don't even allow for living wages to be paid, and there's evidence to say that might be the case in certain commodities, then they're actually making it impossible for people who are working in their supply chains to lift themselves out of poverty," Sahan tells just-food.

In their responses to the Behind the Brands report, the companies stress their commitment to improving working conditions and tackling poverty in their supply chains. No company is going to say it is not interested in doing so. Indeed, there are now international conventions, notably the UN's Guiding Principles on Business and Human Rights, which enshrine these responsibilities. However, the complex structure of global supply chains makes following through on such ideals a far from easy task.

While Unilever, which was the highest performer overall, scored eight out of ten for both farmers and workers, Danone only scored three on both of these issues.

"It's important to acknowledge the complexity of supply chains in general and the difficulties that brands and retailers face in ensuring decent working conditions and wages in the lower levels of their supply chains," says Nick Kightley, food and farming lead at the Ethical Trading Initiative (ETI), the UK multi-stakeholder partnership aimed at improving conditions in ***agricultural*** and manufacturing supply chains. "However, brands have a responsibility for ensuring that workers are well treated in all levels of their supply chain and not just the first tier."

Referring to the "growing appetite" for transparency with regard to supply chains, Kightley sees Oxfam's expectations increasingly reflecting general attitudes. "As an NGO with a campaigning remit, Oxfam will certainly push for the highest possible standards, and from experience, we often know that where NGOs lead, the rest of the world almost inevitably follows."

However, while responsibilities for labour issues among employees can be considered to be a direct responsibility for companies, responsibilities in the broader supply chain, particularly highly complex, global supply chains involving multiple operators, are shared with other entities, as Mondelez International points out. "These challenges are complex and require coordinated action by governments, industry and scientific and environmental experts," the Oreo manufacturer states.

Unilever also stresses working in partnership. It says key areas of focus for the future will include "human rights issues beyond first-tier suppliers, working conditions for migrant labour and continuing collaboration with other organisations in order to influence systemic change". The company adds: "We are proud of our achievements but know that there is more to be done. We aim to work in partnership to create wider movement in our industry and beyond."

General Mills, meanwhile, says "respect for human rights is core to our commitment to conduct business in an ethical manner", but the company also stresses the responsibilities of other actors. "We recognise that governments are ultimately responsible for establishing the legal framework to protect human rights within their jurisdictions, but we are part of the broader community wherever we operate.  We work within a large, diverse value chain of business partners and stakeholders. We recognise that each entity in this value chain has its own independent duty to respect human rights. We expect them to adhere to ethical business conduct consistent with our own."

The world's largest food manufacturer, Nestle, which came second after Unilever in the overall Oxfam rating, also stresses it shares these responsibilities with others. "Responsibility for ensuring that farmers receive living incomes for their produce is a shared endeavour, and we continue to work with others, including governments, to bring about positive change."

However, Brooke Barton, senior director of the water and food programmes at sustainability think tank Ceres, believes companies ultimately have to accept a defining responsibility, particularly when it comes to more serious abuses. "Governments play a crucial role in legislating and enforcing decent working conditions, but companies implicated in sourcing from suppliers with dubious practices can only point the finger at themselves and must articulate the role they play in driving these conditions and in helping to remedy them."

It should be noted that campaigners spend plenty of energy lobbying governments, but the ten companies being monitored through the Behind the Brands campaign represent a highly effective campaigning target. As the name suggests, the campaign is designed specifically to link what is going on in ***agricultural*** supply chains with household names familiar to consumers.

Food companies are both highly visible and extremely powerful. As such, the sort of scrutiny the Behind the Brands campaign represents is a reality of doing business in today's environment.

As Kightley puts it: "Amongst other things, civil society organisations as well as international charities exist to hold the powerful to ***account*** on behalf of the poorest. It's their prerogative to choose what and who to target and why."

A further attribute that makes the ten companies effective targets for campaigning, Sahan adds, is their global presence. "The thing that made it particularly powerful for us as a campaign on these ten companies is that they operate everywhere. There's no government that operates everywhere in the same way, there's not even a civil society organisation that operates in any significant capacity the way that these ten companies do," Sahan explains.  "I would say we focus more on influencing governments than individual companies throughout our work in the 93 countries we work in. But with these ten companies we saw an opportunity to do something globally here.  We can look at what they're doing at a global level and hold them to ***account***."

That said, what is striking about the Behind the Brands campaign is that it is not fundamentally a name-and-shame initiative. Oxfam quite deliberately highlights where companies have made progress. In their responses, the companies are able to acknowledge and welcome that recognition as well as responding to criticism.

In this sense, the campaign becomes much less the traditional diatribe against corporate greed and instead a driver of improvement. "That was a commitment we made at the beginning," says Sahan. "If we are going to challenge companies to do things, then when they do them we have to celebrate it." Highlighting progress is not only more effective, Sahan continues, but also "helps build a narrative that this is possible".

True to its commitment to acknowledge achievement, Oxfam points out that nine of the ten companies had increased their overall score by at least 10% since 2013. However, the report card also calls for companies to address issues where there has been least progress, the most significant of which is most certainly wage levels and labour conditions among those working in ***agricultural*** supply chains. The question remains whether companies can make good on their commitments to improving the lives of the farmers and farm workers who supply them without the "substantial change" to their business models that Oxfam believes is required.

Click here for just-food's rundown of how Oxfam scored food majors including Unilever, Mars Inc and Associated British Foods - and how the companies reacted.

**Load-Date:** May 13, 2016

**End of Document**



[***How to feed 9.7bn people? Startups take on the global food problem; In the hunt for a sustainable solution to a rapidly rising population, agriculture has begun to adopt a venture capital mindset***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JX5-WM11-F021-64W2-00000-00&context=1516831)

The Guardian

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**Section:** WORLD NEWS

**Length:** 1632 words

**Byline:** Nic Fleming in Wageningen

**Body**

The raw numbers make for daunting reading. One in 10 people out of the current global population of 7.4 billion already goes hungry. Crop yields that soared in the decades after the second world war are flatlining, and the UN predicts there will be 2.3 billion more mouths to feed by 2050.

So how to keep people fed without trashing the planet? Some estimates put the contribution of the global food system to manmade ***greenhouse gas*** ***emissions*** as high as a third. Unsustainable farming methods are depleting soil nutrients significantly faster than they can be replenished. Rising demand for meat is driving deforestation as ***land*** is cleared to grow feed for livestock.

Related: And now for something completely different: some positive news

Green shoots of change, however, are starting to emerge, with researchers seeking out possible solutions on the borders between disciplines. The startup and venture capital culture, driving rapid change in other spheres, is gaining a foothold in food and ***agriculture***, and spreading from its stronghold on the US west coast.

The root of the problem

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The Guardian

June 2, 2016 Thursday 12:35 PM GMT

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**Section:** WORLD NEWS

**Length:** 1631 words

**Byline:** Nic Fleming in Wageningen

**Body**

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The Guardian

June 1, 2016 Wednesday 2:28 PM GMT

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**Byline:** Nic Fleming in Wageningen

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[***Taking on the world***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J1T-PTT1-DY9P-N1CN-00000-00&context=1516831)

Irish Independent

February 8, 2016 Monday

Edition 1, National Edition

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**Section:** EXAM BRIEF;FEATURES; Pg. 3,4,5,6,7,8

**Length:** 5406 words

**Body**

The Higher Level Leaving Cert Geography exam is worth 400 marks. There are five sections of the exam, each worth 80 marks. The exam is 2 hours and 50 minutes long.

The Ordinary Level exam is also worth 400 marks. There are four sections in this exam, each worth 100 marks.

The Geographical Investigation is to be completed and submitted by 29 April, 2016. This is worth 100 marks, i.e. 20% of the overall total.

LAYOUT HIGHER LEVEL Part one -short questions (80 marks). There are 12 short questions.. Answer all 12 questions and your 10 best marks will be used.. Do not leave anything blank as there is no penalty for incorrect answers.. Each question is worth 8 marks.

. Do not spend more than 25 minutes on this section. It is possible to complete this section in less than 10 minutes.

Part two -structured and essay questions (320 marks) You must do one whole question from each of the sections:. Physical geography (80 marks). Regional geography (80 marks). Electives; economic activities or the human environment (8o marks). Options (80 marks).

Part one -short questions There will be 12 short questions. Generally about five or six questions are taken from the physical geography part of the course. Four or five questions will be aimed at examining geographical skills such as interpreting graphs, maps, aerial photographs and satellite imagery. One or two questions may be taken from the regional geography section and tend to ask you to classify a list of regions.

Exam tip: Read the question carefully. Read all supplementary information that might be attached to the map/graph/diagram etc. When reading graphs make sure to take note of what the unit of measurement being used on each axis is. A common mistake in this section is to fail to provide a correct unit of measurement when giving what might appear to be a simple answer.

Unit of measurement altitude m distance m, km area Km2 temperature °C air pressure mb, hp rainfall mm Exam tip: Your past papers are a valuable resource in helping you to prepare for this section of the exam. There are now 10 years worth of previous short questions to practice with 2008 exam paper: earthquakes Examine this diagram of an earthquake. Insert the labels W to Z in their correct places in table below: Description Label Fault line W Focus Y Escarpment Z Epicentre X Tip: A common mistake is to get the focus and epicentre of an earthquake mixed up. For example, with 'Focus' on the image above, your eye should be drawn to the centre of the image when you do this. That's the 'focus' that you're then looking at, not the epicentre.

2011 exam paper: weather charts i) The weather over the Iberian Peninsula is very calm. True X False \_\_\_ ii) There is a cold front over central and northern Europe. True X False \_\_\_ iii)There is an anticyclone affecting Ireland and Great Britain. True \_\_ False X iv)Winds are light over Ireland. True \_\_ False X 2009 Exam Paper: Landforms Match each of the surface processes in Column A with the correct example in Column B.

PHYSICAL GEOGRAPHY (80 MARKS) Questions 1, 2 and 3 are on physical geography. You must do one of these three questions. Each question is divided into three parts.

Part A is worth 20 marks. 5 minutes is the most you should spend on this.

Parts B and C are both 30-mark essays. You should allow 15 minutes for each essay.

The following topics tend to be examined in the 20-mark questions:. sketch maps from OS maps and aerial photographs.

. The processes by which rivers, glaciers, the sea, mass movement and weathering alter the landscape, and the landforms formed by these processes.

. The rock cycle.. Identifying tectonic plates and plate boundaries.. The effects of folding and faulting.

2007 Question 2A -plate tectonics (i) Name the island at A where volcanoes occur. Iceland (ii) Name the feature which can be found at B. The Mid-Atlantic Ridge (iii) State clearly the different types of plate boundary found at both C and at D. C is a transform plate boundary. D is a convergent plate boundary. [20m] 2012 Question 3A -rock cycle The Rock Cycle (i) Name the category of rock formed at A and name one example of this category of rock. Sedimentary, sandstone. (ii) Name the category of rock formed at B and name one example of this category of rock. Metamorphic, quartzite.

(iii)Name one example of an igneous rock which is formed at C. Granite. (iv)Name one example of an igneous rock which is formed at D. Basalt. (v) Briefly explain the difference between the process of weathering and the process of erosion. Weathering is the breakdown or decay of rock, erosion involves the movement of that weathered material. [20m] 2010 Question 3A (i) Activity along which two plates resulted in the earthquake in Haiti? The Caribbean plate and the North American plate. (ii) What type of fault caused the earthquake? A transform fault.

(iii)Describe the faulting responsible for the earthquake. The Caribbean plate is moving eastwards along the fault while the North American plate is moving westwards along the fault.

(iv)What tectonic activity along the subduction zone created the island arc on the map? The subduction of the North American plate underneath the Caribbean plate. [20m] Part B and C These are 30-mark essays. You should aim to write about 1.5 pages and allow 15 minutes for each essay. There's no need for any general introductory comments or summary at the end of your essay. What accumulates marks is good, accurate factual information that shows that you can use the correct terminology to describe the various processes at work in shaping the landscape. As you come across new and unfamiliar words while studying geography, these are the words that you need to focus on until you become confident in being able to use them in an exam situation.

Exam tip: One question that has been asked every year since 2006 relates to the formation of a landform.

In 2014 a landform of deposition and a landform of erosion were required, while in 2015 a landform of erosion was specified. You should learn one landform of deposition and one landform of erosion as there is a good chance that you will get to use such an essay in the exam.

LANDFORM DEVELOPMENT Marking scheme 2009 Question 1A Examine with the aid of a labelled diagram/diagrams, the processes which have shaped one Irish landform of your choice.

Landform identified: 2 marks (30m) One named process: 2 marks Irish example: 2 marks Labelled diagram: 4 marks graded Examination: 10 x SRPs Answer: The formation of a delta, a landform of deposition.

1. When a river flows into a standing body of water, such as a lake or ocean, flow velocity is reduced. This causes a reduction in the stream competence and stream capacity. 2. Sediments being transported by the river will then begin to settle out, with the largest particles being deposited first close to the river mouth and the finer sediments being deposited further out.

3. A prodelta develops as sediments build up below the level of the lake or sea. 4. A delta plain develops where sediments accumulate until they protrude above the water level.

5. Deltas only form where the river carries a large volume of sediments, where the lake or sea bed is not very deep, and where waves, currents and tides are not strong enough to transport away all the sediments deposited around the river's mouth.

6. As deposits of alluvium build up, distributaries develop as the river begins to branch off in several directions.

7. A bird's foot delta may develop when the volume of sediment is so large that the delta grows far out into the body of water. One such delta is formed where the Mississippi flows into the Gulf of Mexico.

8. The Nile has an arcuate delta. This is triangular in shape as its seaward edge has been shaped by waves and tides.

9. A lacustrine delta may develop where a river flows into a lake. 10.Due to the richness of the alluvial soil and the availability of moisture, vegetation develops quickly on a delta. Roots help to secure the delta against erosion. Natural levees may also form along the distributaries.

THE ROCK CYCLE Topics within this aspect of physical geography include igneous, sedimentary and metamorphic rocks, how limestone is chemically weathered to produce karst landscapes and how humans interact with the rock cycle.

2010 Question 1C Examine, with reference to examples from Ireland, the formation of metamorphic rocks. (30m) Marking scheme rock named 2+2 marks Examples (Irish locations): 2+2 marks Examination: 11 x SRPs Answer Quartzite 1. During the Caledonian orogeny c.450 m.y.a magma intruded into anticlines and heated the surrounding country rock of sandstone. The sandstone then underwent thermal metamorphism.

2. The sedimentary structure within the sandstone was erased and the silica was re-chrystalised to give the quartzite a glassy and white appearance. 3. Quartzite is a very hard and durable rock. It is chemically inert so it is not prone to chemical weathering.

4. Quartzite is found in a band of 1-2km around the magma intrusion within the Caledonide anticlines in the Wicklow Mountains. This band is called a quartzite aureole.

5. Differential erosion has given to rise quartzite outcrops standing high as quartzite peaks.

The quartzite erodes at a much slower rate than the surrounding sandstone.

6. Quartzite peaks can be seen at the Sugarloaf Mountain in Co Wicklow, Croagh Patrick in Co Mayo and Mount Errigal in Co Donegal.

Slate 1. Dynamic metamorphism occurs when pieces of crust slide past each other in opposite directions. The pressure created can cause the crystals in the rocks to realign. This type of metamorphism is associated with convergent and transform plate boundaries. 2. Shale is a sedimentary rock formed from the deposition of muds and silts on a seafloor.

When shale is put under enough pressure and heated it is compressed into layers or strata forming slate.

3. If shale is heated to 200 °c it will be metamorphosed into slate. 4. Slate is non-porous and it splits or cleaves easily into thin sheets. This makes it an ideal material for roofing.

5. Slate has been quarried at Valentia, Co Kerry.

Marble 1. Limestone that has undergone thermal metamorphism turns into marble. Marble can be seen in Connemara, Co Galway.

Gneiss 1. Granite that has undergone dynamic metamorphism turns into gneiss.

Sugarloaf Mountain, Co Wicklow Regional geography (80 marks) Questions 4, 5 and 6 are on regional geography. You must do one of these three questions. Each question is divided into three parts.

Part A is worth 20 marks. 5 minutes is the most you should spend on this.

Parts B and C are both 30-mark essays. You should allow 15 minutes for each essay.

The following topics tend to be examined in the 20 mark questions:. sketch maps of Irish, European and sub-continental regions. Interpreting data presented in graphs. Identifying the various classifications by which regions can be defined.

Exam tip: If you need to draw a sketch map of an Irish region you will be able to draw a much better outline of Ireland if you are looking at a map of Ireland. Have a look through the entire exam paper. More likely than not, there will be a diagram or an outline map of Ireland somewhere as part of a question. If there isn't, then go to the Ordnance Survey map where you will find a small outline of Ireland on the reverse side of the map, which includes the key and national grid of Ireland.

2012 Question 5A Irish ***agricultural*** trade Irish meat and livestock exports (i) Calculate X, the percentage change for live animal exports, between 2009 and 2010. 15% (ii) Which species had the lowest percentage increase between 2009 and 2010? Sheep (iii)What was the increase in the monetary value of beef exports between 2009 and 2010? (EURO)113m. (iv)Briefly explain one advantage of ***agricultural*** exports to the Irish economy. Export markets allow Irish farmers to increase their production and income, thereby benefitting the Irish exchequer.

(v) Briefly explain one challenge that Irish ***agriculture*** will face in the future. Global warming will probably result in increasing frequency and severity of droughts in the summer and flooding during the winter. Tillage and pastoral farming are more difficult under Failte Ireland Examine the data in the table above and answer the following questions: (i) How many tourists from North America visited Ireland in 2007? 687,000 (ii) Where did the greatest number of tourists come from in 2008? Britain (iii) Calculate X, the total number of tourists visiting Ireland in 2009? 2,931,000 (iv) Name any two Irish tourist attractions. The Giant's Causeway, The Burren (v) Briefly explain why the number of tourists visiting Ireland is decreasing. The biggest decline in visitors has been from Britain. The value of the euro against the pound sterling has been increasing; this has made Ireland a more expensive destination for British tourists.

2013 Q 4b Examine the factors that influence the development of secondary economic activity in an Irish region that you have studied. [30m] Marking scheme named example of secondary economic activity 2 marks Factors named 2+2 marks Examination: 12 x SRPs Factor 1: The greater Dublin area (GDA) has excellent transport links 1. The GDA has the best transport infrastructure in Ireland. This gives manufacturing industries a competitive advantage as they can thereby reduce the transport costs involved in obtaining their raw materials and carrying their finished goods to market.

2. Dublin Port is the busiest container port in Ireland. Bulkier goods can be exported in containers carried by lorries on roll-on roll-off ferries sailing from Dun Laoighire and Dublin Port.

3. The region is well served by motorways, such as the M50 and the M1, which allow manufacturers to transport materials and goods between their factories, the Dublin and Irish market and the region's ports and airports.

4. The opening of the Dublin Port Tunnel has greatly decreased journey times for lorries travelling between Dublin Port and the M50 and the M1.

5. Small, high-value products, such as computer chips produced by Intel in Leixlip, Co Kildare, are exported by air from Dublin Airport.

6. In the 1800s the Grand Canal and the Royal Canal linked Dublin to its fertile hinterland.

***Agricultural*** produce such as wheat and barley were brought into Dublin by barge where food processing, brewing and distillery industries made products such as bread, biscuits, porter and whiskey.

Factor 2: The GDA has a well educated workforce 7. The region has four universities -University College Dublin, Trinity College Dublin, Dublin City University and Maynooth University. The modern manufacturing sector is very dependent on a good supply of graduates from the fields of science and engineering. 8. Pfizer is a large pharmaceutical multinational. It has a plant in Clondalkin that employs 1,200 people, most of whom are science and engineering graduates. New products are tested in the plant's laboratories.

9. Intel in Leixlip requires graduates with degrees in electronics, engineering and science. production of its computer chips is a highly complex process that requires extremely sterile conditions.

10.The Irish Government has actively encouraged the development of research and development (R&D) programmes within the region's universities. Companies often sponsor students undertaking post-graduate research.

Factor 3: favourable tax regime 1. Many American multinationals have been attracted to the region because of Ireland's very low rate of corporate tax. At 12.5% it is the lowest in the EU.

2. By setting up manufacturing plants within the region, American multinationals are able sell goods into the European market without having to pay tariffs on goods that have been produced outside the EU.

Intel plant, Leixlip, Co. Kildare Electives -80 marks Section 2 of the exam relates to the electives. These are questions 7 to 12. You must answer question from either: . Patterns and processes in economic activities OR. Patterns and processes in the human environment You must do one of the three questions from within your chosen elective. Each question is divided into three parts.

Part A is worth 20 marks. 5 minutes is the most you should spend on this.

Parts B and C are both 30-mark essays. You should allow 15 minutes for each essay.

The following topics tend to be examined in the 20-mark questions;. Drawing sketch maps from Ordinance Survey (OS) maps and aerial photographs.. Presenting data in a graph.

. Interpreting data presented in graphs.

Patterns and processes in economic activities Exam tip: When drawing a sketch map from an aerial photograph or an OS map it is essential that you draw the frame correctly -if you don't do this everything within your frame will be wrong. Using a ruler, measure the length and height of the photo/OS map. Halve these dimensions and then draw your frame onto the graph paper. Now write in a title. Now that your frame is half the scale of the original, you can use your ruler to take any measurement from the original, halve it and then transfer this onto your sketch. This technique will ensure that all your features are in the correct location and to the correct scale. When drawing features you only need to mark the outline of the area occupied by the required feature.

2011 Question 8A Examine the aerial photograph of Dingle/An Daingean accompanying this paper.

Draw a sketch of the aerial photograph, half the length and half the breadth.

On it show and name each of the following:. The harbour area. Two connecting roads/streets. A commercial area. A recreational area Parts B and C (30-mark essays) The essay questions in this section are drawn from the following topics; globalisation; colonialism; multinational companies; the uneven nature of economic development; the Human Development Index; Ireland and the EU; the environmental impact of economic activities, and the location of industries.

Sustainable development Marking scheme 2010 Question 9C Discuss the environmental and economic advantages of using renewable energy sources. [30m] Environmental advantage identified: 2 marks Answer Economic advantage identified: 2 marks Renewable energy sources: 2 marks + 2 marks Examination: 11 x SRPs (6/5 SRPs per advantage) Environmental advantages 1. The global demand for energy will continue to rise as the planet's population increases and more people enjoy higher income levels. Any energy that can be produced from renewable sources will reduce the need to create energy by burning fossil fuels such as oil, natural gas, coal and peat.

2. By burning fewer fossil fuels, fewer ***greenhouse gases*** such as carbon dioxide and methane will be released into the atmosphere. This will reduce man-made global warming. 3. If electricity is generated by wind turbines, rather than coal-fired power-stations, less sulphur dioxide would be released. The problem of acid rain would thereby be reduced. 4. If electric car batteries are charged by hydro-electric generated electricity rather than by diesel or petrol combustion engines, the amount of CO2 in the atmosphere would be reduced. This could lessen the problem of ocean acidification. This is having negative impacts on marine ecosystems, such as coral reefs.

5. As solar panel technology becomes more efficient it may be possible to replace nuclear power stations with solar power farms. This would reduce the risk of radiation contamination following a nuclear accident.

6. If renewable sources of energy can eliminate the need to drill for oil in deep water, then disasters such as the BP oil spill in the Gulf of Mexico in 2010 would be a thing of the past.

Economic advantages 7. Oil is a finite resource. The laws of supply and demand dictate that as growing demand outstrips the oil industry's capacity to discover new oil fields the price of oil will rise. Access to renewable energy sources can offer an advantage in the competitive global economy. 8. Iceland is well endowed with geothermal energy. Plans are in place to export electricity created by geothermal power plants to Britain via an undersea cable.

9. Iceland has developed a major aluminium smelting industry thanks to its cheap and abundant supply of geothermal energy. 10.As Ireland develops its potential in creating electricity via wind farms, its energy security will be increased as our reliance on imported fossil fuels will be reduced. 11. By attaching solar panels to a south-facing roof, Irish householders can meet their needs for hot water without the need to burn oil or gas, thereby reducing their energy bills. Grants are available to help with the cost of installing solar panels.

Patterns and processes in the human environment Exam tip: Make sure to bring your calculator, ruler, protractor, compass, colouring pencils and an eraser into the exam with you. You may be required to calculate totals and averages from a table of data. If you are to calculate the angles necessary to draw a pie-chart you will need your calculator. You should also be able to identify all the countries of the Europe on a map.

2009 Question 10A (20 marks) European Birth rates 2007 (iii)Identify one social factor that influences the birth rate. The more educated women are, the more likely they are to be employed outside the home. As women defer the age at which they marry, due to the pursuit of professional careers, fertility rates and birth rates begin to decline.

(iv) Define the term mortality rate. The mortality rate is the number of deaths per thousand of a population within a year.

Marking scheme 2007 Question 12C (30 marks) Migration, both internal and international, continues to play an important role in shaping the populations of states and regions.Examine one impact of population movement on the donor regions and one impact on the receiver regions. [30m] State impact on donor regions: 2 marks State impact on receiver regions: 2 marks. 13 SRPs Impact on donor region 1. Poland is losing young adults who are the most productive cohort of the population. This process known as 'brain drain' can be very damaging as labour shortages can develop in sectors of the economy which require skilled workers.

2. In order to educate a person from primary level up to secondary or third level a large investment is made by the state.Where educated people emigrate after being educated at the expense of the Polish State the benefit accruing from this investment goes to receiver economies instead.

3. Young adults are at a stage of their life cycle where their spending rate is naturally high (due to socialising and buying property). The loss of so many young adults has the effect of reducing aggregate demand across the economy which in turn leads to reduced tax revenue for the government and increased unemployment.

4. The loss of so many young adults raises the age profile of the population. This results in an increase in the dependency ratio. The cost to the State of providing pensions and healthcare for the elderly is thereby increased.

5. Due to the high rate of emigration labour shortages emerged in certain sectors of the Polish economy, especially ***agriculture*** and construction.The work permit regime was relaxed in order to make it easier for migrants to come to Poland from countries such as Ukraine and Belarus.

6. In 2008 the total value of remittances sent to Poland from Poles working abroad amounted to US$10.7bn. This is a valuable source of income for the country and significantly improves the living standards of members of families where one of the parents has chosen to work abroad.

7. Some migrants return from spells working abroad having saved money in order to buy property in Poland. These returning migrants bid up the price of property and this in turn makes property less affordable for those workers who have not emigrated.

Impact of migration on a receiver/host region; impact on the Irish economy 1. As the Irish economy was booming during the Celtic Tiger years (2000-2007) a labour shortage developed as the economy was at full employment and labour shortages developed, especially in the catering, retail and construction sectors.

2. Migrants from Eastern Europe were attracted by the good job prospects and good wages.

The main sending countries were Poland, Lithuania, Latvia and Romania. This allowed the economy to grow without being constrained by labour shortages.

3. At the time of the 2011 census there were 122,000 Poles living in Ireland. Many of those who do not have good English have found jobs on building sites, haulage firms and as chambermaids where the ability to speak English is not a key requirement. 4. This large influx of immigrants at a time when the Irish economy was booming had the effect of reducing wage inflation. This deflationary effect on wages had a positive effect on Ireland's competitiveness.

5. The influx of young adults has the effect of reducing the dependency ratio across the economy. As the population 'greys' pension costs will become an increasing burden. For this reason the influx of migrants can be seen as a very positive development.

6. The Bank of Poland has revealed that (EURO)5.5bn had been sent as remittances from Ireland to Poland during the years 2000-2007. This represents a loss to the Irish economy as money being earned in Ireland is not being spent in Ireland.

Options -80 marks Those taking the Ordinary Level paper will not be examined on this part of the course.

Higher levels students are required to study one of the following four options:. Global interdependence. Geoecology. Culture and identity. The atmosphere -ocean environment.

Within each option there are three essay questions and you must do one of them. You should allow 35/40 minutes for this question. The structure of your essay is very important. At the beginning of your answer set out what the three or four 'aspects' of your answer are going to be. Think of each aspect as a mini-essay within the larger essay. If you have identified four aspects then you will need to provide six SRPs for each of your four aspects to gain full marks. If you have identified three aspects then you will need to provide eight SRPs for each of these aspects in order to secure full marks.

Geoecology option 2009 Question 18 Assess how biomes have been altered by human activity. [80m] Aspect 1: Deforestation is destroying the tropical rainforest biome in the Amazon Basin.

1. In the 1970s the Brazilian government built the Trans-Amazonian Highway and sought to resettle poor farmers from the drought-prone north along the highway as colonists. Settlers were granted 250-acre farms and cheap loans.

2. These farmers used slash and burn methods to clear the ***forest*** and establish cattle ranches. 3. The highway also enabled access for commercial logging of hardwood species such as mahogany and teak. Clear-cutting was often practised where whole areas were logged, rather than just cutting the trees with the greatest commercial value.

4. During the past 40 years about 20% of the Amazon rainforest has been cut down. The rate of evapotranspiration has been reduced and hence rainfall that was generated from transpiration of water through the canopy has been reduced in cleared areas, leaving them prone to drought.

5. The removal of the tree canopy has led to soil erosion as the heavy rains are no longer intercepted by the lush vegetation. Raindrops strike the soils with more force and loosen them. The binding effect of the trees' roots no longer holds the soils in place.

6. The nutrient cycle in this very wet biome is short. Without the constant supply of plant litter at the surface, soils quickly become depleted of their nutrients through the process of leaching.

Aspect 2: ***Agriculture*** is having a damaging impact on the biome. 1. Cattle ranching ***accounts*** for almost 70% of the ***forest*** clearance in the Amazon basin. Brazil has the largest cattle herd in the world.

2. As more economies develop, especially the Chinese economy, the global demand for beef is constantly rising. This provides a commercial incentive for conversion of tropical rainforest into beef pastures. This constitutes a huge threat to the biome of biodiversity, one that is home over 50% of all known animal species.

3. In the 1990s a variety of soya bean was developed that can grow in Brazil's tropical climate.

A Greenpeace campaign has resulted in Brazil's major soya bean producers agreeing not to resort to any more deforestation, although the crop continues to incentivise deforestation in Bolivia and Paraguay.

4. Despite the lush native vegetation, the tropical latosol soils are quite infertile. After three or four years of cultivation the soils become infertile and require large additions of artificial fertilisers. At this stage such ***land*** is usually abandoned and new areas of ***forest*** are cleared. 5. As the vegetative cover is removed the rate of surface run-off is increased leading to soil erosion. Sediments are then deposited on the bed of the rivers. This raises the level of the river-bed and thereby reduces the river's capacity to transport water and increases the frequency of flooding.

6. The removal of the tree canopy to facilitate ***agriculture*** has led to an increase in water temperatures in the rivers and this has had a negative impact on the spawning practices of some fish species.

Aspect 3: Mining has had a negative impact on the biome 1. The global recession of 2007/08 led to a large increase in the price of gold. This made gold mining across the Amazon Basin a more profitable enterprise. The rapid economic growth of China has also been driving up the price of mineral commodities such as copper.

2. Open-cast mining destroys the tropical rainforest biome in the immediate area where it is practised. It also damages the biome in adjacent areas as toxins such as mercury and cyanide used in the ore extraction process seep into the water table.

3. Mercury levels become more concentrated higher up the food chain and can lead to serious health problems in otters, birds of prey and humans.

4. In 1995 a waste holding pool containing 1 billion gallons of cyanide-laced water produced in the mining process in Guyana spilled into a river. This led to massive fish kills and contaminated the soils of the river's floodplain.

5. The exploitation of mineral resources requires the construction of roads, which leads to deforestation. The penetration of roads into the interior of the rainforest encourages illegal miners to settle in the area. The indigenous Yanomani Indians have been exposed to diseases to which they have no immunity against.

6. The increased settlement associated with mining also leads to the construction of dams to create hydro-electric power. The flooding of the rainforest to create reservoirs destroys the tropical rainforest biome that is submerged within such reservoirs.

Aspect 4: Inreasing urban development is putting great strain on the biome. 1. Manaus is the largest city within the Amazon rainforest. It developed as a river port for the rubber industry. Today it has a population of over 2 million.

2. The city has been designated as a targeted growth hub by the Brazilian government and includes a duty-free industrial zone incorporating ship building and petrochemical industries. Industrial toxins are being released into the surrounding rainforest and damaging its ecosystem.

3. Since the city has seen a tenfold increase in population over the past 20 years the area of ***land*** converted from the rainforest biome to urban ***land*** uses has greatly increased. 4. The city has the character of a frontier town and the enforcement of urban planning guidelines and environmental protection measures have often been very lax. The release of untreated sewage into the Negro river causes severe damage to aquatic life.

5. The rapidly growing population of the city is feeding the demand for ***agricultural*** ***land***.

The construction of housing is increasing the demand for timber and hence encouraging deforestation in the adjoining rainforest.

6. Many of the favelas in Manaus are built on stilts in the river's floodplain. This unplanned settlement lacks garbage collection and waste treatment services and hence leads to contamination of the river.

Cattle ranching on deforested ***land*** in the Amazon Basin Exam tip: Include up to two simple illustrations, in two separate aspects of this essay for two SRPs. A diagram illustrating the nutrient cycle within the deforestation aspect would be valid. As would a diagram illustrating how the construction of a dam floods ***land*** within a reservoir.

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ARC Briefing Namibia

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**Body**

**ABSTRACT**

***The government maintains its focus on tackling the urban housing crisis as new revelations of dubious deals by the SWAPO Youth League (SYL) tarnish its credentials to be a champion of the dispossessed. The Namibia Statistics Agency (NSA) substantially revises the 2014 real GDP growth rate upwards to 6.4% and growth should be only slightly less at around 6% in 2015. RMB Namibia has launched the country's first exchange trading system for China's yuan. The government is reviewing the Kudu gas-to-power project, which could lead to development of the Baynes hydropower scheme on the Kunene River instead.***

**FULL TEXT**

**Urban *land* roll-outs gather pace**

It is too soon to judge whether the agreement that President **Hage Geingob** (2015- present) brokered with the **Affirmative Repositioning (AR)** grass roots protest movement in July will lead to a durable solution to the national crisis of insufficient, affordable serviced urban plots for housing (see *ARC Briefing Namibia August 2015)*. However, government ministers have continued to be proactive, no doubt taking their lead from Geingob, who told representatives of shack dwellers around **Windhoek** in early September that, if necessary, parts of adjoining farms would be expropriated to provide sufficient ***land*** for housing. Under the constitution, owners would be due compensation if expropriated, but the reference underscored the governments determination to tackle the housing and homeless problem. It forms part of Geingobs declaration that he aims to eradicate poverty during his presidential term.

The new urban and rural development minister, **Sophia Shaningwa**, has been in the forefront of the housing drive. Speaking at the appointment of a new board for the state-owned **National Housing Enterprise (NHE)**, Shaningwa declared that the government aims to rehouse the several hundred thousand Namibians living in shacks into affordable housing by 2030. The government plans to invest more in housing developments and faster delivery of new houses. **Bank of Namibia (BoN)** director of banking services **Sam Shivute** has taken over as chairman of the NHE board, with the mandate to implement a turnaround strategy to make the state agency financially sound and begin to address an estimated backlog of 100,000 houses.[[2]](#footnote-3)1

Some municipalities appear to be increasing their efforts to address local housing shortages. In the copper-smelting town of **Tsumeb**, mayor **Ndangi Shetekela** acknowledged that while a shortage of housing is a constant problem, most recipients of residential ***land*** are from low income groups. These include organisations such as the **Shack Dwellers Federation of Namibia (SDFN)** that cater for low income groups. However, he pointed out that the lack of sufficient funding from central government during the past five years had forced Tsumeb, like other towns, to go into public-private partnerships, in which private developers often benefit the most.

*"Over the past five years the low-income group has benefited the most from the* ***land*** *delivery process, but also the high-income group because they can afford it. It's either you live in a very expensive house or in a shack. This is the situation that has created the large numbers of low-income groups."*[[3]](#footnote-4)2

The credibility of the **SWAPO Youth League (SYL)**, some of whose leaders play a prominent role in the AR leadership, as a credible champion of the dispossessed is unraveling. Local media recently uncovered a one-day ***land*** trade at a huge profit by SYL information secretary **Neville Itope**.[[4]](#footnote-5)3 According to **Walvis Bay** municipality records, Itope bought a 1,740 square metre plot situated in the central business district (CBD) for N$1.5 million (US$117,000) and almost immediately resold it for N$4.1 million ($320,000) in late June. This was only a month before AR was due to stage its urban ***land*** occupations in protest at the lack of available and/or affordable serviced urban plots.

Itope, who works as assistant to the cabinet secretary, claimed no wrongdoing was involved. However, the deal hardly conforms to the SYLs radical stance on ***land*** reform and the rights of low-income Namibians. It also conflicts with Shaningwas recent moratorium on all new ***land*** transactions, which in particular aims to prevent the purchase of ***land*** by foreign nationals through secretive local entities. Itopes plot was sold to a firm called **Harpies Investments Forty-Two Close Corporation**. A close corporation (CC) is a corporate entity unique to Namibia and **South Africa**. In its registration documents a CC is not required to disclose names of directors or other details. Itope admitted he did not have his own money to purchase the ***land*** and had borrowed money from Harpies, but he refused to identify his partners whom he described as *"some white guys"* or his own interest in the firm.[[5]](#footnote-6)4 Itope claimed that he had decided to sell the plot when he realised it was only suitable for commercial and not residential purposes, although it is also alleged that his late mother, a town councillor until last year, was influential in earmarking the plot for him.[[6]](#footnote-7)5 A council spokesperson confirmed that plans had already been lodged for development of the plot and that while there was no law barring an individual from buying and selling a plot in one day it was a highly unusual transaction given the usual time involved in registering a sale at the municipal deeds office.[[7]](#footnote-8)6

**Real GDP growth was substantially stronger in 2014...**

The **Namibia Statistics Agency (NSA)** this month published the final set of national ***accounts*** for last year, which revised real GDP growth up from the preliminary estimate of 4.9% to 6.4%.[[8]](#footnote-9)7 The 2013 real growth rate has also been raised, from 5.1% to 5.7%. This has been the pattern in recent years, with GDP data calculated in the preliminary set of national ***accounts*** published around March revised upwards later in the year. The main reason seems to be that data for some sectors, mainly for secondary and tertiary industries, is incomplete when the preliminary estimates are calculated.

The main increases were for ***agriculture*** and forestry (from a preliminary 6.5% to 9.6%), construction (from 14.6% to a record 40.5%), wholesale and retail trade (from 8.6% to 15.2%), transport and communications (from 5.6% to 6.6%) and financial intermediation (from 7.7% to 9.9%). These sectors ***accounted*** for 3 1% of GDP at current prices. ***Agricultural*** output came in stronger due to increased growth in the livestock farming sub-sector of 13.0% (8.0% previously), due to increased marketing of cattle by commercial farmers, following restocking after the 2012-13 drought. The current drought is likely to result in a further increase in cattle marketing volumes this year as farmers seek to limit herd losses caused by the deterioration in grazing conditions. Construction activity also increased due to large-scale works on the building of new mines.

Mining and manufacturing was a different story. Mining output contracted by 6.3% (-4.6% previously) due to slower growth in diamond mining, the main sub-component, of 6.2% (11.1% previously). As **De Beers** has not reduced last years figure of 7% diamond output growth by **Namdeb Diamond Corp (Namdeb) -** its 50:50 jointventure with the government which produces all Namibia's mainly gem-quality output - it is not clear why the NSA has revised its preliminary figure downwards. Manufacturing is now shown as contracting by 2.2% compared to 0.5% growth previously; meat processing contracted more sharply (-17.4%) with most sub-sectors recording reduced output growth or contractions compared to the preliminary estimates. However, output by local diamond processing (cutting and polishing) was revised up to 8.2%.

|  |  |  |
| --- | --- | --- |
| **Namibia GDP 2014 (% change)**[[9]](#footnote-10)8 | | |
|  | **2014 preliminary** | **2014 final** |
| ***Agriculture*** & forestry | 6.5 | 9.6 |
| Fishing & on board processing | -4.4 | -2.5 |
| Mining & quarrying |  |  |
| Diamonds | -4.6 | -6.3 |
| Uranium | 11.1 | 6.2 |
| Other minerals | -9.9 | -9.9 |
| **Primary industries** | **-2.3** | **-2.2** |
| Manufacturing | 0.5 | -2.2 |
| Meat processing | -14.8 | -17.4 |
| Diamond processing | 5.6 | 8.2 |
| Construction | 14.6 | 40.5 |
| Electricity & water | 6 | 4.9 |
| **Secondary industries** | **4.7** | **9.4** |
| Wholesale & retail trade | 8.6 | 15.2 |
| Hotels & restaurants | 9.3 | 5.3 |
| Transport & communications | 5.6 | 6.6 |
| Financial intermediation | 7.7 | 9.9 |
| Real estate & business services | 3.2 | 3.2 |
| Government | 5.6 | 4.8 |
|  |  |  |
| Less FIS indirectly measured[[10]](#footnote-11)9 | 7.5 | 7 |
| **All industries at basic prices** | **4.4** | **6** |
| Taxes less product subsidies | 5.6 | 10.9 |
| **GDP at constant market prices** | **4.5** | **6.4** |

**IJG Namibia** analyst **Rowland Brown** noted that

*"... the revision brings both the overall growth level more in line with levels seen in high-frequency indicators through the year, as well as showing notable improvement in many of the sectors' growth levels, bringing these (also) more in line with growth witnessed on the ground."*[[11]](#footnote-12)10

Another noteworthy feature of the revised national ***accounts*** is that gross fixed capital investment (GFCI) growth was much stronger than initially estimated. GFCI increased 47% to a record N$48 billion (US$4.4 billion) in 2014, contributing 34% of GDP at current prices compared to 27% in 2013. Most of the increase will have comprised the vast amount (we estimate US$2.5-3.0 billion) invested in the development of three new mines: the **Otjikoto** gold mine and the **Tschudi** cathode copper mine (both now in production), and the nearly completed **Husab** uranium mine.

The latest **UN Conference on Trade and Development (UNCTAD)** figures for foreign direct investment (FDI) into Namibia show inward FDI almost halved to US$414 million last year, from US$801 million in 2013.[[12]](#footnote-13)11 Outward FDI remained much smaller, but trebled from US$13 million to US$34 million in 2014. The explanation may be that UNCTAD used incomplete or out of date sources in calculating Namibia's inward FDI, and/or **Chinese** investment in the Husab mine (which represents around 80% of total mining sector investment) may not have been included.

We would expect real GDP growth of around 6.0% in 2015; construction growth will slow sharply with the completion of two of the three mines, while diamond output contracted by 5% in the first half of 2015. This may have been a temporary downturn due to lower grades and industrial action at Namdeb's onshore operations. In addition, **Weatherly International**, which is listed on **London (United Kingdom)**s **Alternative Investment Market (AIM)** but has now moved its head office to Namibia, has shut down its two copper concentrate-producing mines, **Matchless** and **Otjihase** near Windhoek, due to the sharp fall in the global copper price. This is expected to result in the loss of 200 jobs. The two mines have been converted to *"project development status" to* prepare them for future production of larger volumes at lower unit costs, when market conditions improve, according to a mid-September update by the firm.[[13]](#footnote-14)12 The lost output - the two mines produced 20,991 tonnes in the 12 months to end-June 2015 - should be partially offset by an ongoing ramp-up in production at the new Tschudi mine, which produces copper of higher value. Things are going better with Tschudi: output was raised by 15%, from 1,000 tonnes (70% of design capacity) to 1,150 tonnes (80% of capacity) of copper metal per month during Q3 2015. By year-end, Weatherly expects that Tschudi will be operating at full capacity of 17,000 tonnes per year.[[14]](#footnote-15)13

**...trading in China's yuan has started**

In a significant development reflecting Namibia's growing commercial links with China, investment bank **Rand Merchant Bank Namibia (RMB Namibia)** has established the countrys first **yuan** exchange platform. This will provide comprehensive payment solutions to enable yuan remittances of both notes and electronic transfers. At a launch in Windhoek earlier this month, Chinese business people converged in number to be informed on how the platform will work. According to RMB, it will provide a currency service to facilitate bilateral trade between China and Namibia. This is currently at a fairly modest level (China supplied 4% of Namibia's imports and purchased 3% of its exports in 2014), but bilateral trade is expanding rapidly. Customers who need to exchange Namibia dollars for yuan and vice versa will be able to do so in cash as well as electronically through the **Swift** payment system used in Namibia.

China's ambassador to Namibia **Xin Shunkan** noted that Namibia-based Chinese companies will benefit from the direct exchange of Namibia dollars to Chinese yuan and easy transfer of Namibia dollars to China without having to change Namibia dollars to **United States (US)** dollars, thus mitigating exchange rate difference losses.[[15]](#footnote-16)14

*"It will encourage more Chinese companies to invest and operate in Namibia. Namibia has become one of the more promising trade partners and investment destination countries of China among the African countries."*[[16]](#footnote-17)15

RMB Namibia is a division of **FNB Namibia**, itself part of one of Africa's largest financial services firms, South Africa's **FirstRand Group**. Its Namibian general manager **Steve Galloway** has been active in arranging project financing packages for both foreign and local investors in Namibia. In July his bank played a key role in the restructuring of Namibia's only cement plant, **Ohorongo Cement**, as lead arranger of a new funding package. The majority shareholder remains **Germany**s **Schwenk Zement**, but as part of the restructuring, the equity interest held by the **Development Bank of Namibia (DBN)** has been increased to 11.7%. The **Otavi**-based plant has a capacity to produce up to 700,000 tonnes annually and has supplied its product for new mining developments and other large projects such as Walvis Bay port expansion. It is price competitive with South African plants, which previously provided most of Namibia's cement requirements.[[17]](#footnote-18)16

Meanwhile, the BoN is considering whether to invest some of its foreign currency reserve assets into yuan-denominated assets once the overall level of reserves is considered to be sufficient (which they are not at present). The size of yuan-denominated loans has increased in recent years, reflecting increased levels of bilateral trade. However, a decision to hold a portion of the central bank's reserve assets in China would have to be in line with strict guidelines. Any investments in Chinese assets would be restricted to high-quality bonds held or issued by the Chinese government, government agencies and state-owned enterprises (SOEs) as these have good credit ratings. Currently, the central bank holds its foreign exchange reserves in the South African rand, US dollar, **euro, British** pound and **Japanese** yen.[[18]](#footnote-19)17

**Baynes would be the alternative to Kudu**

The long-planned development of the **Kudu** gas-to-power project as Namibia's main long-term energy supply solution may now be in doubt. If so, a second hydropower station on the **Kunene River** in the north at **Baynes** would be the main alternative option. President Geingob has ordered a review to determine Kudu's affordability and finance minister **Calle Schlettwein** is due to make a cabinet submission soon. The government has reportedly been advised by the **African Development Bank (AfDB)**, a potential multilateral financing source for the project, that Kudu, with an estimated N$23 billion ($1.8 billion) cost, is no longer Namibia's best energy option.[[19]](#footnote-20)18 This is the second time this year the Kudu project has come to cabinet. In March, the cabinet agreed to provide some government funding for the onshore power station, which Schlettwein reportedly opposed.

The much delayed project, first put forward in the late 1990s, has gone through various permutations. The current project involves a floating production platform to extract gas from the offshore Kudu field on the southwestern maritime border with South Africa, and subsea connecting pipelines to a planned 800 MW combined-cycle gas-fired power plant near to **Oranjemund**, the base for the diamond mining industry where a site has already been allocated. **Ireland**-based **Tullow Oil** was Kudu operator and completed a front-end engineering design (FEED) in 2013, while negotiating a gas sales agreement with the Namibian government for the sale of gas to the national grid in parallel. But Tullow discontinued its involvement in Kudu last year to focus on the firm's African production assets and other exploration/development projects with a greater capacity to generate cash flow in the near-to medium-term.[[20]](#footnote-21)19 Tullow handed back its operatorship and 44% licence interest to the **National Petroleum Corporation of Namibia (NAMCOR)**. An early expression of interest from a Chinese state-owned energy firm in taking over Tullows involvement came to nothing, leaving the government with no private sector equity partner for the upstream component of the project.

It is not known at this stage if the absence of private sector participation is the government's main concern or whether it is a simple issue of affordability. The state-owned **Namibia Power Corporation (Nampower)** would have to cover the estimated U$500m cost of the power station through increased government funding and borrowing and has struggled to conclude an agreement with a private sector investor to share the cost. There appears to be a difference of view between the finance ministry and Nampower over Kudu, which remains strongly backed by the Nampower board and management. Former mines and energy minister **Isak Katali** was enthusiastic about the scheme, although the view of his successor, **Obeth Kandjoze**, appears to be more ambiguous. Both politicians and technocrats appear divided on the best plan to avoid an energy supply crisis in coming years, given existing domestic generating capacity is already insufficient and has to be buttressed by regional electricity imports. A pro-Kudu group within the mines and energy ministry has reportedly accused Schlettwein of trying to block the project at all costs. Despite Kudus potential to supply not just Namibia's power requirements in the next decade but also an exportable surplus, other officials are understood to believe Kudu is being used as a conduit to enrich a few individuals.[[21]](#footnote-22)20

If Kudu was junked the government would have no feasible alternative but to revive the scheme for the Baynes hydropower station, which has taken a backseat in recent years. This would be both cheaper and CO2 free, unlike Kudu, which would raise Namibia's ***greenhouse gas*** ***emissions***. But there are several problems that would have to be overcome. The project is subject to a bilateral agreement with **Angola**. Although Namibia would take the lead, the project requires a more proactive approach by the Angolan government than has hitherto been the case. The second, and major issue, is that the scheme is unpopular with local inhabitants who fear their livelihoods will be adversely affected. The existing **Ruacana** hydrostation, downstream from the Baynes site, has no dam or reservoir (which is why its output fluctuates in line with the river flow as controlling weirs inside Angola have never been fully repaired since the Angolan civil war). But Baynes would have both a dam and a reservoir, which will involve flooding ***land*** of value to the local inhabitants, the **Ovahimba**, a sub-group of the large **Ovaherero** community.

Ovahimba chiefs are already expressing strong opposition to a revival of the Baynes scheme, on the grounds that it would not benefit them and would take away ***land*** and flood ancestral graves. This provides an awkward political problem for the ruling **South West African People's Organisation (SWAPO Party of Namibia)** as most Ovahimba and the other mainly **Damara** inhabitants of the **Kunene** region traditionally vote for opposition parties. Kunene is the only one of Namibia's 13 regions in which SWAPO does not control the regional authority. As a Damara himself, Geingob would be loath to impose an energy solution bitterly opposed by the Ovahimba. **Chief Jonas Ngombe** of **Orotjitombo** in **Opuwo** constituency - which voted for the opposition **Democratic Turnhalle Alliance (DTA)** in the November 2014 legislative election - commented: *"We will not allow the construction of the dam because that is where our livelihood is."* In contrast the government-appointed Kunene region governor (these used to be elected by the regional authorities), **Angelika Muharukua**, claimed locals were in favour of the construction of the hydropower station and dam.[[22]](#footnote-23)21

**Implications**

The upward revision in last year's GDP growth, while not unexpected, is a major fillip to the government. At 6.4%, it puts annual GDP growth in the 6% target range set by the current national development plan (NDP4), covering the 2012/13 to 2016/17 fiscal years, for the first time. Secondly, it indicates Namibia's economy may now be resilient enough to withstand the current downturn in global demand for commodities and resultant decrease in commodity prices. While it is true that the downturn has worsened since the start of 2015, reflecting a further slowing in China's economic growth, there are reasons for optimism in the case of Namibia. We would expect GDP growth to slow only slightly this year, and rebound again next year due to substantially higher mining output, with the start-up of the Husab uranium mine.

Most of the increase to last year's growth rate came not from the mining sector, but from ***agriculture***, construction, domestic trade and financial services. The main boost to construction resulted from large-scale building works for three new mines (two of which are now completed), but construction was set to slow anyway from the latter part of this year with the pending completion of the large Husab uranium project. Some of the slack will be taken up by expanded public infrastructure works, although apart from port expansion at Walvis Bay and the new drive to expand house building, these are proving slow to get off the ground.

However, Namibia is also fortunate in that apart from copper and zinc, its main sources of mineral export receipts, diamonds, gold and uranium, should not be affected by the current turbulence on commodity markets. Prices for rough diamonds, especially for high quality gems which comprise over 90% of Namibian production, are set to remain high, with **India** becoming a major market for diamond jewellery in addition to China and the US. Uranium prices appear to have bottomed and most analysts now expect a gradual recovery although it will be some time before prices rise high enough to warrant the development of further Namibian mines. This should enable the existing **Rössing** mine to increase production once again, while since the latter part of last year the **Langer Heinrich** mine, currently Namibia's biggest producer, is operating at above design capacity of around 5 - 5.4 million pounds (2,268-2,449 tonnes) of uranium oxide per year. This is mainly due to the improved performance resulting from the commissioning of a bicarbonate recovery plant (BRP) in March 2015.

Sustained higher GDP growth will further boost national wealth and provide an opportunity for Geingob and his new government to show they mean business in pushing on with measures to significantly alleviate poverty ('eradicate' seems a tall order) and economic exclusion, increase employment and provide decent housing for all Namibians. Too often in African countries, riches generated by natural resources have merely generated bloated fortunes for a small political and economic elite. Namibians will benefit if Geingob's government can achieve even a modest redistribution of wealth without over-taxing the goose that lays the golden eggs (mining), while rebalancing productive economic activities more towards local value-adding and the manufacture of finished goods, lower-income. Coupled with greater official transparency (although asset declarations by cabinet ministers and senior civil servants are still pending) and better service delivery, that would do much to make Namibia a fairer but still economically successful country.

**FOOTNOTES**

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**End of Document**



[***-Deere Announces Second-Quarter Earnings of $ 495 Million***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JV8-66R1-JD3Y-Y24X-00000-00&context=1516831)

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**Body**

MOLINE, Illinois - Net income attributable to Deere & Company was $ 495.4 million, or $ 1.56 per share, for the second quarter ended April 30, compared with $ 690.5 million, or $ 2.03 per share, for the same period last year.

For the first six months of the year, net income attributable to Deere & Company was $ 749.8 million, or $ 2.36 per share, compared with $ 1.077 billion, or $ 3.14 per share, last year.

Worldwide net sales and revenues decreased 4 percent, to $ 7.875 billion, for the second quarter and declined 8 percent, to $ 13.400 billion, for six months. Net sales of the equipment operations were $ 7.107 billion for the quarter and $ 11.876 billion for the first six months, compared with $ 7.399 billion and $ 13.004 billion for the periods last year.

'John Deere's second-quarter performance reflected the continuing impact of the downturn in the global farm economy and further weakness in the construction equipment sector,' said Samuel R. Allen, chairman and chief executive officer. 'In the face of challenging market conditions, Deere's businesses benefited from the sound execution of operating plans, the strength of a broad product portfolio and our success creating a more flexible cost structure.'

Summary of Operations

Net sales of the worldwide equipment operations declined 4 percent for the quarter and 9 percent for the first six months compared with the same periods a year ago. Sales included price realization of 1 percent for both periods and an unfavorable currency-translation effect of 2 percent for the quarter and 3 percent for six months. Equipment net sales in the United States and Canada decreased 6 percent for the quarter and 11 percent year to date. Outside the U.S. and Canada, net sales decreased 1 percent for the quarter and 4 percent for the first six months, with unfavorable currency-translation effects of 4 percent and 7 percent for the periods.

Deere's equipment operations reported operating profit of $ 688 million for the quarter and $ 902 million for six months, compared with $ 828 million and $ 1.242 billion last year. The declines for both periods were primarily due to lower shipment volumes, the unfavorable effects of foreign-currency exchange and the impact of a less favorable product mix. These factors were partially offset by price realization, lower production costs and lower selling, administrative and general expenses.

Net income of the company's equipment operations was $ 393 million for the second quarter and $ 520 million for the first six months, compared with $ 524 million and $ 764 million for the corresponding periods of 2015.

Financial services reported net income attributable to Deere & Company of $ 102.6 million for the quarter and $ 232.0 million for six months compared with $ 169.8 million and $ 326.6 million last year. Lower results for both periods were primarily due to higher losses on lease residual values, less-favorable financing spreads and a higher provision for credit losses. Results for the first six months were also affected by the unfavorable effects of foreign-currency exchange translation. Prior-year results benefited from a gain on the sale of the crop insurance business.

Company Outlook & Summary

Company equipment sales are projected to decrease about 9 percent for fiscal 2016 and to be about 12 percent lower for the third quarter compared with year-ago periods. Included in the forecast is a negative foreign-currency translation effect of about 2 percent for the full year and 1 percent in the third quarter. For fiscal 2016, net income attributable to Deere & Company is anticipated to be about $ 1.2 billion.

'Although our forecast calls for lower results this year in light of ongoing market pressures, Deere is continuing to perform at a much higher level than in previous downturns,' Allen said. 'Deere's financial condition remains strong and we believe the company is well-positioned to capitalize on attractive growth opportunities that will deliver value to our customers and investors in the future. At the same time, we are continuing to focus on ways to streamline our operations and make them more efficient and profitable.'

Equipment Division Performance

***Agriculture*** & Turf. Sales were approximately the same for the quarter and down 5 percent for six months. The decline year-to-date was due largely to lower shipment volumes. Results for both periods were impacted by the unfavorable effects of foreign- currency translation, partially offset by price realization.

Operating profit was $ 614 million for the quarter and $ 759 million year to date, compared with $ 639 million and $ 907 million, respectively, last year. Lower results for both periods were driven primarily by the unfavorable effects of foreign-currency exchange, lower shipment volumes and a less favorable product mix, partially offset by price realization, lower production costs and lower selling, administrative and general expenses.

Construction & Forestry. Construction and forestry sales decreased 16 percent for the quarter and 20 percent for six months mainly as a result of lower shipment volumes and higher sales-incentive costs.

Operating profit was $ 74 million for the quarter and $ 143 million for six months, compared with $ 189 million and $ 335 million for the periods last year. Operating profit decreased for the quarter mainly due to lower shipment volumes, higher sales-incentive costs and a less favorable product mix, partially offset by lower production costs and lower selling, administrative and general expenses. Six-month results decreased primarily due to lower shipment volumes and higher sales-incentive costs, partially offset by lower selling, administrative and general expenses and lower production costs.

Market Conditions & Outlook

***Agriculture*** & Turf. Deere's worldwide sales of ***agriculture*** and turf equipment are forecast to decrease by about 8 percent for fiscal-year 2016, including a negative currency-translation effect of about 2 percent.

Industry sales for ***agricultural*** equipment in the U.S. and Canada are forecast to be down 15 to 20 percent for 2016. The decline, reflecting the impact of low commodity prices and stagnant farm incomes, is expected to be most pronounced in the sale of higher-horsepower models.

Full-year 2016 industry sales in the EU28 are forecast to be flat to down 5 percent, with the decline attributable to low commodity prices and farm incomes, including continued pressure on the dairy sector. In South America, industry sales of tractors and combines are projected to be down 15 to 20 percent mainly as a result of economic and political concerns in Brazil. Asian sales are projected to be flat to down slightly, due in part to weakness in China.

Industry sales of turf and utility equipment in the U.S. and Canada are expected to be flat to up 5 percent for 2016. Deere sales are expected to benefit from new products and general economic growth.

Construction & Forestry. Deere's worldwide sales of construction and forestry equipment are forecast to be down about 13 percent for 2016, including a negative currency-translation effect of about 1 percent. The forecast decline in sales largely reflects the impact of weak conditions in North America. In forestry, global industry sales are expected to be down 5 to 10 percent from last year's strong levels.

Financial Services. Fiscal-year 2016 net income attributable to Deere & Company for the financial services operations is expected to be approximately $ 480 million. The outlook reflects less-favorable financing spreads, higher losses on lease residual values and an increased provision for credit losses. Additionally, 2015 results benefited from a gain on the sale of the crop insurance business.

John Deere Capital Corporation

The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market.

Net income attributable to John Deere Capital Corporation was $ 69.6 million for the second quarter and $ 169.4 million year to date, compared with $ 115.9 million and $ 249.5 million for the respective periods last year. The decline for both periods was primarily due to higher losses on lease residual values, less-favorable financing spreads and a higher provision for credit losses.

Net receivables and leases financed by JDCC were $ 33.208 billion at April 30, 2016, compared with $ 32.877 billion last year.

Safe Harbor Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under 'Company Outlook & Summary,' 'Market Conditions & Outlook,' and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence and financial condition.

These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.), international reaction to such programs, changes in environmental regulations and their impact on farming practices; changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms).

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results.

Customer and company operations and results could be affected by changes in weather patterns; the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters and the spread of major epidemics.

Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators; actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***, carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates.

Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results.

Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products; changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; changes in demand and pricing for used equipment; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs; security breaches and other disruptions to the company's and suppliers' information technology infrastructure and changes in company declared dividends and common stock issuances and repurchases.

Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action.

The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, to fund operations and costs associated with engaging in diversified funding activities, and to fund purchases of the company's products. If general economic conditions deteriorate or capital markets become more volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses.

The company's outlook is based upon assumptions relating to the factors described above, which are sometimes based upon estimates and data prepared by government agencies. Such estimates and data are often revised. The company, except as required by law, undertakes no obligation to update or revise its outlook, whether as a result of new developments or otherwise. Further information concerning the company and its businesses, including factors that potentially could materially affect the company's financial results, is included in the company's other filings with the SEC.

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[Editorial queries for this story should be sent to [*newswire@enpublishing.co.uk*](mailto:newswire@enpublishing.co.uk) ]

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[***-Deere Announces Second-Quarter Earnings of $ 495 Million***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JV8-66R1-JD3Y-Y1VK-00000-00&context=1516831)

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Company Outlook & Summary

Company equipment sales are projected to decrease about 9 percent for fiscal 2016 and to be about 12 percent lower for the third quarter compared with year-ago periods. Included in the forecast is a negative foreign-currency translation effect of about 2 percent for the full year and 1 percent in the third quarter. For fiscal 2016, net income attributable to Deere & Company is anticipated to be about $ 1.2 billion.

'Although our forecast calls for lower results this year in light of ongoing market pressures, Deere is continuing to perform at a much higher level than in previous downturns,' Allen said. 'Deere's financial condition remains strong and we believe the company is well-positioned to capitalize on attractive growth opportunities that will deliver value to our customers and investors in the future. At the same time, we are continuing to focus on ways to streamline our operations and make them more efficient and profitable.'

Equipment Division Performance <A>griculture & Turf. Sales were approximately the same for the quarter and down 5 percent for six months. The decline year-to-date was due largely to lower shipment volumes. Results for both periods were impacted by the unfavorable effects of foreign- currency translation, partially offset by price realization. Operating profit was $ 614 million for the quarter and $ 759 million year to date, compared with $ 639 million and $ 907 million, respectively, last year. Lower results for both periods were driven primarily by the unfavorable effects of foreign-currency exchange, lower shipment volumes and a less favorable product mix, partially offset by price realization, lower production costs and lower selling, administrative and general expenses. <C>onstruction & Forestry. Construction and forestry sales decreased 16 percent for the quarter and 20 percent for six months mainly as a result of lower shipment volumes and higher sales-incentive costs. Operating profit was $ 74 million for the quarter and $ 143 million for six months, compared with $ 189 million and $ 335 million for the periods last year. Operating profit decreased for the quarter mainly due to lower shipment volumes, higher sales-incentive costs and a less favorable product mix, partially offset by lower production costs and lower selling, administrative and general expenses. Six-month results decreased primarily due to lower shipment volumes and higher sales-incentive costs, partially offset by lower selling, administrative and general expenses and lower production costs. Market Conditions & Outlook <A>griculture & Turf. Deere's worldwide sales of ***agriculture*** and turf equipment are forecast to decrease by about 8 percent for fiscal-year 2016, including a negative currency-translation effect of about 2 percent. Industry sales for ***agricultural*** equipment in the U.S. and Canada are forecast to be down 15 to 20 percent for 2016. The decline, reflecting the impact of low commodity prices and stagnant farm incomes, is expected to be most pronounced in the sale of higher-horsepower models. Full-year 2016 industry sales in the EU28 are forecast to be flat to down 5 percent, with the decline attributable to low commodity prices and farm incomes, including continued pressure on the dairy sector. In South America, industry sales of tractors and combines are projected to be down 15 to 20 percent mainly as a result of economic and political concerns in Brazil. Asian sales are projected to be flat to down slightly, due in part to weakness in China. Industry sales of turf and utility equipment in the U.S. and Canada are expected to be flat to up 5 percent for 2016. Deere sales are expected to benefit from new products and general economic growth. <C>onstruction & Forestry. Deere's worldwide sales of construction and forestry equipment are forecast to be down about 13 percent for 2016, including a negative currency-translation effect of about 1 percent. The forecast decline in sales largely reflects the impact of weak conditions in North America. In forestry, global industry sales are expected to be down 5 to 10 percent from last year's strong levels. <F>inancial Services. Fiscal-year 2016 net income attributable to Deere & Company for the financial services operations is expected to be approximately $ 480 million. The outlook reflects less-favorable financing spreads, higher losses on lease residual values and an increased provision for credit losses. Additionally, 2015 results benefited from a gain on the sale of the crop insurance business. John Deere Capital Corporation The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market. Net income attributable to John Deere Capital Corporation was $ 69.6 million for the second quarter and $ 169.4 million year to date, compared with $ 115.9 million and $ 249.5 million for the respective periods last year. The decline for both periods was primarily due to higher losses on lease residual values, less-favorable financing spreads and a higher provision for credit losses. Net receivables and leases financed by JDCC were $ 33.208 billion at April 30, 2016, compared with $ 32.877 billion last year. Safe Harbor Statement Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under 'Company Outlook & Summary,' 'Market Conditions & Outlook,' and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses. The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence and financial condition. These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.), international reaction to such programs, changes in environmental regulations and their impact on farming practices; changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms). Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs. Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment. All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates; and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results. Customer and company operations and results could be affected by changes in weather patterns; the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters; and the spread of major epidemics. Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings. Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators; actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***, carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise; and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates. Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results. Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses. Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products; changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; changes in demand and pricing for used equipment; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs; security breaches and other disruptions to the company's and suppliers' information technology infrastructure; and changes in company declared dividends and common stock issuances and repurchases. Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action. The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, to fund operations and costs associated with engaging in diversified funding activities, and to fund purchases of the company's products. If general economic conditions deteriorate or capital markets become more volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses. The company's outlook is based upon assumptions relating to the factors described above, which are sometimes based upon estimates and data prepared by government agencies. Such estimates and data are often revised. The company, except as required by law, undertakes no obligation to update or revise its outlook, whether as a result of new developments or otherwise. Further information concerning the company and its businesses, including factors that potentially could materially affect the company's financial results, is included in the company's other filings with the SEC (including, but not limited to, the factors discussed in Item 1A. Risk Factors of the company's most recent annual report on Form 10-K and quarterly reports on Form 10-Q). [Editorial queries for this story should be sent to [*newswire@enpublishing.co.uk*](mailto:newswire@enpublishing.co.uk) ]

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**End of Document**



[***-Deere Announces First-Quarter Earnings of $ 254 Million***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J53-0951-JD3Y-Y1TB-00000-00&context=1516831)

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**Body**

MOLINE, Illinois - Net income attributable to Deere & Company was $ 254.4 million, or $ 0.80 per share, for the first quarter ended January 31, compared with $ 386.8 million or $ 1.12 per share, for the same period of 2015.

Worldwide net sales and revenues for the first quarter decreased 13 percent, to $ 5.525 billion, compared with $ 6.383 billion last year. Net sales of the equipment operations were $ 4.769 billion for the quarter compared with $ 5.605 billion a year ago.

'John Deere's first-quarter results reflected the continuing impact of the downturn in the global farm economy as well as weakness in construction equipment markets,' said Samuel R. Allen, chairman and chief executive officer. 'At the same time, all of Deere's businesses remained solidly profitable, benefiting from the sound execution of our business plans and the success of actions to develop a more responsive cost structure.'

Summary of Operations

Net sales of the worldwide equipment operations declined 15 percent for the quarter. Sales included price realization of 2 percent and an unfavorable currency-translation effect of 4 percent. Equipment net sales in the United States and Canada decreased 18 percent. Outside the U.S. and Canada, net sales were down 9 percent, with unfavorable currency-translation effects of 11 percent.

Deere's equipment operations reported operating profit of $ 214 million for the quarter, compared with $ 414 million in 2015. The decline for the quarter was due primarily to lower shipment volumes, the unfavorable effects of foreign-currency exchange and the impact of a less favorable product mix. Partially offsetting these factors were price realization, lower selling, administrative and general expenses and lower production costs. Net income of the company's equipment operations was $ 127 million for the quarter, compared with $ 241 million for the same period last year. In addition to the operating factors mentioned above, a lower effective tax rate benefited results.

Financial services reported net income attributable to Deere & Company of $ 129.4 million for the quarter compared with $ 156.8 million last year. Lower results for the quarter were primarily due to the unfavorable effects of foreign-currency exchange translation, higher losses on residual values primarily for construction-equipment operating leases, less favorable financing spreads and a higher provision for credit losses. These factors were partially offset by a reduction in selling, administrative and general expenses.

Company Outlook & Summary

Company equipment sales are projected to decrease about 10 percent for fiscal 2016 and to be down about 8 percent for the second quarter compared with the same period a year ago. Included in the forecast is a negative foreign-currency translation effect of about 3 percent for the full year and second quarter. For fiscal 2016, net income attributable to Deere & Company is anticipated to be about $ 1.3 billion.

'Although Deere expects another challenging year in 2016, our forecast represents a level of performance much better than we have experienced in previous downturns,' Allen said. 'This illustrates the impact of our efforts to establish a more durable business model and a wider range of revenue sources. As a result, the company's financial condition remains strong and we are well-positioned to continue investing in innovative products, advanced technology and new markets. These actions, we're confident, will provide significant value to our customers and investors in the years ahead.'

Equipment Division Performance

***Agriculture*** & Turf. Sales decreased 12 percent for the quarter due largely to lower shipment volumes and the unfavorable effects of currency translation, partially offset by price realization.

Operating profit was $ 144 million compared with $ 268 million for the period last year. Results were driven primarily by the impact of lower shipment volumes, the unfavorable effects of foreign-currency exchange and a less favorable product mix. These factors were partially offset by price realization, reduced selling, administrative and general expenses and lower production costs.

Construction & Forestry. Construction and forestry sales decreased 23 percent for the quarter, mainly as a result of lower shipment volumes and the unfavorable effects of currency translation, partially offset by price realization. Operating profit was $ 70 million for the quarter compared with $ 146 million in 2015. The decline in operating profit was mainly due to lower shipment volumes, partially offset by price realization and lower selling, administrative and general expenses.

Market Conditions & Outlook

***Agriculture*** & Turf. Deere's worldwide sales of ***agriculture*** and turf equipment are forecast to decrease by about 10 percent for fiscal-year 2016, including a negative currency-translation effect of about 4 percent. Industry sales for ***agricultural*** equipment in the U.S. and Canada are forecast to be down 15 to 20 percent for 2016. The decline, reflecting the impact of low commodity prices and stagnant farm incomes, is expected to be most pronounced in the sale of higher-horsepower models.

Full-year 2016 industry sales in the EU28 are forecast to be flat to down 5 percent, with the decline attributable to low commodity prices and farm incomes, including further pressure on the dairy sector. In South America, industry sales of tractors and combines are projected to be down 10 to 15 percent mainly as a result of economic concerns and uncertainty about government-sponsored financing in Brazil. Asian sales are projected to be flat to down slightly, due in part to weakness in China.

Industry sales of turf and utility equipment in the U.S. and Canada are expected to be flat to up 5 percent for 2016, benefiting from new products and general economic growth.

Construction & Forestry. Deere's worldwide sales of construction and forestry equipment are forecast to be down about 11 percent for 2016, including a negative currency-translation effect of about 2 percent. The forecast decline in sales reflects the impact of weak conditions in the North American energy sector as well as lower sales outside the U.S. and Canada. In forestry, global sales are expected to be down 5 to 10 percent from last year's strong levels, primarily as a result of weaker demand in the U.S. and Canada.

Financial Services. Fiscal-year 2016 net income attributable to Deere & Company for the financial services operations is expected to be approximately $ 525 million. The outlook reflects less favorable financing spreads, an increased provision for credit losses and the unfavorable effects of foreign-currency exchange translation. Additionally, 2015 results benefited from a gain on the sale of the crop insurance business.

John Deere Capital Corporation

The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market.

Net income attributable to John Deere Capital Corporation was $ 99.9 million for the first quarter compared with $ 133.6 million last year. Lower results for the quarter were primarily due to less favorable financing spreads, higher losses on residual values primarily for construction-equipment operating leases and a higher provision for credit losses.

Net receivables and leases financed by JDCC were $ 31.510 billion and $ 31.508 billion at January 31, 2016 and 2015, respectively.

Safe Harbor Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under 'Company Outlook & Summary,' 'Market Conditions & Outlook,' and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence and financial condition.

These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.), international reaction to such programs, changes in environmental regulations and their impact on farming practices; changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms).

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results.

Customer and company operations and results could be affected by changes in weather patterns; the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters and the spread of major epidemics.

Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators; actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***, carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates.

Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results. Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products; changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; changes in demand and pricing for used equipment; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs; security breaches and other disruptions to the company's and suppliers' information technology infrastructure and changes in company declared dividends and common stock issuances and repurchases.

Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action.

The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, to fund operations and costs associated with engaging in diversified funding activities, and to fund purchases of the company's products. If general economic conditions deteriorate or capital markets become more volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses.

The company's outlook is based upon assumptions relating to the factors described above, which are sometimes based upon estimates and data prepared by government agencies. Such estimates and data are often revised. The company, except as required by law, undertakes no obligation to update or revise its outlook, whether as a result of new developments or otherwise. Further information concerning the company and its businesses, including factors that potentially could materially affect the company's financial results, is included in the company's other filings with the SEC.

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[***-Deere Announces Second-Quarter Earnings of $ 495 Million***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JV8-66R1-JD3Y-Y1RS-00000-00&context=1516831)

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**Body**

Deere Announces Second-Quarter Earnings of $ 495 Million.

Global farm recession, weak construction-equipment markets lead to lower sales and earnings for quarter and six months.

All company businesses remain profitable for both periods, aided by sound execution and disciplined cost management.

Full-year forecast calls for 9% sales decline and earnings of $ 1.2 billion.

MOLINE, Illinois - Net income attributable to Deere & Company was $ 495.4 million, or $ 1.56 per share, for the second quarter ended April 30, compared with $ 690.5 million, or $ 2.03 per share, for the same period last year.

For the first six months of the year, net income attributable to Deere & Company was $ 749.8 million, or $ 2.36 per share, compared with $ 1.077 billion, or $ 3.14 per share, last year.

Worldwide net sales and revenues decreased 4 percent, to $ 7.875 billion, for the second quarter and declined 8 percent, to $ 13.400 billion, for six months. Net sales of the equipment operations were $ 7.107 billion for the quarter and $ 11.876 billion for the first six months, compared with $ 7.399 billion and $ 13.004 billion for the periods last year.

'John Deere's second-quarter performance reflected the continuing impact of the downturn in the global farm economy and further weakness in the construction equipment sector,' said Samuel R. Allen, chairman and chief executive officer. 'In the face of challenging market conditions, Deere's businesses benefited from the sound execution of operating plans, the strength of a broad product portfolio and our success creating a more flexible cost structure.'

Summary of Operations

Net sales of the worldwide equipment operations declined 4 percent for the quarter and 9 percent for the first six months compared with the same periods a year ago. Sales included price realization of 1 percent for both periods and an unfavorable currency-translation effect of 2 percent for the quarter and 3 percent for six months. Equipment net sales in the United States and Canada decreased 6 percent for the quarter and 11 percent year to date. Outside the U.S. and Canada, net sales decreased 1 percent for the quarter and 4 percent for the first six months, with unfavorable currency-translation effects of 4 percent and 7 percent for the periods.

Deere's equipment operations reported operating profit of $ 688 million for the quarter and $ 902 million for six months, compared with $ 828 million and $ 1.242 billion last year. The declines for both periods were primarily due to lower shipment volumes, the unfavorable effects of foreign-currency exchange and the impact of a less favorable product mix. These factors were partially offset by price realization, lower production costs and lower selling, administrative and general expenses.

Net income of the company's equipment operations was $ 393 million for the second quarter and $ 520 million for the first six months, compared with $ 524 million and $ 764 million for the corresponding periods of 2015.

Financial services reported net income attributable to Deere & Company of $ 102.6 million for the quarter and $ 232.0 million for six months compared with $ 169.8 million and $ 326.6 million last year. Lower results for both periods were primarily due to higher losses on lease residual values, less-favorable financing spreads and a higher provision for credit losses. Results for the first six months were also affected by the unfavorable effects of foreign-currency exchange translation. Prior-year results benefited from a gain on the sale of the crop insurance business.

Company Outlook & Summary

Company equipment sales are projected to decrease about 9 percent for fiscal 2016 and to be about 12 percent lower for the third quarter compared with year-ago periods. Included in the forecast is a negative foreign-currency translation effect of about 2 percent for the full year and 1 percent in the third quarter. For fiscal 2016, net income attributable to Deere & Company is anticipated to be about $ 1.2 billion.

'Although our forecast calls for lower results this year in light of ongoing market pressures, Deere is continuing to perform at a much higher level than in previous downturns,' Allen said. 'Deere's financial condition remains strong and we believe the company is well-positioned to capitalize on attractive growth opportunities that will deliver value to our customers and investors in the future. At the same time, we are continuing to focus on ways to streamline our operations and make them more efficient and profitable.'

Equipment Division Performance

***Agriculture*** & Turf. Sales were approximately the same for the quarter and down 5 percent for six months. The decline year-to-date was due largely to lower shipment volumes. Results for both periods were impacted by the unfavorable effects of foreign- currency translation, partially offset by price realization.

Operating profit was $ 614 million for the quarter and $ 759 million year to date, compared with $ 639 million and $ 907 million, respectively, last year. Lower results for both periods were driven primarily by the unfavorable effects of foreign-currency exchange, lower shipment volumes and a less favorable product mix, partially offset by price realization, lower production costs and lower selling, administrative and general expenses.

Construction & Forestry. Construction and forestry sales decreased 16 percent for the quarter and 20 percent for six months mainly as a result of lower shipment volumes and higher sales-incentive costs.

Operating profit was $ 74 million for the quarter and $ 143 million for six months, compared with $ 189 million and $ 335 million for the periods last year. Operating profit decreased for the quarter mainly due to lower shipment volumes, higher sales-incentive costs and a less favorable product mix, partially offset by lower production costs and lower selling, administrative and general expenses. Six-month results decreased primarily due to lower shipment volumes and higher sales-incentive costs, partially offset by lower selling, administrative and general expenses and lower production costs.

Market Conditions & Outlook

***Agriculture*** & Turf. Deere's worldwide sales of ***agriculture*** and turf equipment are forecast to decrease by about 8 percent for fiscal-year 2016, including a negative currency-translation effect of about 2 percent.

Industry sales for ***agricultural*** equipment in the U.S. and Canada are forecast to be down 15 to 20 percent for 2016. The decline, reflecting the impact of low commodity prices and stagnant farm incomes, is expected to be most pronounced in the sale of higher-horsepower models.

Full-year 2016 industry sales in the EU28 are forecast to be flat to down 5 percent, with the decline attributable to low commodity prices and farm incomes, including continued pressure on the dairy sector. In South America, industry sales of tractors and combines are projected to be down 15 to 20 percent mainly as a result of economic and political concerns in Brazil. Asian sales are projected to be flat to down slightly, due in part to weakness in China.

Industry sales of turf and utility equipment in the U.S. and Canada are expected to be flat to up 5 percent for 2016. Deere sales are expected to benefit from new products and general economic growth.

Construction & Forestry. Deere's worldwide sales of construction and forestry equipment are forecast to be down about 13 percent for 2016, including a negative currency-translation effect of about 1 percent. The forecast decline in sales largely reflects the impact of weak conditions in North America. In forestry, global industry sales are expected to be down 5 to 10 percent from last year's strong levels.

Financial Services. Fiscal-year 2016 net income attributable to Deere & Company for the financial services operations is expected to be approximately $ 480 million. The outlook reflects less-favorable financing spreads, higher losses on lease residual values and an increased provision for credit losses. Additionally, 2015 results benefited from a gain on the sale of the crop insurance business.

John Deere Capital Corporation

The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market.

Net income attributable to John Deere Capital Corporation was $ 69.6 million for the second quarter and $ 169.4 million year to date, compared with $ 115.9 million and $ 249.5 million for the respective periods last year. The decline for both periods was primarily due to higher losses on lease residual values, less-favorable financing spreads and a higher provision for credit losses.

Net receivables and leases financed by JDCC were $ 33.208 billion at April 30, 2016, compared with $ 32.877 billion last year.

Safe Harbor Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under 'Company Outlook & Summary,' 'Market Conditions & Outlook,' and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence and financial condition. These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.), international reaction to such programs, changes in environmental regulations and their impact on farming practices; changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms).

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates; and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results.

Customer and company operations and results could be affected by changes in weather patterns; the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters; and the spread of major epidemics.

Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators; actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***, carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise; and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates. Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results. Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products; changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; changes in demand and pricing for used equipment; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs; security breaches and other disruptions to the company's and suppliers' information technology infrastructure; and changes in company declared dividends and common stock issuances and repurchases.

Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action.

The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, to fund operations and costs associated with engaging in diversified funding activities, and to fund purchases of the company's products. If general economic conditions deteriorate or capital markets become more volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses.

The company's outlook is based upon assumptions relating to the factors described above, which are sometimes based upon estimates and data prepared by government agencies. Such estimates and data are often revised. The company, except as required by law, undertakes no obligation to update or revise its outlook, whether as a result of new developments or otherwise. Further information concerning the company and its businesses, including factors that potentially could materially affect the company's financial results, is included in the company's other filings with the SEC (including, but not limited to, the factors discussed in Item 1A. Risk Factors of the company's most recent annual report on Form 10-K and quarterly reports on Form 10-Q).

This media release, financial highlights, and more financial data are available in PDF format.

[*https://www.deere.com/en\_US/docs/Corporate/investor\_relations/pdf/financialdata/reports/2016/2016\_secondquarter.pdf*](https://www.deere.com/en_US/docs/Corporate/investor_relations/pdf/financialdata/reports/2016/2016_secondquarter.pdf)

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**Body**

BISICHI MINING PLC

Results for the year ended 31 December 2015

Summary:

\* ADJUSTED EBITDA:                    £1,700,000 (2014: £4,300,000)

\* Challenging second half at Black Wattle Colliery

\* Physical demand for Black Wattle coal remains strong

\* UK property portfolio continues to perform well

\* Final Dividend proposed of 3p per share, taking full year dividend to 4p per share

\* Dividend yield of 5.2% at year end share price

Chairman, Sir Michael Heller, comments:

"Although the resources sector is going through a very difficult time at the moment we believe that there is still substantial value for our shareholders in our South African coal assets and I look forward to the coming year with confidence."

For further information, please call:

Andrew Heller or Garrett Casey, Bisichi Mining PLC 020 7415 5030

STRATEGIC REPORT

Chairman's Statement

The second half of 2015 has been a challenging period for your company and in particular for Black Wattle, our direct coal mining subsidiary in South Africa. Overall for the year ended 31 December 2015, your company achieved operating profit before depreciation, fair value adjustments and exchange movements (adjusted EBITDA) of £1.7 million (2014: £4.3 million).

Although Black Wattle was profitable for the first half of the year, the mine operated at a loss in the second half. This was largely because of issues over which we have no control, namely the continued weakness in the coal price and delays associated with the granting of blasting permissions. A fuller explanation of these issues and the way that your management have addressed the delays in the permissions is detailed in the Mining Review. On a related issue, your company has been both a beneficiary and a victim of the weakness of the South African Rand. On the upside we have benefitted from the fact that our export coal is priced in US Dollars, but the weakness of the Rand against Sterling, particularly in the second half of the year, has meant that we have taken a substantial exchange rate loss of £1.2million (2014: £0.1million) on consolidation of our South African Rand denominated net assets into the group balance sheet and a £0.5million loss (2014: £0.1million) through the Income Statement related to the retranslation of intercompany trading balances.

Black Wattle continues to perform well under the Quattro Programme, which allows junior black-economic empowerment coal producers direct access to the coal export market via Richards Bay Coal Terminal. We would like to thank Vunani Limited, our black economic empowered shareholders at Black Wattle, for managing and developing this opportunity.

Obviously the resources sector is going through a very difficult time at the moment. Nevertheless we believe that there is still substantial value for our shareholders to be added from our South African coal assets.

The company's UK retail property portfolio, which underpins the group and which is managed actively by London & Associated properties plc, continues to perform well, with average rental yields for the portfolio remaining stable during the year. We are pleased to report that in October 2015, the group acquired a new retail property in Northampton for a total cost of £960,000 in cash. In a separate transaction, in March 2016, the group disposed of its investment in Langney Shopping Centre in Eastbourne for £1.14million. A fuller explanation of the portfolio's valuation results and financial position are discussed in the Directors report.

Looking forward, management will continue to look for opportunities to strengthen and develop the company's UK retail property portfolio.

Finally, your directors have decided to hold the dividend at the 2014 level and will recommend to you, our shareholders, a final dividend of 3p (2014: 3p) payable on Friday 29 July 2016 to shareholders registered at the close of business on 8 July 2016 making the total for the year 4p (2014: 4p). Based on the 2015 year end share price, this represents a 5.2% yield, which is at the high end of the mining sector.

On behalf of the Board and shareholders, I would like to thank all of our staff for their hard work during the course of the year.

Sir Michael Heller

Chairman

18 April 2016

STRATEGIC REPORT

Mining Review

As noted in the Chairman's statement, the challenging environment experienced in the second half at Black Wattle, our South African coal mining operation, had a material effect on the mine's overall performance for the year.

Although we continue to operate in an environment of historically low coal prices, many of the mining challenges experienced in the second half of 2015 have now been overcome. Looking forward, management will continue to focus on keeping cost of production low and ensuring adequate levels of production are achieved.

Production and operations

Although overall Run of Mine production from Black Wattle improved in 2015, with total production for the year of 1.58million metric tonnes (2014: 1.53million metric tonnes), production was severely hampered in the last four months of the year. Average monthly Run of Mine production decreased from 143,000 metric tonnes in the first eight months of the year to 105,000 metric tonnes in the last four months. As noted in the Chairman's Statement, this decrease in production can mainly be attributable to the delays in obtaining the necessary regulatory blasting permissions.

These approvals have now been received and as we continue into 2016, we will look to combine production from new opencast areas opened at Black Wattle with coal received from the opencast reserve already being mined at Blue Nightingale. As previously reported, the coal delivered from Blue Nightingale is part of an agreement to purchase Run of Mine coal from an opencast reserve nearby to Black Wattle. Blue Nightingale is a South African black owned and managed mining company and we are very pleased to be continuing our successful relationship.

Main trends/markets

Along with the general downturn in commodity and energy prices in 2015, international coal prices continued to weaken. At the beginning of 2015, the average weekly price of Free on Board (FOB) Coal from Richards Bay Coal Terminal (API4) was $64. By the end of the year the price had weakened to under $50, less than half the $120 achieved in 2011. A strong depreciation in the South African Rand against the US Dollar in the last quarter of 2015 has helped to partially offset this decline together with a stable domestic market. Total mining costs increased from £18.2 million in 2014 to £19.2 million in 2015, inclusive of the impact of the depreciation in the South African Rand against the US Dollar.

Looking forward, we continue to see strong demand for our coal in both the domestic and export markets and we will continue to focus on keeping our cost of production low in order to offset the impact of lower international coal prices.

Health, Safety & Environment (HSE)

Black Wattle is committed to creating a safe and healthy working environment for its employees and the health and safety of our employees is of the utmost importance.

HSE performance in 2015:

·     No cases of Occupational Diseases were recorded.

·     Zero claims for the Compensation for Occupational Diseases were submitted.

·     No machines operating at Black Wattle exceeded the regulatory noise level.

·     Black Wattle Colliery recorded two Lost time Injuries during 2015.

In addition to the required personnel appointments and assignment of direct health and safety responsibilities on the mine, a system of Hazard Identification and Risk Assessments has been designed, implemented and maintained at Black Wattle.

Health and Safety training is conducted on an ongoing basis. We are pleased to report all employees to date have received training in hazard identification and risk assessment in their work areas.

A medical surveillance system is also in place which provides management with information used in determining measures to eliminate, control and minimise employee health risks and hazards and all Occupational Health hazards are monitored on an ongoing basis.

Various systems to enhance the current HSE strategy have been introduced as follows:

·     In order to improve hazard identification before the commencing of tasks, mini risk assessment booklets have been distributed to all mine employees and long term contractors on the mine.

·     Dover testing for all operators was introduced in the last quarter of 2015.

·     All of the plant personnel have undergone basic rigging training in 2015

·     Black Wattle Colliery has extensively revised all the SOP's related to machinery and refresher training was done with all the machine operators.

·     A Job Safety Analysis form has been introduced to ensure effective identification of hazards in the workplace.

·     In order to improve the current reporting practice of incidents on the mine, initial reporting of incidents booklets were handed out to all employees and contractors.

·     In order to capture and record investigation findings from incidents, an incident recording sheet was introduced to line management and contractors.

·     Black Wattle Colliery utilises ICAM (Incident cause analysis method).

·     Hazard Identification and Risk Assessment training was given to all levels of employees, line management, Heads of Departments, contractor representatives and contractor employees.

·     Ongoing training on conveyor belt operation is being conducted with all employees involved with this discipline.

Environment Management Programme

Under the terms of the mine's Environmental Management Programme approved by the Department of Mineral Resource ("DMR"), Black Wattle undertakes a host of environmental protection activities to ensure that the approved Environmental Management Plan is fully implemented. In addition to these routine activities, Black Wattle regularly carries out environmental monitoring activities on and around the mine, including evaluation of ground water quality, air quality, noise and lighting levels, ground vibrations, air blast monitoring, and assessment of visual impacts.

Black Wattle is fully compliant with the regulatory requirements of the Department of Water Affairs and Forestry and has an approved water use licence.

Black Wattle Colliery has substantially improved its water management by erecting and upgrading all its pollution control dams in consultation with the Department of Water Affairs and Forestry.

A performance assessment audit was conducted to verify compliance to our Environmental Management Programme and no significant deviations were found.

BLACK WATTLE COLLIERY SOCIAL AND LABOUR PLAN (SLP) PROGRESS

Black Wattle Colliery is committed to true transformation and empowerment as well as poverty eradication within the surrounding and labour providing communities.

Black Wattle is committed to providing opportunities for the sustainable socio-economic development of its stakeholders, such as:

·     Employees and their families, through Skills Development, Education Development, Human Resource Development, Empowerment and Progression Programmes.

·     Surrounding and labour sending communities, through Local Economic Development, Rural and Community Development, Housing and Living Condition, Enterprise Development and Procurement Programmes; and

·     Empowerment partners, through Broad-Based Black Economic Empowerment (BBBEE) and Joint Ventures with Historically Disadvantaged South African (HDSA) new mining entrants and enterprises.

·     The company engages in ongoing consultation with its stakeholders to develop strong company-employee relationships, strong company-community relationships and strong company-HDSA enterprise relationships.

The key focus areas in terms of the detailed SLP programmes were updated as follows:

·     New implementation action plans, projects, targets and budgets were established through regular workshops with all stakeholders.

·     A comprehensive desktop socio-economic assessment was undertaken on baseline data of the Steve Tshwete Local Municipality (STLM) and Nkangala District Municipality (NDM).

·     The current Black Wattle Colliery Local Economic Development (LED) programmes were upgraded, and new LED projects were selected in consultation with the key stakeholders from the STLM.

·     An appropriate forum was established on the mine and a process initiated for the consultation, empowerment and participation of the employee representatives in the Black Wattle Colliery SLP process.

·     Black Wattle Colliery has concluded extensive work on various ***Agricultural*** projects as well as the E-Bag Recycling projects. The E-Bag Recycling project aims to minimize the environmental impact of post-consumer Polyethylene Terephthalate plastic (PET) on the South African landscape. The project was awarded the PET Entrepreneur award for 2013 and the project was awarded a new bailing machine as part of the award. An additional piece of ground has been identified to extend the project to a different area within the Mhluzi Township nearby to Black Wattle. During 2014 the project self-funded the purchase of an additional bailing machine, an important milestone in bringing the project to a position of self-sustainability. To date in 2016, the E-Bag recycling project has initiated up to 70 local community jobs in the region.

Black Wattle Colliery has entered into a joint venture project with Enviroserve Waste Management to further develop and ensure the future sustainability of this project.

·     Various upgrades were initiated at the Evergreen School nearby to Black Wattle including upgrades to the roof, classrooms and outer areas. Further upgrades to this school will commence in 2016 whereby proper toilet facilities will be erected for the boys and girls, this will form part of the mines skills development program for our employees.

Procurement

In compliance with the Mining Charter and the Mineral and Petroleum Resource Development Act, Black Wattle has implemented a BBBEE-focussed procurement policy which strongly encourages our suppliers to establish and maintain BBBEE credentials. At present, BBBEE companies provide approximately 80 percent of Black Wattle's equipment and services. We closely monitor our monthly expenditure and welcome potential BBBEE suppliers to compete for equipment and service contracts at Black Wattle. Black Wattle also sells much of its coal products to empowered companies.

Employment in South Africa

As part of Black Wattle's commitment to the South African government Mining Charter, the company seeks to:

·     Expand opportunities for historically disadvantaged South Africans (HDSAs), including women, to enter the mining and minerals industry and benefit from the extraction and processing of the country's resources;

·     Utilise the existing skills base for the empowerment of HDSAs; and

·     Expand the skills base of HDSAs in order to serve the community.

In addition Black Wattle is committed to achieving the goals of the South African Employment Equity Act and is pleased to report the following:

·     Black Wattle Colliery has exceeded the 10 percent women in management and core mining target.

·     Black Wattle Colliery has achieved 18.4 percent women in core mining.

·     94 percent of the women at Black Wattle Colliery are HDSA females.

Black Wattle Colliery has successfully submitted their annual Employment Equity Report to the Department of Labour.

In terms of staff training some highlights for 2015 were:

·     17 employees were trained in ABET (Adult Basic Educational Training) on various levels;

·     An additional 5 disabled women continue their training on ABET level one and two.

·     4 HDSA Females have commenced apprenticeship at the mine.

·     78 Plant personnel were trained in Basic Rigging skills.

·     One HDSA male is currently undergoing an intensive one year safety training course on the mine.

Prospects

Management continue to focus on providing consistent production from its own existing reserves as well as reserves developed in partnership with our BEE partners. Although international coal prices remain depressed, management continue to remain confident in the ability to achieve significant value from our existing South African mining operations.

As a result, I look forward to the coming year with confidence.

Andrew Heller

Managing Director

18 April 2016

STRATEGIC REPORT

Risk & Performance

The directors present the Strategic Report of the company for the year ending 31 December 2015. The aim

of the Strategic Report is to provide shareholders with the ability to assess how the Directors have performed their duty to promote the success of the company for the collective benefit of shareholders.

Business review

The Chairman's Statement and the Mining Review which form part of the Strategic Report on the preceding pages 2 to 7 give a comprehensive and fair review of the group's activities during the past year and prospects for the forthcoming year.

Principal activity, strategy & business model

The company carries on business as a mining company and its principal activity is coal mining in South Africa. The company's strategy is to create and deliver long terms sustainable value to our stakeholders through our business model which can be broken down into four key areas:

·     acquiring and securing additional coal reserves in South Africa

·     coal mining

·     coal washing

·     coal transportation and marketing

In addition to the four key areas outlined above, we seek to balance the high risk of our mining operations with a dependable cash flow from our UK property investment operations. The company invests in retail property across the UK. The UK property portfolio is managed by London & Associated Properties PLC whose responsibility is to actively manage the portfolio to improve rental income and thus enhance the value of the portfolio over time.

Risk & uncertainties

Coal price risk:The group's South African mining operational earnings are largely dependent on movements in both the export and domestic coal price.

Coal washing:The group's mining operation's earnings are highly sensitive to coal washing, therefore a stoppage or disruption to the process could significantly impact earnings. However, there is scope to raise earnings substantially if the yield from the washing process is improved even marginally.

Mining risk:Attached to mining there are inherent health and safety risks. Any such safety incidents disrupt operations, and can slow or even stop production. The group has a comprehensive Health and Safety programme in place to mitigate this. As with many mining operations, the reserve that is mined has the risk of not having the qualities and accessibility expected from geological and environmental analysis.

Currency risk:The group's South African operations are sensitive to currency movements, especially those between the South African Rand, US Dollar and British Pound.

New reserves and mining permissions:The life of the mine, acquisition of additional reserves, permissions to mine and new mining opportunities in South Africa generally are contingent on a number of factors outside of the group's control, e.g. approval by the Department of Mineral Resources and the Department of Water Affairs and Forestry.

Regulatory risk:The group's South African operations are subject to the government Mining Charter and scorecard which primarily seeks to:

·     Promote equitable access to South Africa's mineral resources for all people in South Africa;

·     Expand opportunities for historically disadvantaged South Africans (HDSAs), including women, to enter the mining and minerals industry and benefit from the extraction and processing of the country's resources;

·     Utilise the existing skills base for the empowerment of HDSAs;

·     Expand the skills base of HDSAs in order to serve the community;

·     Promote employment and the social and economic welfare of mining communities and areas supplying mining labour; and

·     Promote beneficiation of South Africa's mineral commodities beyond mining and processing, including the production of consumer goods.

The group continues to make good progress towards meeting the Charter requirements. However any regulatory changes to these, or failure to meet existing targets, could adversely affect the mine's ability to retain its mining rights in South Africa.

Transport risk:At present the government owned Transnet Freight Rail (TFR) is the sole rail freight provider for coal in South Africa. The group's South African operations are therefore reliant on TFR for delivery of its export quality coal directly or indirectly via the Southern African ports to its end customers.

Power supply risk:The current utility provider for power supply in South Africa is the government run Eskom. Eskom continues to undergo capacity problems resulting in power cuts and lack of provision of power supply to new projects. The group's mining operations have to date not been affected by power cuts.

Flooding risk:The group's mining operations are susceptible to seasonal flooding which could disrupt production. Management monitors water levels on an ongoing basis and various projects have been completed, including the construction of additional dams, to mitigate this risk.

Environmental risk: The group's South African mining operations are required to adhere to local environmental regulations. Details of the groups Environment Management Programme are disclosed in the Mining Review on page 6.

Health & Safety risk: The group's South African mining operations are required to adhere to local Health and Safety regulations. Details of the group's Health and Safety Programme are disclosed in the Mining Review on page 5.

Labour risk: The group's mining operations and coal washing plant facility are labour intensive and unionised. Any labour disputes, strikes or wage negotiations may disrupt production and impact earnings.

Cashflow risk and property: We seek to balance the high risk of our mining operations with a dependable cash flow from our UK property investment operations. Fluctuations in property values, which are reflected in the Consolidated Income Statement and Balance Sheet, are dependent on an annual valuation of commercial properties. A fall in UK commercial property can have a marked effect on the profitability and the net asset value of the group. However, due to the long term nature of the leases, the effect on cash flows from property investment activities are expected to remain stable as long as tenants remain in operation.

Financial position

In South Africa, an increase in the structured trade finance facility from R60million (South African Rand) to R80million was signed by Black Wattle Colliery (Pty) Limited ("Black Wattle") in October 2013 with Absa Bank Limited, a South African subsidiary of Barclays Bank PLC. The facility is renewable annually at 30 June and is secured against inventory, debtors and cash that are held in the group's South African operations. This facility comprises of a R60million revolving loan to cover the fluctuating working capital requirements of the group's South African operations, and a fully drawn R20million loan facility to cover guarantee requirements related to the group's South African mining operations.

In December 2014, the group signed a £6 million term loan facility with Santander. The Loan is secured against the group's UK retail property portfolio. The facility has a five year term, is fully drawn and is repayable at the end of the term. The interest cost of the loan is 2.35% above LIBOR. The property portfolio was externally valued at 31 December 2015 and the value of UK investment properties attributable to the group at year end was £12.8 million (2014: £11.6million).

In October 2015, the group acquired a new retail property in Northampton for a total cost of £960,000 in cash. The group's portfolio is managed actively by London & Associated properties plc and continues to perform well with voids across the portfolio at the low level of 1.12%.

In a separate transaction, in March 2016 the group disposed of its joint venture investment in Langney Shopping Centre in Eastbourne for £1.14million in cash. The investment is classified as a non-current asset held for sale within the group's consolidated balance sheet.

The open market value of the company's share of investment properties included within its joint venture investment in Dragon Retail Properties is £1.3million (2014: £4million) and within non-current assets held for sale is £2.3million (2014: £nil). Overall, the group achieved net property revenue of £1.3million (2014: £1.2million) for the year which includes the company's share of net property revenue from its investment in joint ventures of £86,000 (2014: £236,000) and non-current assets held for sale of £172,000 (2014: £nil).

The Group holds £1,225,000 (2014: £1,722,000) of loans and joint venture investment in Ezimbokedwini Mining (Pty) Limited the carrying value of which is dependent upon the completion of the acquisition of the Pegasus coal project in South Africa.  The carrying value of the underlying project is supported by its coal reserves and Life of Mine plan and is considered appropriate given the underlying economic value of the project. Further details on the financial positions of the Groups joint ventures can be found in note 13 to the financial statements.

The group's cash and cash equivalents (excluding bank overdrafts) at year end were £1.6million (2014: £2.8million). The net assets of the group at the year end were £15.6million (2014: £17.7million). The group has considerable financial resources available at short notice including cash, investments available for sale and its £2m loan to Dragon Retail Properties Limited which accrues annual interest at 6.875 per cent.

Further details on the group's overall financial position are stated in the Consolidated Balance Sheet on page 42.

Cashflow

The company at year end had a net balance owing of cash and cash equivalents (including bank overdrafts) of £0.6 million (2014: net positive balance of £0.7 million). For the year, the group had a net cash generated from operating activities of £1.7million (2014: £3.4million) and an overall net decrease in cash and cash equivalents of £1.7million (2014: Increase of £2.0million) after taking into ***account*** financing and investing activities. Details on the group's cashflow position are stated in the Consolidated Cashflow Statement on page 45. Cash and cash equivalents as per the Cashflow Statement comprise Cash and cash equivalents as presented in the balance sheet and bank overdrafts (secured).

Key Performance Indicators

The Key Performance Indicators for the group are:

|  | **2015**  **£'000** | **2014**  **£'000** |
| --- | --- | --- |
| **For our UK property investment operations:** |  |  |
| **Net property valuation** | **12,800** | **11,575** |
|  | **2015**  **£'000** | **2014**  **£'000** |
| For South African mining activities: |  |  |
| Operating profit before depreciation, fair value adjustments and exchange movements (adjusted EBITDA) | **625** | 3,161 |
|  | **Tonnes** | Tonnes |
| Mining production | **1,580** | 1,530 |
|  |  |  |
| For the group: |  |  |
| (Loss)\Profit before tax | **(147)** | 1,568 |
| Operating profit before depreciation, fair value adjustments and exchange movements (adjusted EBITDA) | **1,717** | 4,276 |

Environment

The group's UK activities are principally property investment whereby we provide premises which are rented to retail businesses. We seek to provide those tenants with good quality premises from which they can operate in an efficient and environmentally sound manner.

Further information relating to the company's position on the Environment and Environmental Management issues related to our South African operations can be found in The Mining Review which forms part of the Strategic Report on the preceding pages 5 to 7.

Employment

Employment terms and conditions for our employees based at our UK office and at our South African mining operations are regulated by and are operated in compliance with all relevant prevailing national and local legislation. Employment terms and conditions provided to mining staff meet or exceed the national average.

Further information relating to the company's position on Employment issues can be found in The Mining Review which forms part of the Strategic Report on the preceding pages 5 to 7.

Green House Gas reporting

We have reported on all of the ***emission*** sources required under the Companies Act 2006 (Strategic Report and Directors' Reports) Regulations.

The group has employed the Operational Control boundary definition to outline our carbon footprint boundary. Included within that boundary are Scope 1 & 2 ***emissions*** from coal extraction and onsite mining processes for Black Wattle Colliery. We have not measured and reported on our Scope 3 ***emissions*** sources. Excluded from the footprint boundary are ***emission*** sources considered non material by the group, including refrigerant use onsite.

We have used the GHG Protocol Corporate ***Accounting*** and Reporting Standard (revised edition) and a methodology adapted from the Intergovernmental Panel on Climate Change (2006) to calculate fugitive ***emissions*** from surface coal mining activities. Further ***emission***

factors were used from UK Government's GHG Conversion Factors for company Reporting 2015.

The group's carbon footprint:

|  | **2015**  **CO2e**  **Tonnes** | **2014**  **CO2e**  **Tonnes** |
| --- | --- | --- |
| ***Emissions*** source: |  |  |
| Scope 1 Combustion of fuel & operation of facilities | **10,571** | 14,867 |
| Scope 1 ***Emissions*** from coal mining activities | **27,789** | 26,872 |
| Scope 2 Electricity, heat, steam and cooling purchased for own use | **7,571** | 8,300 |
| Total | **45,931** | 50,039 |
| Intensity: |  |  |
| Intensity 1 Tonnes of CO2 per pound sterling of revenue | **0.00179** | 0.00189 |
| Intensity 2 Tonnes of CO2 per tonne of coal produced | **0.0291** | 0.0327 |

Social, community and human rights issues

The company believes that it is in the shareholders' interests to consider social and human rights issues when conducting business activities both in the UK and South Africa. Further information relating to the company's position on social and community issues can be found in the Mining Review which forms part of the Strategic Report on the preceding pages 5 to 7.

Directors, employees and gender representation

At the year end the group had 6 directors (6 male, 0 female), 7 senior managers (6 male, 1 female) and 205 employees (154 male,

51 female).

Future prospects

The group seeks to expand its operations in South Africa through the acquisition of additional coal reserves. Further information on the outlook of the company can be found in both the Chairman's Statement on page 2 and the Mining Review on page 5 which form part of the Strategic Report.

Signed on behalf of the Board of Directors

Garrett Casey

Finance Director

18 April 2016

Management team

1   Sir Michael Heller

      Chairman

      Bisichi Mining PLC

2   Andrew Heller

      Managing Director

      Bisichi Mining PLC,

      Managing Director

      Black Wattle Colliery

3   Christopher Joll

      Senior Independent Director,

      Chairman Audit

      and Remuneration

      Committees

4   Garrett Casey

      Finance Director

      Bisichi Mining PLC,

      Director

      Black Wattle Colliery

5   Robert Grobler

      Director of Mining

      Bisichi Mining PLC,

      Director

      Black Wattle Colliery

6   Ethan Dube

      Director

      Black Wattle Colliery

7   Nico Serfontein

      Mine Manager

      Black Wattle Colliery

GOVERNANCE

Directors & advisors

\*     Sir Michael Heller

      MA, FCA (Chairman)

      Andrew R Heller

      MA, ACA

      (Managing Director)

      Garrett Casey

      CA (SA)

      (Finance Director)

      Robert Grobler

      Pr Cert Eng

      (Director of mining)

O+ Christopher A Joll

MA (Non-executive)

Christopher Joll was appointed a Director on 1 February 2001. He has held a number of non-executive directorships of quoted and un-quoted companies and is currently senior partner of MJ2 Events LLP an event management business.

O\*  John A Sibbald

BL (Non-executive)

John Sibbald has been a Director since 1988. After qualifying as a Chartered Accountant he spent over 20 years in stockbroking, specialising in mining and international investment.

Secretary & Registered office

Garrett Casey CA (SA)

24 Bruton Place

London W1J 6NE

Black Wattle Colliery Directors

Andrew Heller (Managing Director)

Ethan Dube

Robert Grobler

Garrett Casey

Property portfolio asset manager

James Charlton BSc MRICS

Company Registration

Company registration No. 112155 (Incorporated in England and Wales)

Website

[*http://www.bisichi.co.uk*](http://www.bisichi.co.uk)

E-mail

[*admin@bisichi.co.uk*](mailto:admin@bisichi.co.uk)

\*     Member of the nomination committee

+    Senior independent director

O   Member of the audit, nomination and remuneration committees.

Auditor

BDO LLP

Principal bankers

United Kingdom

Santander UK PLC

National Westminster Bank PLC

Investec PLC

South Africa

ABSA Bank (SA)

First National Bank (SA)

Standard Bank (SA)

Corporate solicitors

United Kingdom

Olswang LLP, London

Memery Crystal, London

Fladgate LLP, London

South Africa

Tugendhaft Wapnick Banchetti and Partners, Johannesburg

Hogan Lovells, Johannesburg

Brandmullers Attorneys, Middelburg

Stockbrokers

Shore Capital & Corporate Ltd

REGISTRARS AND TRANSFER OFFICE

Capita Asset Services

The Registry

34 Beckenham Road

Beckenham

Kent, BR3 4TU

Telephone 0871 664 0300

(Calls cost 12p per minute + network extras) or

+44 (0) 208 639 3399 for overseas callers

[*http://www.capitaassetservices.com*](http://www.capitaassetservices.com)

[*Email:ssd@capitaregistrars.com*](mailto:Email:ssd@capitaregistrars.com)

Five year summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 | 2013  £'000 | 2012  £'000 | 2011  £'000 |
| Consolidated income statement items |  |  |  |  |  |
| Revenue | **25,655** | 26,500 | 35,105 | 35,962 | 29,909 |
| Operating profit/(loss) | **150** | 1,364 | 123 | 2,568 | (1,328) |
| Profit/(loss) before tax | **(147)** | 1,568 | 102 | 2,190 | (1,450) |
| Trading profit/(loss) before tax | **(188)** | 1,157 | 17 | 2,808 | (1,210) |
| Revaluation and impairment profit /(loss) before tax | **41** | 411 | 85 | (618) | (240) |
| Operating profit before depreciation, fair value adjustments and exchange movements (adjusted EBITDA) | **1,717** | 4,276 | 3,834 | 5,484 | (144) |
| Consolidated balance sheet items |  |  |  |  |  |
| Investment properties | **12,800** | 11,575 | 11,559 | 11,612 | 12,068 |
| Fixed asset investments | **2,112** | 4,090 | 4,370 | 4,309 | 2,727 |
|  | **14,912** | 15,665 | 15,929 | 15,921 | 14,795 |
| Available for sale investments | **594** | 796 | 822 | 787 | 2,515 |
|  | **15,506** | 16,461 | 16,751 | 16,708 | 17,310 |
| Other assets less liabilities less non-controlling interests | **(196)** | 854 | (123) | 607 | (537) |
| Total equity attributable to equity shareholders | **15,310** | 17,315 | 16,628 | 17,315 | 16,773 |
| Net assets per ordinary share (attributable) | **143.4p** | 162.2p | 156.3p | 164.0p | 158.9p |
| Dividend per share | **4.00p** | 4.00p | 4.00p | 4.00p | 4.00p |

Financial calendar

|  |  |
| --- | --- |
| 10 June 2016 | Annual General Meeting |
| 29 July 2016 | Payment of final dividend for 2015  (if approved) |
| Late August 2016 | Announcement of half-year results to 30 June 2016 |
| Late April 2017 | Announcement of results for year ending 31 December 2016 |

Directors' report

The directors submit their report together with the audited financial statements for the year ended 31 December 2015.

Activities and review of business

The group continues its mining activities. Income for the year was derived from sales of coal from its South African operations. The group also has a property investment portfolio for which it receives rental income.

The results for the year and state of affairs of the group and the company at 31 December 2015 are shown on pages 39 to 80 and in the Strategic Report on pages 2 to 15. Future developments and prospects are also covered in the Strategic Report. Over 99 per cent. of staff are employed in the South African coal mining industry - employment matters and health and safety are dealt with in the Strategic Report.

The management report referred to in the Director's responsibilities statement encompasses this Directors' Report and Strategic Report on pages 2 to 15.

Corporate responsibility

Environment

The environmental issues of the group's South African coal mining operations are covered in the Strategic Report on pages 2 to 15.

The group's UK activities are principally property investment whereby premises are provided for rent to retail businesses. The group seeks to provide those tenants with good quality premises from which they can operate in an efficient and environmentally friendly manner. Wherever possible, improvements, repairs and replacements are made in an environmentally efficient manner and waste re-cycling arrangements are in place at all the company's locations.

***Greenhouse Gas*** ***Emissions***

Details of the group's ***greenhouse gas*** ***emissions*** for the year ended 31 December 2015 can be found on page 13 of the Strategic Report.

Employment

The group's policy is to attract staff and motivate employees by offering competitive terms of employment. The group provides equal opportunities to all employees and prospective employees including those who are disabled. The Strategic Report gives details of the group's activities and policies concerning the employment, training, health and safety and community support and social development concerning the group's employees in South Africa.

Dividend policy

An interim dividend for 2015 of 1p was paid on 5 February 2016 (Interim 2014: 1p). The directors recommend the payment of a final dividend for 2015 of 3p per ordinary share (2014: 3p) making a total dividend for 2015 of 4p (2014: 4p).

Subject to shareholder approval, the total dividend per ordinary share for 2015 will be 4p per ordinary share.

The final dividend will be payable on Friday 29 July 2016 to shareholders registered at the close of business on 8 July 2016.

Investment properties

The investment property portfolio is stated at its open market value of £12,800,000 at 31 December 2015 (2014: £11,575,000) as valued by professional external valuers. The open market value of the company's share of investment properties included within its investments in joint ventures is £1,334,000 (2014: £4,021,000) and within non-current assets held for sale is £2,286,000.

Financial instruments

Note 22 to the financial statements sets out the risks in respect of financial instruments. The Board reviews and agrees overall treasury policies, delegating appropriate authority to the managing director. Financial instruments are used to manage the financial risks facing the group - speculative transactions are not permitted. Treasury operations are reported at each Board meeting and are subject to weekly internal reporting.

Directors

The directors of the company for the whole year were Sir Michael Heller, A R Heller, G J Casey, C A Joll, R J Grobler (a South African citizen), and J A Sibbald.

The directors retiring by rotation are Sir M A Heller , Mr C A Joll and Mr J A Sibbald who offer themselves for re-election.

Sir Michael Heller has been an executive Director since 1972 and Chairman since 1981. He is a Chartered Accountant and has a contract of employment determinable at six months' notice.

Christopher Joll has been a Director since 1 February 2001 and has a contract of service determinable at three months' notice. He has held a number of non-executive directorships of quoted and un-quoted companies and is currently a senior partner of MJ2 Events LLP an event management business.

John Sibbald has been a non-executive Director since 1988. He is a retired Chartered Accountant. For most of his career he was employed in stockbroking in the City of London where he specialised in mining and international investment. He has a contract of service determinable at three months notice.

No director had any material interest in any contract or arrangement with the company during the year other than as shown in this report.

Directors' shareholdings

The interests of the directors in the shares of the company, including family and trustee holdings where appropriate, are shown on page 30 of the Annual Remuneration Report.

Substantial interests

The following have advised that they have an interest in 3 per cent. or more of the issued share capital of the company as at 18 April 2016:

London & Associated Properties PLC - 4,432,618 shares representing 41.52 per cent. of the issued capital. (Sir Michael Heller is a director and shareholder of London & Associated Properties PLC).

|  |  |
| --- | --- |
| Sir Michael Heller - | 330,117 shares representing 3.09 per cent. of the issued capital. |
| A R Heller - | 785,012 shares representing 7.35 per cent. of the issued capital. |
| Cavendish Asset Management Limited - | 1,848,110 shares representing 17.31per cent. of the issued share capital. |
| James Hyslop - | 341,126 shares representing 3.20 per cent. of the issued share capital. |

Disclosure of information to auditor

The directors in office at 31 December 2015 have confirmed that as far as they are aware that there is no relevant audit information of which the auditor is unaware. Each of the directors has confirmed that they have taken all reasonable steps they ought to have taken as directors to make themselves aware of any relevant audit information and to establish that it has been communicated to the auditor.

Corporate governance

The Board acknowledges the importance of the guidelines set out in the Quoted Companies Alliance (QCA) published Corporate Governance Code and complies with these so far as is appropriate having regard to the size and nature of the Company. The paragraphs below set out how the company has applied this guidance during the year.

Principles of corporate governance

The group's Board appreciates the value of good corporate governance not only in the areas of accountability and risk management, but also as a positive contribution to business prosperity. The Board endeavours to apply corporate governance principles in a sensible and pragmatic fashion having regard to the circumstances of the group's business. The key objective is to enhance and protect shareholder value.

Board structure

During the year the Board comprised the executive chairman, the managing director, two other executive directors and two non-executive directors. Their details appear on page 19. The Board is responsible to shareholders for the proper management of the group. The Directors' responsibilities statement in respect of the ***accounts*** is set out on page 37. The non-executive directors have a particular responsibility to ensure that the strategies proposed by the executive directors are fully considered. To enable the Board to discharge its duties, all directors have full and timely access to all relevant information and there is a procedure for all directors, in furtherance of their duties, to take independent professional advice, if necessary, at the expense of the group. The Board has a formal schedule of matters reserved to it and meets bi-monthly.

The Board is responsible for overall group strategy, approval of major capital expenditure projects and consideration of significant financing matters.

The following Board committees, which have written terms of reference, deal with specific aspects of the group's affairs:

·     The nomination committee is chaired by Christopher Joll and comprises the non-executive directors and the executive chairman. The committee is responsible for proposing candidates for appointment to the Board, having regard to the balance and structure of the Board. In appropriate cases recruitment consultants are used to assist the process. Each director is subject to re-election at least every three years.

·     The remuneration committee is responsible for making recommendations to the Board on the company's framework of executive remuneration and its cost. The committee determines the contractual terms, remuneration and other benefits for each of the executive directors, including performance related bonus schemes, pension rights and compensation payments. The Board itself determines the remuneration of the non-executive directors. The committee comprises the non-executive directors. It is chaired by Christopher Joll. The company's executive chairman is normally invited to attend meetings. The report on directors' remuneration is set out on pages 28 to 34.

·     The audit committee comprises the two non-executive directors and is chaired by Christopher Joll. Its prime tasks are to review the scope of external audit, to receive regular reports from the company's auditor and to review the half-yearly and annual ***accounts*** before they are presented to the Board, focusing in particular on ***accounting*** policies and areas of management judgment and estimation. The committee is responsible for monitoring the controls which are in force to ensure the integrity of the information reported to the shareholders. The committee acts as a forum for discussion of internal control issues and contributes to the Board's review of the effectiveness of the group's internal control and risk management systems and processes. The committee also considers annually the need for an internal audit function. It advises the Board on the appointment of external auditors and on their remuneration for both audit and non-audit work, and discusses the nature and scope of the audit with the external auditors. The committee, which meets formally at least twice a year, provides a forum for reporting by the group's external auditors.

Meetings are also attended, by invitation, by the company chairman, managing director and finance director.

The audit committee also undertakes a formal assessment of the auditors' independence each year which includes:

·     a review of non-audit services provided to the group and related fees;

·     discussion with the auditors of a written report detailing all relationships with the company and any other parties that could affect independence or the perception of independence;

·     a review of the auditors' own procedures for ensuring the independence of the audit firm and partners and staff involved in the audit, including the regular rotation of the audit partner; and

·     obtaining written confirmation from the auditors that, in their professional judgement, they are independent.

The audit committee report is set out on page 35.

An analysis of the fees payable to the external audit firm in respect of both audit and non-audit services during the year is set out in Note 4 to the financial statements.

Performance evaluation - board, board committees and directors

The performance of the board as a whole and of its committees and the non-executive directors is assessed by the chairman and the managing director and is discussed with the senior independent director. Their recommendations are discussed at the nomination committee prior to proposals for re-election being recommended to the Board. The performance of executive directors is discussed and assessed by the remuneration committee. The senior independent director meets regularly with the chairman and both the executive and non-executive directors individually outside of formal meetings. The directors will take outside advice in reviewing performance but have not found this necessary to date.

Independent directors

The senior independent non-executive director is Christopher Joll. The other independent non-executive director is John Sibbald.

Christopher Joll has been a non-executive director for over ten years and John Sibbald has been a non-executive director for over twenty years. The Board encourages Christopher Joll and John Sibbald to act independently. The board considers that their length of service and connection with the company's public relations advisers, does not, and has not, resulted in their inability or failure to act independently. In the opinion of the Board, Christopher Joll and John Sibbald continue to fulfil their role as independent non-executive directors.

The independent directors regularly meet prior to Board meetings to discuss corporate governance issues.

Board and board committee meetings

The number of meetings during 2015 and attendance at regular Board meetings and Board committees was as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Meetings held | Meetings Attended |
| Sir Michael Heller | Board  Nomination committee | 5  1 | 5  1 |
| A R Heller | Board  Audit committee | 5  2 | 5  2 |
| G J Casey | Board  Audit committee | 5  2 | 5  2 |
| R J Grobler | Board | 5 | 1 |
| C A Joll | Board  Audit committee  Nomination committee  Remuneration committee | 5  2  1  1 | 5  2  1  1 |
| J A Sibbald | Board  Audit committee  Nomination committee  Remuneration committee | 5  2  1  1 | 5  2  1  1 |

Internal control

The directors are responsible for the group's system of internal control and review of its effectiveness annually. The Board has designed the group's system of internal control in order to provide the directors with reasonable assurance that its assets are safeguarded, that transactions are authorised and properly recorded and that material errors and irregularities are either prevented or would be detected within a timely period. However, no system of internal control can eliminate the risk of failure to achieve business objectives or provide absolute assurance against material misstatement or loss.

The key elements of the control system in operation are:

·     the Board meets regularly with a formal schedule of matters reserved to it for decision and has put in place an organisational structure with clearly defined lines of responsibility and with appropriate delegation of authority;

·     there are established procedures for planning, approval and monitoring of capital expenditure and information systems for monitoring the group's financial performance against approved budgets and forecasts;

·     UK property and financial operations are closely monitored by members of the Board and senior managers to enable them to assess risk and address the adequacy of measures in place for its monitoring and control. The South African operations are closely supervised by the UK based executives through daily, weekly and monthly reports from the directors and senior officers in South Africa. This is supplemented by monthly visits by the UK based finance director to the South African operations which include checking the integrity of information supplied to the UK. The directors are guided by the internal control guidance for directors issued by the Institute of Chartered Accountants in England and Wales.

During the period, the audit committee has reviewed the effectiveness of internal control as described above. The Board receives periodic reports from its committees.

There are no significant issues disclosed in the Annual Report for the year ended 31 December 2015 (and up to the date of approval of the report) concerning material internal control issues. The directors confirm that the Board has reviewed the effectiveness of the system of internal control as described during the period.

Communication with shareholders

Communication with shareholders is a matter of priority. Extensive information about the group and its activities is given in the Annual Report, which is made available to shareholders. Further information is available on the company's website,[*http://www.bisichi.co.uk*](http://www.bisichi.co.uk). There is a regular dialogue with institutional investors. Enquiries from individuals on matters relating to their shareholdings and the business of the group are dealt with informatively and promptly.

Takeover directive

The company has one class of share capital, ordinary shares. Each ordinary share carries one vote. All the ordinary shares rank pari passu. There are no securities issued in the company which carry special rights with regard to control of the company. The identity of all substantial direct or indirect holders of securities in the company and the size and nature of their holdings is shown under the "Substantial interests" section of this report above.

A relationship agreement dated 15 September 2005 (the "Relationship Agreement") was entered into between the company and London & Associated Properties PLC ("LAP") in regard to the arrangements between them whilst LAP is a controlling shareholder of the company. The Relationship Agreement includes a provision under which LAP has agreed to exercise the voting rights attached to the ordinary shares in the company owned by LAP to ensure the independence of the Board of directors of the company.

Other than the restrictions contained in the Relationship Agreement, there are no restrictions on voting rights or on the transfer of ordinary shares in the company. The rules governing the appointment and replacement of directors, alteration of the articles of association of the company and the powers of the company's directors accord with usual English company law provisions. Each director is re-elected at least every three years. The company is not party to any significant agreements that take effect, alter or terminate upon a change of control of the company following a takeover bid. The company is not aware of any agreements between holders of its ordinary shares that may result in restrictions on the transfer of its ordinary shares or on voting rights.

There are no agreements between the company and its directors or employees providing for compensation for loss of office or employment that occurs because of a takeover bid.

The Bribery Act 2010

The Bribery Act 2010 came into force on 1 July 2011, and the Board took the opportunity to implement a new Anti-Bribery Policy. All directors and staff continue to complete an e-learning training course on a bi-annual basis. The company is committed to acting ethically, fairly and with integrity in all its endeavours and compliance of the code is closely monitored.

Annual General Meeting

The annual general meeting of the company ("Annual General Meeting") will be held at 24 Bruton Place, London W1J 6NE on Friday, 10 June 2016 at 11.00 a.m. Resolutions 1 to 9 will be proposed as ordinary resolutions. More than 50 per cent. of shareholders' votes cast must be in favour for those resolutions to be passed. Resolutions 10 to 12 will be proposed as special resolutions. At least 75 per cent. of shareholders' votes cast must be in favour for those resolutions to be passed.

The directors consider that all of the resolutions to be put to the meeting are in the best interests of the company and its shareholders as a whole. The Board recommends that shareholders vote in favour of all resolutions.

Please note that the following paragraphs are only summaries of certain resolutions to be proposed at the Annual General Meeting and not the full text of the resolutions. You should therefore read this section in conjunction with the full text of the resolutions contained in the notice of Annual General Meeting.

Directors' authority to allot shares (Resolution 9)

In certain circumstances it is important for the company to be able to allot shares up to a maximum amount without needing to seek shareholder approval every time an allotment is required. Paragraph 9.1.1 of Resolution 9 would give the directors the authority to allot shares in the company and grant rights to subscribe for, or convert any security into, shares in the company up to an aggregate nominal value of £355,894. This represents approximately 1/3 (one third) of the ordinary share capital of the company in issue (excluding treasury shares) at 18 April 2016 (being the last practicable date prior to the publication of this Directors' Report). Paragraph 9.1.2 of Resolution 9 would give the directors the authority to allot shares in the company and grant rights to subscribe for, or convert any security into, shares in the company up to a further aggregate nominal value of £355,894, in connection with a pre-emptive rights issue. This amount represents approximately 1/3 (one third) of the ordinary share capital of the company in issue (excluding treasury shares) at 18 April 2016 (being the last practicable date prior to the publication of this Directors' Report).

Therefore, the maximum nominal value of shares or rights to subscribe for, or convert any security into, shares which may be allotted or granted under resolution 9 is £711,788.

Resolution 9 complies with guidance issued by the Investment Management Association (IMA).

The authority granted by resolution 9 will expire on 31 August 2017 or, if earlier, the conclusion of the next annual general meeting of the company. The directors have no present intention to make use of this authority. However, if they do exercise the authority, the directors intend to follow emerging best practice as regards its use as recommended by the IMA.

Disapplication of pre-emption rights (Resolution 10)

A special resolution will be proposed at the Annual General Meeting in respect of the disapplication of pre-emption rights.

Shares allotted for cash must normally first be offered to shareholders in proportion to their existing shareholdings. The directors will, at the forthcoming Annual General Meeting seek power to allot equity securities (as defined by section 560 of the Companies Act 2006) or sell treasury shares for cash as if the pre-emption rights contained in Section 561 of the Companies Act 2006 did not apply:

(a)  in relation to pre-emptive offers and offers to holders of other equity securities if required by the rights of those securities or as the directors otherwise consider necessary, up to a maximum nominal amount of £355,894 which represents approximately 1/3 (one third) of the ordinary share capital of the company in issue (excluding treasury shares) and, in relation to rights issues only, up to a maximum additional amount of £355,894 which represents approximately 1/3 (one third) of the ordinary share capital of the company in issue (excluding treasury shares), in each case as at 18 April 2016 (being the last practicable date prior to the publication of this Directors' Report); and

(b)  in any other case, up to a maximum nominal amount of £53,384 which represents approximately 5 per cent. of the ordinary share capital of the company in issue (excluding treasury shares) as at 18 April 2016  (being the last practicable date prior to the publication of this Directors' Report).

In compliance with the guidelines issued by the Pre-emption group, the directors will ensure that, other than in relation to a rights issue, no more than 7.5 per cent. of the issued ordinary shares (excluding treasury shares) will be allotted for cash on a non pre-emptive basis over a rolling three year period unless shareholders have been notified and consulted in advance.

The power in resolution 10 will expire when the authority given by resolution 9 is revoked or expires.

The directors have no present intention to make use of this authority.

Notice of General Meetings (Resolution 11)

Resolution 11 will be proposed to allow the company to call general meetings (other than an Annual General Meeting) on 14 clear days' notice. A resolution in the same terms was passed at the Annual General Meeting in 2015. The notice period required by the Companies Act 2006 for general meetings of the company is 21 days unless shareholders approve a shorter notice period, which cannot however be less than 14 clear days. Annual General Meetings must always be held on at least 21 clear days' notice. It is intended that the flexibility offered by this resolution will only be used for time-sensitive, non-routine business and where merited in the interests of shareholders as a whole. The approval will be effective until the company's next Annual General Meeting, when it is intended that a similar resolution will be proposed. In order to be able to call a general meeting on less than 21 clear days' notice, the company must make a means of electronic voting available to all shareholders for that meeting.

Purchase of own Ordinary Shares (Resolution 12)

The effect of resolution 12 would be to renew the directors' current authority to make limited market purchases of the company's ordinary shares of 10 pence each. The power is limited to a maximum aggregate number of 1,067,683 ordinary shares (representing approximately 10 per cent. of the company's issued share capital as at 18 April 2016 (being the last practicable date prior to publication of this Directors' Report)). The minimum price (exclusive of expenses) which the company would be authorised to pay for each ordinary share would be 10 pence (the nominal value of each ordinary share). The maximum price (again exclusive of expenses) which the company would be authorised to pay for an ordinary share is an amount equal to 105 per cent. of the average market price for an ordinary share for the five business days preceding any such purchase.

The authority conferred by resolution 12 will expire at the conclusion of the company's next annual general meeting or 15 months from the passing of the resolution, whichever is the earlier. Any purchases of ordinary shares would be made by means of market purchase through the London Stock Exchange. If granted, the authority would only be exercised if, in the opinion of the directors, to do so would result in an increase in earnings per share or net asset value per share and would be in the best interests of shareholders generally. In exercising the authority to purchase ordinary shares, the directors may treat the shares that have been bought back as either cancelled or held as treasury shares (shares held by the company itself). No dividends may be paid on shares which are held as treasury shares and no voting rights are attached to them.

As at 18 April 2016 (being the last practicable date prior to the publication of this Directors' Report) the total number of options to subscribe for new ordinary shares in the company was 598,000 shares representing 5.60 per cent. of the company's issued share capital (excluding treasury shares) as at that date. Such number of options to subscribe for new ordinary shares would represent approximately 6.22 per cent. of the reduced issued share capital of the company (excluding treasury shares) assuming full use of the authority to make market purchases sought under resolution 12.

Donations

No political or charitable donations were made during the year (2014: Nil).

Going concern

The group's business activities, together with the factors likely to affect its future development are set out in the Chairman's Statement on the preceding page 2, the Mining Review on pages 5 to 7 and its financial position is set out on page 12 of the Strategic Report. In addition Note 22 to the financial statements includes the group's treasury policy, interest rate risk, liquidity risk and hedging profile.

The group has prepared cash flow forecasts which demonstrate that the group has sufficient resources to meet its liabilities as they fall due for at least the next 12 months.

In October 2013, an increase in the structured trade finance facility from R60million (South African Rand) to R80million was signed by Black Wattle Colliery (Pty) Limited ("Black Wattle") with Absa Bank Limited, a South African subsidiary of Barclays Bank PLC. The facility is renewable annually at 30 June and is secured against inventory, debtors and cash that are held in the group's South African operations. The Directors do not foresee any reason why the facility will not continue to be renewed at the next renewal date, in line with prior periods and based on their banking relationships This facility comprises of a R60million revolving loan to cover the working capital requirements of the group's South African operations, and a R20million loan facility to cover guarantee requirements related to the group's South African mining operations.

In December 2014, the group signed a £6 million term loan facility with Santander. The loan is secured against the company's UK retail property portfolio. The debt package has a five year term and is repayable at the end of the term. The interest cost of the loan is 2.35% above LIBOR.

If required, the group has sufficient financial resources available at short notice including cash, available-for-sale investments and its £2m loan to Dragon Retail Properties Limited which is repayable on demand. In addition its investment property assets benefit from long term leases with the majority of its tenants. Although the directors expect that that the challenging coal market conditions experienced by Black Wattle Colliery, its direct mining asset, in 2015 will be similar going into 2016, they have a reasonable expectation that the mine will continue to achieve positive levels of cash generation for the group in 2016. As a consequence, the directors believe that the group is well placed to manage its business risks successfully.

As a result of the banking facilities held as well as the acceptable levels of profitability and cash generation the mine is expected to achieve in 2016, the Directors believe that the group has adequate resources to continue in operational existence for the foreseeable future and that the group is well placed to manage its business risks. Thus they continue to adopt the going concern basis of ***accounting*** in preparing the annual financial statements.

By order of the board

G.J Casey

Secretary

24 Bruton Place

London W1J 6NE

18 April 2016

Statement of the Chairman of the remuneration committee

The remuneration committee presents its report for the year ended 31 December 2015.

The Annual Remuneration Report details remuneration awarded to directors and non-executive directors during the year. The shareholders will be asked to approve the Annual Remuneration Report as an ordinary resolution (as in previous years) at the AGM in June 2016.

A copy of the remuneration policy, which details the remuneration policy for directors, can be found at[*http://www.bisichi.co.uk*](http://www.bisichi.co.uk). The remuneration policy was subject to a binding vote which was approved by shareholders at the AGM in June 2014. The approval will apply for a 3 year period commencing 11 June 2014. The approved policy took effect from 11 June 2014.

The remuneration committee reviewed the existing policy and deemed no changes necessary to the current arrangements.

Both of the above reports have been prepared in accordance with The Large and Medium-sized Companies and groups (***Accounts*** and Reports) (Amendment) Regulations 2013.

The company's auditors, BDO LLP are required by law to audit certain disclosures and where disclosures have been audited they are indicated as such.

Christopher Joll

Chairman - remuneration committee

24 Bruton Place

London W1J 6NE

18 April 2016

Annual remuneration report

The following information has been audited:

Single total figure of remuneration for the year ended 31 December 2015

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Salaries  and Fees | Bonuses | Benefits | Pension | Total  before  Share  options | Share  options | Total  2015 |
|  | £'000 | £'000 | £'000 | £'000 | **£'000** | £'000 | **£'000** |
| Executive Directors |  |  |  |  |  |  |  |
| Sir Michael Heller | **75** | **-** | **-** | **-** | **75** | **-** | **75** |
| A R Heller | **450** | **300** | **67** | **36** | **853** | **59** | **912** |
| G J Casey | **133** | **100** | **15** | **18** | **266** | **59** | **325** |
| R Grobler | **146** | **62** | **14** | **7** | **229** | **-** | **229** |
| Non-Executive Directors |  |  |  |  |  |  |  |
| C A Joll\* | **30** | **-** | **-** | **-** | **30** | **-** | **30** |
| J A Sibbald\* | **2** | **-** | **3** | **-** | **5** | **-** | **5** |
| Total | **836** | **462** | **99** | **61** | **1,458** | **118** | **1,576** |

\*Members of the remuneration committee for the year ended 31 December 2015

In addition, A Heller received £109,000 in cash on cancellation of share options representing the increase in value of the shares under option at the cancellation date.

Single total figure of remuneration for the year ended 31 December 2014

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Salaries  and Fees | Bonuses | Benefits | Pension | Total  before  Share  options | Share  options | Total  2014 |
|  | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 |
| Executive Directors |  |  |  |  |  |  |  |
| Sir Michael Heller | 75 | - | - | - | 75 | - | 75 |
| A R Heller | 450 | 300 | 54 | 32 | 836 | 26 | 862 |
| G J Casey | 124 | 100 | 14 | 16 | 254 | - | 254 |
| R Grobler | 149 | 102 | 15 | 8 | 274 | - | 274 |
| Non-Executive Directors |  |  |  |  |  |  |  |
| C A Joll\* | 25 | - | - | - | 25 | - | 25 |
| J A Sibbald\* | 2 | - | 3 | - | 5 | - | 5 |
| Total | 825 | 502 | 86 | 56 | 1,469 | 26 | 1,495 |

\*Members of the remuneration committee for the year ended 31 December 2014

|  |  |  |  |
| --- | --- | --- | --- |
| Summary of directors' terms | Date of contract | Unexpired term | Notice period |
| Executive directors |  |  |  |
| Sir Michael Heller | November 1972 | Continuous | 6 months |
| A R Heller | January 1994 | Continuous | 3 months |
| G J Casey | June 2010 | Continuous | 3 months |
| R J Grobler | April 2008 | Continuous | 3 months |
| Non-executive directors |  |  |  |
| C A Joll | February 2001 | Continuous | 3 months |
| J A Sibbald | October 1988 | Continuous | 3 months |

Pension schemes and incentives

Two (2014: three) directors have benefits under money purchase pension schemes. Contributions in 2015 were £54,000 (2014: £56,000), see table above.

Scheme interests awarded during the year

On the 18 September 2015, under the company's 2012 Share Option Scheme, Andrew Heller and Garrett Casey were granted an option to acquire 150,000 Shares each at an Acquisition Price of £87.01 pence per share.

Share option schemes

The company currently has three "Unapproved" Share Option Schemes which are not subject to HM Revenue and Customs (HMRC) approval. The "2006 Scheme" was approved by shareholders on 29 June 2006, and the "2010 Scheme" was approved by shareholders on 7 June 2011. The "2012 Scheme" was approved by the remuneration committee of the company on 28 September 2012. Existing options over ordinary shares granted under the First Scheme lapsed on 29 September 2012. All available options under each of the Schemes have been granted.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Number of share options |  |  |  |  |  |
|  | Option  price\* | 1 January  2015 | Options  Granted/  Cancelled  in  2015 | 31  December  2015 | Exercisable  from | Exercisable  to |
| The 2006 Scheme |  |  |  |  |  |  |
| A R Heller | 237.05p | 275,000 | - | 275,000 | 4/10/2009 | 3/10/2016 |
| Employee | 237.05p | 50,000 | - | 50,000 | 4/10/2009 | 3/10/2016 |
| The 2010 Scheme |  |  |  |  |  |  |
| G J Casey | 202.05p | 80,000 | - | 80,000 | 31/08/2013 | 30/08/2020 |
| The 2012 Scheme |  |  |  |  |  |  |
| A R Heller | 34.00p | 193,000 | (193,000) | - | 01/10/2012 | 30/09/2022 |
| A R Heller | 87.01p | - | 150,000 | 150,000 | 18/09/2015 | 17/09/2025 |
| G J Casey | 87.01p | - | 150,000 | 150,000 | 18/09/2015 | 17/09/2025 |

\*Middle market price at date of grant

No consideration is payable for the grant of options under the Unapproved Share Option Schemes.

Performance conditions:

The exercise of options under the Unapproved Share Option Schemes, for certain option issues, is subject to the satisfaction of objective performance conditions specified by the remuneration committee, which will conform to institutional shareholder guidelines and best practice provisions in force from time to time. The performance conditions for the 2010 scheme, agreed by members on 31 August 2010, requires growth in net assets over a three year period to exceed the growth in the retail price index by a scale of percentages. There are no performance conditions attached to the other schemes.

Payments to past directors

No payments were made to past directors in the year ended 31 December 2015.

Payments for loss of office

No payments for loss of office were made in the year ended 31 December 2015.

Statement of directors' shareholding and share interest

Directors' interests

The interests of the directors in the shares of the company, including family and trustee holdings where appropriate, were as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Beneficial | Non-beneficial |  |  |
|  | 31.12.2015 | 1.1.2015 | 31.12.2015 | 1.1.2015 |
| Sir Michael Heller | 148,783 | 148,783 | 181,334 | 181,334 |
| A R Heller | 785,012 | 785,012 | - | - |
| C A Joll | - | - | - | - |
| J A Sibbald | - | - | - | - |
| R J Grobler | - | - | - | - |
| G J Casey | 40,000 | 40,000 | - | - |

The following section is unaudited.

The following graph illustrates the company's performance compared with a broad equity market index over a ten year period. Performance is measured by total shareholder return. The directors have chosen the FTSE All Share Mining index as a suitable index for this comparison as it gives an indication of performance against a spread of quoted companies in the same sector.

GRAPH

The middle market price of Bisichi Mining PLC ordinary shares at 31 December 2015 was 77.50p (2014-80p). During the year the share price ranged between 62.50p and 92.50p.

Remuneration of the Managing Director over the last ten years

The table below demonstrates the remuneration of the holder of the office of Managing Director for the last ten years for the period from 1 January 2005 to 31 December 2015.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Managing  Director | Managing Director  Single total figure of  remuneration  £'000 | Annual bonus payout  against maximum  opportunity\*  % | Long-term incentive  vesting rates against  maximum opportunity\*  % |
| 2015 | A R Heller | 853 | 22% | N/A |
| 2014 | A R Heller | 836 | 22% | N/A |
| 2013 | A R Heller | 614 | N/A | N/A |
| 2012 | A R Heller | 544 | N/A | N/A |
| 2011 | A R Heller | 626 | N/A | N/A |
| 2010 | A R Heller | 568 | N/A | N/A |
| 2009 | AR Heller | 817 | N/A | N/A |
| 2008 | AR Heller | 716 | N/A | N/A |
| 2007 | AR Heller | 961 | N/A | N/A |
| 2006 | AR Heller | 462 | N/A | N/A |
| 2005 | AR Heller | 413 | N/A | N/A |

Bisichi Mining PLC does not have a Chief Executive so the table includes the equivalent information for the Managing Director.

\*There were no formal criteria or conditions to apply in determining the amount of bonus payable or the number of shares to be issued prior to 2014.

Percentage change in remuneration of director undertaking role of Managing Director

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Managing Director  £'000 | UK based employees  £'000 |  |  |  |  |
|  | 2015 | 2014 | % change | 2015 | 2014 | % change |
| Base salary | 450 | 450 | 0% | 208 | 199 | 4.3% |
| Benefits | 67 | 54 | 19.4% | 15 | 14 | 6.6% |
| Bonuses | 300 | 300 | 0% | 100 | 100 | 0% |

Bisichi Mining PLC does not have a Chief Executive so the table includes the equivalent information for the Managing Director.

The comparator group chosen is all UK based employees as the remuneration committee believe this provides the most accurate comparison of underlying increases based on similar annual bonus performances utilised by the group.

Relative importance of spend on pay

The total expenditure of the group on remuneration to all employees (see Notes 29 and 8 to the financial statements) is shown below:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Employee remuneration | 5,094 | 5,057 |
| Distribution to shareholders | 427 | 427 |

Statement of implementation of remuneration policy

The remuneration policy was approved at the AGM in June 2014. The policy took effect from 11 June 2014 and will apply for 3 years unless changes are deemed necessary by the Remuneration committee. The company may not make a remuneration payment or payment for loss of office to a person who is, is to be, or has been a director of the company unless that payment is consistent with the approved remuneration policy, or has otherwise been approved by a resolution of members.

Consideration by the directors of matters relating to directors' remuneration

The remuneration committee considered the executive directors remuneration and the board considered the non-executive directors remuneration in the year ended 31 December 2015. No increases were awarded and no external advice was taken in reaching this decision.

Shareholder voting

At the Annual General Meeting on 10 June 2015, there was an advisory vote on the resolution to approve the remuneration report, other than the part containing the remuneration policy. In addition, on 11 June 2014 there was a binding vote on the resolution to approve the remuneration policy the results of which are detailed below:

|  |  |  |  |
| --- | --- | --- | --- |
|  | % of votes  for | % of votes  against | No of votes  withheld |
| Resolution to approve the Remuneration Report (10 June 2015) | 98.94% | 1.06% | 120 |
| Resolution to approve the Remuneration Policy (11 June 2014) | 98.75% | 1.04% | 5,405 |

Service contracts

All executive directors have full-time contracts of employment with the company. Non-executive directors have contracts of service. No director has a contract of employment or contract of service with the company, its joint venture or associated companies with a fixed term which exceeds twelve months. Directors notice periods (see page 29 of the annual remuneration report) are set in line with market practice and of a length considered sufficient to ensure an effective handover of duties should a director leave the company.

All directors' contracts as amended from time to time, have run from the date of appointment. Service contracts are kept at the registered office.

Remuneration policy table

The remuneration policy table below is an extract of the group's remuneration policy on directors' remuneration, which was approved by a binding vote at the 2014 AGM. The approved policy took effect from 11 June 2014. A copy of the full policy can be found at[*http://www.bisichi.co.uk*](http://www.bisichi.co.uk).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Element | Purpose | Policy | Operation | Opportunity and performance conditions |
| Executive directors |  |  |  |  |
| Base  salary | To recognise:  Skills  Responsibility  Accountability  Experience  Value | Considered by remuneration committee on appointment  Set at a level considered appropriate to attract, retain motivate and reward the  right individuals | Reviewed annually  Paid monthly in cash | There is no prescribed maximum salary or maximum rate of increase  No specific performance conditions are attached to base salaries |
| Pension | To provide competitive retirement benefits | Company contribution offered  at up to 10% of base salary as part of overall remuneration package | The contribution payable by the company is included in the director's contract of employment  Paid into money purchase schemes | Company contribution offered at up to 10% of base salary as part of overall remuneration package  No specific performance conditions are attached to pension contributions |
| Benefits | To provide a competitive benefits package | Contractual benefits can  include but are not limited to:  Car or car allowance  Group health cover  Death in service cover  Permanent health insurance | The committee retains the discretion to approve changes in contractual benefits in exceptional circumstances or where factors outside the control of the group lead to increased costs (e.g. medical inflation) | The costs associated with benefits offered are closely controlled and reviewed on an annual basis  No specific performance conditions are attached to contractual benefits  The value of benefits for each director for the year ended 31 December 2015 is shown in the table on page 28 |
| Annual  Bonus | To reward and incentivise | In assessing the performance of the executive team, and in particular to determine whether bonuses are merited the remuneration committee takes into ***account*** the overall performance of the business  Bonuses are generally offered in cash | The remuneration committee determines the level of bonus  on an annual basis applying such performance conditions and performance measures  as it considers appropriate | The current maximum bonus opportunity will not exceed 200% of base salary in any one year, but the remuneration committee reserves the power to award up to 300% in an exceptional year  Performance conditions will be assessed on an annual basis. The performance measures applied may be financial, non-financial, corporate, divisional or individual and in such proportion as the remuneration committee considers appropriate |
| Share Options | To provide executive directors with a  long-term interest  in the company | Granted under existing  schemes (see page 29) | Offered at appropriate times by the remuneration committee | Entitlement to share options is not subject to any performance conditions  Share options will be offered by the remuneration committee as appropriate  There are no maximum levels for share options offered |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Element | Purpose | Policy | Operation | Opportunity and performance conditions |
| Non-executive directors |  |  |  |  |
| Base  salary | To recognise:  Skills  Experience  Value | Considered by the board on appointment  Set at a level considered appropriate to attract, retain and motivate the individual  Experience and time required for the role are considered on appointment | Reviewed annually | There is no prescribed maximum salary or maximum rate of increase  No specific performance conditions are attached to base salaries |
| Pension |  | No pension offered |  |  |
| Benefits |  | No benefits offered except to one non-executive director who is eligible for health cover (see annual remuneration  report page 28) |  | The costs associated with the benefit offered is closely controlled and reviewed on an annual basis  No specific performance conditions are attached to contractual benefits |
| Share Options |  | Non-executive directors do not participate in the share option schemes |  |  |

The remuneration committee consider the performance measures outlined in the table above to be appropriate measures of performance and that the KPI's chosen align the interests of the directors and shareholders.

Audit committee report

The committee's terms of reference have been approved by the board and follow published guidelines, which are available from the company secretary. The audit committee comprises the two non-executive directors, Christopher Joll (chairman), an experienced financial PR executive and John Sibbald, a retired chartered accountant.

The Audit Committee's prime tasks are to:

Review the scope of external audit, to receive regular reports from the auditor and to review the half-yearly and annual ***accounts*** before they are presented to the board, focusing in particular on ***accounting*** policies and areas of management judgment and estimation;

Monitor the controls which are in force to ensure the integrity of the information reported to the shareholders;

Assess key risks and to act as a forum for discussion of risk issues and contribute to

the board's review of the effectiveness of the group's risk management control and processes;

Act as a forum for discussion of internal control issues and contribute to the board's review of the effectiveness of the group's internal control and risk management systems and processes;

Consider each year the need for an internal audit function;

Advise the board on the appointment of external auditors and rotation of the audit partner every five years, and on their remuneration for both audit and non-audit work, and discuss the nature and scope of their audit work;

Participate in the selection of a new external audit partner and agree the appointment

when required;

Undertake a formal assessment of the auditors' independence each year which includes:

·     a review of non-audit services provided to the group and related fees;

·     discussion with the auditors of a written report detailing all relationships with the company and any other parties that could affect independence or the perception of independence;

·     a review of the auditors' own procedures for ensuring the independence of the audit firm and partners and staff involved in the audit, including the regular rotation of the audit partner; and

·     obtaining written confirmation from the auditors that, in their professional judgement, they are independent.

Meetings

The committee meets prior to the annual audit with the external auditors to discuss the audit plan and again prior to the publication of the annual results. These meetings are attended by the external audit partner, managing director, director of finance and company secretary. Prior to bi-monthly board meetings the members of the committee meet on an informal basis to discuss any relevant matters which may have arisen. Additional formal meetings are held as necessary.

During the past year the committee:

·     met with the external auditors, and discussed their report to the Audit Committee;

·     approved the publication of annual and half-year financial results;

·     considered and approved the annual review of internal controls;

·     decided that due to the size and nature of operation there was not a current need for an internal audit function;

·     agreed the independence of the auditors and approved their fees for both audit and not-audit services as set out in note 4 to the financial statements.

External Auditors

BDO LLP held office throughout the year. In the United Kingdom the company is provided with extensive administration and ***accounting*** services by London & Associated Properties PLC which has its own audit committee and employs a separate firm of external auditors, RSM UK Audit LLP (Formerly Baker Tilly UK Audit LLP). In South Africa Grant Thornton (Jhb) Inc. acts as the external auditor to the South African companies, and the work of that firm was reviewed by BDO LLP for the purpose of the group audit.

Christopher Joll

Chairman - audit committee

24 Bruton Place

London W1J 6NE

18 April 2016

Valuers' certificates

To the directors of Bisichi Mining PLC

In accordance with your instructions we have carried out a valuation of the freehold property interests held as at 31 December 2015 by the company as detailed in our Valuation Report dated 31 December 2015.

Having regard to the foregoing, we are of the opinion that the open market value as at 31 December 2015 of the interests owned by the company was £12,800,000 being made up as follows:

|  |  |
| --- | --- |
|  | £000 |
| Freehold | 10,150 |
| Leasehold | 2,650 |
|  | 12,800 |
| Leeds  31 December 2015 | Carter Towler  Regulated by Royal Institute of Chartered Surveyors |

Directors' responsibilities statement

The directors are responsible for preparing the annual report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors are required to prepare the group financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and have elected to prepare the company financial statements in accordance with United Kingdom Generally Accepted ***Accounting*** Practice (United Kingdom ***Accounting*** Standards and applicable law). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the group and company and of the profit or loss for the group for that period.

In preparing these financial statements, the directors are required to:

·     select suitable ***accounting*** policies and then apply them consistently;

·     make judgements and ***accounting*** estimates that are reasonable and prudent;

·     state with regard to the group financial statements whether they have been prepared in accordance with IFRSs as adopted by the European Union subject to any material departures disclosed and explained in the financial statements;

·     state with regard to the parent company financial statements, whether applicable UK ***accounting*** standards have been followed, subject to any material departures disclosed and explained in the financial statements;

·     prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company and the group will continue in business;

·     prepare a strategic report, director's report and director's remuneration report which comply with the requirements of the Companies Act 2006.

The directors are responsible for keeping adequate ***accounting*** records that are sufficient to show and explain the company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the financial statements comply with the Companies Act 2006 and, as regards the group financial statements, Article 4 of the IAS Regulation. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Website publication

The directors are responsible for ensuring the annual report and the financial statements are made available on a website. Financial statements are published on the company's website in accordance with legislation in the United Kingdom governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the company's website is the responsibility of the directors. The directors' responsibility also extends to the ongoing integrity of the financial statements contained therein.

Directors' responsibilities pursuant to DTR4

The directors confirm to the best of their knowledge:

·     the group financial statements have been prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and Article 4 of the IAS Regulation and give a true and fair view of the assets, liabilities, financial position and profit and loss of the group.

·     the annual report includes a fair review of the development and performance of the business and the financial position of the group and the parent company, together with a description or the principal risks and uncertainties that they face.

Independent auditor's report

To the members of Bisichi Mining PLC

We have audited the financial statements of Bisichi Mining PLC for the year ended 31 December 2015 which comprise the consolidated income statement, the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated statement of changes in shareholders' equity, the consolidated cash flow statement, the parent company balance sheet, the parent company statement of changes in equity and the related notes. The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. The financial reporting framework that has been applied in preparation of the parent company financial statements is applicable law and United Kingdom ***Accounting*** Standards (United Kingdom Generally Accepted ***Accounting*** Practice).

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of directors and auditors

As explained more fully in the statement of directors' responsibilities, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Financial Reporting Council's (FRC's) Ethical Standards for Auditors.

Scope of the audit of the financial statements

A description of the scope of an audit of financial statements is provided on the FRC's website at[*http://www.frc.org.uk/auditscopeukprivate*](http://www.frc.org.uk/auditscopeukprivate).

Opinion on financial statements

In our opinion:

·     the financial statements give a true and fair view of the state of the group's and the parent company's affairs as at 31 December 2015 and of the group's loss for the year then ended;

·     the group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;

·     the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted ***Accounting*** Practice; and

·     the financial statements have been prepared in accordance with the requirements of the Companies Act 2006; and, as regards the group financial statements, Article 4 of the IAS Regulation.

Opinion on other matters prescribed by the Companies Act 2006

In our opinion:

·     the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006; and

·     the information given in the strategic report and directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which we are required to report by exception

Under the Companies Act 2006 we are required to report to you if, in our opinion:

·     adequate ***accounting*** records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or

·     the parent company financial statements and the part of the directors' remuneration report to be audited are not in agreement with the ***accounting*** records and returns; or

·     certain disclosures of directors' remuneration specified by law are not made; or

·     we have not received all the information and explanations we require for our audit.

Ryan Ferguson (senior statutory auditor)

For and on behalf of BDO LLP, statutory auditor

London, United Kingdom

20 April 2016

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

Consolidated income statement

for the year ended 31 December 2015

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Notes | 2015  Trading  £'000 | 2015  Revaluations and impairment  £'000 | 2015  Total  £'000 | 2014  Trading  £'000 | 2014  Revaluations and impairment  £'000 | 2014  Total  £'000 |
| Group revenue | 1 | **25,655** | **-** | **25,655** | 26,500 | - | 26,500 |
| Operating costs | 2 | **(23,938)** | **-** | **(23,938)** | (22,224) | - | (22,224) |
| Operating profit before depreciation, fair value adjustments and exchange movements |  | **1,717** | **-** | **1,717** | 4,276 | - | 4,276 |
| Depreciation | 2 | **(1,284)** | **-** | **(1,284)** | (2,682) | - | (2,682) |
| Operating profit before fair value adjustments and exchange movements | 1 | **433** | **-** | **433** | 1,594 | - | 1,594 |
| Exchange losses |  | **(497)** | **-** | **(497)** | (143) | - | (143) |
| Increase/(decrease) in value of investment properties | 3 | **-** | **225** | **225** | - | (6) | (6) |
| (Decrease)/increase in value of other investments |  | **-** | **(11)** | **(11)** | - | 1 | 1 |
| Loss on held for trading investments |  | **-** | **-** | **-** | - | (82) | (82) |
| Operating (loss)/profit | 1 | **(64)** | **214** | **150** | 1,451 | (87) | 1,364 |
| Share of profit/(loss) in joint ventures | 12 | **104** | **(35)** | **69** | 65 | 498 | 563 |
| Loss on reclassification of asset as held for sale | 14 | **-** | **(138)** | **(138)** | - | - | - |
| Profit before interest and taxation |  | **40** | **41** | **81** | 1,516 | 411 | 1,927 |
| Interest receivable |  | **245** | **-** | **245** | 234 | - | 234 |
| Interest payable | 6 | **(473)** | **-** | **(473)** | (593) | - | (593) |
| (Loss)/Profit before tax | 4 | **(188)** | **41** | **(147)** | 1,157 | 411 | 1,568 |
| Taxation | 7 | **(84)** | **(24)** | **(108)** | (348) | (17) | (365) |
| (Loss)/Profit for the year |  | **(272)** | **17** | **(255)** | 809 | 394 | 1,203 |
| Attributable to: |  |  |  |  |  |  |  |
| Equity holders of the company |  | **(276)** | **17** | **(259)** | 709 | 394 | 1,103 |
| Non-controlling interest | 27 | **4** | **-** | **4** | 100 | - | 100 |
| (Loss)/Profit for the year |  | **(272)** | **17** | **(255)** | 809 | 394 | 1,203 |
| (Loss)/Profit per share - basic | 9 |  |  | **(2.43p)** |  |  | 10.33p |
| (Loss)/Profit per share - diluted | 9 |  |  | **(2.43p)** |  |  | 10.23p |

Trading gains and losses reflect all the trading activity on mining and property operations. Revaluation gains and losses reflects the revaluation of investment properties and other assets within the group and any proportion of these amounts within Joint Ventures, together with impairment loss on reclassification of assets to held for sale. The total column represents the consolidated income statement presented in accordance with IAS 1.

Consolidated statement of comprehensive income

for the year ended 31 December 2015

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| (Loss)/Profit for the year | **(255)** | 1,203 |
| Other comprehensive (expense)/income: |  |  |
| Items that may be subsequently recycled to the income statement: |  |  |
| Exchange differences on translation of foreign operations | **(1,167)** | (121) |
| (Loss)/Gain on available for sale investments | **(202)** | 56 |
| Taxation | **41** | (15) |
| Other comprehensive expense for the year net of tax | **(1,328)** | (80) |
| Total comprehensive (expense)/income for the year net of tax | **(1,583)** | 1,123 |
| Attributable to: |  |  |
| Equity shareholders | **(1,500)** | 1,036 |
| Non-controlling interest | **(83)** | 87 |
|  | **(1,583)** | 1,123 |

Consolidated balance sheet

at 31 December 2015

|  |  |  |  |
| --- | --- | --- | --- |
|  | Notes | 2015  £'000 | 2014  £'000 |
| Assets |  |  |  |
| Non-current assets |  |  |  |
| Value of investment properties | 10 | **12,800** | 11,575 |
| Fair value of head lease | 31 | **194** | 195 |
| Investment properties |  | **12,994** | 11,770 |
| Mining reserves, plant and equipment | 11 | **5,374** | 6,064 |
| Investments in joint ventures ***accounted*** for using equity method | 12 | **1,198** | 2,898 |
| Loan to joint venture | 12 | **900** | 1,040 |
| Other investments | 12 | **14** | 152 |
| Total non-current assets |  | **20,480** | 21,924 |
| Current assets |  |  |  |
| Inventories | 16 | **1,049** | 1,760 |
| Trade and other receivables | 17 | **6,187** | 6,860 |
| Corporation tax recoverable |  | **29** | 35 |
| Available for sale investments | 18 | **594** | 796 |
| Cash and cash equivalents |  | **1,608** | 2,838 |
| Non-current assets held for sale | 14 | **1,168** | - |
| Total current assets |  | **10,635** | 12,289 |
| Total assets |  | **31,115** | 34,213 |
|  | Notes | 2015  £'000 | 2014  £'000 |
| Liabilities |  |  |  |
| Current liabilities |  |  |  |
| Borrowings | 20 | **(2,267)** | (2,139) |
| Trade and other payables | 19 | **(4,234)** | (4,986) |
| Current tax liabilities |  | **-** | (23) |
| Total current liabilities |  | **(6,501)** | (7,148) |
| Non-current liabilities |  |  |  |
| Borrowings | 20 | **(5,940)** | (6,013) |
| Provision for rehabilitation | 21 | **(847)** | (930) |
| Finance lease liabilities | 31 | **(194)** | (195) |
| Deferred tax liabilities | 23 | **(2,002)** | (2,208) |
| Total non-current liabilities |  | **(8,983)** | (9,346) |
| Total liabilities |  | **(15,484)** | (16,494) |
| Net assets |  | **15,631** | 17,719 |
| Equity |  |  |  |
| Share capital | 24 | **1,068** | 1,068 |
| Share premium ***account*** |  | **258** | 258 |
| Translation reserve |  | **(2,757)** | (1,677) |
| Available for sale reserve |  | **(120)** | 41 |
| Other reserves | 25 | **574** | 652 |
| Retained earnings |  | **16,287** | 16,973 |
| Total equity attributable to equity shareholders |  | **15,310** | 17,315 |
| Non-controlling interest | 27 | **321** | 404 |
| Total equity |  | **15,631** | 17,719 |

These financial statements were approved and authorised for issue by the board of directors on 18 April 2016 and signed on its behalf by:

A R Heller               G J Casey                              Company Registration No. 112155

Director                  Director

Consolidated statement of changes in shareholders' equity

for the year ended 31 December 2015

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Share  capital  £'000 | Share  Premium  £'000 | Translation  reserves  £'000 | Available-  for-sale reserves  £'000 | Other  reserves  £'000 | Retained  earnings  £'000 | Total  £'000 | Non-  controlling  interest  £'000 | Total  equity  £'000 |
| Balance at 1 January 2014 | 1,064 | 249 | (1,569) | - | 587 | 16,297 | 16,628 | 359 | **16,987** |
| Revaluation and impairments | - | - | - | - | - | 394 | 394 | - | **394** |
| Trading | - | - | - | - | - | 709 | 709 | 100 | **709** |
| Profit for the year | - | - | - | - | - | 1,103 | 1,103 | 100 | **1,203** |
| Other comprehensive (expense)/income | - | - | (108) | 41 | - | - | (67) | (13) | **(80)** |
| Total comprehensive expense/income for the year | - | - | (108) | 41 | - | 1,103 | 1,036 | 87 | **1,123** |
| Dividend (note 8) | - | - | - | - | - | (427) | (427) | (42) | **(469)** |
| Share issues | 4 | 9 | - | - | - | - | 13 | - | **13** |
| Share options issued | - | - | - | - | 65 | - | 65 | - | **65** |
| Balance at 1 January 2015 | 1,068 | 258 | (1,677) | 41 | 652 | 16,973 | 17,315 | 404 | 17,719 |
| Revaluation and impairments | - | - | - | - | - | 17 | 17 | - | 17 |
| Trading | - | - | - | - | - | (276) | (276) | 4 | **(272)** |
| Loss/Profit for the year | - | - | - | - | - | (259) | (259) | 4 | (255) |
| Other comprehensive expense | - | - | (1,080) | (161) | - | - | (1,241) | (87) | (1,328) |
| Total comprehensive expense/income for the year | - | - | (1,080) | (161) | - | (259) | (1,500) | (83) | (1,583) |
| Dividend (note 8) | - | - | - | - | - | (427) | (427) | - | (427) |
| Share options issued | - | - | - | - | 31 | - | 31 | - | 31 |
| Share options cancelled | - | - | - | - | (109) | - | (109) | - | (109) |
| Balance at 31 December 2015 | **1,068** | **258** | **(2,757)** | **(120)** | **574** | **16,287** | **15,310** | **321** | **15,631** |

Consolidated cash flow statement

for the year ended 31 December 2015

|  |  |  |
| --- | --- | --- |
|  | Year ended  31 December  2015  £'000 | Year ended  31 December  2014  £'000 |
| Cash flows from operating activities |  |  |
| Operating profit | **150** | 1,364 |
| Adjustments for: |  |  |
| Depreciation | **1,284** | 2,682 |
| Share based payments | **31** | 65 |
| Loss on investment held for trading | **-** | 82 |
| Unrealised loss on investment properties | **(225)** | 6 |
| Unrealised (gain)/loss on other investments | **132** | (1) |
| Exchange adjustments | **497** | 143 |
| Cash flow before working capital | **1,869** | 4,341 |
| Change in inventories | **393** | (4) |
| Change in trade and other receivables | **(212)** | 2,438 |
| Change in trade and other payables | **(71)** | (3,083) |
| Cash generated from operations | **1,979** | 3,692 |
| Interest received | **115** | 234 |
| Interest paid | **(363)** | (506) |
| Income tax paid | **-** | (14) |
| Cash flow from operating activities | **1,731** | 3,406 |
| Cash flows from investing activities |  |  |
| Acquisition of reserves, property, plant and equipment | **(2,992)** | (1,903) |
| Share of profit in joint ventures | **104** | - |
| Cash flow from investing activities | **(2,888)** | (1,903) |
|  | Year ended  31 December  2015  £'000 | Year ended  31 December  2014  £'000 |
| Cash flows from financing activities |  |  |
| Borrowings drawn | **18** | 5,902 |
| Borrowings repaid | **(66)** | (5,000) |
| Equity dividends paid | **(427)** | (427) |
| Net proceeds from issue of ordinary shares | **-** | 13 |
| Cancelled share options | **(109)** | - |
| Cash flow from financing activities | **(584)** | 488 |
| Net (decrease) / increase in cash and cash equivalents | **(1,741)** | 1,991 |
| Cash and cash equivalents at 1 January | **719** | (1,322) |
| Exchange adjustment | **396** | 50 |
| Cash and cash equivalents at 31 December | **(626)** | 719 |
| Cash and cash equivalents at 31 December comprise: |  |  |
| Cash and cash equivalents as presented in the balance sheet | **1,608** | 2,838 |
| Bank overdrafts (secured) | **(2,234)** | (2,119) |
|  | **(626)** | 719 |

Group ***accounting*** policies

for the year ended 31 December 2015

Basis of ***accounting***

The results for the year ended 31 December 2015 have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and with those parts of the Companies Act 2006 applicable to companies reporting under IFRS. The principal ***accounting*** policies are described below:

The group financial statements are presented in £ sterling and all values are rounded to the nearest thousand pounds (£000) except when otherwise stated.

The functional currency for each entity in the group, and for joint arrangements and associates, is the currency of the country in which the entity has been incorporated. Details of which country each entity has been incorporated can be found in note 15 for subsidiaries and Note 13 for joint arrangements and associates.

Going concern

The group has prepared cash flow forecasts which demonstrate that the group has sufficient resources to meet its liabilities as they fall due for at least the next 12 months.

In October 2013, an increase in the structured trade finance facility from R60million (South African Rand) to R80million was signed by Black Wattle Colliery (Pty) Limited ("Black Wattle") with Absa Bank Limited, a South African subsidiary of Barclays Bank PLC. The facility is renewable annually at 30 June and is secured against inventory, debtors and cash that are held in the group's South African operations. The Directors do not foresee any reason why the facility will not continue to be renewed at the next renewal date, in line with prior periods and based on their banking relationships This facility comprises of a R60million revolving loan to cover the working capital requirements of the group's South African operations, and a R20million loan facility to cover guarantee requirements related to the group's South African mining operations.

In December 2014, the group signed a £6 million term loan facility with Santander. The loan is secured against the company's UK retail property portfolio. The debt package has a five year term and is repayable at the end of the term. The interest cost of the loan is 2.35% above LIBOR.

If required, the group has sufficient financial resources available at short notice including cash, available-for-sale investments and its £2m loan to Dragon Retail Properties Limited which is repayable on demand. In addition its investment property assets benefit from long term leases with the majority of its tenants. Although the directors expect that that the challenging coal market conditions experienced by Black Wattle Colliery, its direct mining asset, in 2015 will be similar going into 2016, they have a reasonable expectation that the mine will continue to achieve positive levels of cash generation for the group in 2016. As a consequence, the directors believe that the group is well placed to manage its business risks successfully.

As a result of the banking facilities held as well as the acceptable levels of profitability and cash generation the mine is expected to achieve in 2016, the Directors believe that the group has adequate resources to continue in operational existence for the foreseeable future and that the group is well placed to manage its business risks. Thus they continue to adopt the going concern basis of ***accounting*** in preparing the annual financial statements.

International Financial Reporting Standards (IFRS)

The financial statements are prepared in accordance with International Financial Reporting Standards and Interpretations in force at the reporting date. These are prepared under the historic cost basis as modified by the revaluation of investment properties and available for sale investments.

During 2015, there were no new standards or interpretations effective for the first time for periods beginning on or after 1 January 2015 that would have had material impact on the financial statements.

None of the amendments to Standards that are effective from that date have resulted in a change of the group's ***accounting*** policy and they had no material impact on the group's financial position or performance.

The group has not adopted any standards or interpretations in advance of the required implementation dates. The following new or revised standards that are applicable to the group were issued but not yet effective:

·     IFRS 9 - Financial instruments

·     IFRS 15 - Revenue from Contracts with Customers

·     Amendment to IAS 1 - Presentation of Financial Statements Disclosure Initiative.

·     Amendments to IAS 16 and IAS 38 - Clarification of Acceptable Methods of Depreciation and Amortisation

·     Amendments to IFRS 11 - ***Accounting*** amendments relating to acquisitions of interests in joint operations.

The effects of IFRS 15 Revenues from Contracts with Customers and IFRS 9 Financial Instruments are still being assessed, as these new standards may have a significant effect on the group's future financial statements.

Key judgements and estimates

Areas where key estimates and judgements are considered to have a significant effect on the amounts recognised in the financial statements include:

Life of mine and reserves

The directors consider their judgements and estimates surrounding the life of the mine and its reserves to have the most significant effect on the amounts recognised in the financial statements and to be the area where the financial statements are at most risk of a material adjustment due to estimation uncertainty.  The group's coal reserves are subject to assessment by an independent Competent Person and impact assessments of the carrying value of property, plant and equipment, depreciation calculations and rehabilitation and decommissioning provisions.  There are numerous uncertainties inherent in estimating coal reserves and changes to these assumptions may result in restatement of reserves.  These assumptions include factors such as commodity prices, production costs and yield.

Depreciation, amortisation of mineral rights, mining development costs and plant & equipment

The annual depreciation/amortisation charge is dependent on estimates, including coal reserves and the related life of mine, expected development expenditure for probable reserves, the allocation of certain assets to relevant ore reserves and estimates of residual values of the processing plant. The charge can fluctuate when there are significant changes in any of the factors or assumptions used, such as estimating mineral reserves which in turn affects the life of mine or the expected life of reserves. Estimates of proven and probable reserves are prepared by an independent Competent Person. Assessments of depreciation/amortisation rates against the estimated reserve base are performed regularly. Details of the depreciation/amortisation charge can be found in note 11.

Provision for mining rehabilitation including restoration and de-commissioning costs

A provision for future rehabilitation including restoration and decommissioning costs requires estimates and assumptions to be made around the relevant regulatory framework, the timing, extent and costs of the rehabilitation activities and of the risk free rates used to determine the present value of the future cash outflows. The provisions, including the estimates and assumptions contained therein, are reviewed regularly by management. The group engages an independent expert to assess the cost of restoration and decommissioning annually as part of management's assessment of the provision. Details of the provision for mining rehabilitation can be found in note 21.

Impairment

Property, plant and equipment representing the group's mining assets in South Africa are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable.  The impairment test is performed using the approved Life of Mine plan and those future cash flow estimates are discounted using asset specific discount rates and are based on expectations about future operations. The impairment test requires estimates about production and sales volumes, commodity prices, proven and probable reserves (as assessed by the Competent Person), operating costs and capital expenditures necessary to extract reserves in the approved Life of Mine plan. Changes in such estimates could impact recoverable values of these assets. Details of the carrying value of property, plant and equipment can be found in note 11.

The impairment test indicated significant headroom as at 31 December 2015 and therefore no impairment is considered appropriate.  The key assumptions include:  coal prices, including domestic coal prices based on recent pricing and assessment of market forecasts for export coal; production based on proven and probable reserves assessed by the independent Competent Person and an increase in yield associated with new mining areas based on assessments by the Competent Person and empirical data. A 5.5% decrease in yield below expectation would be required to create a break even scenario.  However, the assumptions used are considered appropriate.

Fair value measurements of investment properties

An assessment of the fair value of investment properties, is required to be performed. In such instances, fair value measurements are estimated based on the amounts for which the assets and liabilities could be exchanged between market participants. To the extent possible, the assumptions and inputs used take into ***account*** externally verifiable inputs. However, such information is by nature subject to uncertainty. The directors note that the fair value measurement of the investment properties, can be considered to be less judgemental where external valuers have been used and as a result of the nature of the underlying assets. The fair value of investment property is set out in note 10, whilst the carrying value of investments in joint ventures which themselves include investment property held at fair value by the joint venture is set out at note 12.

Carrying value of Ezimbokedwini joint venture

The group holds a £1,225,000 (2014: £1,722,000) of loans and joint venture investment in Ezimbokedwini Mining (Pty) Limited ("Ezimbokedwini"), the recoverability of which is dependent upon the completion of the acquisition of the Pegasus coal project in South Africa.  The carrying value of the underlying project is supported by its coal reserves and Life of Mine plan and is considered appropriate given the underlying economic value of the project.

Basis of consolidation

The group ***accounts*** incorporate the ***accounts*** of Bisichi Mining PLC and all of its subsidiary undertakings, together with the group's share of the results of its joint ventures. Non-controlling interests in subsidiaries are presented separately from the equity attributable to equity owners of the parent company. On acquisition of a non-wholly owned subsidiary, the non-controlling shareholders' interests are initially measured at the non-controlling interests' proportionate share of the fair value of the subsidiaries net assets. Thereafter, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity.  For subsequent changes in ownership in a subsidiary that do not result in a loss of control, the consideration paid or received is recognised entirely in equity.

The definition of control assumes the simultaneous fulfilment of the following three criteria:

·     The parent company holds decision-making power over the relevant activities of the investee,

·     The parent company has rights to variable returns from the investee, and

·     The parent company can use its decision-making power to affect the variable returns.

Investees are analysed for their relevant activities and variable returns, and the link between the variable returns and the extent to which their relevant activities could be influenced in order to ensure the definition is correctly applied.

Revenue

Revenue comprises sales of coal and property rental income. Revenue is recognised when the customer has a legally binding obligation to settle under the terms of the contract and has assumed all significant risks and rewards of ownership.

Revenue is only recognised on individual sales of coal when all of the significant risks and rewards of ownership have been transferred

to a third party. Export revenue is generally recognised when the product is delivered to the export terminal location specified by the customer, at which point the customer assumes risks and rewards under the contract.  Domestic coal revenues are generally recognised on collection by the customer from the mine when loaded into transport, where the customer pays the transportation costs.

Rental income which excludes services charges recoverable from tenants, is recognised in the group income statement on a straight-line basis over the term of the lease. This includes the effect of lease incentives.

Investment properties

Investment properties comprise freehold and long leasehold ***land*** and buildings. Investment properties are carried at fair value in accordance with IAS 40 'Investment Properties'. Properties are recognised as investment properties when held for long-term rental yields, and after consideration has been given to a number of factors including length of lease, quality of tenant and covenant, value of lease, management intention for future use of property, planning consents and percentage of property leased. Investment properties are revalued annually by professional external surveyors and included in the balance sheet at their fair value. Gains or losses arising from changes in the fair values of assets are recognised in the consolidated income statement in the period to which they relate. In accordance with IAS 40, investment properties are not depreciated. The fair value of the head leases is the net present value of the current head rent payable on leasehold properties until the expiry of the lease.

Mining reserves, plant and equipment

The cost of property, plant and equipment comprises its purchase price and any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in accordance with agreed specifications. Freehold ***land*** is not depreciated. Other property, plant and equipment is stated at historical cost less accumulated depreciation.

Provisions

Provisions are recognised when the group has a present obligation as a result of a past event which it is probable will result in an outflow of economic benefits that can be reliably estimated.

A provision for rehabilitation of the mine is initially recorded at present value and the discounting effect is unwound over time as a finance cost.  Changes to the provision as a result of changes in estimates are recorded as an increase / decrease in the provision and associated decommissioning asset. The decommissioning asset is depreciated in line with the group's depreciation policy over the life of mine. The provision includes the restoration of the underground, opencast, surface operations and de-commissioning of plant and equipment. The timing and final cost of the rehabilitation is uncertain and will depend on the duration of the mine life and the quantities of coal extracted from the reserves.

Mine reserves and development cost

The purpose of mine development is to establish secure working conditions and infrastructure to allow the safe and efficient extraction of recoverable reserves. Depreciation on mine development is not charged until production commences or the assets are put to use. On commencement of full commercial production, depreciation is charged over the life of the associated mine reserves extractable using the asset on a unit of production basis.  The unit of production calculation is based on tonnes mined as a ratio to proven and probable reserves and also includes future forecast capital expenditure.

Other assets and depreciation

The cost, less estimated residual value, of other property, plant and equipment is written off on a straight-line basis over the asset's expected useful life. This includes the washing plant and other key surface infrastructure. Residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. Changes to the estimated residual values or useful lives are ***accounted*** for prospectively. Heavy surface mining and other plant and equipment is depreciated at varying rates depending upon its expected usage.

The depreciation rates generally applied are:

|  |  |
| --- | --- |
| Mining equipment | 5-10 per cent per annum, but  shorter of its useful life or the life of the mine |
| Motor vehicles | 25 - 33 per cent per annum |
| Office equipment | 10 - 33 per cent per annum |

POST PRODUCTION STRIPPING

In surface mining operations, the group may find it necessary to remove waste materials to gain access to coal reserves prior to and after production commences.  Prior to production commencing, stripping costs are capitalised until the point where the overburden has been removed and access to the coal seam commences.  Subsequent to production, waste stripping continues as part of extraction process as a run of mine activity.  There are two benefits accruing to the group from stripping activity during the production phase: extraction of coal that can be used to produce inventory and improved access to further quantities of material that will be mined in future periods.  Economic coal extracted is ***accounted*** for as inventory.  The production stripping costs relating to improved access to further quantities in future periods are capitalised as a stripping activity asset, if and only if, all of the following are met:

it is probable that the future economic benefit associated with the stripping activity will flow to the group;the group can identify the component of the ore body for which access has been improved; andthe costs relating to the stripping activity associated with that component or components can be measured reliably.

In determining the relevant component of the coal reserve for which access is improved, the group componentises its mine into geographically distinct sections or phases to which the stripping activities being undertaken within that component are allocated. Such phases are determined based on assessment of factors such as geology and mine planning.

The group depreciates deferred costs capitalised as stripping assets on a unit of production method, with reference the tons mined and reserve of the relevant ore body component or phase.

Employee benefits

Share based remuneration

The company operates a share option scheme. The fair value of the share option scheme is determined at the date of grant. This fair value is then expensed on a straight-line basis over the vesting period, based on an estimate of the number of shares that will eventually vest. The fair value of options granted is calculated using a binomial or Black-Scholes-Merton model. Details of the share options in issue are disclosed in the Directors' Remuneration Report on page 29 under the heading Share option schemes which is within the audited part of that report.

Pensions

The group operates a defined contribution pension scheme. The contributions payable to the scheme are expensed in the period to which they relate.

Foreign currencies

Monetary assets and liabilities are translated at year end exchange rates and the resulting exchange rate differences are included in the consolidated income statement within the results of operating activities if arising from trading activities and within finance cost/income if arising from financing.

For consolidation purposes, income and expense items are included in the consolidated income statement at average rates, and assets and liabilities are translated at year end exchange rates. Translation differences arising on consolidation are recognised in other comprehensive income. Where foreign operations are disposed of, the cumulative exchange differences of that foreign operation are recognised in the consolidated income statement when the gain or loss on disposal is recognised.

Transactions in foreign currencies are translated at the exchange rate ruling on transaction date.

Financial instruments

The group classifies financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Bank loans and overdrafts

Bank loans and overdrafts are included as financial liabilities on the group balance sheet at the amounts drawn on the particular facilities net of the unamortised cost of financing. Interest payable on those facilities is expensed as finance cost in the period to which it relates.

Finance lease liabilities

Finance lease liabilities arise for those investment properties held under a leasehold interest and ***accounted*** for as investment property. The liability is initially calculated as the present value of the minimum lease payments, reducing in subsequent reporting periods by the apportionment of payments to the lessor.

Available for sale investments

Financial assets available for sale are measured at fair value and movements in fair value are charged/credited to the statement of comprehensive income in the period.

Trade receivables

Trade receivables do not carry any interest and are stated at their nominal value as reduced by appropriate allowances for estimated recoverable amounts as the interest that would be recognised from discounting future cash payments over the short payment period is not considered to be material.

Trade payables

Trade payables are not interest bearing and are stated at their nominal value, as the interest that would be recognised from discounting future cash payments over the short payment period is not considered to be material.

Other financial assets and liabilities

The groups other financial assets and liabilities not disclosed above are ***accounted*** for at amortised cost.

Joint ventures

Investments in joint ventures, being those entities over whose activities the group has joint control, as established by contractual agreement, are included at cost together with the group's share of post-acquisition reserves, on an equity basis. Dividends received are credited against the investment. Joint control is the contractually agreed sharing of control over an arrangement, which exists only when decisions about relevant strategic and/or key operating decisions require unanimous consent of the parties sharing control. Control over the arrangement is assessed by the group in accordance with the definition of control under IFRS 10.  Loans to joint ventures are classified as non-current assets when they are not expected to be received in the normal working capital cycle.  Trading receivables and payables to joint jointures are classified as current assets and liabilities.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost includes materials, direct labour and overheads relevant to the stage of production. Net realisable value is based on estimated selling price less all further costs to completion and all relevant marketing, selling and distribution costs.

Other investments

Other investments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are recognised at cost less any provision for impairment.

Impairment

Whenever events or changes in circumstance indicate that the carrying amount of an asset may not be recoverable an asset is reviewed for impairment. A review involves determining whether the carrying amounts are in excess of their recoverable amounts. An asset's recoverable amount is determined as the higher of its fair value less costs of disposal and its value in use. Such reviews are undertaken on an asset-by-asset basis, except where assets do not generate cash flows independent of other assets, in which case the review is undertaken on a cash generating unit basis.

If the carrying amount of an asset exceeds its recoverable amount An asset's carrying value is written down to its estimated recoverable amount (being the higher of the fair value less cost to sell and value in use) if that is less than the asset's carrying amount. Any change in carrying value is recognised in the comprehensive income statement.

Deferred tax

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the tax computations, and is ***accounted*** for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. In respect of the deferred tax on the revaluation surplus, this is calculated on the basis of the chargeable gains that would crystallise on the sale of the investment portfolio as at the reporting date. The calculation takes ***account*** of indexation on the historical cost of the properties and any available capital losses.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is charged or credited in the group income statement, except when it relates to items charged or credited directly to other comprehensive income, in which case it is also dealt with in other comprehensive income.

Dividends

Dividends payable on the ordinary share capital are recognised as a liability in the period in which they are approved.

Cash and cash equivalents

Cash comprises cash in hand and on-demand deposits. Cash and cash equivalents comprises short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value and original maturities of three months or less. The cash and cash equivalents shown in the cashflow statement are stated net of bank overdrafts.

Assets held for sale

Non-current assets, or disposal groups comprising assets and liabilities, are classified as held-for-sale if it is highly probable that they will be recovered primarily through sale rather through continuing use. Such assets, or disposal groups, are generally measured at the lower of their carrying amount and fair value less costs of sell. Any impairment loss on a disposal group is allocated first to goodwill, and then to the remaining assets and liabilities on a pro rata basis, except that no loss is allocated to inventories, financial assets, deferred tax assets, employee benefit assets, investment property which continue to be measured in accordance with the group's other ***accounting*** policies. Impairment losses on initial classification as held-for-sale and subsequent gains and losses on remeasurement are recognised in profit or loss. Once classified as held-for-sale, intangible assets and property, plant and equipment are no longer amortised or depreciated, and any equity-***accounted*** investment is no longer equity ***accounted***.

SEGMENTAL REPORTING

For management reporting purposes, the group is organised into business segments distinguishable by economic activity. The group's only business segments are mining activities and investment properties. These business segments are subject to risks and returns that are different from those of other business segments and are the primary basis on which the group reports its segment information. This is consistent with the way the group is managed and with the format of the group's internal financial reporting. Significant revenue from transactions with any individual customer, which makes up 10 percent or more of the total revenue of the group, is separately disclosed within each segment.

Notes to the financial statements

for the year ended 31 December 2015

1. Segmental reporting

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015 |  |  |  |
| Business analysis | Mining  £'000 | Property  £'000 | Other  £'000 | Total  £'000 |
| Significant revenue customer A | 14,126 | - | - | 14,126 |
| Significant revenue customer B | 2,561 | - | - | 2,561 |
| Significant revenue customer C | 1,545 | - | - | 1,545 |
| Other revenue | 6,376 | 1,014 | 33 | 7,423 |
| Segment revenue | **24,608** | **1,014** | **33** | **25,655** |
| Operating (loss)/profit before fair value adjustments & exchange movements | (288) | 690 | 31 | **433** |
| Revaluation of investments & exchange movements | (497) | 225 | (11) | **(283)** |
| Operating (loss)/profit and segment result | **(785)** | **915** | **20** | **150** |
| Segment assets | 10,102 | 13,525 | 2,594 | **26,221** |
| Unallocated assets |  |  |  |  |
| - Non-current assets |  |  |  | **20** |
| - Cash & cash equivalents |  |  |  | **1,608** |
| Total assets excluding investment in joint ventures and assets held for sale |  |  |  | **27,849** |
| Segment liabilities | (4,865) | (2,183) | (229) | **(7,277)** |
| Borrowings | (2,280) | (5,927) | - | **(8,207)** |
| Total liabilities | (7,145) | (8,110) | (229) | **(15,484)** |
| Net assets |  |  |  | **12,365** |
| Non segmental assets |  |  |  |  |
| - Investment in joint ventures |  |  |  | **1,198** |
| - Loan to joint venture |  |  |  | **900** |
| - Non-current asset held for sale |  |  |  | **1,168** |
| Net assets as per balance sheet |  |  |  | **15,631** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Geographic analysis | United  Kingdom  £'000 | South  Africa  £'000 | Other  £'000 | Unallocated  £'000 | Total  £'000 |
| Revenue | 1,047 | 24,608 | - | - | 25,655 |
| Operating profit/(loss) and segment result | 935 | (785) | - | - | 150 |
| Non-current assets excluding investments | 13,003 | 5,355 | - | 10 | 18,368 |
| Total net assets | 6,672 | 2,064 | 10 | 6,885 | 15,631 |
| Capital expenditure | 1,002 | 1,990 | - | - | 2,992 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2014 |  |  |  |
| Business analysis | Mining  £'000 | Property  £'000 | Other  £'000 | Total  £'000 |
| Significant revenue customer A | 12,607 | - | - | 12,607 |
| Significant revenue customer B | 6,455 | - | - | 6,445 |
| Significant revenue customer C | 1,793 | - | - | 1,793 |
| Other revenue | 4,681 | 931 | 33 | 5,645 |
| Segment revenue | 25,536 | 931 | 33 | 26,500 |
| Operating profit before fair value adjustments & exchange movements | 864 | 699 | 31 | 1,594 |
| Revaluation of investments & exchange movements | (143) | (6) | (81) | (230) |
| Operating profit/(loss) and segment result | 721 | 693 | (50) | 1,364 |
| Segment assets | 12,058 | 12,546 | 2,797 | 27,401 |
| Unallocated assets |  |  |  |  |
| - Non-current assets |  |  |  | 36 |
| - Cash & cash equivalents |  |  |  | 2,838 |
| Total assets excluding investment in joint ventures |  |  |  | 30,275 |
| Segment liabilities | (6,698) | (1,301) | (319) | (8,318) |
| Borrowings | (2,179) | (5,973) | - | (8,152) |
|  | (8,877) | (7,274) | (319) | (16,470) |
| Unallocated liabilities |  |  |  | (24) |
| Total liabilities |  |  |  | (16,494) |
| Net assets |  |  |  | 13,781 |
| Non segmental assets |  |  |  |  |
| - Investment in joint ventures |  |  |  | 2,898 |
| - Loan to joint venture |  |  |  | **1,040** |
| Net assets as per balance sheet |  |  |  | 17,719 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Geographic analysis | United  Kingdom  £'000 | South  Africa  £'000 | Other  £'000 | Unallocated  £'000 | Total  £'000 |
| Revenue | 964 | 25,536 | - | - | 26,500 |
| Operating profit and segment result | 643 | 721 | - | - | 1,364 |
| Non-current assets excluding investments | 11,780 | 6,030 | - | 24 | 17,834 |
| Total net assets | 5,724 | 3,176 | 17 | 8,802 | 17,719 |
| Capital expenditure | 26 | 1,877 | - | - | 1,903 |

2.  Operating costs

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Mining | **19,177** | 18,244 |
| Property | **111** | 97 |
| Cost of sales | **19,288** | 18,341 |
| Administration | **5,934** | 6,565 |
| Operating costs | **25,222** | 24,906 |
| The direct property costs are: |  |  |
| Ground rent | **10** | 8 |
| Direct property expense | **71** | 55 |
| Bad debts | **30** | 34 |
|  | **111** | 97 |

Operating costs above include depreciation of £1,284,000 (2014: £2,682,000).

3.  GAIN/(LoSS) on revaluation of investment properties

The reconciliation of the investment surplus/(deficit) to the gain/(loss) on revaluation of investment properties in the income statement is set out below:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Investment surplus/(deficit) | **226** | (5) |
| Loss on valuation movement in respect of head lease payments | **(1)** | (1) |
| Gain/(Loss) on revaluation of investment properties | **225** | (6) |

4.  (LOSS)/Profit before taxation

(Loss)/profit before taxation is arrived at after charging:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Staff costs (see note 29) | **5,094** | 5,057 |
| Depreciation | **1,284** | 2,682 |
| Exchange loss | **497** | 143 |
| Fees payable to the company's auditor for the audit of the company's annual ***accounts*** | **31** | 48 |
| Fees payable to the company's auditor and its associates for other services: |  |  |
| The audit of the company's subsidiaries pursuant to legislation | **8** | 3 |
| Audit related services | **2** | 1 |

The directors consider the auditors were best placed to provide the above non-audit services.

The audit committee reviews the nature and extent of non-audit services to ensure that independence is maintained.

5.  Directors' emoluments

Directors' emoluments are shown in the Directors' remuneration report on pages 28 and 29 under the heading Directors' remuneration which is within the audited part of that report.

6.  Interest payable

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| On bank overdrafts and bank loans | **364** | 487 |
| Unwinding of discount | **79** | 87 |
| Other interest payable | **30** | 19 |
| Interest payable | **473** | 593 |

7.  Taxation

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| (a) Based on the results for the year: |  |  |
| Corporation tax - adjustment in respect of prior year - UK | **(23)** | 20 |
| Corporation tax - adjustment in respect of prior year - Overseas | **3** | 16 |
| Current tax | **(20)** | 36 |
| Deferred tax | **128** | 329 |
| Total tax in income statement | **108** | 365 |

(b) Factors affecting tax charge for the year:

The corporation tax assessed for the year is different from that at the standard rate of corporation tax in the United Kingdom of 20% (2014: 23%)

The differences are explained below:

|  |  |  |
| --- | --- | --- |
| (Loss)/Profit on ordinary activities before taxation | **(147)** | 1,568 |
| Tax on profit on ordinary activities at 20.25% (2014: 21.5%) | (30) | 337 |
| Effects of: |  |  |
| Expenses not deductible for tax purposes | 21 | 45 |
| Adjustment to tax rate | (63) | (2) |
| Other differences | 200 | (59) |
| Adjustment in respect of prior years | (20) | 44 |
| Total tax | **108** | 365 |

(c) Analysis of United Kingdom and overseas tax

United Kingdom tax included in above:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Corporation tax | **-** | - |
| Adjustment in respect of prior years | **(23)** | 20 |
| Current tax | **(23)** | 20 |
| Deferred tax | **12** | 38 |
|  | **(11)** | 58 |
| Overseas tax included in above: |  |  |
| Corporation tax | **-** | 16 |
| Adjustment in respect of prior years | **3** | - |
| Current tax | **3** | 16 |
| Deferred tax | **116** | 291 |
|  | **119** | 307 |

8.  Dividends paid

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015  Per share | 2015  £'000 | 2014  Per share | 2014  £'000 |
| Dividends paid during the year relating to the prior period | **4.00p** | **427** | 4.00p | 427 |
| Dividends to be paid: |  |  |  |  |
| Interim dividend for 2015 paid on 5 February 2016 | **1.00p** | **107** | 1.00p | 107 |
| Proposed final dividend for 2015 | **3.00p** | **320** | 3.00p | 320 |
|  | **4.00p** | **427** | 4.00p | 427 |

The dividends to be paid are not ***accounted*** for until they have been approved at the Annual General Meeting. The amount will be ***accounted*** for as an appropriation of retained earnings in the year ending 31 December 2016.

9.  (LOSS)/Profit and diluted (LOSS)/profit per share

Both the basic and diluted (loss)/profit per share calculations are based on a loss of £259,000 (2014: profit: £1,103,000). The basic (loss)/profit per share has been calculated on a weighted average of 10,676,839 (2014: 10,673,506) ordinary shares being in issue during the period. The diluted (loss)/profit per share has been calculated on the weighted average number of shares in issue of 10,676,839 (2014: 10,673,506) plus the dilutive potential ordinary shares arising from share options of nil (2014: 110,975) totalling 10,676,839 (2014: 10,784,481).

Dilutive potential ordinary shares of 34,973 (2014: nil) were excluded from the calculation of diluted ordinary shares as there was no dilutive effect due to the loss for the year.

10. Investment properties

|  |  |  |  |
| --- | --- | --- | --- |
|  | Freehold  £'000 | Long  Leasehold  £'000 | Total  £'000 |
| Valuation at 1 January 2015 | 8,925 | 2,650 | 11,575 |
| Acquisition | 960 | - | 960 |
| Additions | 40 | - | 40 |
| Revaluation | 225 | - | 225 |
| Valuation at 31 December 2015 | 10,150 | 2,650 | 12,800 |
| Valuation at 1 January 2014 | 9,035 | 2,524 | 11,559 |
| Additions | 22 | - | 22 |
| Revaluation | (132) | 126 | (6) |
| Valuation at 31 December 2014 | 8,925 | 2,650 | **11,575** |
| Historical cost |  |  |  |
| At 31 December 2015 | 5,823 | 728 | 6,551 |
| At 31 December 2014 | 4,823 | 728 | 5,551 |

Long leasehold properties are those for which the unexpired term at the balance sheet date is not less than 50 years.

All investment properties are held for use in operating leases and all properties generated rental income during the period.

Freehold and Long Leasehold properties were externally professionally valued at 31 December on an open market basis by:

|  |  |
| --- | --- |
|  | 2015  £'000 |
| Carter Towler | 12,800 |

The valuations were carried out in accordance with the Statements of Asset Valuation and Guidance Notes published by The Royal Institution of Chartered Surveyors.

Each year external valuers are appointed by the Executive Directors on behalf of the Board. The valuers are selected based upon their knowledge, independence and reputation for valuing assets such as those held by the group.

Valuations are performed annually and are performed consistently across all investment properties in the group's portfolio. At each reporting date appropriately qualified employees of the group verify all significant inputs and review the computational outputs. Valuers submit their report to the Board on the outcome of each valuation round.

Valuations take into ***account*** tenure, lease terms and structural condition. The inputs underlying the valuations include market rent or business profitability, likely incentives offered to tenants, forecast growth rates, yields, EBITDA, discount rates, construction costs including any specific site costs (for example section 106), professional fees, developer's profit including contingencies, planning and construction timelines, lease regear costs, planning risk and sales prices based on known market transactions for similar properties to those being valued.

Valuations are based on what is determined to be the highest and best use. When considering the highest and best use a valuer will consider, on a property by property basis, its actual and potential uses which are physically, legally and financially viable. Where the highest and best use differs from the existing use, the valuer will consider the cost and likelihood of achieving and implanting this change in arriving at its valuation.

There are often restrictions on Freehold and Leasehold property which could have a material impact on the realisation of these assets. The most significant of these occur when planning permission or lease extension and renegotiation of use are required or when a credit facility is in place. These restrictions are factored in the property's valuation by the external valuer.

IFRS 13 sets out a valuation hierarchy for assets and liabilities measured at fair value as follows:

Level 1:   valuation based on inputs on quoted market prices in active markets

Level 2:   valuation based on inputs other than quoted prices included within level 1 that maximise the use of observable data directly or from market prices or indirectly derived from market prices.

Level 3:   where one or more inputs to valuations are not based on observable market data

The inter-relationship between key unobservable inputs and the groups' properties is detailed in the table below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Class of property Level 3 | Carrying/  fair value  2015  £'000 |  | Valuation technique | Key  unobservable inputs | Range  (weighted  average)  2015 |  |
| Freehold - external valuation | 10,150 |  | Income capitalisation | Estimated rental value  per sq ft p.a | £7 - £27 (£19) |  |
|  |  |  |  | Equivalent Yield | 8.0% - 12.6% (9.2%) |  |
| Long leasehold - external valuation | 2,650 |  | Income capitalisation | Estimated rental  value per sq ft p.a | £8 - £8 (£8) |  |
|  |  |  |  | Equivalent yield | 7.5% - 7.5% (7.5%) |  |
| At 31 December 2015 | 12,800 |  |  |  |  |  |
|  |  |  |  |  |  |  |

There are interrelationships between all these inputs as they are determined by market conditions. The existence of an increase in more than one input would be to magnify the input on the valuation. The impact on the valuation will be mitigated by the interrelationship of two inputs in opposite directions, for example, an increase in rent may be offset by an increase in yield.

The table below illustrates the impact of changes in key unobservable inputs on the carrying / fair value of the group's properties:

|  |  |  |
| --- | --- | --- |
|  | Estimated rental value  10% increase or decrease  £'000 | Equivalent yield  25 basis point contraction  or expansion  £'000 |
| Freehold - external valuation | 1,015 / (1,015) | 300 / (263) |
| Long Leasehold - external valuation | 265 / (265) | 92 / (86) |

11. Mining reserves, plant and equipment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Mining  reserves  £'000 | Mining  equipment  £'000 | Motor  vehicles  £'000 | Office  equipment  £'000 | Total  £'000 |
| Cost at 1 January 2015 | 1,266 | 17,539 | 169 | 115 | 19,089 |
| Exchange adjustment | (271) | (4,048) | (30) | (12) | (4,361) |
| Additions | - | 1,964 | 11 | 17 | 1,992 |
| Disposals | - | (2) | - | - | (2) |
| Cost at 31 December 2015 | 995 | 15,453 | 150 | 120 | 16,718 |
| Accumulated depreciation at 1 January 2015 | 1,149 | 11,705 | 77 | 94 | 13,025 |
| Exchange adjustment | (256) | (2,679) | (17) | (11) | (2,963) |
| Charge for the year | 56 | 1,177 | 39 | 12 | 1,284 |
| Disposals | - | (2) | - | - | (2) |
| Accumulated depreciation at 31 December 2015 | 949 | 10,201 | 99 | 95 | 11,344 |
| Net book value at 31 December 2015 | 46 | 5,252 | 51 | 25 | 5,374 |
| Cost at 1 January 2014 | 1,310 | 16,328 | 165 | 112 | 17,915 |
| Exchange adjustment | (44) | (550) | (4) | (2) | (600) |
| Additions | - | 1,838 | 38 | 5 | 1,881 |
| Disposals | - | (77) | (30) | - | (107) |
| Cost at 31 December 2014 | 1,266 | 17,539 | 169 | 115 | 17,915 |
| Accumulated depreciation at 1 January 2014 | 1,184 | 9,470 | 77 | 88 | 10,819 |
| Exchange adjustment | (38) | (329) | (1) | (1) | (369) |
| Charge for the year | 3 | 2,641 | 31 | 7 | 2,682 |
| Disposals in year | - | (77) | (30) | - | (107) |
| Accumulated depreciation at 31 December 2014 | 1,149 | 11,705 | 77 | 94 | 13,025 |
| Net book value at 31 December 2014 | 117 | 5,834 | 92 | 21 | 6,064 |

12. Investments held as non-current assets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015  Joint  ventures  assets  £'000 | 2015  Other  £'000 | 2014  Joint  ventures  assets  £'000 | 2014  Other  £'000 |
| At 1 January | **2,898** | **156** | 3,235 | 156 |
| Transfer to non-current asset held for sale | **(1,168)** | **-** | - | - |
| Loss on transfer | **-** | **(126)** | - | - |
| Dividends received | **(105)** | **-** | (900) | - |
| Exchange adjustment | **(358)** | **(1)** | - | - |
| Share of gain in joint ventures | **69** | **-** | 563 | - |
| Loss on reclassification of non-current asset held for sale | **(138)** | **-** | - | - |
| Net assets at 31 December | **1,198** | **29** | 2,898 | 156 |
| Loan to joint venture (Ezimbokedwini): |  |  |  |  |
| At 1 January | **1,040** | **-** | 984 | - |
| Exchange adjustments | **(235)** | **-** | (36) | - |
| Additions | **95** | **-** | 92 | - |
| At 31 December | **900** | **-** | 1,040 | - |
| At 31 December | **2,098** | **29** | 3,938 | 156 |
| Provision for diminution in value: |  |  |  |  |
| At 1 January | **-** | **(4)** | - | (5) |
| Transfer | **-** | **-** | - | - |
| Write back\(down) of investment | **-** | **(11)** | - | 1 |
| At 31 December | **-** | **(15)** | - | (4) |
| Net book value at 31 December | **2,098** | **14** | 3,938 | 152 |

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Net book value of unquoted investments | - | 126 |
| Net book and market value of investments listed on overseas stock exchanges | 14 | 26 |
|  | 14 | 152 |

13. Joint ventures

The company owns 50% of the issued share capital of Dragon Retail Properties Limited, an unlisted property investment company. The remaining 50% is held by London & Associated Properties PLC. Dragon Retail Properties Limited is incorporated in England and Wales. It has issued share capital of 500,000 (2014: 500,000) ordinary shares of £1 each.

The company owns 49% of the issued share capital of Ezimbokodweni Mining (Pty) Limited, an unlisted coal exploration and development company. The company is incorporated in South Africa. It has issued share capital of 100 (2014: 100) ordinary shares of ZAR1 each.

Prior to 11 March 2016, the company owned 12.5% of the units of Langney Shopping Centre Unit Trust, an unlisted property unit trust incorporated in Jersey. 12.5% of the units in the trust were held by London & Associated Properties PLC and 75% were held by Columbus UK GP limited, a partner acting on behalf of Columbus UK Real Estate Fund. On the 11 March 2016, the company disposed of its investment in Langney Shopping Centre Unit Trust. The net proceeds from the sale were £1,168,000 which includes £30k dividends repaid post year end. At 31 December 2015, the investment was transferred from investment in joint ventures to non-current asset held for sale in the balance sheet. At year end, the share of the net assets of the trust held by the group were £1,168,000 (2014: £1,375,000) which includes a loss on the reclassification of the asset to held for sale in the amount of £138,000.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Dragon  50%  £'000 | Ezimbokodweni  49%  £'000 | Langney  12.5%  £'000 | 2015  £'000 | 2014  £'000 |
| Turnover |  | 86 | - | 172 | **258** | 236 |
| Profit and loss |  |  |  |  |  |  |
| (Loss)/Profit before tax |  | (37) | - | (102) | **(139)** | 564 |
| Taxation |  | 70 | - | - | **70** | (1) |
| (Loss)/Profit after taxation |  | 33 | - | (102) | **(69)** | 563 |
| Balance sheet |  |  |  |  |  |  |
| Non-current assets |  | 1,349 | 895 | 2,286 | **4,530** | 5,060 |
| Current assets |  | 1,274 | 2 | 102 | **1,378** | 1,735 |
| Current liabilities |  | (1,100) | (897) | (46) | **(2,043)** | (2,329) |
| Non-current liabilities |  | (650) | - | (1,174) | **(1,824)** | (2,251) |
| Share of net assets at 31 December |  | 873 | - | 1,168 | **2,041** | 2,215 |

14. NON-CURRENT ASSETS HELD FOR SALE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |  |  |  |
| Investment in Langney Shopping Centre Unit Trust |  |  |  |  |  |
| Balance at 1 January | **-** | - |  |  |  |
| Transfer | **1,168** | - |  |  |  |
|  | **1,168** | - |  |  |  |
| On the 11 March 2016, the company disposed of its investment in Langney Shopping Centre Unit Trust, an unlisted property unit trust incorporated in Jersey. At year end, the company owned 12.5% of the units of the trust. The net proceeds from the sale were £1,138,000 (excluding dividend). At year end, the company's share of the net assets of the trust were £1,168,000 (2014: £1,375,000). |  |  |  |  |  |
|  |  |  |  |  |  |

15. Subsidiary companies

The company owns the following ordinary share capital of the subsidiaries which are included within the consolidated financial statements:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Activity | Percentage of  share capital |  | Country of  incorporation |
| Mineral Products Limited | Share dealing | 100% |  | England and Wales |
| Bisichi (Properties) Limited | Property | 100% |  | England and Wales |
| Bisichi Northampton Limited | Property | 100% |  | England and Wales |
| Bisichi Trustee Limited | Property | 100% |  | England & Wales |
| Urban First (Northampton) Limited | Property | 100% |  | England & Wales |
| Black Wattle Colliery (Pty) Limited | Coal mining | 62.5% |  | South Africa |
| Bisichi Coal Mining (Pty) Limited | Coal mining | 100% |  | South Africa |
| Black Wattle Klipfontein (Pty) Limited | Coal mining | 62.5% |  | South Africa |
| Bisichi Mining (Exploration) Limited | Holding company | 100% |  | England and Wales |
| Ninghi Marketing Limited | Dormant | 90.1% |  | England and Wales |
| Bisichi Mining Managements Services Limited | Dormant | 100% |  | England and Wales |
| Amandla Ehtu Mineral Resource Development (Pty) Limited | Dormant | 70% |  | South Africa |

Details on the non-controlling interest in subsidiaries are shown under note 27.

16. Inventories

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Coal |  |  |
| Washed | **778** | 606 |
| Run of mine | **110** | 1,070 |
| Work in progress | **122** | 45 |
| Other | **39** | 39 |
|  | **1,049** | 1,760 |

17. Trade and other receivables

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Amounts falling due within one year: |  |  |
| Trade receivables | **3,500** | 4,046 |
| Amount owed by joint venture | **2,140** | 2,168 |
| Other receivables | **490** | 419 |
| Prepayments and accrued income | **57** | 227 |
|  | **6,187** | 6,860 |

18.        Available for sale investments

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Market value of listed Investments: |  |  |
| Listed in Great Britain | **568** | 758 |
| Listed outside Great Britain | **26** | 38 |
|  | **594** | 796 |
| Original cost of listed investments | **737** | 740 |
| Unrealised deficit / surplus of market value versus cost | **(143)** | 56 |

19. Trade and other payables

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Trade payables | **1,982** | 1,682 |
| Amounts owed to joint ventures | **223** | 305 |
| Other payables | **1,279** | 1,320 |
| Accruals and deferred income | **750** | 1,679 |
|  | **4,234** | 4,986 |

20. Financial liabilities - borrowings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Current | Non-current |  |  |
|  | 2015  £'000 | 2014  £'000 | 2015  £'000 | 2014  £'000 |
| Bank overdraft (secured) | **2,234** | 2,119 | **-** | - |
| Bank loan (secured) | **33** | 20 | **5,940** | 6,013 |
|  | **2,267** | 2,139 | **5,940** | 6,013 |
|  |  |  | 2015  £'000 | 2014  £'000 |
| Bank overdraft and loan instalments by reference to the balance sheet date: |  |  |  |  |
| Within one year |  |  | **2,267** | 2,139 |
| From one to two years |  |  | **27** | 21 |
| From two to five years |  |  | **5,913** | 5,992 |
|  |  |  | **8,207** | 8,152 |
| Bank overdraft and loan analysis by origin: |  |  |  |  |
| United Kingdom |  |  | **5,927** | 5,973 |
| Southern Africa |  |  | **2,280** | 2,179 |
|  |  |  | **8,207** | 8,152 |

The United Kingdom bank loans and overdraft are secured by way of a first charge over the investment properties in the UK which are included in the financial statements at a value of £12,800,000.

The South African bank loans are secured by way of a first charge over specific pieces of mining equipment, inventory and the debtors of the relevant company which holds the loan which are included in the financial statements at a value of £4,830,291.

Consistent with others in the mining and property industry, the group monitors its capital by its gearing levels. This is calculated as the net debt (loans less cash and cash equivalents) as a percentage of equity. At year end the gearing of the group was calculated as follows:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Total debt | **8,207** | 8,152 |
| Less cash and cash equivalents | **(1,608)** | (2,838) |
| Net debt | **6,599** | 5,314 |
| Total equity attributable to shareholders of the parent | **15,310** | 17,315 |
| Gearing | **43.1%** | 30.7% |

21. Provision for rehabilitation

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| As at 1 January | **930** | 874 |
| Exchange adjustment | **(162)** | (31) |
| Unwinding of discount | **79** | 87 |
| As at 31 December | **847** | 930 |

22. Financial instruments

Total financial assets and liabilities

The group's financial assets and liabilities are as follows, representing both the fair value and the carrying value:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Loans and  receivables  £'000 | Financial  Liabilities  measured at  amortised cost  £'000 | Available for sale investments  £'000 | 2015  £'000 | 2014  £'000 |
| Cash and cash equivalents | 1,608 | - | - | **1,608** | 2,838 |
| Available for sale investments | - | - | 594 | **594** | 796 |
| Other investments | - | - | 14 | **14** | 152 |
| Trade and other receivables | 6,954 | - | - | **6,954** | 7,673 |
| Bank borrowings and overdraft | - | (8,207) | - | **(8,207)** | (8,152) |
| Finance leases | - | (194) | - | **(194)** | (195) |
| Other liabilities | - | (4,024) | - | **(4,024)** | (4,836) |
|  | 8,562 | (12,425) | 608 | **(3,255)** | (1,724) |

Available for sale investments fall under level 1 of the fair value hierarchy into which fair value measurements are recognised in accordance with the levels set out in IFRS 7. Other investments are held at cost. The directors are of the opinion that the difference in value between cost and fair value of other investments is not significant or material. The comparative figures for 2014 fall under the same category of financial instrument as 2015.

Treasury policy

Although no derivative transactions were entered into during the current and prior year, the group may use derivative transactions such as interest rate swaps and forward exchange contracts as necessary in order to help manage the financial risks arising from the group's activities. The main risks arising from the group's financing structure are interest rate risk, liquidity risk, market risk, credit risk, currency risk and commodity price risk. There have been no changes during the year of the main risks arising from the group's finance structure. The policies for managing each of these risks and the principal effects of these policies on the results are summarised below.

Interest rate risk

Interest rate risk is the risk that the value of a financial instrument or cashflows associated with the instrument will fluctuate due to changes in market interest rates. Interest rate risk arises from interest bearing financial assets and liabilities that the group uses. Treasury activities take place under procedures and policies approved and monitored by the Board to minimise the financial risk faced by the group. Interest bearing assets comprise cash and cash equivalents which are considered to be short-term liquid assets and loans to joint ventures. Interest bearing borrowings comprise bank loans, bank overdrafts and variable rate finance lease obligations. The rates of interest vary based on LIBOR in the UK and PRIME in South Africa.

As at 31 December 2015, with other variables unchanged, a 1% increase or decrease in interest rates, on investments and borrowings whose interest rates are not fixed, would respectively decrease or increase the loss for the year by £67,000 (2014: £79,000). The effect on equity of this change would be an equivalent decrease or increase for the year of £67,000 (2014: £79,000).

Liquidity risk

The group's policy is to minimise refinancing risk. Efficient treasury management and strict credit control minimise the costs and risks associated with this policy which ensures that funds are available to meet commitments as they fall due. As at year end the group held borrowing facilities in the UK in Bisichi Mining PLC and in South Africa in Black Wattle Colliery (Pty) Ltd.

The following table sets out the maturity profile of the financial liabilities as at 31 December:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Within one year | **6,692** | 7,400 |
| From one to two years | **213** | 223 |
| From two to five years | **6,464** | 6,539 |
| Beyond five years | **133** | 134 |
|  | **13,502** | 14,296 |

The following table sets out the maturity profile of the financial liabilities as at 31 December maturing within one year:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Within one month | **606** | 1,587 |
| From one to three months | **2,709** | 2,438 |
| From four to twelve months | **3,377** | 3,375 |
|  | **6,692** | 7,400 |

In South Africa, an increase in the structured trade finance facility from R60million (South African Rand) to R80million was signed by Black Wattle Colliery (Pty) Limited in October 2013 with Absa Bank Limited, a South African subsidiary of Barclays Bank PLC. The facility is renewable annually at 30 June and is secured against inventory, debtors and cash that are held by Black Wattle Colliery (Pty) Limited.

This facility comprises of a R60million revolving loan to cover the working capital requirements of the group's South African operations, and a R20million loan facility to cover guarantee requirements related to the group's South African mining operations. The interest cost of the loan is at the South African prime lending rate.

In December 2014, the group signed a £6 million term loan facility with Santander. The Loan is secured against the group's UK retail property portfolio. The debt package has a five year term and is repayable at the end of the term. The interest cost of the loan is 2.35% above LIBOR.

As a result of the above agreed banking facilities, the Directors believe that the group is well placed to manage its liquidity risk.

Credit risk

The group is mainly exposed to credit risk on its cash and cash equivalents, trade and other receivables and amounts owed by joint ventures as per the balance sheet. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the balance sheet which at year end amounted to £8,562,000 (2014: £10,511,000). The group's credit risk is primarily attributable to its trade receivables. The group had amounts due from its significant revenue customers at the year end that represented 91% of the trade receivables balance. These amounts have been subsequently settled.

Trade debtor's credit ratings are reviewed regularly. The group only deposits surplus cash with well-established financial institutions of high quality credit standing. As at year end the amount of trade receivables held past due date was £144,000 (2014: £130,000). To date, the amount of trade receivables held past due date that has not subsequently been settled is £136,000 (2014: £85,000). Management have no reason to believe that this amount will not be settled.

Financial assets maturity

On 31 December 2015, cash at bank and in hand amounted to £1,608,000 (2014: £2,838,000) which is invested in short term bank deposits maturing within one year bearing interest at the bank's variable rates. Cash and cash equivalents all have a maturity of less than 3 months.

Commodity price risk

Commodity price risk is the risk that the group's future earnings will be adversely impacted by changes in the market of commodities. The group is exposed to commodity price risk as its future revenues will be derived based on a contract with a physical off-take partner at prices that will be determined by reference to market prices of coal at the delivery date.

From time to time the group may manage its exposure to commodity price risk by entering into forward sales contracts with the goal of preserving future revenue streams. The group has not entered any such contracts in 2015 and 2014.

Foreign exchange risk

All trading is undertaken in the local currencies. Funding is also in local currencies other than inter-company investments and loans and it is not the group's policy to obtain forward contracts to mitigate foreign exchange risk on these amounts. During 2015 and 2014 the group did not hedge its exposure of foreign investments held in foreign currencies.

The table below shows the currency profiles of cash and cash equivalents:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Sterling | **1,135** | 1,697 |
| South African Rand | **470** | 1,138 |
| US Dollar | **3** | 3 |
|  | **1,608** | 2,838 |

Cash and cash equivalents earn interest at rates based on LIBOR in Sterling and Prime in Rand.

The tables below shows the currency profiles of net monetary assets and liabilities by functional currency of the group:

|  |  |  |
| --- | --- | --- |
| 2015: | Sterling  £'000 | South  **African**  Rands  £'000 |
| Sterling | **(3,221)** | **-** |
| South African Rand | **89** | **(136)** |
| US Dollar | **13** | **-** |
|  | **(3,119)** | **(136)** |

|  |  |  |
| --- | --- | --- |
| 2014: | Sterling  £'000 | South  African  Rands  £'000 |
| Sterling | (2,515) | - |
| South African Rand | 153 | 618 |
| US Dollar | 20 | - |
|  | (2,342) | 618 |

The directors consider there to be no significant risk from exchange rate movements of foreign currencies against the functional currencies of the reporting companies within the group, excluding inter-company balances. As such no sensitivity analysis is prepared.

23. Deferred taxation

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Balance at 1 January | **2,208** | 1,902 |
| Recognised in income | **128** | 329 |
| Recognised in other comprehensive income | **(41)** | 15 |
| Exchange adjustment | **(293)** | (38) |
|  | **2,002** | 2,208 |
| The deferred tax balance comprises the following: |  |  |
| Revaluation of properties | **626** | 730 |
| Capital allowances | **1,487** | 1,418 |
| Short-term differences | **(111)** | 60 |
|  | **2,002** | 2,208 |

24. Share capital

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Authorised: 13,000,000 ordinary shares of 10p each | 1,300 | 1,300 |

Allotted and fully paid:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015  Number of  ordinary  shares | 2014  Number of  ordinary  shares | 2015  £'000 | 2014  £'000 |
| At 1 January | **10,676,839** | 10,636,839 | **1,068** | 1,064 |
| Shares issued during the year in regard to employee share options exercised (note 26) | **-** | 40,000 | **-** | 4 |
| Outstanding at 31 December | **10,676,839** | 10,676,839 | **1,068** | 1,068 |

25. Other reserves

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Equity share options | **488** | 566 |
| Net premium on share capital in joint venture | **86** | 86 |
|  | **574** | 652 |

26. Share based payments

Details of the share option scheme are shown in the Directors' remuneration report on pages 28 and 29 under the heading Share option schemes which is within the audited part of this report. Further details of the share option schemes are set out below.

The Bisichi Mining PLC Unapproved Option Schemes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year of grant | Subscription  price per share | Period within  which options  exercisable | Number of share  for which options  outstanding at  31 December 2014 | Number of  share options  issued/  (cancelled)  during year | Number of share  for which options  outstanding at  31 December 2015 |
| 2006 | 237.5p | Oct 2009 - Oct 2016 | 325,000 | - | 325,000 |
| 2010 | 202.5p | Aug 2013 - Aug 2020 | 80,000 | - | 80,000 |
| 2012 | 34.0p | Oct 2012 - Sep 2022 | 193,000 | (193,000) | - |
| 2015 | 87.0p | Sep 2015 - Sep 2025 | - | 300,000 | 300,000 |

The exercise of options under the Unapproved Share Option Schemes, for certain option issues, is subject to the satisfaction of objective performance conditions specified by the remuneration committee, which will conform to institutional shareholder guidelines and best practice provisions in force from time to time. The performance conditions for the 2010 scheme, agreed by members on 31 August 2010 respectively, requires growth in net assets over a three year period to exceed the growth of the retail prices index by a scale of percentages. There are no performance or service conditions attached to the other schemes.

The 2015 options were valued at £118,000 at date of grant using the Black-Scholes-Merton model with the following assumptions:

Expected volatility                                                  36.30%

Expected life                                                          4 years

Risk free rate                                                          0.994%

Expected dividends                                                  4.47%

Expected volatility was determined by reference to the historical volatility of the share price over a period commensurate with the option's expected life. The expected life used in the model is used on the risk-averse balance likely to be required by the option holders.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015  Number | 2015  Weighted  average  exercise price | 2014  Number | 2014  Weighted  average  exercise price |
| Outstanding at 1 January | **598,000** | **167.1p** | 718,000 | 157.7p |
| Granted during the year | **300,000** | **87.0p** | - | - |
| Cancelled during the year | **(193,000)** | **34.0p** | (80,000) | (149.0p) |
| Exercised during the year | **-** | **0.0p** | (40,000) | (34.0p) |
| Outstanding at 31 December | **705,000** | **133.1p** | 598,000 | 167.1p |
| Exercisable at 31 December | **705,000** | **133.1p** | 598,000 | 167.1p |

27. Non-controlling interest

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| As at 1 January | **404** | 359 |
| Share of profit for the year | **4** | 100 |
| Dividends received | **-** | (42) |
| Exchange adjustment | **(87)** | (13) |
| As at 31 December | **321** | 404 |

The non-controlling interest comprises of a 37.5% shareholding in Black Wattle Colliery (Pty) Ltd. A coal mining company incorporated in South Africa. Summarised financial information reflecting 100% of the underlying subsidiary's relevant figures, is set out below.

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Revenue | 24,608 | 25,536 |
| Expenses | (24,582) | (24,866) |
| Profit for the year | 26 | 670 |
| Other comprehensive Income | - | - |
| Total comprehensive income for the year | 26 | 670 |
| Balance sheet |  |  |
| Non-current assets | 5,355 | 6,030 |
| Current assets | 5,932 | 8,054 |
| Current liabilities | (7,156) | (9,125) |
| Non-current liabilities | (1,988) | (2,260) |
| Net assets at 31 December | 2,143 | 2,699 |

The non-controlling interest relates to the disposal of a 37.5% shareholding in Black Wattle Colliery (Pty) Ltd in 2010. The total issued share capital in Black Wattle Colliery (Pty) Ltd was increased from 136 shares to 1,000 shares at par of R1 (South African Rand) through the following shares issue:

-    a subscription for 489 ordinary shares at par by Bisichi Mining (Exploration) Limited increasing the number of shares held from 136 ordinary shares to a total of 675 ordinary shares;

-    a subscription for 110 ordinary shares at par by Vunani Mining (Pty) Ltd;

-    a subscription for 265 "A" shares at par by Vunani Mining (Pty) Ltd

Bisichi Mining (Exploration) Limited is a wholly owned subsidiary of Bisichi Mining PLC incorporated in England and Wales.

Vunani Mining (Pty) Ltd is a South African Black Economic Empowerment company and minority shareholder in Black Wattle Colliery (Pty) Ltd.

The "A" shares rank pari passu with the ordinary shares save that they will have no dividend rights until such time as the dividends paid by Black Wattle Colliery (Pty) Ltd on the ordinary shares subsequent to 30 October 2008 will equate to R832,075,000.

A non-controlling interest of 15% in Black Wattle Colliery (Pty) Ltd is recognised for all profits distributable to the 110 ordinary shares held by Vunani Mining (Pty) Ltd from the date of issue of the shares (18 October 2010). An additional non-controlling interest will be recognised for all profits distributable to the 265 "A" shares held by Vunani Mining (Pty) Ltd after such time as the profits available for distribution, in Black Wattle Colliery (Pty) Ltd, before any payment of dividends after 30 October 2008, exceeds R832,075,000.

28. Related party transactions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | At 31 December | During the year |  |  |
|  | Amounts  owed  to related  party  £'000 | Amounts  owed  by related  party  £'000 | Costs  recharged  (to)/by  related  party  £'000 | Cash paid  (to)/by  related  party  £'000 |
| Related party: |  |  |  |  |
| London & Associated Properties PLC (note (a)) | 59 | - | 138 | (82) |
| Langney Shopping Centre Unit Trust (note (b)) | - | (64) | - | 104 |
| Dragon Retail Properties Limited (note (c)) | 223 | (2,076) | (180) | 21 |
| Ezimbokodweni Mining (Pty) Limited (note (d)) | - | (897) | (94) | - |
| As at 31 December 2015 | **282** | **(3,037)** | **(136)** | **43** |
|  |  |  |  |  |
| London & Associated Properties PLC (note (a)) | 3 | - | 138 | (135) |
| Langney Shopping Centre Unit Trust (note (b)) | - | (168) | - | 64 |
| Dragon Retail Properties Limited (note (c)) | 305 | (2,000) | (174) | (726) |
| Ezimbokodweni Mining (Pty) Limited (note (d)) | - | (1,040) | (92) | - |
| As at 31 December 2014 | 308 | (3,208) | (128) | (797) |

London & Associated Properties PLC is a substantial shareholder. Dragon Retail Properties Limited is a joint venture and is treated as a non-current asset investment. On the 11 March 2016, the company disposed of its investment in Langney Shopping Centre Unit Trust, a joint venture. The trust is therefore held as a non-current asset held for sale. Ezimbokodweni Mining (Pty) Limited is a joint venture and is treated as a non-current asset investment.

(a)  London & Associated Properties PLC - Property management, office premises, general management, ***accounting*** and administration services are provided for Bisichi Mining PLC and its UK subsidiaries.

(b)  Langney Shopping Centre Unit Trust - Langney Shopping Centre Unit Trust is an unlisted property unit trust incorporated in Jersey.

(c)  Dragon Retail Properties Limited - ("Dragon") is owned equally by the company and London & Associated Properties PLC. During 2012 the company lent £2million to Dragon at 6.875 per cent annual interest.

(d) Ezimbokodweni Mining (Pty) Limited - Ezimbokodweni Mining is a prospective coal production company based in South Africa.

Details of key management personnel compensation and interest in share options are shown in the Directors' Remuneration Report on pages 28 and 29 under the headings Directors' remuneration, Pension schemes and incentives and Share option schemes which is within the audited part of this report. The total employers' national insurance paid in relation to the remuneration of key management was £157,000 (2014: 114,000). In 2012 a loan was made to one of the directors, Mr A R Heller, for £116,000. The loan amount outstanding at year end was £86,000 (2014: £101,000) and a repayment of £15,000 (2014: £15,000) was made during the year.

29. Employees

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| The average weekly numbers of employees of the group during the year were as follows: |  |  |
| Production | **191** | 213 |
| Administration | **17** | 18 |
|  | **208** | 231 |

|  |  |  |
| --- | --- | --- |
|  | £'000 | £'000 |
| Staff costs during the year were as follows: |  |  |
| Salaries | **4,682** | 4,676 |
| Social security costs | **160** | 117 |
| Pension costs | **221** | 209 |
| Share based payments | **31** | 55 |
|  | **5,094** | 5,057 |

30. Capital commitments

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Commitments for capital expenditure approved but not contracted for at the year end | **306** | 389 |
| Share of commitment of capital expenditure in joint venture | **1,102** | 1,402 |

31. Head lease commitments and future property lease rentals

Present value of head Leases on properties

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minimum lease  payments | Present value of  minimum lease  payments |  |  |
|  | 2015  £'000 | 2014  £'000 | 2015  £'000 | 2014  £'000 |
| Within one year | **12** | 12 | **12** | 12 |
| Second to fifth year | **48** | 49 | **45** | 45 |
| After five years | **1,549** | 1,569 | **137** | 138 |
|  | **1,609** | 1,630 | **194** | 195 |
| Discounting adjustment | **(1,415)** | (1,435) | **-** | - |
| Present value | **194** | 195 | **194** | 195 |

Finance lease liabilities are in respect of leased investment property. Many of the leases provide for contingent rents in addition to the rents above which are a proportion of rental income. Finance lease liabilities are effectively secured as the rights to the leased asset revert to the lessor in event of default.

The group leases out its investment properties under operating leases. The future aggregate minimum rentals receivable under non-cancellable operating leases are as follows:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Within one year | **923** | 746 |
| Second to fifth year | **2,699** | 2,399 |
| After five years | **9,786** | 9,868 |
|  | **13,408** | 13,013 |

32. Contingent liabilities

Bank guarantees have been issued by the bankers of Black Wattle Colliery (Pty) Limited on behalf of the company to third parties. The guarantees are secured against the assets of the company and have been issued in respect of the following:

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Rail siding | **47** | 158 |
| Rehabilitation of mining ***land*** | **1,009** | 1,114 |
| Water & electricity | **42** | 52 |

Company balance sheet

at 31 December 2015

|  |  |  |  |
| --- | --- | --- | --- |
|  | Notes | 2015  £'000 | 2014  £'000 |
| Fixed assets |  |  |  |
| Tangible assets | 35 | **20** | 34 |
| Investment in joint ventures | 36 | **1,810** | 1,810 |
| Other investments | 36 | **7,577** | 7,712 |
|  |  | **9,407** | 9,556 |
| Current assets |  |  |  |
| Debtors - amounts due within one year | 37 | **3,296** | 2,981 |
| Debtors - amounts due in more than one year | 37 | **659** | 1,127 |
| Bank balances |  | **1,031** | 988 |
|  |  | **4,986** | 5,096 |
| Creditors - amounts falling due within one year | 38 | **(1,301)** | (1,218) |
| Net current liabilities |  | **3,685** | 3,878 |
| Total assets less current liabilities |  | **13,092** | 13,434 |
| Creditors - amounts falling due in more than one year - term bank loan | 38 | **(9)** | (64) |
| Provision for liabilities and charges | 39 | **(182)** | - |
| Net assets |  | **12,901** | 13,370 |
| Capital and reserves |  |  |  |
| Called up share capital | 24 | **1,068** | 1,068 |
| Share premium ***account*** |  | **258** | 259 |
| Other reserves |  | **489** | 566 |
| Retained earnings | 33 | **11,086** | 11,477 |
| Shareholders' funds |  | **12,901** | 13,370 |

The company financial statements were approved and authorised for issue by the board of directors on 18 April 2015 and signed on its behalf by:

A R Heller               G J Casey                              Company Registration No. 112155

Director                  Director

Company statement of

changes in equity

for the year ended 31 December 2015

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Share  capital  £'000 | Share  premium  £'000 | Other  reserve  £'000 | Retained  earnings  £'000 | **Shareholders**  **funds**  **£'000** |
| Balance at 1 January 2014 | 1,064 | 249 | 503 | 10,279 | **12,095** |
| Dividend paid | - | - | - | (427) | **(427)** |
| Share option charge | 4 | 10 | 63 | - | **77** |
| Profit and total comprehensive income for the year | - | - | - | 1,625 | **1,625** |
| Balance at 1 January 2015 | 1,068 | 259 | 566 | 11,477 | 13,370 |
| Dividend paid | - | - | - | (427) | **(427)** |
| Share option charge | - | (1) | 32 | - | **31** |
| Share option cancelled | - | - | (109) | - | **(109)** |
| Profit and total comprehensive income for the year | - | - | - | 36 | **36** |
| Balance at 31 December 2015 | 1,068 | 258 | 489 | 11,086 | 12,901 |

Company ***accounting*** policies

for the year ended 31 December 2015

The following are the main ***accounting*** policies of the company:

***Accounting*** convention: First time adoption of FRS 100 and 101

In the current year the company has adopted FRS 100 and FRS 101. In previous years the financial statements were prepared under the historical cost convention, as modified by the revaluation of investment properties, and in accordance with applicable UK Generally Accepted ***Accounting*** Practice.

This change in the basis of preparation has materially altered the recognition and measurement requirements applied in accordance with previously applicable UK ***accounting*** standards. An explanation of the impact of adoption of FRS 100 and FRS 101 for the first time is included in note 41.

DISCLOSURE EXEMPTIONS ADOPTED

In preparing these financial statements the company has taken advantage of all disclosure exemptions conferred by FRS 101. Therefore these financial statements do not include:

·     certain comparative information as otherwise required by EU endorsed IFRS;

·     certain disclosures regarding the company's capital;

·     a statement of cash flows;

·     the effect of future ***accounting*** standards not yet adopted;

·     the disclosure of the remuneration of key management personnel; and

·     disclosure of related party transactions with the company's wholly owned subsidiaries

In addition, and in accordance with FRS 101, further disclosure exemptions have been adopted because equivalent disclosures are included in the company's Consolidated Financial Statements.

Dividends received

Dividends are credited to the profit and loss ***account*** when received.

Depreciation

Provision for depreciation on tangible fixed assets is made in equal annual instalments to write each item off over its useful life. The rates generally used are:

Motor vehicles        25 - 33 per cent

Office equipment   10 - 33 per cent

Foreign currencies

Monetary assets and liabilities expressed in foreign currencies have been translated at the rates of exchange ruling at the balance sheet date. All exchange differences are taken to the profit and loss ***account***.

Investment properties

The investment property portfolio is included in the financial statements at open market valuation. An external professional valuation is carried out annually by professional external surveyors. Surpluses and deficits arising on valuations are taken direct to the revaluation reserve. No depreciation or amortisation is provided in respect of freehold and leasehold investment properties. Depreciation or amortisation is only one of many factors reflected in the valuation and the amount which might otherwise have been shown cannot be separately identified or quantified.

On the 23rd of December 2014, the investment property portfolio was transferred within the group to Bisichi (Properties) Limited, a 100% owned and controlled subsidiary of the company.

Investments

Investments of the company are stated in the balance sheet as fixed assets at cost less provisions for impairment.

Financial instruments

Bank loans and overdrafts

Bank loans and overdrafts are included in creditors on the company balance sheet net of the unamortised cost of financing.

Interest payable on those facilities is expensed as a finance cost in the period to which it relates.

Debtors

Amounts due from subsidiary undertakings are held at present value where the interest that would be recognised from discounting future cash payments is considered to be material. Other debtors do not carry interest and are stated at their nominal value as reduced by appropriate allowances for estimated recoverable amounts.

Creditors

Creditors are not interest bearing and are stated at their nominal value.

Joint ventures

Investments in joint ventures, being those entities over whose activities the group has joint control as established by contractual agreement, are included at cost, less impairment.

Deferred taxation

A full provision is made for deferred tax where the carrying amount of an asset or liability in the balance sheet differs from its tax base, except for those differences in respect of which the standard specifies that deferred tax should not be recognised. Deferred tax assets and liabilities are calculated at the tax rates expected to be effective at the time the timing differences are expected to reverse.

Leased assets and obligations

All leases are "Operating Leases" and the annual rentals are charged to the profit and loss ***account*** on a straight line basis over the lease term. Rent free periods or other incentives received for entering into a lease are ***accounted*** for over the period of the lease so as to spread the benefit received over the lease term.

Pensions

The company makes contributions to a money purchase scheme and the costs are charged to the profit and loss ***account*** in the period to which they relate.

Share based remuneration

The company operates a share option scheme. The fair value of the share option scheme is determined at the date of grant. This fair value is then expensed on a straight-line basis over the vesting period, based on an estimate of the number of shares that will eventually vest. The fair value of options granted is calculated using a binomial model or Black-Scholes-Merton model. Details of the share options in issue are disclosed in the Directors' Remuneration Report on pages 28 and 29 under the heading Share option schemes which is within the audited part of this report.

33. PROFIT & LOSS ***ACCOUNT***

A separate profit and loss ***account*** for Bisichi Mining PLC has not been presented as permitted by Section 408(2) of the Companies Act 2006. The profit for the financial year, before dividends, was £36,000 (2014: £1,625,000)

Details of share capital are set out in note 24 and details of the share options are shown in the Directors' Remuneration Report on page 29 under the heading Share option schemes which is within the audited part of this report and note 26.

34. Dividends

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015  Per share | 2015  £'000 | 2014  Per share | 2014  £'000 |
| Dividends paid during the year relating to the prior period | **4.00p** | **427** | 4.00p | 427 |
| Dividends to be paid: |  |  |  |  |
| Interim dividend for 2015 paid on 5 February 2016 | **1.00p** | **107** | 1.00p | 107 |
| Proposed final dividend for 2015 | **3.00p** | **320** | 3.00p | 320 |
|  | **4.00p** | **427** | 4.00p | 427 |

The aggregate amount of dividends to be paid and not recognised as liabilities as at year end is £427,000 (2014: £427,000). The dividends to be paid are not ***accounted*** for until they have been approved at the Annual General Meeting. The amount will be ***accounted*** for as an appropriation of retained earnings in the year ending 31 December 2016.

35. Tangible fixed assets

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  | Motor  vehicles  £'000 | Office  equipment  £'000 | Total  £'000 |  |  |  |
| Cost at 1 January 2015 | 37 | 66 | 103 |  |  |  |
| Additions | - | 1 | 1 |  |  |  |
| Cost at 31 December 2015 | 37 | 67 | 104 |  |  |  |
|  |  |  |  |  |  |  |
| Accumulated depreciation at 1 January 2015 | 14 | 55 | 69 |  |  |  |
| Charge for the year | 13 | 2 | 15 |  |  |  |
| Accumulated depreciation at 31 December 2015 | 27 | 57 | 84 |  |  |  |
| Net book value at 31 December 2015 | 10 | 10 | 20 |  |  |  |
| Net book value at 31 December 2014 | 23 | 11 | 34 |  |  |  |
|  |  |  |  |  |  |  |

36. Investments

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Joint  ventures  shares  £'000 | Shares in subsidiaries  £'000 | Loans  £'000 | Other  investments  £'000 | Total  £'000 |
| Cost at 1 January 2015 | 1,810 | 6,356 | 1,331 | 26 | 7,713 |
| Invested during year | - | - | 3 | - | 3 |
| Loss on transfer | - |  | (126) | - | (126) |
| Cost at 31 December 2015 | 1,810 | 6,356 | 1,208 | 26 | 7,590 |
| Provision for impairment |  |  |  |  |  |
| As at 1 January | - | - | - | (1) | (1) |
| Impaired during the year | - | - | - | (12) | (12) |
| As at 31 December 2015 | - | - | - | (13) | (13) |
| Net book value at 31 December 2015 | 1,810 | 6,356 | 1,208 | 13 | 7,577 |
| Net book value at 31 December 2014 | 1,810 | 6,356 | 1,331 | 25 | 7,712 |

Other investments comprise £13,000 (2014: £25,000) shares.

Investments in subsidiaries are detailed in note 15. In the opinion of the directors the aggregate value of the investment in subsidiaries is not less than the amount shown in these financial statements.

On the 11 March 2016, the company disposed of its joint venture investment in Langney Shopping Centre Unit Trust. The net book value of the investment included in these financial statements at 31 December 2015 was £963,000. The net proceeds from the sale were £1,138,000 (excluding dividend). Further information relating to the disposal of Langney Shopping Centre Unit Trust can be found in Note 14.

37. Debtors

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Amounts due within one year: |  |  |
| Amounts due from subsidiary undertakings | **1,003** | 360 |
| Trade receivables | **16** | 109 |
| Other debtors | **81** | 118 |
| Joint venture | **2,140** | 2,168 |
| Prepayments and accrued income | **56** | 226 |
|  | **3,296** | 2,981 |
| Amounts due in more than one year: |  |  |
| Amounts due from subsidiary undertakings | **659** | 1,123 |
| Deferred taxation | **-** | 4 |
|  | **659** | 1,127 |

38. Creditors

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Amounts falling due within one year: |  |  |
| Bank overdraft (secured) | **-** | - |
| Bank loan (secured) | **8** | 7 |
| Amounts due to subsidiary undertakings | **365** | - |
| Joint venture | **223** | 305 |
| Current taxation | **-** | 23 |
| Other taxation and social security | **3** | 89 |
| Other creditors | **574** | 444 |
| Accruals and deferred income | **128** | 350 |
|  | **1,301** | 1,218 |
| Amounts falling due in more than one year: |  |  |
| Bank loan (secured) | **9** | 64 |

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Bank and other loan instalments by reference to the balance sheet date: |  |  |
| Within one year | **8** | 7 |
| From one to two years | **7** | 7 |
| From two to five years | **2** | 57 |
|  | **17** | 71 |

39. Provisions for liabilities

|  |  |  |
| --- | --- | --- |
|  | 2015  £'000 | 2014  £'000 |
| Deferred taxation |  |  |
| Balance at 1 January | - | 695 |
| Provision | 182 | (695) |
| Transfer | - | - |
|  | 182 | - |

40. Related party transactions

|  |  |  |  |
| --- | --- | --- | --- |
| At 31 December | During the year |  |  |
|  | Amounts owed  by related party  £'000 | Costs  recharged /  accrued  (to) / by  related party  £'000 | Cash paid  (to)/ by  related  party  £'000 |
| Related party: |  |  |  |
| Black Wattle Colliery (Pty) Ltd (note (a)) | (1,157) | (653) | 1,812 |
| Ninghi Marketing Limited (note (b)) | (102) | - | - |
| As at 31 December 2015 | (1,259) | (653) | 1,812 |
| Black Wattle Colliery (Pty) Ltd (note (a)) | (2,316) | (1,009) | 1,207 |
| Ninghi Marketing Limited (note (b)) | (102) | - | - |
| As at 31 December 2014 | (2,418) | (1,009) | 1,207 |

(a)  Black Wattle Colliery (Pty) Ltd - Black Wattle Colliery (Pty) Ltd is a coal mining company based in South Africa.

(b)  Ninghi Marketing Limited - Ninghi Marketing Limited is a dormant coal marketing company incorporated in England & Wales.

Black Wattle Colliery (PTY) Ltd and NInghi Marketing Limited are subsidiaries of the company.

In addition to the above, the company has issued a company guarantee of R17,000,000 (2013: R17,000,000) (South African Rand) to the bankers of Black Wattle Colliery (Pty) Ltd in order to cover bank guarantees issued to third parties in respect of the rehabilitation of mining ***land***.

A provision of £102,000 has been raised against the amount owing by Ninghi Marketing Limited as the company is dormant.

In 2012 a loan was made to one of the directors, Mr A R Heller, for £116,000. There is no fixed repayment date. The loan amount outstanding at year end was £86,000 (2014: £101,000) and a repayment of £15,000 (2014: £15,000) was made during the year.

Under FRS 101, the company has taken advantage of the exemption from disclosing transactions with other wholly owned group companies.

Details of other related party transactions are given in note 28 of the group financial statements.

41. FIRST TIME ADOPTION OF FRS 101 REDUCED DISCLOSURE FRAMEWORK

This is the first time that the company has adopted FRS 101 having previously applied applicable UK ***accounting*** standards.  The date of transition to FRS 101 was 1 January 2014.

In applying FRS 101 for the first time the company has made the election to retain the cost of investment in subsidiary undertakings at their carrying amounts under applicable UK ***accounting*** standards.

The following table summarise the effects on the company's equity and total comprehensive income of applying FRS 101 for the first time.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Equity  at  1 January 2014  £'000 | Equity  at  31 December 2014  £'000 | Comprehensive income  at  31 December 2014  £'000 |
| **As previously reported in accordance with applicable UK *accounting* standards** | **12,808** | **13,370** | **912** |
| **Transition adjustments:** |  |  |  |
| Deferred taxation on revaluation of investment property | (713) | - | 713 |
| ***Accounted* in accordance with  FRS 101** | **12,095** | **13,370** | **1,625** |

In addition to above, in the 2014 year end there is a reclassification of debtor amounts that are due in more than one year of £1,127,000 from non-current assets to current assets in the balance sheet.

**Load-Date:** April 22, 2016

**End of Document**



[***-Deere Announces Earnings of $ 351 Million for Fourth Quarter and $ 1.94 Billion for Full Year***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HG2-K9W1-JD3Y-Y41W-00000-00&context=1516831)

ENP Newswire

November 26, 2015 Thursday

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**Length:** 3478 words

**Body**

MOLINE, Illinois - Net income attributable to Deere & Company was $ 351.2 million, or $ 1.08 per share, for the fourth quarter ended October 31, compared with $ 649.2 million, or $ 1.83 per share, for the same period of 2014.

For fiscal 2015, net income attributable to Deere & Company was $ 1.940 billion, or $ 5.77 per share, compared with $ 3.162 billion, or $ 8.63 per share, last year.

Worldwide net sales and revenues decreased 25 percent, to $ 6.715 billion, for the fourth quarter and were down 20 percent, to $ 28.863 billion, for the full year. Net sales of the equipment operations were $ 5.932 billion for the quarter and $ 25.775 billion for the year, compared with $ 8.043 billion and $ 32.961 billion for the same periods in 2014.

'John Deere has completed a successful year in the face of further weakness in the global ***agricultural*** sector and a slowdown in construction-equipment markets,' said Samuel R. Allen, chairman and chief executive officer. 'Sales and earnings for the year were the sixth-highest in company history, a notable achievement in light of the challenging market conditions we experienced. The company's performance benefited from the adept execution of our business plans and disciplined cost management. As a result, Deere remains well-positioned to serve its customers while continuing to make investments in quality and innovation that are designed to drive growth in the future.'

Summary of Operations

Net sales of the worldwide equipment operations declined 26 percent for the quarter and 22 percent for the full year compared with the same periods in 2014. Sales included price realization of 1 percent for the quarter and full year. Additionally, sales included an unfavorable currency-translation effect of 5 percent for the quarter and full year. Equipment net sales in the United States and Canada decreased 23 percent for the quarter and 18 percent for the full year. Outside the U.S. and Canada, net sales fell 31 percent for the quarter and were down 28 percent for the year, with unfavorable currency-translation effects of 11 percent and 10 percent for these periods.

Deere's equipment operations reported operating profit of $ 335 million for the quarter and $ 2.177 billion for the full year, compared with $ 910 million and $ 4.297 billion in 2014. For both periods, the decline was due primarily to lower shipment volumes, the impact of a less favorable product mix, and the unfavorable effects of foreign-currency exchange. In the quarter, these factors were partially offset by lower production costs, lower selling administrative and general expenses, and price realization. The full-year reduction in operating profit was partially offset by price realization, lower selling, administrative and general expenses and lower production costs.

Net income of the company's equipment operations was $ 200 million for the fourth quarter and $ 1.308 billion for the year, compared with $ 488 million and $ 2.548 billion in 2014. In addition to the operating factors mentioned above, a lower effective tax rate benefited both quarterly and annual results. The lower rate resulted mainly from a reduction of a valuation allowance recorded during the quarter due to a change in the expected realizable value of a deferred tax asset.

Financial services reported net income attributable to Deere & Company of $ 153.0 million for the quarter and $ 632.9 million for the year compared with $ 172.2 million and $ 624.5 million in 2014. Lower results for the quarter were primarily due to the unfavorable effects of foreign-currency exchange translation, and higher losses on residual values primarily for construction-equipment operating leases, partially offset by lower selling, administrative and general expenses. Results for the year improved due to growth in the average credit portfolio, the previously announced crop insurance sale and higher crop insurance margins experienced prior to divestiture, and lower selling, administrative and general expenses. These factors were partially offset by the unfavorable effects of foreign-currency exchange translation, less-favorable financing spreads, and higher losses on residual values primarily for construction-equipment operating leases.

Full-year results in 2014 also benefited from a more favorable effective tax rate.

Company Outlook & Summary

Company equipment sales are projected to decrease about 7 percent for fiscal 2016 and to be down about 11 percent for the first quarter compared with year-ago periods. Included in the forecast is a negative foreign-currency translation effect of about 2 percent for the full year and 4 percent for the first quarter. For fiscal 2016, net income attributable to Deere & Company is anticipated to be about $ 1.4 billion.

'Although our forecast calls for lower results in the year ahead, the outlook represents a level of performance that is considerably better than we have experienced in previous downturns,' Allen said. 'This shows the continuing success of our efforts to establish a more durable business model and a wider range of revenue sources.'

Longer term, Allen reaffirmed his belief the future holds great promise for the company. 'John Deere remains in a strong position to carry out its growth plans and attract new customers throughout the world,' he said. 'Thanks to the commitment of our employees, dealers and suppliers, our plans for helping meet the world's increasing need for food, shelter and infrastructure are continuing to move ahead. These trends in our view remain quite compelling and have ample staying power. All in all, we have confidence in the company's present direction and firmly believe it is on track to deliver significant value to our customers and investors in the years to come.'

Equipment Division Performance

***Agriculture*** & Turf. Sales fell 25 percent for the quarter and full year due largely to lower shipment volumes and the unfavorable effects of currency translation. These factors were partially offset by price realization.

Operating profit was $ 271 million for the quarter and $ 1.649 billion for the year, compared with $ 682 million and $ 3.649 billion in 2014. Lower results for both periods were driven primarily by the impact of lower shipment volumes, a less favorable product mix, and the unfavorable effects of foreign-currency exchange, partially offset by price realization, lower selling, administrative and general expenses, and lower production costs.

Construction & Forestry. Construction and forestry sales decreased 32 percent for the quarter and 9 percent for the year. Sales for both periods were lower mainly as a result of lower shipment volumes and the unfavorable effects of currency translation. For the full year, these declines were partially offset by price realization.

Operating profit was $ 64 million for the quarter and $ 528 million for the year, compared with $ 228 million and $ 648 million in 2014. Operating profit decreased for the quarter mainly due to lower shipment volumes and the unfavorable effects of foreign-currency exchange, partially offset by lower selling, administrative and general expenses. Full-year results declined due to lower shipment volumes, the unfavorable effects of foreign exchange, and higher production costs, partially offset by price realization and lower selling, administrative and general expenses.

Market Conditions & Outlook

***Agriculture*** & Turf. Deere's worldwide sales of ***agriculture*** and turf equipment are forecast to decrease by about 8 percent for fiscal-year 2016, including a negative currency-translation effect of about 2 percent.

Industry sales for ***agricultural*** equipment in the U.S. and Canada are forecast to be down 15 to 20 percent for 2016. The decline, which reflects the impact of low commodity prices and stagnant farm incomes, is expected to be most pronounced in the sale of higher-horsepower models.

Full-year 2016 industry sales in the EU28 are forecast to be flat to down 5 percent, with the decline attributable to low commodity prices and farm incomes, including further pressure on the dairy sector. In South America, industry sales of tractors and combines are projected to be down 10 to 15 percent mainly as a result of economic concerns in Brazil and uncertainty about government-sponsored financing. Asian sales are projected to be flat to down slightly, due in part to weakness in China.

Industry sales of turf and utility equipment in the U.S. and Canada are expected to be flat to up 5 percent for 2016, benefiting from general economic growth.

Construction & Forestry. Deere's worldwide sales of construction and forestry equipment are forecast to be down about 5 percent for 2016, including a negative currency-translation effect of about 1 percent.

The forecast decline in sales reflects the impact of weak conditions in the North American energy sector, especially in Canada, as well as lower sales outside the U.S. and Canada. In forestry, global sales are expected to be down 5 to 10 percent from last year's strong levels, primarily as a result of lower sales in the U.S. and Canada.

Financial Services. Fiscal-year 2016 net income attributable to Deere & Company for the financial services operations is expected to be approximately $ 550 million. The outlook reflects less-favorable financing spreads and an increased provision for credit losses. Additionally, 2015 results benefited from a gain on the sale of the crop insurance business.

John Deere Capital Corporation

The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market.

Net income attributable to John Deere Capital Corporation was $ 121.8 million for the fourth quarter and $ 498.2 million for the full-year 2015, compared with $ 154.2 million and $ 544.2 million for the respective periods last year. The decline for the quarter was primarily due to a decline in the average credit portfolio, higher losses on residual values primarily for construction-equipment operating leases, and less favorable financing spreads, partially offset by lower selling, administrative and general expenses.

The decline for the full year was primarily due to less favorable financing spreads, higher losses on residual values primarily for construction-equipment operating leases and the unfavorable effects of foreign-currency exchange translation, partially offset by growth in the average credit portfolio and lower selling, administrative and general expenses. Full-year results for 2014 also benefited from a more favorable effective tax rate.

Net receivables and leases financed by JDCC were $ 32.592 billion and $ 32.984 billion at October 31, 2015 and 2014, respectively.

Safe Harbor Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under 'Company Outlook & Summary,' 'Market Conditions & Outlook,' and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence. These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.),

international reaction to such programs, changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms).

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates; and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results.

Customer and company operations and results could be affected by changes in weather patterns (including the effects of drought and drier than normal conditions in certain markets); the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters; and the spread of major epidemics.

Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions, borrowing and repayment practices, and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators;

actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***, carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise; and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates. Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results. Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products;

changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs;

security breaches and other disruptions to the company's information technology infrastructure; and changes in company declared dividends and common stock issuances and repurchases.

Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action.

The liquidity and ongoing profitability of John Deere Capital Corporation and other credit subsidiaries depend largely on timely access to capital in order to meet future cash flow requirements, to fund operations and costs associated with engaging in diversified funding activities, and to fund purchases of the company's products. If general economic conditions deteriorate or capital markets become volatile, funding could be unavailable or insufficient. Additionally, customer confidence levels may result in declines in credit applications and increases in delinquencies and default rates, which could materially impact write-offs and provisions for credit losses.

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[***-Deere Announces Third-Quarter Earnings of $ 512 Million***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GS2-54G1-F0K1-N01C-00000-00&context=1516831)

ENP Newswire

August 24, 2015 Monday

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**Length:** 3435 words

**Body**

MOLINE, Illinois - Net income attributable to Deere & Company was $ 511.6 million, or $ 1.53 per share, for the third quarter ended July 31, compared with $ 850.7 million, or $ 2.33 per share, for the same period last year.

For the first nine months of the year, net income attributable to Deere & Company was $ 1.589 billion, or $ 4.67 per share, compared with $ 2.513 billion, or $ 6.79 per share, last year.

Worldwide net sales and revenues decreased 20 percent, to $ 7.594 billion, for the third quarter and were down 18 percent, to $ 22.147 billion, for nine months. Net sales of the equipment operations were $ 6.840 billion for the quarter and $ 19.843 billion for nine months, compared with $ 8.723 billion and $ 24.918 billion for the periods last year.

'John Deere's third-quarter results reflected the continuing impact of the downturn in the farm economy as well as lower demand for construction equipment,' said Samuel R. Allen, chairman and chief executive officer. 'Nevertheless, all of Deere's businesses remained solidly profitable, benefiting from the sound execution of our business plans and the success of our efforts to develop a more agile cost structure. As a result, the company continues to be well-positioned to provide customers with technologically advanced products and services, while funding its growth plans and returning cash to stockholders.'

Summary of Operations

Net sales of the worldwide equipment operations declined 22 percent for the quarter and 20 percent for nine months compared with the same periods a year ago. Sales included price realization of 2 percent for the quarter and nine months. Additionally, sales included an unfavorable currency-translation effect of 6 percent for the quarter and 4 percent for nine months. Equipment net sales in the United States and Canada decreased 21 percent for the quarter and 17 percent year to date. Outside the U.S. and Canada, net sales fell 23 percent for the quarter and 26 percent for nine months, with unfavorable currency-translation effects of 12 percent and 9 percent for the periods.

Deere's equipment operations reported operating profit of $ 601 million for the quarter and $ 1.842 billion for nine months, compared with $ 1.135 billion and $ 3.387 billion last year. For both periods, the decline was due primarily to lower shipment volumes, the impact of a less favorable product mix, and the unfavorable effects of foreign-currency exchange. These factors were partially offset by price realization and lower production costs for the quarter and by price realization, lower selling, administrative and general expenses, and lower production costs for the year to date.

Net income of the company's equipment operations was $ 344 million for the third quarter and $ 1.109 billion for the first nine months, compared with $ 680 million and $ 2.061 billion in 2014. In addition to the operating factors mentioned above, a lower effective tax rate benefited both quarterly and year-to-date results.

Financial services reported net income attributable to Deere & Company of $ 153.4 million for the quarter and $ 480.0 million for nine months compared with $ 162.3 million and $ 452.2 million last year. Lower results for the quarter were primarily due to less favorable financing spreads, partially offset by lower selling, administrative and general expenses. Year-to-date results improved as a result of the previously announced crop insurance sale and higher crop insurance margins experienced prior to divestiture, growth in the average credit portfolio, and lower selling, administrative and general expenses, partially offset by less favorable financing spreads. Year-to-date results in 2014 also benefited from a more favorable effective tax rate.

Company Outlook & Summary

Company equipment sales are projected to decrease about 21 percent for fiscal 2015 and to be down about 24 percent for the fourth quarter compared with year-ago periods. Included in the forecast is a negative foreign-currency translation effect of about 4 percent for the full year and 5 percent for the fourth quarter. For fiscal 2015, net income attributable to Deere & Company is anticipated to be about $ 1.8 billion.

According to Allen, Deere's performance in 2015 underscores its success establishing a wider range of revenue sources and more durable business model. 'By continuing to report solid profits in a difficult environment, the company is showing great resilience and performing much better than in previous ***agricultural*** downturns.'

Longer term, Allen said he remained quite confident about the company's prospects. 'We believe our steady investment in new products and geographies will make Deere the provider of choice for a growing global customer base and that the impact of these actions will become increasingly clear when our end markets recover,' said Allen. 'In our view, favorable trends based on a growing, more affluent, and increasingly mobile population, have ample staying power. For all these reasons, we have confidence in the company's present course and its ability to deliver significant value to customers and investors in the years ahead.'

Equipment Division Performance

***Agriculture*** & Turf. Sales fell 24 percent for the quarter and 25 percent for nine months due largely to lower shipment volumes and the unfavorable effects of currency translation. These factors were partially offset by price realization.

Operating profit was $ 472 million for the quarter and $ 1.378 billion year to date, compared with $ 941 million and $ 2.967 billion, respectively, last year. Lower results for both periods were driven primarily by the impact of lower shipment volumes, a less favorable product mix, and the unfavorable effects of foreign-currency exchange. Partially offsetting these factors were price realization and lower production costs in the third quarter and price realization, lower selling, administrative and general expenses, and lower production costs for the first nine months.

Construction & Forestry. Construction and forestry sales decreased 13 percent for the quarter and were flat for the first nine months. Sales for the quarter were lower mainly as a result of lower shipment volumes and the unfavorable effects of currency translation, partially offset by price realization. On a year-to-date basis, higher shipment volumes and price realization were offset by the unfavorable effects of currency translation.

Operating profit was $ 129 million for the quarter and $ 464 million for nine months, compared with $ 194 million and $ 420 million for the corresponding periods last year. Operating profit decreased for the quarter mainly due to lower shipment volumes and the unfavorable effects of foreign-currency exchange, partially offset by price realization. Year-to-date results improved due to price realization, lower selling, administrative and general expenses, and higher shipment volumes, partially offset by unfavorable foreign-currency effects.

Market Conditions & Outlook

***Agriculture*** & Turf. Deere's worldwide sales of ***agriculture*** and turf equipment are forecast to decrease by about 25 percent for fiscal-year 2015, including a negative currency-translation effect of about 5 percent.

Lower commodity prices and falling farm incomes are continuing to pressure demand for ***agricultural*** machinery, with the declines most pronounced in higher-horsepower models. Conditions are more positive in the U.S. livestock sector, supporting some improvement in the sales of smaller sizes of equipment. Based on these factors, industry sales for ***agricultural*** equipment in the U.S. and Canada are forecast to be down about 25 percent for 2015.

Full-year 2015 industry sales in the EU28 are forecast to be down about 10 percent, with the decline attributable to lower crop prices and farm incomes as well as pressure on the dairy sector. In South America, industry sales of tractors and combines are projected to be down 20 to 25 percent mainly as a result of economic uncertainty in Brazil and higher interest rates on government-sponsored financing. Asian sales are projected to be down moderately, with most of the decline in India and China. Industry sales in the Commonwealth of Independent States are expected to be down significantly due to economic pressures and tight credit conditions.

Industry sales of turf and utility equipment in the U.S. and Canada are expected to be flat to up 5 percent for 2015, benefiting from general economic growth.

Construction & Forestry. Deere's worldwide sales of construction and forestry equipment are forecast to be down about 5 percent for 2015, including a negative currency-translation effect of about 3 percent.

The forecast decline in sales reflects the impact of weakening conditions in the North American energy sector, as well as lower sales outside the U.S. and Canada. In forestry, global sales are expected to be flat to up 5 percent in comparison with last year's attractive levels, as gains in the U.S. and Europe are offset by declines elsewhere.

Financial Services. Fiscal-year 2015 net income attributable to Deere & Company for the financial services operations is expected to be approximately $ 630 million. The forecast improvement over last year is primarily due to the divestiture of the crop insurance business and growth in the average credit portfolio. These factors are being partially offset by less favorable financing spreads, a less favorable tax rate, and an increased provision for credit losses.

John Deere Capital Corporation

The following is disclosed on behalf of the company's financial services subsidiary, John Deere Capital Corporation (JDCC), in connection with the disclosure requirements applicable to its periodic issuance of debt securities in the public market.

Net income attributable to John Deere Capital Corporation was $ 126.9 million for the third quarter and $ 376.4 million year to date, compared with $ 129.2 million and $ 390.0 million for the respective periods last year. The decline for the quarter was primarily due to less favorable financing spreads, partially offset by lower selling, administrative and general expenses. The decline in year-to-date results was primarily due to less favorable financing spreads, partially offset by growth in the credit portfolio and lower selling, administrative and general expenses. Last year's year-to-date results also benefited from a favorable effective tax rate.

Net receivables and leases financed by JDCC were $ 33.400 billion at July 31, 2015, compared with $ 33.534 billion last year.

Safe Harbor Statement

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements under 'Company Outlook & Summary,' 'Market Conditions & Outlook,' and other forward-looking statements herein that relate to future events, expectations, trends and operating periods involve certain factors that are subject to change, and important risks and uncertainties that could cause actual results to differ materially. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of the company's businesses.

The company's ***agricultural*** equipment business is subject to a number of uncertainties including the many interrelated factors that affect farmers' confidence. These factors include demand for ***agricultural*** products, world grain stocks, weather conditions (including its effects on timely planting and harvesting), soil conditions (including low subsoil moisture), harvest yields, prices for commodities and livestock, crop and livestock production expenses, availability of transport for crops, the growth and sustainability of non-food uses for some crops (including ethanol and biodiesel production), real estate values, available acreage for farming, the ***land*** ownership policies of various governments, changes in government farm programs and policies (including those in Argentina, Brazil, China, the European Union, India, Russia and the U.S.), international reaction to such programs, changes in and effects of crop insurance programs, global trade agreements, animal diseases and their effects on poultry, beef and pork consumption and prices, crop pests and diseases, and the level of farm product exports (including concerns about genetically modified organisms).

Factors affecting the outlook for the company's turf and utility equipment include consumer confidence, weather conditions, customer profitability, consumer borrowing patterns, consumer purchasing preferences, housing starts, infrastructure investment, spending by municipalities and golf courses, and consumable input costs.

Consumer spending patterns, real estate and housing prices, the number of housing starts and interest rates are especially important to sales of the company's construction and forestry equipment. The levels of public and non-residential construction also impact the results of the company's construction and forestry segment. Prices for pulp, paper, lumber and structural panels are important to sales of forestry equipment.

All of the company's businesses and its reported results are affected by general economic conditions in the global markets and industries in which the company operates, especially material changes in economic activity in these markets and industries; customer confidence in general economic conditions; foreign currency exchange rates and their volatility, especially fluctuations in the value of the U.S. dollar; interest rates; and inflation and deflation rates. Government spending and taxing could adversely affect the economy, employment, consumer and corporate spending, and company results.

Customer and company operations and results could be affected by changes in weather patterns (including the effects of drought and drier than normal conditions in certain markets); the political and social stability of the global markets in which the company operates; the effects of, or response to, terrorism and security threats; wars and other conflicts and the threat thereof and the response thereto; natural disasters; and the spread of major epidemics.

Significant changes in market liquidity conditions and any failure to comply with financial covenants in credit agreements could impact access to funding and funding costs, which could reduce the company's earnings and cash flows. Financial market conditions could also negatively impact customer access to capital for purchases of the company's products and customer confidence and purchase decisions; borrowing and repayment practices; and the number and size of customer loan delinquencies and defaults. A debt crisis, in Europe or elsewhere, could negatively impact currencies, global financial markets, social and political stability, funding sources and costs, asset and obligation values, customers, suppliers, demand for equipment, and company operations and results. The company's investment management activities could be impaired by changes in the equity, bond and other financial markets, which would negatively affect earnings.

Additional factors that could materially affect the company's operations, access to capital, expenses and results include changes in and the impact of governmental trade, banking, monetary and fiscal policies, including financial regulatory reform and its effects on the consumer finance industry, derivatives, funding costs and other areas, and governmental programs, policies, tariffs and sanctions in particular jurisdictions or for the benefit of certain industries or sectors (including protectionist, economic, punitive and expropriation policies and trade and licensing restrictions that could disrupt international commerce); actions by the U.S. Federal Reserve Board and other central banks; actions by the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission and other financial regulators; actions by environmental, health and safety regulatory agencies, including those related to engine ***emissions***,

carbon and other ***greenhouse gas*** ***emissions***, noise and the effects of climate change; changes in labor regulations; changes to ***accounting*** standards; changes in tax rates, estimates, and regulations and company actions related thereto; compliance with U.S. and foreign laws when expanding to new markets and otherwise; and actions by other regulatory bodies including changes in laws and regulations affecting the sectors in which the company operates. Trade, financial and other sanctions imposed by the U.S., the European Union, Russia and other countries could negatively impact company assets, operations, sales, forecasts and results. Customer and company operations and results also could be affected by changes to GPS radio frequency bands or their permitted uses.

Other factors that could materially affect results include production, design and technological innovations and difficulties, including capacity and supply constraints and prices; the availability and prices of strategically sourced materials, components and whole goods; delays or disruptions in the company's supply chain or the loss of liquidity by suppliers; disruptions of infrastructures that support communications, operations or distribution; the failure of suppliers to comply with laws, regulations and company policy pertaining to employment, human rights, health, safety, the environment and other ethical business practices; events that damage the company's reputation or brand; significant investigations, claims, lawsuits or other legal proceedings; start-up of new plants and new products; the success of new product initiatives and customer acceptance of new products;

changes in customer product preferences and sales mix whether as a result of changes in equipment design to meet government regulations or for other reasons; gaps or limitations in rural broadband coverage, capacity and speed needed to support technology solutions; oil and energy prices, supplies and volatility; the availability and cost of freight; actions of competitors in the various industries in which the company competes, particularly price discounting; dealer practices especially as to levels of new and used field inventories; labor relations and contracts; acquisitions and divestitures of businesses; the integration of new businesses; the implementation of organizational changes; difficulties related to the conversion and implementation of enterprise resource planning systems that disrupt business, negatively impact supply or distribution relationships or create higher than expected costs;

security breaches and other disruptions to the company's information technology infrastructure; and changes in company declared dividends and common stock issuances and repurchases.

Company results are also affected by changes in the level and funding of employee retirement benefits, changes in market values of investment assets, the level of interest and discount rates, and compensation, retirement and mortality rates which impact retirement benefit costs, and significant changes in health care costs including those which may result from governmental action.

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**Load-Date:** August 24, 2015

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[***Ethiopia warns Saudi Arabia, UAE of "consequences" for using Eritrean territory***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HHK-JPR1-JC8S-C3SP-00000-00&context=1516831)

BBC Monitoring Africa - Political

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**Body**

The Ethiopian prime minister, Hailemariam Desalegn, says his government has warned both Saudi Arabia and the United Arab Emirates over their use of Eritrean territory in their war against Huthi militants in Yemen. In an interview with a local newspaper, Hailemariam expressed fears that the two Arab countries' use of Eritrea territory is a "threat" to Ethiopia's peace and security. He threatened that "Ethiopia absolves itself of any responsibility in case of disruptions to their operation in the area due to our proportionate response to any provocations by the Eritrean regime". The following are excerpts from the interview published in English by Ethiopian newspaper The Reporter on 28 November; subheadings inserted editorially

On Thursday, 26 November 2015, [Ethiopian Prime Minister] Hailemariam Desalegn held his first exclusive interview with a private Ethiopian newspaper when he sat down with Asrat Seyoum and Zekarias Sntayehu of The Reporter.

The prime minister addresses a wide range of issues in this interview held at his office off Lorenzo Taezaz Street [in Addis Ababa] and lasted an hour-and-a-half. From the current drought situation to good governance problems and from the economy to foreign relations matters, Hailemariam articulated the efforts of his administration which he served at the helm for a little over three years. Excerpts [follow]:

The Reporter: Victims of the drought that hit hard as a result of the El Nino effect in different parts of Ethiopia are estimated to have reached 8.2 million by government's ***account***. According to international donors, this number can rise up to 15 million in the coming months. Either way, the response from the international community is not as expected. If this condition persists, how is your government going to deal with the crisis? In connection to that, the victims on the ground are complaining that they are not receiving food assistance properly and that there is lack of coordination?

***Greenhouse gas***

Hailemariam: The El Nino phenomenon, as you may well know, is not something that Ethiopia as a country is able to control. The problem has its roots from the irresponsible ***emission*** of the so-called ***greenhouse gas*** by the world's most advanced economies for many years and its impact is felt in the form of disruption of the climatic conditions around the globe. This disruption in the climatic condition in turn causes temperature levels to rise in oceans, resulting in the disruption of the usual rainfall cycles that originate from these water bodies. So, what we can do from our end is use our capacity to prevent this drought from turning into famine and prevent the damage inflicted on the vulnerable members of the society like women and children.

"Most severe" impact in nation's history

We believe that the government of Ethiopia is first entity that is directly ***accountable*** to any hardship that befalls its people. So, we waited for no one to start our response to this phenomenon. Since our main focus was to prevent death, I can say that we have done [a good job] and are still doing a good job. Also, one should keep in mind that this is by far the most severe El Nino impact to hit the country in its long history. Hence, it is self-evident that the government's efforts to respond to the drought by availing food assistance to the affected people has paid off.

Government not much concerned about numbers

The situation is quite precarious, to say the least, from the perspective of the affected; and if our assistance was not coordinated and was not reaching the people, then we would have heard reports of loss of life. Also, we are not that much concerned about the actual number of the affected. It can be 15 million as indicated within a short period of time. Rather, we are highly concerned about the conditions of each and every household in the large swath of drought-affected areas. In terms, of monitoring the actual condition of households, now we have developed the capacity through our health and ***agricultural*** extension workers to screen almost each and every household in the affected areas and know their conditions. Based on our screening, so far, the number we are sure about is 8.2 million. However, in connection to the meher [long rain season] harvest season, we have done another screening and the results will be posted soon.

Government "will gladly accept" aid

Here, again, it will not concern the government so much if this number goes higher as long as we can alleviate the problem and provide the assistance needed. I know that some in the international community are anticipating that Ethiopia would try to hide or understate the number and magnitude, but that is not our headache, at all. By the way, we will not be the only one making the assessment; there is a multi-agency assessment group as well to verify the figures. This being the case, we at the beginning tried to forecast even for the worst case scenario and what would be needed to address the crisis. So, we are prepared in that sense, too. For instance, in the beginning, we imported 250,000 metric tonnes of food from abroad but most recently we learned that this might not be enough and have ordered an additional 650,000 tonnes. So, if our friends extend their helping hands, we will gladly accept but as government, we will do what is necessary to avert this crisis without a single loss of life.

The Reporter: In your earlier explanation regarding the drought, you indicated that some state-sponsored projects can be folded to avail more resources towards this crisis. Which projects are going to be folded? Also, last year the outgoing parliament approved a contingency budget of only 1bn birr [47m dollars], but your government is saying that, so far, it has spent close to 6bn birr. Where did you get the extra 5bn birr from?

Hailemariam: For the record, we do know that what we have set aside as contingency budget will not be adequate to deal with this crisis, but we went ahead to have the 1bn birr approved since we have a customary practice of presenting another (supplementary) budget bill to correct such mismatches if there are any. At the time of the ratification of the budget, we knew that we will have some finances coming our way from different sources but did not and could not declare it since it was not fully secured at the time. This helps us to use our resources and develop more projects in time than setting aside a hefty sum for contingency. We also knew that we will have the required sum for the contingency budget.

Mega projects

On the other hand, when we say that we might go as far as folding some projects, we were not referring to the mega projects that we are currently investing in. In fact, most of our mega projects are financed not out of the government budget but out of loans solicited both from foreign and local creditors; they do not need resources out of the government budget, at all. However, if we look at some projects like roads, they rely on the budget and we might decide to fold some of them, looking at the conditions. According to our forecast, both from our tax revenue and revenue from remittance and state-owned enterprises, we expect six to 9bn birr which will be earmarked as contingency budget, but even if we have to fold projects, we will do that since we will not let our people go hungry. But that is not going to happen.

Lavish party celebrations

The Reporter: Recently, the Amhara National Democratic Movement (ANDM), a member party of the ruling Ethiopian Peoples' Revolutionary Democratic Front (EPRDF), celebrated its 35th anniversary. And later, your government is set to celebrate the Nations and Nationalities Day (NND) in a big way. This has drawn criticism from different corners on grounds of not being morally responsible when so many people are affected by drought in the country. In fact, some go as far as drawing parallels with lavish celebration of Emperor Haile Selassie's birthday and Dergue's [former military regime of Col Mengistu Hailemariam] 10th year anniversary of the revolution, which happened to coincide with two severe droughts in Ethiopia. What is your response to that?

Hailemariam: First of all, we believe our commemorations are not occasions of jubilation and celebrations. It is part of our day-to-day life that is shaping and moulding a common identity and mindset. I think the greatest wealth this country could ever have is this shared consensus and mindset. We believe if we can harness this shared mindset and vision, we can move mountains. Apart from that, our commemorations are not celebrations of birthdays as it was the case in the past regimes. Those were individual celebrations; ours is a celebration of the people, which is geared towards strengthening our unity and our shared vision for development. It is a serious work on the way. So, I value it no less than any of our mega projects. What our country lacks today is this national consensus. This would also mean, by extension, that what you (the media) are doing in shaping public opinion is also not a serious job; I think such perception is basically flawed.

On the other hand, I do not see how our celebrations are taken to be extravagant since what we basically do is gather and, may be, drink water and talk about our issues and go home. We are not popping champagne or pour whiskey; we are simply holding an event where the public gathers to talk about the country's issues. To the contrary, members of the EPRDF have made contributions to help the drought-affected communities. In this regard, members of ANDM have donated 30m birr pooled from members' contribution towards this effort of combating the drought. If you see the NND celebrations as well, we use it basically to improve various infrastructures in the developing regional states. While preparing for this event, these regional states would benefit from permanent improvement in their infrastructure and facilities. For instance, if you take Gambela [Regional State], one of the developing regions in Ethiopia, we have used NND as an excuse to build permanent water facilities and asphalt roads for the community; also renovated the stadium. So, those sentiments you have expressed do not seem to carry any weight.

Lack of good governance

The Reporter: Recently, a high-level government meeting that was chaired by you has underscored the urgency of addressing deficiencies in good governance. The sentiment and the heated and frank discussions reverberated among the public. Nevertheless, what the public observed to be business as usual in the aftermath of the discussion have led many to dub the meeting a "staged drama" of the highest order. What do say to that? And what should the public expect in the near future in this regard. On a related note, some also accuse the Federal Ethics and Anti-corruption Commission (FEACC) of focusing on petty corruption rather than dealing with grand corruption matters. Does your government have a detailed plan to tackle corruption in the coming years?

Hailemariam: To start with, if there is anyone who thinks that deficit in good governance would be addressed in a matter of one month or just because we expressed our determination in that meeting, I would say that the person is very naive. In the first place, it is an issue which can only be addressed through a process which definitely takes time. On the other hand, good governance is not something that trickles from top to the bottom; it is not something that is given by the politicians but improved with active involvement of the public. What I said in that meeting was exactly this: there cannot be an improvement in governance without the determination of the political leadership and the involvement of the public at large. So, what we said in that meeting was that we were reaffirming our determination as political leaders.

Now, that cannot be construed to be a drama or false promise. We were criticized in the past (including by the media) for not being transparent when it comes to such issues. So, what we did was to become transparent and show the public that we are determined to address governance problem. We chose to be honest and straightforward in admitting the existence and the magnitude of the problem. We then tried to understand and locate the source of the problem and decided on what the remedy would be. So, this would defiantly be a process, not a problem that would be addressed in a month or a week. If you think corrupt groups would change their ways just because we went on TV to speak about the problem, you are naive. During that platform, we deliberated on the problems based on a detailed study. For me, that forum was a platform where we understood the nature and the extent of good governance problem in Ethiopia. For me, it is 50 per cent of the work right there.

On the other hand, we went deeper and tried to identify the source of the problem in every sector and aspect of governance. By the way, I do not believe this problem can be addressed in a general discussion; details are very important. After that, the government has put down what it thinks is a solution to bad governance. But, surely, this cannot be a full-fledged solution since the public has to contribute to this solution, which it did. Now, it has evolved to an annual plan and this plan will be evaluated every three months or so. Once we reach that point, we can be evaluated for what we have achieved in that plan. This said, it is also important to note the nature of the problem of good governance.

Climbing a chain of mountains

For me, it is like climbing a chain of mountains where we are able to see only the one mountain that is in front of us. But, once we get to the top, there will definitely be another one to climb. The other aspect is the need to see a shift in the overall mindset of the public in general. For instance, we cannot expect good governance to improve in a society which espouses a mentality of benefiting from quick gains and shortcuts. Every bit of the governance problem is also a societal problem. One thing that should be understood is that the political leadership is also the product and reflection of the society. If the public is complaisant when it comes to lack of good governance and corruption, then the leadership would also nurture such attitudes. This is why we call it a political economy problem. That is why discussing with the public is important; it helps to shape the mindset in hope of nurturing a society that believes in competition not by quick gains and shaving zero-tolerance to misgivings in governance and corruption. With regards to corruption, there are independent studies like the one that was done by the World Bank, confirming that it is petty corruption that is rampant in Ethiopia not grand corruption. It is not to say that grand corruption is totally nonexistent in Ethiopia, but it is the petty corruption and bribery, say for example in the government service-giving sector, that is frustrating the public.

100 per cent election win

The Reporter: At one time, the late prime minister, Meles Zenawi, said that the people gave their votes to the EPRDF on the principle of the lesser evil. This year, the EPRDF and its affiliates secured 100 per cent of parliamentary seats despite your government openly admitting a serious good governance issue. Do you think people will continue to give their votes to EPRDF in such circumstances?

Hailemariam: First of all, we must make a distinction on good governance problems in urban and rural areas. In our discussions, we have identified urban ***land*** system as our main area of focus. Now, we know there are some minor issues in rural ***land*** system, but it is not a fundamental problem for the rural community. However, the urban ***land*** system is the main thriving ground for rent-seekers. That is why we are introducing reforms in the urban ***land*** system. But I do not think EPRDF is the lesser evil. People know what EPRDF's weaknesses and strengths are. So, when they deny us their votes, it is because they know our weaknesses. The same way, those who gave us their votes did so because of our strengths. We have had successive meetings with the public. The fact that there is good governance problem does not mean the EPRDF has not done anything good. There are huge achievements the world testifies to. [Passage omitted]

the Reporter: There does not seem to be a clear image with regards to the overall evaluation of the Growth and Transformation Plan (GTP I). While some government officials claim a glaring success, others took it to be a learning curve. Where do you stand?

Hailemariam: We have properly evaluated the GTP I performance by sector as well as at macro level. So, if there is no clarity, it might be down to an individual's level of awareness. [Passage omitted]

Eritrea, Saudi Arabia, UAE

The Reporter: A recent UN monitoring group report indicates that Saudi Arabia and the United Arab Emirates (UAE) have leased the Assab port for 30 years from the Eritrean government in their coalition to fight the Huthis in Yemen. Satellite images have confirmed that warships from these countries docked at Assab port. Is this not an imminent danger to Ethiopia in light of the state of no-peace-no-war situation between Ethiopia and Eritrea, and a UN sanction against the latter? We understand you have held talks in Saudi Arabia in your visit to the country recently.

Hailemariam: First of all, it is clear that Ethiopia has always been trying to normalize relations with Eritrea and we continue to do so, but there are no improvements due to the stubborn nature of the regime in Asmara. We are aware that the regime in Asmara is bent on the agenda of destabilizing Ethiopia. It has been supporting Al-Shabab for which we appealed to the international community that led to a UN sanction. The sanction is still in place and following the monitoring group report you cited, the UN Security Council has extended the sanction. As long as the regime continues with its destabilizing agenda, we said we would respond proportionately and we have been done so several times in the past. We cannot go further than that because we abide by international law.

Saudi Arabia, UAE "will bear the consequences"

And recently, we are aware that Saudi Arabia and UAE, due to their strategic interest in Yemen, are using the port of Assab to launch aerial operations in Yemen. We have held talks with them [Saudi Arabia and UAE]. Their objective is not to support the Eritrean regime but their operation in Yemen. The main issue is the threat it poses to the peace and security of Ethiopia. We have had frank discussions with both countries. They have assured us that they would not be engaged in activities that would endanger the peace, security, unity, growth and development of Ethiopia. They have said this is only a choice of tactical convenience to their operation in Yemen and that they would evacuate the area as soon as the mission is completed. We have also stressed that they will bear the consequences of our response if their operation in the area supports the Eritrean regime's destabilization agenda against Ethiopia. Although we understand their objective, we were not consulted before the countries reached to this agreement. We have a right to protect the sovereignty of our country, and this might depend on the actions of the Eritrean regime. We have told them that Ethiopia absolves itself of any responsibility in case of disruptions to their operation in the area due to our proportionate response to any provocations by the Eritrean regime.

The Reporter: How about the report that they have leased the port of Assab for 30 years?

Hailemariam: We have heard about it but we do not have adequate evidence to substantiate that. They said they do not have such lease agreements. So, I cannot say anything on that on the basis of hearsay without having the necessary evidence.

Opposition leader extradited from Yemen

The Reporter: Where is Andargachew Tsige [opposition leader kidnapped in Yemen and extradited to Ethiopia in June 2014] and in what state is he in?

Hailemariam: He is in prison. He is in the same state as any other prisoner.

The Reporter: He was expected to appear before court as a witness but he did not.

Prime Minister Hailemariam: Well, it is up to the court to ask the prison administration. [Passage omitted]

Foreign currency shortage

The Reporter: The country's foreign currency reserve has impacted various sectors. Those in the banking sector are trading birr for dollar to avail foreign currency. Is this not a challenge for the country in its drive to attract FDI [Foreign Direct Investment]?

Hailemariam: Every nation whose economy was in transition faces foreign currency crunches. China and Korea have gone through the same path. It is not unique to Ethiopia. It will be challenging for the time being but it will improve. That said, the current problem is, as ever, a result of low export performance during the first quarter of the budget year. That improves from the second quarter of the budget year as our export performance, remittances and investment revenues improve. Already, there is no shortage of foreign currency. That is confirmed by the bank as well.

Protests against Addis Ababa master plan

The Reporter: The Addis Ababa and Oromiya Special Zones integrated master plan has caused a huge friction between the government and the public. The experts have finished their work and what remains is a political decision. What is its current state?

Hailemariam: Although the master plan has not entered implementation phase, there are complaints. I would understand if complaints come from people who are affected by the plan during implementation, but the master plan has not been approved yet. A master plan, by its nature, needs the participation of the people. The people should participate at every level. That is why there have been public deliberations. The plan would, inevitably, be implemented in Addis Ababa. When the plan was prepared it is believed that the surrounding Oromiya Special Zones would stand to benefit from the growth of the city.

For example, if a rail network stops within the bounds of Addis Ababa, people in the special zone will not get to benefit from that. The same with water pipelines as well as electric lines. The connectivity would spur economic, infrastructural and people-to-people ties between communities in Oromiya and Addis Ababa. That is why the plan was integrated, but the special zones remain under the administration of Oromiya Regional State, and Addis Ababa will be administered by the city administration. It must be underlined that there are no political implications.

Misleading the public

Now, there are erroneous deductions from this, with some groups misleading the public by claiming that the special zones will be swallowed up by Addis Ababa because of the master plan. That is impossible. Addis Ababa has its own defined territory. It will not expand an inch into the special zones.

The Reporter: Some say, the problems in Addis Ababa are further compounded because those in the administrative positions are not well versed with the psyche of the urban community. What do you say to that?

Hailemariam: Our young leaders at position of power at wereda [district] level in Addis Ababa are mainly the ones who directly deal with the public. They number around 4,000. Except a few, most are from the city and educated in Addis Ababa. They are residents of Addis Ababa. There are also many in sub-cities. For instance, I am not from Addis Ababa. Does that mean I am not allowed to be an administrator in Addis Ababa? I do not think that is the issue. I would agree if there are question marks on their administration capacity in urban settings. What matters is their capacity in urban administration. In the past, there was a problem assigning rural administrators to urban offices. Now, in Addis Ababa, the minimum educational qualification to be appointed in an administrative position is a bachelor's degree. Those below that educational qualification are sent to school. [Passage omitted]

Source: The Reporter, Addis Ababa, in English 28 Nov 15

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[***The potential of One Belt, One Road***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HNC-67H1-JD1P-T4D4-00000-00&context=1516831)

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**Section:** CHINA,CHINESE INFRASTRUCTURE,ONE BELT ONE ROAD,OBOR

**Length:** 6341 words

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**Highlight:** One Belt, One Road "" a simple name for a vastly ambitious and complex project that China hopes will create demand overseas for its excess capacity in areas such as steel, cement and aluminium, and aid the transformation of its economy away from the domestic investment-led model. GlobalCapital explores the potential of this transformational infrastructure investment.

**Body**

There are several reasons why it has become increasingly inappropriate to view infrastructure development through the prism of domestic markets, financial systems or regulatoryregimes.

First, many big ticket infrastructure initiatives are trade-related projects involving two or more countries, most obviously in the transportation sector.

Second, institutional capital looking for longer-dated assets is flowing across borders more fluidly than ever. Witness, for example, the growth in demand for exposure to real assets in general, and infrastructure in particular, among sovereign wealth funds over the lastdecade.

Third, even those infrastructure developments that appear to be purely domestic projects will often have environmental reverberations well beyond national boundaries. After all, ***greenhouse gas*** ***emissions*** don't carry passports or require visas.

The Silk Road trading route

Today, the most striking example of the borderless nature of infrastructure development is China's One Belt, One Road initiative, which aims to foster economic growth and investment along the ancient Silk Road trading route between Europe and the East.

An extensive report on the project published recently by CLSA and CITIC Securities explains that "One Belt" refers to the Silk Road Economic Belt where China plans to invest heavily in infrastructure to underpin its long-term presence in Eurasia. "One Road", meanwhile, is the 21st century maritime Silk Road which will call for the construction of ports and maritime facilities from the Pacific Ocean to the Baltic Sea.

As the CLSA/CITICS guide explains, the initiative serves two key economic objectives for China. First, it creates demand overseas for China's excess capacity in areas such as steel, cement and aluminium. "Difficulty in maintaining rapid investment growth due to heavy local government debt has meant excess capacity cannot be fully used through domestic investment," notes the CLSA/CITICS report.

Second, by expanding and strengthening its trading links with a large block of countries in Asia, the Middle East, Africa and Europe, it supports the transformation of China's economy away from the domestic investment-led model that is no longer as robust as it once was.

Investors agree that this is a significant step in the readjustment of the Chinese economic model. "One Belt, One Road is a smart way for China to develop new markets and secure new investment opportunities, especially for infrastructure-related equipment manufacturers and service providers," says Karine Hirn, a partner at the emerging and frontier markets specialist, East Capital. "Another long-term implication is that as the RMB will be the main currency for One Belt, One Road-related projects, it will support the strategic objective of the Chinese government to internationalise its currency."

The Chinese government says that the principal focus of the One Belt, One Road project is connectivity in areas such as policy, transport, trade and currencies, which will create a number of other benefits across several sectors. As HSBC explains in a recent research note, "the build-up of physical links will have an immediate effect on trade and productivity growth. Other related industries, suchas ***agriculture*** product processing, machinery engineering and tourism, will also develop as the result of better connectivity. Tourism in particular has huge potential given that China is rapidly turning into a nation of holidaymakers."

The HSBC research report puts the geographical scope of the One Belt, One Road project into perspective. This notes that the countries along the ***land*** and sea routes on the Silk Road ***account*** for 63% of the world's population and 29% of global GDP.

In 2014, trade between these countries and China reached $1tr, which is 26% of China's total trade value, and President Xi Jinping is banking on annual trade between China and its One Belt, One Road partners surpassing $2.5tr within the next decade.

The same report notes that according to estimates by the China Development Bank (CDB), the number of cross-border co-operation projects envisaged by the Silk Road plan already exceeds 900 and involves 64 different countries. The total investment value of these projects "" most of which are concentrated in the infrastructure sector "" is estimated at$890bn.

The role of the financial services sector

Bankers are optimistic about the opportunities for trade, investment and job creation that the project will generate. If the initiative is to deliver on its ambitious objectives, however, it will need the full backing of the financial services sector at two levels.

First, China will need to develop and expand its local financial services industry to provide enhanced support in some of the less-developed areas of the country that are pivotal to the project's longer term success. Second, it will need to provide support for the new supranational agencies that will play anchor roles in financing much of the cross-border projects underpinning the project.

As HSBC comments in its research on the Silk Road, "the way the New Silk Road is financed could be the most important factor in terms of the sustainability of the entire initiative." This is why China is channelling investment into a number of projects designed to develop local financial markets along the Silk Road "" including financial centres in Jinbian and Xi'an to serve inland regions and focus on energy transactions.

David Gardner, head of project and export finance at HSBC in Hong Kong, says he is encouraged by the financial firepower and expertise that has already been assembled in support of One Belt, One Road.

"In assessing how it can help investors and developers explore opportunities outside China, the government has used the model of other countries that have been successful internationally," says Gardner. "Japan, for example, set very high standards because companies such as Marubeni and Mitsui are among the best developers in the world. But they did not achieve their global success on their own. They needed the support of liquid and competitive commercial bank debt, and the icing on the cake was provided by JBIC [Japan Bank for International Co-operation] and NEXI [Nippon Export and InsuranceCompany]."

Some of the firepower supporting the One Belt, One Road initiative will be provided by seasoned entities such as China's Export-Import Bank and the China Export and Credit Insurance Corp (Sinosure) which have been supporting China's trade for many years. This will be complemented by the newly created BRICS Development Bank, which has a broad mandate to fund infrastructure and sustainable development projects, and by two new organisations established specifically to help finance One Belt, One Road-relatedprojects.

The Silk Road Fund

The first of these is the $40bn Silk Road Fund, which was established in Beijing in December 2014, and is mandated to "seek investment opportunities and provide monetary services throughout the Belt and Road initiatives," according to the People's Bank of China (PBOC). Aside from the government, the Silk Road Fund's backers are China Investment Corp (CIC), the Export-Import Bank of China and the China DevelopmentBank.

"The Silk Road Fund is a very versatile source of funding, which can provide senior and mezzanine debt as well as equity," says HSBC's Gardner. Details about the fund's investment strategy have so far been sketchy, although the governor of PBOC, Zhou Xiaochuan, has been quoted as saying it will operate like a private equity investor, but with a longer time horizon. It has been reported that the Silk Road Fund, which is adamant that it is a profit-making entity rather than an aid agency, will aim to exit from its investments through a combination of stock market listings and government transfers.

To date, the Silk Road Fund has made three very different investments. The first of these was the Karot hydropower plant in Pakistan, which is a strategically important staging-post on the Silk Road. Another arose from an agreement announced in September with Russia's state development bank, Vnesheconombank, to co-invest in infrastructure and other projects, especially in the electricity and energy sectors. At the same time, the Silk Road Fund signed an agreement with Russia's second largest natural gas producer, Novatek, for the acquisition of a 9.9% stake in a Yamal liquefied natural gas (LNG) project at Sabetta on the Yamal Peninsula in the north of Russia.

Sandwiched between these projects was the announcement of an equity investment in the Italian tyre maker, Pirelli, which at first sight seems to be only very loosely connected with the One Belt, One Road plan.

The role of the Asian Infrastructure Investment Bank

The second newly-established entity designed to support the One Belt, One Road initiative is the Asian Infrastructure Investment Bank (AIIB), which has capital of $100bn and is co-owned by 57 countries, with China holding approximately 30%.

"As well as providing finance, AIIB will add another layer of credibility and bankability which will be important for Chinese developers as they increase their outbound investment," says Gardner. "This will be very valuable in some of the less developed markets on the Silk Road which many of the commercial banks still regard as too risky."

The creation of the AIIB has been controversial from a political as well as an ecological perspective, with some concerns having been expressed that as China is such a large shareholder in the bank, it will effectively enjoy a veto over major issues.

Small wonder, against this backdrop, that the Chinese authorities have emphasised there is no question of the Silk Road initiative being used as an instrument of Chinese regional economic hegemony. When Wang Yang, vice premier of the State Council, spoke about the Silk Road project at the opening ceremony of the China-Eurasia Expo in ÃoerÃ¼mqi inSeptember, he told the audience that it was all about "openness and inclusiveness, [and] joint development based on consultation and mutual benefit".

He added that the Silk Road is, "first and foremost, a trade route" and that China would be scrupulous in ensuring that this would create equal opportunities for all trading partners along it. "China is ready to import more competitive products from other countries along the economic belt, especially non-resource products, so as to promote balanced and sustainable development of trade," hesaid. On a similar note, he promised that China would provide "favourable conditions" for companies in the economic belt to "explore the Chinese market".

Equally significantly, Wang pledged that China would remain committed to a "reasonable division of labour" in Silk Road projects. That may have been a nod to the complaints that have been expressed in some developing countries that Chinese companies often import their own workers for big-ticket infrastructure projects, doing little or nothing to create local jobs.

Ecologically, meanwhile, there have been some suggestions that China may be less meticulous about observing high environmental standards in its overseas investments than it has become within its domestic borders. Some recent press coverage, for example, has reported concerns that the AIIB may take a light touch on some of the environmental and social safeguards that can sometimes slow down projects backed by other multilateral development banks.

Sean Kidney, chief executive of the Climate Bond Initiative (CBI), is prepared to give the AIIB the benefit of the doubt on this score. "We've been encouraged by the statements that have been issued by the AIIB," he says. "The incoming CEO has promised that green finance will be at its core, and we have also heard that AIIB plans to issue green bonds to raise capital, which is fantastic news."

China's green credit guidelines

Kidney says he is also comfortable that the Chinese banks themselves will be as committed to green criteria in their overseas lending activities as they have been in the domestic market, in conformity with the Green Credit Guidelines issued by the China Banking Regulatory Commission (CBRC) in February 2012. According to the IFC, these specified "how to integrate sustainability practices into the lending cycle and [directed] banks to apply them to both domestic and overseas financing".

The WWF, the global conservation organisation, meanwhile, has also acknowledged the significance of the CBRC guidelines for Chinese banks' international activities. It described the publication of the recommendations as "a significant milestone in transforming China's economic development and China's growing overseasinvestments".

The recommendations published by the PBOC's task force on establishing a green financial system should also be reassuring to those who are concerned about environmental best practice in China's international investment and in AIIB's lending policy. The PBOC's report insists that the lending mechanisms supporting OBOR "cannot become channels for Chinese companies to offload outdated and polluting capacities to other Asian developing countries".

In order to safeguard against this risk, the report calls for the AIIB and Silk Road Fund to adopt a "highly transparent environmental disclosure mechanism". Lenders to One Belt, One Road projects, says the PBOC's report, should "not only require the disclosure of environmental and social risks of projects and risk mitigation measures by loan applicants, but also prescribe a minimum value for the percentage of loans to environmental projects and disclose such information in their annual reports."

Strong and well co-ordinated support for One Belt, One Road from the AIIB and the Silk Road Fund will be as critical to its success as the â,¬315bn Juncker Plan is for Europe. "For years, Europe muddled along with no coherent, joined-up strategy to address its infrastructure deficit," says Scott Dickens, global co-head of infrastructure finance at HSBC. "The Juncker Plan creates a co-ordinated strategy for infrastructure investment, and I'd expect One Belt, One Road to do the same for China."

International investors and joint venture partners will also have an important contribution to make to projects developed by Chinese companies along the Silk Road. As HSBC's research explains, this is because the track record of China's overseas investments to date has been unflattering. This points out that between 2005-2014, the value of troubled Chinese investments overseas reached just shy of $200bn, or about 33% of their total international investments over the same period.

"Losing money in developing countries is nothing new for China, international investors or private sector investors in recent history," cautions HSBC. All the more reason why Chinese investors venturing down the Silk Road would be well advised to use as much support as multinational banks and joint venture partners can provide.

Developing the China-Pakistan Economic Corridor

Pivotal to the Silk Road initiative is the development of the western region of China, which has benefited less from the economic boom of the last decade than the heavilypopulated eastern seaboard. "The One Belt, One Road initiative is an important strategic move for China, which has recognised that although the eastern part of China has been an economic success story, there is a lack of development, employment and social infrastructure in the west," saysHSBC's Gardner.

The basic numbers speak for themselves. According to research published recently by HSBC, the central and western provinces cover a third of China's territory and are home to about a fifth of its population. But its railway density is just 6km per 1,000km sq, well below the national average of 10km "" which is why these less-developed regions ***account*** for most of China's planned Rmb800bn ($125.22bn) investment in its railway system in 2015.

Infrastructure development in this region will create substantial opportunities for overseas as well as local companies. This explains why, on his recent visit to China, Chancellor of the Exchequer George Osborne became the first British minister to visit the northwestern province of Xinjiang, which has extensive resources of minerals, oil, gas and coal. "I want Britain to be connected to every part of this vast nation," said the chancellor in a speech in Shanghai the day before he headed west to ÃoerÃ¼mqi, capital of Xinjiang.

The development of Xinjiang means the province will play a central role in the ambitious $45bn, 3,000km China-Pakistan Economic Corridor (CPEC) project, which aims to connect Kashgar in Xinjiang with the warm-water port of Gwadar. Located 130km from the Iranian border and 380km north-east of Oman, Gwadar is strategically positioned close to the Strait of Hormuz, giving it easy access to a key shipping route in and out of the Persian Gulf.

Built in 2007 with technical and financial assistance from China, Gwadar's deep-water port is regarded by China as a strategic link to the Middle East, Africa and Europe. Asignal of that commitment was the agreement signed by China Overseas Port Holding Company (COPHC) in 2013 to manage the port at Gwadar for the next 40 years.

China's commitment to the development of Gwadar is bold, given its location in Baluchistan "" Pakistan's poorest and least-developed region, where 46% of the population reportedly living below the poverty line. It is also one of its most restive, and has been vulnerable to sporadic terrorist attacks.

As part of its commitment to the China-Pakistan Corridor, the Chinese government is reported to have agreed to build 18 new power plants, half of which will be coal-powered. China will also support the construction of five wind farms, three hydroelectric projects and one solar plant, all of which will be crucial to Pakistan's economic development. According to CLSA's research, Pakistan's peak power demand is 18,000MW, but the country's total power generation capacity is just 12,000MW. "The power shortage of 6,000MW implies a lot of opportunities for China to co-operate with Pakistan in this field," CLSA advises. Pakistan's government has calculated that the country's energy shortfall results in a loss to GDP of between 4%-7%.

In order to start addressing the formidable challenge of power shortages, in 2008 Pakistan's Water and Power Development Authority (WAPDA) launched a national water resource and hydropower programme, which is part of Pakistan's broader development agenda known as Vision 2025, aimed at making Pakistan "the next AsianTiger".

In the energy sector, Vision 2025 calls for a doubling of the country's power generation, to provide "uninterrupted and affordable electricity", and to increase electricity access from 67% to more than 90% of Pakistan's population.

The Karot hydropower blueprint

One of the first projects to benefit from the Silk Road Fund is the 720MW, $1.4bn Karot hydropower plant on the Jhelum River in the northeast of Pakistan, which will be jointly developed by China Three Gorges South Asia Investment Ltd (CSAIL) and Pakistan's Private Power and Infrastructure Committee. The plant, which is due to be built by 2020 and transferred to the government after 30 years of operation, is expected to create about 3,500 local jobs and generate enough power to provide electricity for some seven million homes.

The Silk Road Fund's co-investors in Three Gorges Investment are PBOC and the IFC, with loans provided by China Exim Bank and CDB.

According to the environmental and social impact assessment of the Karot project, there will be negative ecological and social side-effects, with a number of families needing to be rehoused and the habitat of the endangered golden mahseer fish disrupted, but the net impact on ***emissions*** will be beneficial, producing some 1.6m tonnes of CO2 fewer than a fossil-fuelled plant.

More broadly, projects in CEPC's pipeline will be highly supportive of continued economic expansion in Pakistan, which posted GDP growth of more than 4% in fiscal 2014-15. According to the IMF, the lion's share of the total investment envisaged under the CEPC will be ***accounted*** for by energy, which calls for $33.8bn, with transportation projects requiring the remaining $10.6bn. The transportation infrastructure developments are due for completion by 2017-18, while priority projects in the energy sector are scheduled to add 10,000MW of new capacity by 2017-18 (by 2020 for hydro projects). A further set of promoted projects is planned to add another 6,500MW of capacity "in due course", according to the IMF.

The IMF adds that the methods of financing transportation and energy projects differ. Transport infrastructure developments will be exclusively financed by long-term government-to-government loans on concessional terms. Energy-related projects, meanwhile, will be FDI-based, financed by commercial loans from Chinese financial institutions to Chinese investors, which will undertake construction of all projects in collaboration with local Pakistani partners. Energy sales by independent power producers (IPPs) will be guaranteed by the government of Pakistan through power purchase agreements (PPAs) at tariffs pre-determined by the National Electric Power Regulatory Authority (NEPRA).

Given that Pakistan is to be one of the earliest beneficiaries of One Belt, One Road, economists will keep a close eye on the broader economic impact of the infrastructure investment and stronger trade links created by the Silk Road initiative.

The IMF is encouraged by what it has seen so far, commenting that CPEC has the potential to raise productivity and growth as long as the projects are well managed and the risks are efficiently mitigated. Imports, says the IMF, will probably rise as Chinese contractors bring in a large share of the required machinery and raw materials. "However," adds the IMF, "supply-side effects facilitated by higher power generation capacity (including through FDI) and better infrastructure, will be beneficial for economic growth in the medium term."

Analysts also appear to be encouraged by the economic impact that One Belt, One Road will have on the less-developed countries located on the Silk Road. Moody's says that it regards the initiative as credit positive for emerging market sovereigns.

The agency commented in a report published in July that the main beneficiaries will be "smaller sovereigns with relatively low per-capita incomes, financing constraints on their current ***account*** positions, and low investment rates".

Supporting development in Bangladesh and Myanmar

Aside from Pakistan, the most notable beneficiaries of the One Belt, One Road initiative may be the countries located on the other economic corridors that the project is looking to develop. Foremost among these is the 2,800km Bangladesh-China-India-Myanmar (BCIM) EconomicCorridor.

The East Asian Forum calls this a "win-win arrangement" for the countries involved, which between them ***account*** for 9% of the global ***land*** mass, but 40% of the world's population. According to the East Asia Forum, intra-regional trade ***accounted*** for just 5% of the total in BCIM countries in 2012, compared with 35% in the ASEAN region in southeast Asia.

The development of a more efficient transportation infrastructure connecting BCIM countries is expected to increase this share, especially if China delivers on its plan to construct a high-speed rail link between Kunming and Kolkata in Bengal. It has been reported that this high-speed line, which would pass through Mandalay in Myanmar as well as the strategic port of Chittagong in Bangladesh, is a candidate for funding from the AIIB and the Silk Road Fund. "To date," comments the East Asian Forum, "South Asia has not come close to enjoying the same economic success that East Asia has reaped. BCIM might well be the game changer that South Asia needs."

Bangladesh's infrastructure could certainly use the sort of game-changer that Chinese capital could bring via the One Belt, One Road scheme. The scale of this capital is not to be sniffed at, with Bangladesh reported to be in negotiations with China over a $13bn loan to finance the production of 24,000MW of electricity by 2021.

It is not just Bangladesh's energy sector that is in desperate need of investment. According to CLSA's research "" which describes the country's traffic as "appalling" "" paved road coverage in Bangladesh is just 9.5%, flooding is common and maintenance costs are high. As CLSA remarks, it takes 24 hours to drive from the capital, Dhaka, to the port of Chittagong, even though the distance between the two cities is only 240km. The result is a woeful under-development of Bangladesh's export potential: "The manufacturing export industry in Asia depends on processing imported parts and transport conditions mean that Bangladesh cannot participate well in this production change," says CLSA.

Closer trade links generated by the BCIM will also be especially appealing for Myanmar, which has set out on apath of reform in 2014 after decades of economic isolation.

A recent analysis by McKinsey describes Myanmar as a "highly unusual, but promising prospect for businesses and investors "" an underdeveloped economy with many advantages in the heart of the world's fastest growing region."

The World Bank recently scaled back its estimate of economic growth in Myanmar in 2016, from 8.2% to 6.5%, but as McKinsey says, if the country can accelerate its labour productivity growth, Myanmar has the potential to grow at 8% a year.

Beyond South Asia, the other economic corridors which are part of the huge One Belt, One Road plan will have important repercussions for economic growth and infrastructure investment in countries ranging from Mongolia and Russia to the five Central Asian republics of Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan, as well as in the Middle East and parts of Europe. The new Eurasia ***Land*** Bridge, for example, proposes to link Lianyungang in China's Jiangsu province with key ports in Europe, while the China-Central Asia-West Asia Economic Corridor, which extends from China in the East to Iran and Turkey in the West, will unlock opportunities throughout the resource-rich countries of CentralAsia.

A transformational impact

Moody's notes that "the new silk roads could have a transformational impact for smaller, infrastructure-impoverished countries in South and Southeast Asia, by spurring investment and boosting economic growth potential". This suggests that the project could kickstart a virtuous circle for infrastructure finance across the region by strengthening credit ratings, supporting the evolution of local capital markets and making projects more bankable.

Although much of the One Belt, One Road project has not yet progressed beyond the drawing board, China's leading banks have already started to mobilise capital in support of the initiative. In June 2015, for example, Bank of China (BoC) became the first of the banks to issue a bond explicitly for Silk Road purposes.

The $3.55bn (equivalent) transaction was a four-currency issue, raising US dollars, euros, Singapore dollars and renminbi, on which Barclays, Citi, DBS and HSBC joined BoC as global co-ordinators across all fourtranches.

A number of heavyweight Chinese investors have also already made a significant commitment to the One Belt, One Road initiative. Citic, for example, has announced plans to invest over CNY400bn in more than 200 Silk Road projects. It has also setup a CNY20bn One Belt, One Roadfund.

Bankers say they are also encouraged by the response of the Chinese corporate sector to the opportunities being opened up to them by the One Belt, One Road scheme. "We've had a number of discussions with many of the Chinese infrastructure developers, and a common theme among them is that 90% or 95% of their revenue still comes from the domestic market," says HSBC's Gardner. "They recognise that they need to grow their overseas business, but they are also very cognizant of the constraints to international growth."

Already, there is evidence that in the renewables sector, Chinese companies are benefiting from the One Belt, One Road initiative. Goldwind is explicit about this in its 2014 annual report, commenting that "China's "~New Silk Road' strategy supported Goldwind's success in the overseas market". Goldwind completed its first project in Pakistan in late 2014, which the company says will "help to relieve a shortage of power, improve the energy structure and promote economic and social sustainable development in Pakistan".

Elsewhere along the Silk Road, Goldwind has also won orders in countries ranging from Thailand to Serbia and Romania. Further afield, in April 2014 it won its largest overseas order in the form of a 215MW mandate from Panama "" which can hardly be said to be on China's Silk Road. Another of China's largest wind farm companies, Sinovel, has sold wind turbines to Turkey and Sweden.

Exporting China's infrastructural know-how

Global infrastructure investment opportunities for a number of other Chinese companies also extend well beyond those directly created by the One Belt, One Road project.

According to research published recently by HSBC, in 2014 China's outward direct investment (ODI) exceeded the foreign direct investment (FDI) it attracted for the first time.

As this process accelerates, it is probable that Chinese companies will increasingly look to export their know-how in sustainable infrastructure development.

"You only need to visit China and use the high-speed rail system to see that it is starting to lead the world in terms of infrastructure development," says HSBC's Dickens. "China is now focused on starting to export some of that technological and construction experience. Be it in high speed rail, nuclear or renewables, China has a lot of knowledge as well as capital to put to work across the world."

This process is already gathering traction. Look, for example, at the recent creation by China Railway Corp of China Railway International, which is co-ordinating the company's overseas investments and has been chalking up new mandates across the globe. In September, for example, it was announced that the joint venture between China Rail International USA and XpressWest had won a mandate to develop, finance, build and operate the high-speed Southwest Rail Network between Los Angeles and Las Vegas.

China Rail International reports that it is now "executing and implementing" projects in countries ranging from Venezuela and South Africa to Indonesia, Malaysia andNigeria.

Co-operation between China and Europe

While demand for environmentally-sound technology is one area that some Chinese companies are looking to explore as a source of international diversification, others may arise from Europe's huge infrastructure investment requirement. China has already indicated that it stands ready to support the Juncker Plan, with some reports suggesting it is prepared to invest as much as â,¬10bn in Europe's new infrastructure fund.

Speaking at the 10th EU-China Business Summit this summer, EC President Jean-Claude Juncker said that Europe is as eager to play a role in One Belt, One Road as China is to invest in the blueprint for reinvigorating Europe's infrastructure that bears his name. "We see the project as an open hand, an invitation to connect China and Europe better than ever before," he said. "China and the European Union should now bring together know-how, resources and other strengths to make sure we succeed. The ambition of our response should be equal to the scope of the project itself."

For both sides, Chinese support for the Juncker Plan is seen as cementing economic and trading relations which have strengthened significantly in recent years and are expected to grow in importance over the coming decade. In his keynote address to the recent EU-China Summit, the Premier of China's State Council, Li Keqiang, said that he hoped trade between China and Europe would reach at least $1,000bn by 2020, which compares with a little over â,¬500bn in 2014.

China's enthusiasm for the Juncker Plan, say a number of market participants, contrasts with the lukewarm approach to sustainable infrastructure investment of many European politicians. "Governments like China's and India's have been far more aggressive in formulating green infrastructure investment plans than Europe's," says CBI CEO Kidney. "In Europe, governments are saying they can't invest in infrastructure because they're in an austerity phase. But infrastructure investment is precisely how you climb out of recession and create jobs."

This argument appears to be borne out by recent research from Standard &amp; Poor's (S&amp;P) on infrastructure investment's economic impact. "In Europe," this advises, "investment in infrastructure is lower than a decade ago and we believe this low investment has been a major cause [of] the slow recovery in the EU economy "" moreover, chronically weak capital spending endangers future growth."

The numbers are eye-catching. S&amp;P estimates that for each additional â,¬1 allocated to public sector investment in 2015, â,¬1.4 would be added to real GDP between 2015- 2017. "At the same time," says S&amp;P, "such an increase would add around 627,000 jobs in the Eurozone and more than a million in the EU." With the EU's unemployment rate at 9.3% in September 2015, governments should take note.

Implications for the green capital market

Kidney argues that as well as stoking growth and creating employment, the financing of the Juncker Plan should have a decisive role to play in underpinning the expansion of the green capital market. "The ECB's charter says that it is meant to meet the social and political goals of the union," he says. "What better way to do that than to include green bonds in the ECB's asset-purchase programme? If this were to happen it would ignite a rush of green bond issuance.

"I'm a great fan of the Juncker Plan, but policymakers' support for it has been extraordinarily light. By failing to wash it through a green filter, we are missing an unbelievableopportunity."

|  |  |  |
| --- | --- | --- |
| - | Looking for investment opportunities on the Silk Road | - |
| - | Meet the man who says he has the best job in the world. As portfolio manager of the London-based Alquity Asian ESG Fund, Mike Sell's job is to trawl emerging markets hunting for companies that combine the best ESG standards with the brightest growth prospects. The two, says Sell, are symbiotic. "If you're reducing your energy usage it's not just good for the planet because you're reducing your ***greenhouse gas*** ***emissions***," he says. "It's also good for your bottom line because you're reducing your costs."About 40% of the assets in the $20m equity fund managed by Sell are in the frontier markets located along China's Silk Road, with approximately 15% in Vietnam, 5% in Pakistan, 5% in Bangladesh and 4% in Myanmar. These are four of the frontier markets dubbed Asia's "~super seven' by Alquity, with Sri Lanka, the Philippines and India making the others in the septet."The exposure of most investors in Asia is concentrated around China, Korea, Taiwan and Malaysia," says Sell. "While I'm sure there are plenty of good investment stories in those markets, we think the most exciting growth opportunities are to be found in the region's frontier markets."Sell says it is too early to judge how the super seven "" let alone individual stocks within these markets "" have been impacted by China's One Belt, One Road initiative. But he says the longer term spill-over from Chinese investment into infrastructure along the Silk Road will be considerable. He points to Pakistan, which is set to receive close to $50bn in Chinese investment over the next few years, as one of the most compelling examples."For Pakistan, this is a mind-numbingly large amount which will have incredibly powerful implications for growth and development," hesays.The size of the planned Chinese investment in Pakistan is put into graphic perspective in a recent HSBC research bulletin. This notes that the $46bn of investment identified under the Silk Road project compares with a historical annual average total of inbound investment over the last five years of just $2bn. Small wonder that it is not just frontier specialists like Alquity that are weighing up opportunities for equity investment in Pakistan. Having been ejected from the MSCI emerging markets index in 2008, in response to the temporary closure of the Karachi Stock Exchange, Pakistan isexpected to be reinstated in 2016, which should kick start a virtuous circle for investors."We're not benchmarked, so the inclusion of Pakistan in the index won't affect our fund directly," says Sell. "But it will mean that the market attracts plenty of passive money. That will bolster liquidity, which will make me and my investors very happy."Curiously, given that it has uncovered compelling opportunities in markets like Myanmar and Laos, the country where Sell's fund has struggled to find companies that meet Alquity's ESG requirements is China. "Whilst Chinese construction companies are winning a lot of orders as a result of the One Belt programme, very few meet our governance criteria," hesays. "They may be perfectly good companies but they are not sufficiently transparent for us." He says that the only notable exception, China State Construction "" which is in the Alquity portfolio "" is a domestic-oriented group which has not been a beneficiary of the One Belt, One Road initiative.Karine Hirn, partner at the emerging and frontier market specialist, East Capital, agrees that Chinese companies have the most to gain from One Belt, One Road in the short to medium term."The main beneficiaries will be Chinese train manufacturers, nuclear power companies, telecoms equipment manufacturers and banks, because they will be the preferred contractors and financiers for the projects," she says. For stock pickers, however, she says that the challenge will probably be to sift the genuine winners from companies hyped by the broking community. | - |
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[***Operation & maintenance - The road to climate resilience.***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JSY-HXK1-JD7R-X0MJ-00000-00&context=1516831)

Water Power & Dam Construction

May 1, 2016

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**Highlight:** The impact of climate change on precipitation patterns is likely to affect power production the world over, but the hydropower industry is being reminded that this should not always be viewed as a threat. In many cases plant designers and operators will be able to seize the opportunity and maximise the benefits of climate change. Suzanne Pritchard reports.

**Body**

Power plants across the world could be affected by changes in precipitation patterns, which are combining with increasing competition between water users to adversely affect the resilience of energy services," warns Christoph Frei, Secretary General of the World Energy Council (WEC). "The energy-water-food nexus poses a systematic risk which could impact the robustness of energy and supply demand over many years to come."

While there is still a great deal of uncertainty about future projections of precipiataion, UN estimates suggest that by 2030 there could be a 40% global shortfall of available water. With 98% of electric power generation comprising hydro and thermoelectric power plants which are water-dependent, a new study published in Nature Climate Change indicates this could lead to reductions in production capacity for more than 60% of power plants from 2040-2069. Using data from 24,515 hydropower and 1427 thermoelectric power plants, Van Vliet et al's research is described as examining the links between climate change, water resources, and electricity production on a global scale.

The report's authors say the US, southern South America, southern Africa, central and southern Europe, Southeast Asia and southern Australia are vulnerable regions, because declines in mean annual streamflow are projected, combined with strong increases in water temperature under a changing climate. This could reduce the potential for hydropower generation in these regions, the report states.

This study has however been widely criticised in the hydropower community on a number of methodological points, particularly because the most advanced climate models show high variability at the regional scale, especially with regards to precipitation, which means there is a level of uncertainty at the river basin level as to a net positive or negative impact on hydropower generation in the decades to come. In addition, the authors do not take into ***account*** that storage hydropower projects increase the availability of freshwater not only for hydro, but also for other water uses. In addition to hydro's contribution to climate mitigation through its low-carbon characteristics, it's storage and flexibility facilitates the increased use of other clean energy solutions, further mitigating ***greenhouse-gas*** ***emissions***. Reservoirs will provide an increasing range of climate adaptation services in the context of increased hydrological variability and uncertainty about future climate conditions, a point which the paper omits in its survey of potential adaptation measures.

Cross-border co-operation

In an effort to counter problems with future access to water, cross-border co-operation is described as being 'vital'. Christoph Frei from WEC believes that we should be taking advantage of the 261 international trans-boundary basins that cover 45% of the earth's ***land*** surface.

"Clear co-ordination and planning needs to take place now or we will start to see the effects of water scarcity on energy supplies in the very near future," he adds. "Energy resilience can only be achieved by moving from individual to joint efforts."

Calling for immediate action in order to secure resilient energy infrastructure, the World Energy Council (WEC) has released the early findings of its new report: "The road to resilience - managing the risks of the energy-water-food nexus". Supported by a task force of over 140 experts from across the world, its key findings are that:

- Energy is the second largest freshwater user after ***agriculture***.

- The risks posed by the energy-water-food nexus will become more significant because of growing demand for energy, water and food. Some of the currently water stressed regions are also likely to see significant economic development, population growth and changing consumption patterns; intensifying the risks posed by the nexus.

- In many cases, there is a lack of location-specific knowledge on water issues and a lack of modelling tools to adequately reflect risks posed by the nexus in energy infrastructure investment decisions. Such risks can be associated with large economic stakes: in 2015, hydropower facilities in Brazil sustained economic losses of more than US$4.3B due to drought-related energy and water rationing measures.

- The risks posed by the nexus are often exacerbated by the lack of sound water governance.

- Cross-border co-operation is a key issue: 261 international trans-boundary basins cover 45% of the earth's ***land*** surface, serve 40% of the world's population and provide 60% of the earth's entire freshwater volume. This affects the operation of planned and proposed energy infrastructure, and there is a need to ensure that adequate cross-border water management frameworks are in place.

- Alongside growing demand, increasing uncertainty about water availability and quality - driven by climate change impacts, increased ocean temperatures and more extreme weather - will further increase the significance of risks posed by the nexus.

Hydropower survey

As the International Hydropower Association (IHA) acknowledges, climate change brings an unfamiliar set of risks and limited experience in how to address them. With the support of Mott MacDonald, the association recently conducted a survey of hydropower companies worldwide in an attempt to gain a better understanding of how the industry views climate threats and opportunities.

When asked if the impacts of climate change were already being felt through their organisations, 63% of respondents stated yes, with 36% believing that impacts will be felt within the next 30 years. Potential impacts were identified as being changes to flow variability, extreme weather events and changes to mean flow - all of which were cited as being of moderate or significant risk by respondents. Operational risks were cited as being the main type of climate risk for hydropower companies, with loss of production the highest indicator of whether or not climate change can impact an organisation.

"Hydropower systems are characterised by their longevity, and are traditionally designed on the basis of historical hydrological data. However, under climate change, the past is no longer a reliable indication of the future," Tracy Lane, programme director of hydropower development at IHA, explains. "Decision-makers must consider how to prepare for potential impacts of climate change through the development of systems - both physical and corporate - that are capable of absorbing change. In particular, decision-makers must act today with data and information that may or may not prove reliable over the longer term."

US perspectives

The impact of climate change on water sustainability has also come under the national spotlight in the US. "One of the greatest challenges we face is dealing with the impacts of climate change on our nation's water, which is really the lifeblood of our economy," says Deputy Secretary of the US Department of the Interior, Michael L Connor. "We need to continue to develop collaborative strategies across each river basin to ensure that our nation's water and power supplies, ***agricultural*** activities, ecosystems, and other resources all have sustainable paths forward."

In March 2016 the Department of the Interior, together with the US Bureau of Reclamation (USBR), released a basin-by-basin report on the impacts of climate change in the western states. As the largest manager and wholesaler of western water, USBR says that it has a responsibility to consider potential risks to its water supplies. With dams and hydropower plants constructed in 17 western states, USBR provides more than 10T gallons of water for municipal use each year, as well as irrigation water that contributes to the production of 60% of US vegetables and 25% of its fruit and nuts. In addition, Reclamation's 53 power plants generate more than 40BkWh of electricity annually.

Having identified climate change as a growing risk to western water supplies, USBR is working towards implementing measures to ensure it will be managed as effectively and sustainably as possible.

The SECURE Water Act Report says that water supply, quality and operations; hydropower; groundwater resources; flood control; recreation; and fish, wildlife and other ecological resources in the western states remain at risk from climate change. Specific projections in the report include:

- A temperature increase of 5-7 degrees Fahrenheit by the end of the century.

- A precipitation increase over the north western and north-central portions of the western US, and a decrease over the southwestern and south-central areas.

- A decrease for almost all of the April 1st snowpack, a standard benchmark measurement used to project river basin runoff.

- A 7 to 27% decrease in April to July stream flow in several river basins, including the Colorado, the Rio Grande, and the San Joaquin.

USBR says that it is already addressing such vulnerabilities through adaptation strategies being developed with water managers across the west. "Reclamation, its customers and stakeholders have adapted to various climate conditions for more than 100 years," says USBR Commissioner Estevan Lopez. "Now changing climate is creating a greater challenge; but through collaboration and co-operation, we will work to ensure a sustainable and secure water supply now and into the future."

Collaboration

Collaboration is key to IHA's activities. Working with international organisations such as the World Bank Group and European Bank for Reconstruction and Development, the association is striving to build knowledge and identify good practices when incorporating climate resilience into hydro project development, operations and modernisation.

In November 2015 the World Bank and IHA convened a workshop to review current understanding about climate change and discuss a common way forward. One encouraging observation was that collaborative partnerships are currently being developed throughout the industry. Indeed in its survey, IHA found that 60% of respondents are working with research organisations to better understand climate change, while others are also working with scientists to forecast future impacts.

Landsvirkjun for example has participated in the Nordic Climate Change Project, working with over 100 scientists and 30 organisations to project future climatic conditions in Iceland, Greenland and Scandinavia. While French electricity generation company, Compagnie Nationale du Rhone, partnered with Meteo France to study the impact of climate change on the availability and management of water resources in the south-west of France.

Other innovative partnerships described by IHA include the Ouranos Consortium which comprises Hydro-Quebec, Rio Tinto Alcan, Manitoba Hydro, Ontario Power Generation, and the water authority of Quebec. They are studying and exploring potential climate adaptation measures, such as future changes in probable maximum precipitation. In addition the European Bank for Reconstruction and Development is facilitating a partnership between Barki Tojik, the state-owned utility in Tajikistan, and Hydro-Quebec/Ouranos to support skills transfer and capacity building around best international practices in climate resilience and adaptation measures.

Although the majority of respondents in IHA's recent survey are well aware of the need to develop climate-resilient infrastructure, 74% said that their organisation did not have existing guidelines on the topic, with 83% adding that sector guidelines would be useful. IHA stressed that such guidelines should be developed in partnership between businesses, the finance sector, and the academic community. They should take into consideration recent experiences and current initiatives, while a common international approach would be particularly useful.

Changing climatic conditions are already having palpable effects on the sector, according to IHA, and these impacts are only expected to become more pronounced in the future. Current uncertainty surrounding climate change means that hydropower businesses are faced with the economic impacts of either decreased or increased generating capacity, while developers and operators will need to make design and operational changes to improve climate resilience. However, as IHA warns, it is important not to take such challenges out of proportion. Developers and operators are already dealing with a range of risk (including hydrological variability) and, although climate risk must be incorporated into these processes, IHA says that risk management should continue to be business as usual.

It is generally accepted that climate change will affect precipitation patterns but this could potentially create new opportunities for the hydropower sector: as 70% of IHA survey respondents agree. They believe there will be potential opportunities for adaptation services such as flood protection and drought management; expanded roles in energy system balancing; an increased need for reservoir services; and increased power generation.

Indeed such hydro opportunities were illustrated at the joint IHA/World Bank workshop. Iceland was given as an example where the generation capacity of the current hydro system has already increased by 8% due to warming. The same system will only be able to exploit 30% of additional energy brought by future projected increases in glacial runoff, so there is a need to increase capacity at existing plants.

Meanwhile, in order to optimise productivity due to increasing climate variability, the Qairokkum hydropower plant in Tajikistan is being rehabilitated to increase installed capacity from 126MW to 174MW.

A flexible approach

The importance of a flexible project design is vitally important in a world faced with the prospect of climate change. IHA has reiterated that it is necessary to understand and prepare for adaptations which may be required at a later date, but it is not always necessary to build all of these immediately.

"Hydropower developers must carefully assess if they are investing in a region where climate change is expected to have a positive or negative impact on hydropower production," says Martin Fuchs, chief hydrologist and head of the hydro-consulting section at Poyry Hydropower. "Knowing about the expected changes will allow developers to adapt plant design and operation to maximise the benefit from climate change, or to mitigate adverse impacts."

Fuchs acknowledges that issues of climate resilience and climate change adaptation have become increasingly important for large infrastructure investments. "In water resources management and hydropower development there is a concern that climate-induced changes in the flow regime might have adverse impacts on technical and economic project viability," he said, adding that this not only applies to new investments but existing infrastructure as well. "However," he stresses, "it is often forgotten that for hydropower assets, climate change is not always a threat but in many cases also an opportunity."

SECURE WATER ACT REPORT - IMPACTS OF CLIMATE CHANGE

According to the USBR basin-level impacts of climate change will be experienced as indicated below:

Southern California: In Southern California, warming and population growth are projected to increase water demand, reliance on imported water and the use of groundwater in the area, leading to development of alternative water supplies, such as recycled water.

Colorado River Basin: Described as a critical resource in the west, seven basin states (Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming) depend on the Colorado River for water supply, hydropower, recreation, wildlife and fish habitats and other benefits. Reductions in spring and early summer runoff could translate into a drop in water supply for meeting irrigation demands and adversely impact hydropower operations at reservoirs.

Columbia and Missouri River Basins: The Missouri is the longest river in the US. It encompasses one-sixth of the country and USBR has more than 40 dams on river tributaries. The Columbia River is the fourth largest river system in North America and has more than 400 dams providing hydropower to meet up to 80% of electrical needs in the northwest, flood storage, irrigation and navigation for 17M tons of cargo annually. Climate change will mean that moisture falling as rain instead of snow at lower elevations will increase the runoff during the wintertime rather than the summer, translating to reductions for meeting irrigation demands, adversely impacting hydropower operations, and increasing wintertime flood-control challenges.

Klamath and Truckee River Basins: The Klamath project provides irrigation for 850km2 of cropland and surplus water is diverted for use in water deficient areas of California's Central Valley. Warmer conditions may result in increased stress on fisheries, reduced salmon habitat, increased electricity demand, increased water demands for in-stream ecosystems and increased likelihood of invasive species' infestations.

Sacramento and San Joaquin River Basins: Earlier season runoff combined with a potential for increasing upper watershed evapotranspiration may reduce the capacity to store runoff in Reclamation's Central Valley Project and state water resources reservoirs.

CLIMATE CHANGE KNOWLEDGE NETWORK

IHA has established a new forum called the Climate Change Knowledge Network. This aims to bring together IHA members and external experts to foster discussion and build and share knowledge on climate-related topics, including resilience and adaptation. Contact [*climate@hydropower.org*](mailto:climate@hydropower.org) for more details.

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[***FIDELITY JAPANESE VALUES PLC - Final Results***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JF8-YVW1-DXP3-R3DG-00000-00&context=1516831)

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**Body**

Fidelity Japanese Values PLC

Final Results

For the year ended 31 December 2015

Investment Objective and Performance

The investment objective of the Company is to achieve long term capital growth from an actively managed portfolio of securities primarily of small and medium sized Japanese companies listed or traded on Japanese stockmarkets.

|  |  |
| --- | --- |
| Performance (year ended 31 December 2015) |  |
| Net Asset Value ("NAV") per Ordinary Share Total Return - undiluted | +24.6% |
| Ordinary Share Price Total Return | +20.5% |
| Russell Nomura Mid/Small Cap Index Total Return (in sterling terms)\* | +19.4% |
| \* The Company's Reference Index |  |
| As at 31 December 2015 |  |
| Equity Shareholders' Funds | £116.0m |
| Market Capitalisation | £99.8m |
| Capital Structure: |  |
| Ordinary shares of 25 pence each | 114,218,356 |
| Subscription shares of 0.001 pence each | 22,527,339 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Standardised Performance - Total Return (%) |  |  |  |  |  |
|  | 01/01/2015  to  31/12/2015 | 01/01/2014  to  31/12/2014 | 01/01/2013  to  31/12/2013 | 01/01/2012  to  31/12/2012 | 01/01/2011  to  31/12/2011 |
| NAV per ordinary share - undiluted | +24.6 | +3.1 | +31.8 | -6.6 | -6.2 |
| Ordinary share price | +20.5 | ?0.0 | +39.5 | -1.7 | -8.3 |
| Russell Nomura Mid/Small Cap Index (in sterling terms) | +19.4 | +5.1 | +21.7 | -3.1 | -9.3 |
| Sources: Fidelity and Datastream  Past performance is not a guide to future returns |  |  |  |  |  |

Financial Summary

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 2015 | 2014 |
| Assets at 31 December |  |  |  |
| Total portfolio exposure1 |  | £135.3m | £113.5m |
| Shareholders' funds |  | £116.0m | £92.9m |
| Total portfolio exposure in excess of shareholders' funds |  | 16.6% | 22.2% |
| NAV per ordinary share - undiluted |  | 101.56p | 81.48p |
| NAV per ordinary share - diluted2 |  | 99.08p | n/a |
| Stockmarket data at 31 December |  |  |  |
| Russell Nomura Mid/Small Cap Index (in sterling terms) |  | 2.7042 | 2.2654 |
| Yen/£ exchange rate |  | 177.303 | 186.946 |
| Ordinary share price at the year end |  | 86.75p | 72.00p |
| year high |  | 88.00p | 75.75p |
| year low |  | 71.00p | 64.75p |
| Discount - undiluted at the year end |  | 14.6% | 11.6% |
| year high |  | 17.7% | 17.8% |
| year low |  | 6.7% | 2.8% |
| Subscription share price at the year end |  | 3.13p | 4.25p |
| year high |  | 7.25p | 4.25p |
| year low |  | 1.50p | 3.75p |
| Total returns for the year to 31 December |  |  |  |
| NAV per ordinary share - undiluted |  | +24.6% | +3.1% |
| Ordinary share price |  | +20.5% | +0.0% |
| Russell Nomura Mid/Small Cap Index (in sterling terms) |  | +19.4% | +5.1% |
| Results for the year to 31 December |  |  |  |
| Revenue loss per ordinary share |  | (0.14p) | (0.45p) |
| Capital return per ordinary share |  | 20.24p | 2.91p |
| Total return per ordinary share |  | 20.10p | 2.46p |
| Ongoing charges for the year to 31 December3 |  | 1.52% | 1.62% |

1   The total exposure of the investment portfolio, including exposure to the investments underlying the long CFDs

2   There was no diluted net asset value per ordinary share at 31 December 2014 as the net asset value per ordinary share was below the 86.50 pence exercise price of a subscription share

3   Ongoing charges (excluding finance costs and taxation) as a percentage of average net asset values for the reporting year (prepared in accordance with methodology recommended by the Association of Investment Companies)

Chairman's Statement

I have pleasure in presenting the Annual Report of Fidelity Japanese Values PLC for the year ended 31 December 2015.

PERFORMANCE REVIEW

Despite the major setback suffered by the Japanese market in the second half of 2015, arising from concerns over the slowdown in China and the likelihood of a rise in US interest rates, I am pleased to be able to report that over the year to 31 December 2015, the Company's net asset value rose by 24.6% to 101.56p per share, substantially beating the Russell Nomura Mid/Small Cap Index, which rose by 19.4% in sterling terms. The share price also went up, but only by 20.5% per share to 86.75p, as the Company's share discount to NAV widened to 14.6%. This was in line with a widening of discounts for Asian investment trusts and emerging market funds generally.

PORTFOLIO MANAGER

At the end of July 2015 we announced that the Company's Portfolio Manager would change from Shinji Higaki to Nicholas Price, effective from 1 September 2015. The Board took this decision as it felt that the long term performance of the Company versus its peer group had not been satisfactory despite the Company's outperformance of the Reference Index. We are grateful for Shinji's eight years of service to the Company and the undoubted hard work that he put into the management of the Company's portfolio. The Board also wishes him well in his new role as Finance Director of a small Japanese company.

In his successor, Nicholas Price, we believe we have managed to find a Portfolio Manager who will be a great fit for the Company. Nicholas is a highly experienced Japanese equities manager and has an excellent track record on the funds he has run to date. He is a "growth at a reasonable price" manager with a natural bias towards mid and small cap companies.

RESULTS AND DIVIDENDS

The revenue column of the Income Statement shows a net loss on ordinary activities after taxation for the year of £160,000 (2014: £509,000). As the revenue reserve remained substantially in deficit at 31 December 2015, the Directors do not recommend the payment of a dividend. However, as Japanese companies are beginning to raise their dividend pay-out ratios generally, this is an issue which the Board will continue to monitor closely.

GEARING

The Company is permitted to gear through the use of long Contracts for Difference ("CFDs"). Total portfolio exposure at the end of the year was £135.3m, equating to gearing of 16.6% compared with 22.2% at the end of 2014. Further information can be found in the Strategic Report.

With the change of Portfolio Manager, the Board concluded that a revision to the Company's gearing guidelines would be appropriate. Whilst the previous Manager tended to remain fairly fully geared on the Board's instruction, Nicholas Price has agreed with the Board that he is likely to want to use gearing more dynamically. The Board has therefore given him discretion to move between being 25% geared to holding 5% net cash.

The Board continues to be of the view that using CFDs provides more flexibility for the Company's needs at a much lower cost than traditional bank debt, despite the low level of interest rates.

MANAGEMENT FEE ARRANGEMENTS AND ONGOING CHARGES

Shareholders may recall that the management fee was reduced on 1 January 2014 from 1.00% to 0.85% of gross assets. As a result ongoing charges were 1.62%. During 2015, Fidelity, on behalf of the Board, negotiated a reduction in fees paid to third party providers. These efforts resulted in a further decline in the Company's ongoing charges to 1.52% in 2015. This places the Company below the average of the peer group (at 1.65%), but the Board will continue to monitor costs very closely and will keep the management fee under review.

THE BOARD

Following the recruitment of two new Board Directors in 2014, the Board has operated with six members since last year's Annual General Meeting ("AGM"). At the conclusion of this year's AGM, David Miller will be stepping down from the Board, bringing the number back down to five. I would like to take this opportunity to thank him on behalf of the Board and shareholders for his invaluable contribution over the last eleven years, and for his support as Senior Independent Director. Philip Kay has kindly agreed to take over from David Miller as the Company's Senior Independent Director following the AGM.

SUBSCRIPTION SHARES

On 26 August 2014, the Company undertook a bonus issue of subscription shares to ordinary shareholders on the basis of one subscription share for every five ordinary shares held. The subscription shares were allotted to qualifying ordinary shareholders at no cost. The exercise price was set at 86.50 pence.

The rights attaching to a total of 215,981 subscription shares were exercised in respect of the year ended 31 December 2015, at which point the total number of subscription shares in issue was 22,527,339. The final date for exercising the rights to subscription shares will be 29 April 2016. As at 29 March 2016, the diluted net asset value per ordinary share (including income) was 103.24p. Further details of the subscription shares may be found in the Directors' Report and in Note 13 of the Report and ***Accounts***.

SHARE REPURCHASES

Purchases of ordinary and subscription shares for cancellation are made at the discretion of the Company and within guidelines set from time to time by the Board. Share repurchases are made in the light of prevailing market conditions, together with their impact on liquidity and gearing. Shares will only be repurchased when the result is an enhancement to the net asset value of the ordinary shares for the remaining shareholders. No shares were repurchased during the year (2014: nil) for cancellation. Since 1 January 2016 and as at the date of this report, the Company has repurchased 420,000 ordinary shares.

TREASURY SHARES

In order to assist in managing the discount, the Board has decided to seek shareholder approval to hold in Treasury any ordinary shares repurchased by the Company, rather than cancelling them. The Treasury shares would carry no voting rights or rights to receive a dividend and would have no entitlement in a winding up of the Company. No more than 5% of the issued ordinary share capital of the Company would be held in Treasury. Any shares held in Treasury would only be re-issued at NAV per share or at a premium to NAV per share. This would ensure that the net effect of repurchasing and then re-issuing the ordinary shares would enhance NAV per share. The Board is seeking shareholder approval to implement these recommendations at the forthcoming AGM.

VIABILITY STATEMENT

In accordance with the 2014 UK Corporate Governance Code, the Directors are now required to report on the viability of the Company over a longer period than the twelve month period required by the Going Concern statement. This new statement can be found in the Strategic Report.

CONTINUATION VOTE

In accordance with the Articles of Association of the Company, an ordinary resolution that the Company continue as an investment trust for a further three years was passed at the 2013 AGM. A further continuation vote will be proposed at this year's AGM.

The Company's NAV total return over the last three years was 69.4% compared to the Reference Index return of 52.6%, whilst the share price rose by 68.0%. The Company's share price has been at a discount to NAV in the past three years as follows: 8.9% (at 31.12.2013); 11.6% (at 31.12.2014); and 14.6% (at 31.12.2015).

As mentioned earlier in this report the Board took steps last year to change the Portfolio Manager in order to address the unsatisfactory long term performance of the Company against its peer group. Further, since the start of this year, the Board has worked closely with its broker on establishing a buyback programme in order to manage the Company's discount, to the extent possible, having regard to recent market volatility and the size of the Company.

Therefore your Board recommends that shareholders vote in favour of the continuation vote. If the vote is passed, a further continuation vote will take place at the Annual General Meeting in 2019.

AGM

The AGM will be held at 12:00pm on 24 May 2016 at the offices of Fidelity at 25 Cannon Street, London EC2M 5TA (St Paul's or Mansion House tube station) and all investors are encouraged to attend. The Board looks forward to the opportunity to speak to shareholders of the Company. The Portfolio Manager will attend and will give a presentation on the past year and the prospects for the coming year.

OUTLOOK

It appears that the Japanese market continues to offer exciting opportunities. With the potential shift from deflation to inflation and from contraction to growth, Japan is arguably on the cusp of a sustained recovery.

Unemployment has declined and is approaching 3%, which means that more households are earning an income, and the prospects for further wage increases are improving. While the core CPI number is still running below the Bank of Japan's 2% target, it has been substantially affected by the drop in the oil price over the past year. However, this energy price decline is actually a huge boost for Japan as a country which imports all required fossil fuels. So-called "core-core" inflation, which strips out the effects of falling oil prices, is around 1%. This means that as individuals and companies make decisions about consumption and investment, they are more likely to make positive choices.

The key challenge for Japan is to remain focused on the reform agenda. Japan has had loose monetary policy for a sustained period of time and what is really needed is a fundamental pick up in end demand. The employment picture is improving, inflation is gradually picking up and what really matters now is the continuation of the government's reform agenda. In this respect, Upper House elections in the summer, and possibly a general election, will be crucial for Prime Minister Abe in retaining the level of support required to push his reform agenda through.

The improvements in corporate governance that we are seeing are very important for equity investors. Japanese companies are actively taking steps to improve capital efficiency and return on equity ("RoE"), and are delivering record levels of cash to shareholders. Fidelity believes that the Japanese market's RoE should average around 11% over the next 2-3 years.

The world's third biggest economy may be on the verge of returning to economic relevance for capital markets. This is not factored into share prices and it is certainly not reflected in investors' portfolios. Japan has an improving fundamental story, micro-level reforms are progressing well and valuations are reasonable.

David Robins

Chairman

31 March 2016

Portfolio Manager's Review

PORTFOLIO MANAGER AND INVESTMENT APPROACH

Nicholas began his investment career over 20 years ago as a research analyst at Fidelity's Tokyo office and has been running Japanese equity portfolios for both domestic and overseas clients for 15 years. Through more than two decades of experience, he has developed a rigorous, bottom-up investment approach based on in-depth fundamental research of individual companies, underpinned by a strong sell discipline.

Nicholas follows a 'growth at a reasonable price' approach, utilising Fidelity's local research capability as well as its broader global network. In addition, he also conducts his own research, looking for undercovered names by joining the dots between multiple information sources in order to get ahead of the market. In this way, he uses input from a number of perspectives, including venture capital companies, regulators, academic research, non-listed companies etc. Nicholas typically attends more than 300 company and related meetings per year and looks closely at a company's business model, particularly in terms of sustainability and barriers to entry, valuations, liquidity and potential upside versus downside.

Detecting signs of change is also a key pillar of his investment approach:

·   Changes in fundamentals- internally driven, such as market share growth stemming from the introduction of highly competitive new products or a company going global.

·   Changes in environment- such as a change in consumer mindset and greater willingness to buy online, fuelling strong growth in internet sales.

·   Changes in sentiment- such as the gap between mid term growth opportunities and overly pessimistic short term market sentiment.

·   Changes in valuations- such as valuation criteria changing from price-to-book (liquidation value) to price-to-earnings (going-concern value).

Overall, Nicholas tends to invest more in mid cap growth companies where he believes he can find better business models and RoE, and where management is more incentivised in terms of shareholder returns. Being relatively young and dynamic, small companies are often able to create their own niche market and may therefore be capable of expanding their business regardless of the external economic environment. Over time, areas such as internet services, Asian consumption, finance and environmental themes have yielded rewarding investment ideas.

TRANSITION OF THE PORTFOLIO

Following the transition of Portfolio Manager, the Company has shifted slightly up the market cap scale, with a weighted median market cap of £2.7 billion. This compares with £1.2 billion under the previous Portfolio Manager and £3.4 billion for the Reference Index. The Company continues to show a clear tilt towards mid and small cap growth stocks. Since the transition, the Company has looked to invest in stocks and sectors which are showing signs of improving corporate governance resulting from the Abenomics programme, and has also taken advantage of the theme of Chinese tourist spending in Japan. Since the transition, there has been a significant increase in the Company's weighting in the Machinery, Chemicals and Other Finance sectors. In Machinery, the Company has taken a positive view of companies which benefit from automation, such as the mechanisation of ***agriculture*** across emerging Asia. In the Chemicals sector, attractive opportunities have been identified in fields such as veterinary drugs for animals, whilst in the Other Financials area, the Company has initiated positions in non-bank financial services companies, which have tended to offer better opportunities for growth, as well as higher shareholder returns. On the other hand, since the transition the Company has reduced weightings in the Precision Instruments and Insurance sectors as better opportunities were identified elsewhere.

MARKET REVIEW

The year under review was a tale of two halves for the Japanese equity market. The market performed strongly in the first half as economic conditions continued to recover from the recession of 2014 triggered by the hike in consumption tax. There was a notable pickup in buying by overseas investors as signs of improving corporate governance and expectations for further growth in corporate earnings bolstered sentiment. Large cap stocks generally performed well, as the yen continued to gently depreciate against the backdrop of the Bank of Japan's quantitative easing programme.

However, Japanese stocks corrected sharply in August as shares and commodity prices fell globally amid intensifying concerns about a slowdown in China and problems in emerging markets more generally. In the third quarter, the broad-based TOPIX index suffered its worst quarterly decline since June 2010. Overseas investors were aggressive net sellers of Japanese stocks as the sell-off in global equity markets continued into September. Prime Minister Shinzo Abe laid out three new policy arrows (a strong economy, parenting support and social security reform), but the announcement was light on details and the market impact was muted. After a slight recovery in October and November, the market ended the year on a weak note, with a further big sell-off in December.

Against this backdrop, the performance gap between domestic and external demand-oriented stocks widened significantly. Defensive stocks and beneficiaries of lower oil prices outperformed, whereas the energy, materials and industrials sectors were conspicuous laggards.

PERFORMANCE REVIEW

As noted in the Chairman's Statement, the Company's NAV increased from 81.48p to 101.56p during the year under review, and outperformed the Reference Index.

As demonstrated by the attribution analysis below, the market's movement contributed 13.2% to the increase in the NAV per share, whilst stock selection and gearing both added 2.5%, respectively. The appreciation of the yen against the pound, particularly during the second half of the year, produced a positive exchange rate effect, which contributed 6.3% to the increase in the Company's NAV.

The attribution analysis below shows how the increase in NAV has been achieved.

|  |  |
| --- | --- |
| Analysis of change in NAV during the year (%) |  |
| Impact of: |  |
| Reference Index (in yen terms) | +13.2 |
| Reference Index income (in yen terms) | +1.9 |
| Stock selection (relative to the Index) | +2.5 |
| Gearing (yen) | +2.5 |
| Exchange rate | +6.3 |
| Charges | -1.8 |
| Total return for the year ended 31 December 2015 | +24.6 |

Over the year, stock selection in the services sector was the principal driver of the Company's outperformance relative to the Reference Index. Three of the top ten contributors to performance over the year were online businesses, namely Kakaku.com, Septeni Holdings and M3. In addition, hotel and resort operator Fujita Kanko, a recent addition to the portfolio, performed well on an increase in hotel room rates and a recovery at its hot spring resort business.

Among financials, notable performers included Anicom Holdings, a pet insurance company, and Financial Products Group, a provider of financial services for small companies seeking tax-efficient investments. These stocks have added value over a number of years, but as their valuations started to look stretched, these positions were sold.

In the retail sector, MonotaRO, an online supplier of factory-use consumables, and Seria, an operator of discount stores, made material contributions to returns. However, this was tempered by the disappointing performance of some inbound tourism-based stocks towards the end of the year. Both positions were sold.

Elsewhere, holdings in Asahi Intecc, a maker of specialised medical tools, and Ono Pharmaceutical, a mid-sized drug company renowned for its anti-cancer treatments, were notable outperformers. Some profits were taken following their share price gains, but overweight positions in both companies were retained.

Conversely, stock selection in the information and communication sector detracted from performance. One of the largest detractors in 2014, WirelessGate (a provider of Wi-Fi services in public spaces) continued to struggle and the position was sold. Mobile Create Company, a provider of mobile management systems to transportation operators, lost ground as rising development costs resulted in disappointing earnings results. This stock was also sold. A new position in mobile carrier SoftBank also hurt performance, but looks attractive from a mid to long term perspective.

The tables below show the principal five contributors to, and principal five detractors from, the Company's performance relative to the Reference Index. Conversely, holdings in the retail trade sector performed poorly,

|  |  |  |  |
| --- | --- | --- | --- |
| Principal  contributors  to relative return | Sector | Relative  average  weight  (%) | Contribution  to  relative  returns  (%) |
| Anicom Holdings | Insurance | 1.6 | 1.3 |
| Asahi Intecc | Precision   Instruments | 1.8 | 1.3 |
| MonotaRO | Retail Trade | 0.9 | 1.3 |
| Kakaku.com | Services | 1.6 | 0.9 |
| Seria | Retail | 2.0 | 0.9 |

|  |  |  |  |
| --- | --- | --- | --- |
| Principal  detractors  to relative return | Sector | Relative  average  weight  (%) | Contribution  to  relative  returns  (%) |
| Mobile Create Company | Information &  Communications | 1.2 | -1.3 |
| WirelessGate | Information &  Communications | 1.9 | -1.3 |
| Rohm | Electrical  Appliances | 2.4 | -1.2 |
| SoftBank | Information &  Communications | 1.3 | -0.7 |
| Nihon Nohyaku | Chemicals | 0.8 | -0.7 |

Principal Contributors

Anicom Holdings is a niche insurance company that specialises in policies for pets, commanding 60% of Japan's pet insurance market. The company reported solid results for the financial year to 31 March 2015 and the first half of the financial year to 31 March 2016. In addition to an increase in insurance premiums, growth in new policies and measures to hold down the loss ratio contributed to a clear improvement in profitability. Although these measures are expected to continue to contribute to margin expansion in the near term, they have been fully discounted in the price and valuations appeared expensive. Therefore, the stock was sold in September 2015.

Asahi Intecc manufactures medical tools, as well as industrial-use stainless wire rope. The company continued to generate strong profit momentum as it increased its market share for mainstay products (both in Japan and overseas) and enhanced its product line-up. Demand for Asahi Intecc's niche guide wires (used to navigate medical devices) and micro catheters remains strong. We expect the company to continue to achieve high growth owing to its expanding market share.

MonotaRO is an online supplier of factory-use consumables to small businesses. It has gained significant market share in the maintenance, repair, and operations market for small factories through its e-commerce model. The company maintained robust levels of sales growth, supported by its superior products and aggressive promotion strategy. Its margins also improved because of higher royalty income and operational streamlining. Although MonotaRO continues to generate strong earnings momentum, the positive story is already priced in and its valuation appears expensive. The stock was therefore sold in September 2015.

Kakaku.com operates online price comparison and restaurant services websites. The company announced favourable interim results, supported by firm growth in sales at Tabelog (an extensive online directory of information about restaurants and eating places in Japan) and new media. It also reasserted its commitment to increase shareholder returns and to maintain a 40% RoE over the medium term. Kakaku.com remains a top pick as a structural winner in the expanding e-commerce market.

Seria operates a nationwide chain of 100-yen shops in Japan, the equivalent of a pound store in the UK. It has the second largest share of the domestic market and a strong track record in generating same-store sales. The company's competitive advantage lies in its precise control of inventory, which has contributed to top-line growth and improved profit quality. On the expectation that margins would falter as a weaker yen inflated its costs, the stock was sold in September 2015.

Principal detractors

Mobile Create Company provides information technology (IT) services (including vehicle tracking, wireless communication and electronic payment systems) predominantly to the taxi and bus industries in Japan. It reported lower-than-expected earnings results and issued weak forecasts due to rising development costs for its main product - integrated circuit cards (also known as smart rechargeable cards) used on trains and buses. As a result, the stock was sold in October 2015.

WirelessGate a provider of Wi-Fi services in public spaces in Japan, continued to struggle. Its profit margins came under pressure owing to the start-up costs of a new high-speed connection service. Its share of large Wi-Fi infrastructure projects for corporate customers remained limited. Increased competition in the personal SIM card segment represented an additional headwind. In light of these factors, the position was sold in October 2015.

Rohm is a leading manufacturer of custom integrated circuits and semiconductor devices with a high in-house production ratio. Concerns about a correction in the semiconductor market continued to weigh on the company's share price. However, Rohm remains well placed to capitalise on the structural growth in automotive and industrial semiconductors. Its commitment to enhancing shareholder returns by returning 100% of free cashflow is also appealing, so the position remains in the portfolio.

SoftBank is a leading provider of communication and internet services, and ranks among Japan's top three mobile carriers. The stock was added to the portfolio in September and whilst performance has improved, the stock has continued to lag the Reference Index primarily due to significant uncertainty surrounding potential regulatory changes. The lack of near term momentum at its overseas businesses, particularly its US wireless unit Sprint, has also weighed on its shares. However, SoftBank's domestic telecommunications business remains a stable source of income. Furthermore, the turnaround at Sprint is also on track and therefore SoftBank's share price appears to be fundamentally undervalued.

Nihon Nohyaku is a leading producer of insecticides and fungicides. Its weak share price performance reflected concerns about a short term slowdown in earnings, as an increased inventory of insecticides in Brazil appeared likely to decrease royalty income from Bayer Corp Science for the use of Nihon Nohyaku's products. In addition to the near term downside in earnings, the likely impact of a patent expiry in 2019 for Nihon Nohyaku's main product, Belt, could be more severe than initially expected. As a result, the position was sold in May 2015.

OUTLOOK

The external economic environment, centred on China and other emerging markets, is generating a high level of uncertainty. However, conditions in developed countries are relatively firm and the recent market correction in Japan appears excessive relative to the change in external fundamentals. Monetary conditions in Japan should remain highly accommodative throughout 2016, contrasting with the onset of a moderate tightening cycle in the US. The Japanese market should continue to recover, supported by gradual wage hikes. This being the case, corporate Japan can be expected to deliver another year of positive earnings growth in 2016.

The three arrows of Abenomics (Prime Minister Shinzo Abe's economic policies) have produced mixed results, with success in monetary policies and micro-level reforms contrasting with the lack of progress on deregulation and other complex structural issues. Abenomics 2.0 aims to boost the momentum of the initial policy agenda and to tackle Japan's longer term challenges. The coming year will therefore mark the start of a medium term initiative, which should form the basis for sustainable growth in the domestic economy. Measures to lift productivity and deal with Japan's declining population will be key.

We are also likely to see progress in the introduction of new technologies, (including self-driving vehicles, robotics and artificial intelligence), as well as support for both working seniors and families.

The desire for reform in Japan remains firm and the corporate sector is changing for the better. Japanese companies are committed to improving capital efficiency and RoE, and many are actively using free cash flow to improve shareholder returns. Established companies are refocusing on core competencies, and cash-rich corporates are starting to deploy more of their surplus funds towards investment. As pressure mounts on companies to explain the economic rationale for cross shareholdings between companies, the pace of share buybacks is likely to accelerate. While the rate of change varies on a company-by-company basis, this commitment to broad-based reforms is clearly good news for investors and should contribute to the performance of your Company.

Nicholas Price

Portfolio Manager

31 March 2016

Strategic Report

The Directors have pleasure in presenting the Strategic Report of the Company. It provides a review of the Company's business and describes the principal risks and uncertainties it faces. An analysis of the performance of the Company during the financial year and the position at the year end is included taking into ***account*** its objective, strategy and risks and how these are measured using key performance indicators. The Chairman's Statement and Portfolio Manager's Review form part of the Strategic Report.

BUSINESS AND STATUS

The Company carries on business as an investment trust and has been accepted as an approved investment trust by HM Revenue & Customs under Sections 1158 and 1159 of the Corporation Tax Act 2010, subject to the Company continuing to meet eligibility conditions. The Directors are of the opinion that the Company has conducted its affairs in a manner which will satisfy the conditions for continued approval.

The Company is registered as an investment company under Section 833 of the Companies Act 2006 and operates as such. It is not a close company and has no employees.

OBJECTIVE

The Company's objective is to achieve long term capital growth from an actively managed portfolio of securities primarily of small and medium sized Japanese companies listed or traded on Japanese stockmarkets.

STRATEGY

In order to achieve this objective, the Company operates as an investment company which has an actively managed portfolio of investments, consisting of Japanese listed companies.

As part of the strategy, the Board has delegated the management of the portfolio and other services. The Portfolio Manager aims to achieve a total return on the Company's total assets over the longer term in excess of the Reference Index, the Russell Nomura Mid/Small Cap Index, as expressed in sterling. The stock selection approach adopted by the Portfolio Manager is considered to be well suited to achieving the objective. The Board takes the view that investing in equities is a long term process, and that the Company's returns to shareholders will vary from year to year. The Board takes the view that long term returns for shareholders can be enhanced by the use of gearing in a carefully considered and monitored way. The level of gearing is reviewed by the Board and the Portfolio Manager on a regular basis.

The Board has reviewed the summary of the year's activities and is in agreement with the indications of likely future developments and the factors likely to affect these which are given in the Chairman's Statement and in the Portfolio Manager's Review.

INVESTMENT POLICY

The markets in which the Company may invest will comprise primarily the Tokyo Stock Exchange, the Jasdaq and the regional stockmarkets of Fukuoka, Nagoya, Osaka and Sapporo.

No material change will be made to the investment policy without shareholder approval.

INVESTMENT MANAGEMENT PHILOSOPHY, STYLE AND PROCESS

The Portfolio Manager's investment approach is focused on 'growth at a reasonable price', utilising Fidelity's extensive research capability. His investment approach and bias towards mid and small cap growth stocks fits well with the Company's investment philosophy and style.

INVESTMENT RESTRICTIONS

In order to diversify the Company's portfolio, the Board has set the following investment guidelines for the Portfolio Manager:

·   A maximum of 7.5% in the aggregate of all securities of any one company or other investment entity (10% for any group of companies) at the time of purchase, which is further limited to 12% of the Company's equity portfolio based on the latest market value.

·   A maximum of 5% of its assets (at the time of acquisition) in securities which are not listed on any stock exchange or traded on the Jasdaq market (the Company would not normally make any such investment except where the Manager expects that the securities would shortly become registered for trading on the OTC market or become listed on a Japanese stockmarket).

·   A maximum of 30% of its assets (at the time of acquisition) in equity-related and debt instruments. The Company may also invest in derivatives for e?cient portfolio management to protect the portfolio against market risk. Any such investment would normally be at a low level as the Company invests primarily in shares.

·   A maximum of 15% of the Company's total assets may be invested in the securities of other investment trust companies.

·   The maximum that the Company can hold in cash would be 25% of the total value of the Company's assets. This limit will not include any cash or cash equivalent paid as collateral for unrealised losses on CFDs. In practice the cash position will normally be much lower. Currently the Portfolio Manager has discretion to hold 5% net cash.

GEARING

The Company's policy is to be geared in the belief that long term investment returns will exceed the cost of gearing. This gearing is obtained through the use of CFDs to obtain exposure to Japanese equities selected by the Manager. The e?ect of gearing is to magnify the consequence of market movements on the portfolio and if the portfolio value rises the NAV will be positively impacted, but if it falls the NAV will be adversely impacted.

The aggregate exposure of the Company to Japanese equities, whether held directly or through CFDs, will not exceed shareholders' funds by more than 30% at the time any CFD is entered into or a security acquired. The Board also intends that the exposure will not exceed shareholders' funds by more than 40% at any other time unless exceptional circumstances exist. Currently the Portfolio Manager has discretion to be 25% geared.

At the year end the Company was 16.6% geared (2014: 22.2%).

PERFORMANCE

The Company's performance for the year ended 31 December 2015 and details on trends and factors that may impact the future performance of the Company are included in the Chairman's Statement and the Portfolio Manager's Review. The Portfolio Listing, Gearing, Distribution of the Portfolio, Ten Year Record and Summary of Performance Charts can be found in the Annual Report and ***Accounts***.

RESULTS

The Company's results for the year ended 31 December 2015 are set out in the Income Statement of the Report and ***Accounts***. The total return per ordinary share was 20.10 pence of which the revenue return was a loss of 0.14 pence.

KEY PERFORMANCE INDICATORS

The key performance indicators ("KPIs") used to determine the performance of the Company and which are comparable to those reported by other investment trusts are set out below.

|  |  |  |
| --- | --- | --- |
|  | Year  ended  31  December  2015  % | Year  ended  31  December  2014  % |
| NAV per share1 (undiluted) | +24.6 | +3.1 |
| Share Price1 | +20.5 | +0.0 |
| Russell Nomura Mid/Small Cap Index1 | +19.4 | +5.1 |
| Discount to NAV (undiluted) | 14.6 | 11.6 |
| Ongoing Charges2 | 1.52 | 1.62 |

1   Total returns (includes reinvested income)

2      The Board regularly considers the costs of running the Company to ensure they are reasonable and competitive

Sources: Fidelity and Datastream

Past performance is not a guide to future returns

As well as the KPIs above, the Board regularly reviews the Company's performance against its peer group of investment trusts. Long term performance is also monitored and the Ten Year Record and the Summary of Performance Charts in the Report and ***Accounts*** show this information.

PRINCIPAL RISKS AND UNCERTAINTIES

As required by provision C.2.1 of the UK Corporate Governance Code 2014, the Board has a robust ongoing process for identifying, evaluating and managing the principal risks faced by the Company and this is reviewed on a regular basis.

The Board is responsible for the Company's system of risk management and of internal controls and for reviewing its effectiveness. It determines the nature and extent of any risks it is willing to take in order to achieve its strategic objectives. An internal controls report providing an assessment of risks, together with controls to mitigate these risks, is prepared by the Manager and considered by the Audit Committee at each of its meetings.

The Alternative Investment Fund Manager, FIL Investment Services (UK) Limited, also has responsibility for risk management for the Company. It works with the Board to identify and manage the principal risks and to ensure that the Board can continue to meet its UK corporate governance obligations.

The Board considers the following as the principal risks and uncertainties faced by the Company:

Market Risk

The Company's assets consist mainly of listed securities and the principal risks are therefore market related such as market downturn, interest rate movements and exchange rate movements. The Portfolio Manager's success or failure to protect and increase the Company's assets against this background is core to the Company's continued success.

Risks to which the Company is exposed and which form part of the market risk category are included in Note 16 to the Financial Statements together with summaries of the policies for managing these risks. These comprise: market price risk (comprising interest rate risk, foreign currency risk and other price risk), liquidity risk, counterparty risk, credit risk and derivative instruments risk.

Performance Risk

The Board reviews risk at each Board meeting, considers the asset allocation of the portfolio and the risk associated with Japan and industry sectors within the parameters of the investment objective and strategy. The Portfolio Manager is responsible for actively monitoring the portfolio selected in accordance with the asset allocation parameters and seeks to ensure that individual stocks meet an acceptable risk/reward profile. The emphasis is on long term results as the Company risks volatility of performance in the shorter term.

The Board appointed a new Portfolio Manager from 1 September 2015. This change incurred a degree of transition risk as the new Portfolio Manager made changes to the portfolio and gearing levels.

Discount Control Risk

The Board cannot fully control the discount at which the Company's ordinary share price trades in relation to net asset value. However, it can have a modest influence in the market by maintaining the profile of the Company through a marketing campaign and, under certain circumstances, through repurchasing shares. The Company's share price, NAV and discount volatility are monitored daily by the Manager and considered by the Board regularly.

Gearing Risk

The Company has the option to make use of loan facilities or to use CFDs to invest in equities. The principal risk is that, while in a rising market the Company will benefit from gearing, in a falling market the impact would be detrimental. Other risks are that the cost of gearing may be too high or that the term of the gearing is inappropriate in relation to market conditions. The Company currently has no bank loans and gears through the use of long CFDs. Utilising long CFDs for gearing purposes provides greater flexibility and has been significantly cheaper than traditional bank loans. The Board regularly considers the level of gearing and gearing risk and sets limits within which the Portfolio Manager must operate.

Currency Risk

The functional currency of the Company in which it reports its results is UK sterling; however, most of its assets and its income are denominated in yen. Consequently, it is subject to currency risk on exchange rate movements between UK sterling and yen. It is the Company's policy not to hedge against currency risks. Further details can be found in Note 16 to the Financial Statements.

Tax and Regulatory Risks

A breach of Section 1158 of the Corporation Tax Act 2010 could lead to a loss of investment trust status, resulting in the Company being subject to tax on capital gains. A breach of other legal and regulatory rules may lead to suspension from listing on the London Stock Exchange or a qualified audit report. The Board receives regular reports from the Manager confirming regulatory compliance during the year.

Operational Risks

The Company has no employees and relies on a number of third party service providers, principally the Manager, Registrar, Custodian and Depositary. The Company is dependent on the Manager's control systems and those of its Registrar and Custodian both of whom are monitored and managed by the Manager in the context of the Company's assets and interests on behalf of the Board. The Depositary, under a tri-partite agreement, oversees the custody of investments and cash. The security of the Company's assets, dealing procedures, ***accounting*** records and the maintenance of regulatory and legal requirements, among other things, rely on the effective operation of such systems.

The Manager, Registrar and Custodian are subject to a risk-based programme which is monitored by the Manager. In addition, service providers' own internal controls reports are received by the Board and any concerns investigated.

Although the likelihood of poor governance, compliance and operational administration by third party service providers is low, the financial consequences could be serious, including the associated reputational damage to the Company.

Other Risks

A continuation vote takes place every three years. There is a risk that shareholders may not vote in favour of continuation during periods when performance is poor. The next continuation vote will take place at this year's AGM on 24 May 2016.

VIABILITY STATEMENT

In accordance with provision C.2.2 of the UK Corporate Governance Code, issued by the Financial Reporting Council in September 2014, the Directors have assessed the prospects of the Company over a longer period than the twelve month period required by the "Going Concern" provision. The Company is an investment trust with an objective of achieving long term capital growth and the Board consider three years is an appropriate investment horizon to assess the viability of the Company. This time period is also consistent with the Company's continuation vote which takes place every three years, the next one taking place at this year's AGM.

The Board has taken ***account*** of the Company's current position, the principal risks that it faces and their potential impact on its future development and prospects, the Company's investment objective and strategy, the investment capabilities of the Manager and the current outlook for the Japanese economy and equity market. The Directors, therefore, confirm that they have a reasonable expectation that, subject to shareholders voting in favour of continuation at this year's AGM, the Company will be able to continue in operation and meet its liabilities as they fall due over the three year period of assessment.

BOARD DIVERSITY

The Board carries out any candidate search against a set of objective criteria on the basis of merit, with due regard for the benefits of diversity on the Board, including gender. As at 31 December 2015, there were five male Directors and one female Director on the Board.

EMPLOYEE, SOCIAL, COMMUNITY, HUMAN RIGHTS AND ENVIRONMENTAL ISSUES

The Company has no employees and all of its Directors are non-executive and it therefore has no disclosures to make in respect of employees and human rights.

The Company's financial reports are printed by a company which has won awards for its environmental awareness and further details of this may be found on the back cover of this report.

Details about Fidelity's own community involvement may be found on its website at[*http://www.fidelity.co.uk*](http://www.fidelity.co.uk).

SOCIALLY RESPONSIBLE INVESTMENT

The Manager believes that high standards of corporate social responsibility ("CSR") make good business sense and have the potential to protect and enhance investment returns. Consequently, its investment process takes social, environmental and ethical issues into ***account*** when, in its view, these have a material impact on either investment risk or return.

***GREENHOUSE GAS*** ***EMISSIONS***

The Company has no premises, consumes no electricity, gas or diesel fuel and consequently does not have a measurable carbon footprint. FIL Investments International is registered with the Carbon Reduction Commitment Energy Efficiency Scheme administered by the Environment Agency.

CORPORATE ENGAGEMENT

The Board believes that the Company should, where appropriate, take an active interest in the affairs of the companies in which it invests and that it should exercise its voting rights at their general meetings. Unless there are any particularly controversial issues (which are then referred to the Board) it delegates the responsibility for corporate engagement and shareholder voting to the Manager. These activities are reviewed annually.

FUTURE DEVELOPMENTS

Some trends likely to affect the Company in the future are common to many investment companies together with the impact of regulatory change. The factors likely to affect its future development, performance and position are set out in the Chairman's Statement and the Portfolio Manager's Review.

By order of the Board

FIL Investments International

Secretary

31 March 2016

Portfolio Listing as at 31 December 2015

The Portfolio Exposures shown below measure exposure to market price movements as a result of owning shares and long CFDs. The Fair Values shown measure the actual value on the Balance Sheet.

|  |  |  |  |
| --- | --- | --- | --- |
| Shares and long CFDs | Portfolio  Exposure  £'000 | %1 | Fair  Value  £'000 |
| Kubota  Manufacturer of tractors and heavy equipment | 7,611 | 6.6 | 7,611 |
| AEON Financial Service  Provider of loans, credit cards and customer instalment credits | 7,324 | 6.3 | 7,324 |
| Nissan Chemical Industries  Producer of chemicals, agrochemicals and pharmaceutical products | 7,173 | 6.2 | 7,173 |
| Kakaku.com  Provider of price comparison services, product information and internet advertising services | 5,602 | 4.8 | 5,602 |
| Orix (long CFD)2  Provider of leasing, real estate loans, life insurance, banking and consumer finance | 4,673 | 4.0 | (35) |
| SoftBank (long CFD)2  Provider of telecommunication services including ADSL and fibre optic Internet connection | 4,584 | 4.0 | (107) |
| Rohm (long CFD)2  Manufacturer and distributor of electronic components | 4,036 | 3.5 | (975) |
| Zojirushi  Manufacturer of kitchen appliances, heat-insulating containers and environmental equipment | 3,747 | 3.2 | 3,747 |
| Makita  Manufacturer of electric power tools | 3,634 | 3.1 | 3,634 |
| Mazda Motor (shares and long CFD)2  Manufacturer of cars, trucks and auto parts | 3,506 | 3.0 | 2,183 |
| Ten largest exposures (2014: 26.0%) | 51,890 | 44.7 | 36,157 |
| Keyence | 3,215 | 2.8 | 3,215 |
| Rinnai | 3,021 | 2.6 | 3,021 |
| J Front Retailing | 2,965 | 2.6 | 2,965 |
| M3 (long CFD)2 | 2,890 | 2.5 | 152 |
| Nippon Shinyaku | 2,842 | 2.5 | 2,842 |
| Shionogi | 2,805 | 2.4 | 2,805 |
| Kao | 2,345 | 2.0 | 2,345 |
| Ferrotec | 2,282 | 2.0 | 2,282 |
| Ono Pharmaceutical (long CFD)2 | 2,202 | 1.9 | 892 |
| Fujita Kanko | 2,181 | 1.9 | 2,181 |
| Ryohin Keikaku | 2,168 | 1.9 | 2,168 |
| Ai Holdings | 2,161 | 1.9 | 2,161 |
| H.I.S. | 2,040 | 1.8 | 2,040 |
| Aska Pharmaceutical | 2,030 | 1.8 | 2,030 |
| NITTA Corporation | 1,949 | 1.7 | 1,949 |
| ASICS Corporation | 1,948 | 1.7 | 1,948 |
| Septeni Holdings | 1,927 | 1.7 | 1,927 |
| Shinoken Group | 1,912 | 1.6 | 1,912 |
| Hoshizaki Electric | 1,816 | 1.6 | 1,816 |
| Sakata INX Corporation | 1,781 | 1.5 | 1,781 |
| Okamoto Industries | 1,755 | 1.5 | 1,755 |
| THK Co | 1,725 | 1.5 | 1,725 |
| Tasaki Shinju | 1,507 | 1.3 | 1,507 |
| Eiken Chemical | 1,444 | 1.2 | 1,444 |
| Asahi Intecc | 1,431 | 1.2 | 1,431 |
| Kotobuki Seika | 1,268 | 1.1 | 1,268 |
| Kyoritsu Maintenance | 1,203 | 1.0 | 1,203 |
| Descente | 1,164 | 1.0 | 1,164 |
| Start Today | 1,150 | 1.0 | 1,150 |
| Open House | 1,136 | 1.0 | 1,136 |
| Piolax | 1,078 | 0.9 | 1,078 |
| Nichias | 1,025 | 0.9 | 1,025 |
| PC Depot | 1,024 | 0.9 | 1,024 |
| Nihon Flush | 1,016 | 0.9 | 1,016 |
| Optex | 1,007 | 0.9 | 1,007 |
| Nakamura Choukou | 971 | 0.8 | 971 |
| Juki | 913 | 0.8 | 913 |
| Mitsubishi Pencil | 913 | 0.8 | 913 |
| Sinko Industries | 895 | 0.8 | 895 |
| Yamabiko | 830 | 0.7 | 830 |
| Daikin Industries | 823 | 0.7 | 823 |
| Gurunavi | 788 | 0.7 | 788 |
| Apamanshop Holdings | 786 | 0.7 | 786 |
| Yamaha Motor | 777 | 0.7 | 777 |
| Nifco | 672 | 0.6 | 672 |
| Fuji Corporation | 625 | 0.5 | 625 |
| Ride On Express | 609 | 0.5 | 609 |
| NEXT Co | 548 | 0.5 | 548 |
| Jamco | 544 | 0.5 | 544 |
| Yonex | 519 | 0.4 | 519 |
| Nojima | 485 | 0.4 | 485 |
| Sagami Rubber Industries | 485 | 0.4 | 485 |
| Takuma | 476 | 0.4 | 476 |
| CAC | 443 | 0.4 | 443 |
| PAL Co | 427 | 0.4 | 427 |
| Komehyo | 350 | 0.3 | 350 |
| Chugai Pharmaceutical | 344 | 0.3 | 344 |
| Freund | 328 | 0.3 | 328 |
| Taikisha | 327 | 0.3 | 327 |
| VT Holdings | 308 | 0.3 | 308 |
| Eizo Corporation | 280 | 0.2 | 280 |
| Iino Kaiun Kaisha | 276 | 0.2 | 276 |
| Universal Entertainment | 269 | 0.2 | 269 |
| Bengo4.com | 264 | 0.2 | 264 |
| Creek & River | 235 | 0.2 | 235 |
| Pressance | 233 | 0.2 | 233 |
| Kusuri No Aoki | 227 | 0.2 | 227 |
| N Field | 201 | 0.2 | 201 |
| Yamaya | 193 | 0.2 | 193 |
| Sawada Holdings | 188 | 0.1 | 188 |
| Information Services International-Dentsu | 181 | 0.1 | 181 |
| Nitori Holdings | 63 | - | 63 |
| Samantha Thavasa Japan | 39 | - | 39 |
| Kuriyama Holdings | 28 | - | 28 |
| Sysmex | 26 | - | 26 |
| Suzuki Motor | 23 | - | 23 |
| Ezaki Glico | 15 | - | 15 |
| Shinsei Bank | 13 | - | 13 |
| Hokkaido Chuo Bus | 9 | - | 9 |
| Total Portfolio Exposure | 135,252 | 116.6 |  |
| Total Portfolio Fair Value3 |  |  | 115,471 |
| Net current assets excluding derivatives |  |  | 529 |
| Shareholders' Funds (per the Balance Sheet) |  |  | 116,000 |
| 1          Portfolio Exposure is expressed as a percentage of Shareholders' Funds  2          Investment via long contracts for difference ("CFDs") provides exposure to the underlying share price in excess of the fair value  3          Total Portfolio Fair Value comprises (per the Balance Sheet) investments £115,532,000 plus derivative assets £1,056,000 less derivative liabilities £1,117,000 |  |  |  |

Gearing as at 31 December 2015

|  |  |  |  |
| --- | --- | --- | --- |
|  | PPPortfolio  Exposure |  |  |
| Shares and long CFDs | 2015  £'000 |  | 2014  £'000 |
| Investments - shares | 115,532 |  | 82,486 |
| Derivative instruments - long CFDs | 19,720 |  | 31,063 |
| Total Portfolio Exposure | 135,252 |  | 113,549 |
| Shareholders' Funds | 116,000 |  | 92,886 |
| Gearing - Total Portfolio Exposure in excess of Shareholders' Funds | 16.6% |  | 22.2% |

Distribution of the Portfolio as at 31 December 2015

|  |  |  |
| --- | --- | --- |
|  | Portfolio Exposure |  |
| Sector | 2015  %1 | 2014  %1 |
| Machinery | 17.5 | 4.9 |
| Services | 15.9 | 20.9 |
| Electrical Appliances | 12.6 | 18.1 |
| Chemicals | 10.3 | 11.0 |
| Other Financing Business | 10.3 | 1.5 |
| Pharmaceuticals | 10.1 | 4.8 |
| Retail Trade | 8.6 | 9.4 |
| Other Products | 5.1 | 0.6 |
| Information & Communications | 4.5 | 9.5 |
| Transport Equipment | 4.2 | 5.6 |
| Rubber Products | 3.6 | - |
| Metal Products | 3.5 | 0.4 |
| Real Estate | 3.5 | 4.5 |
| Wholesale Trade | 1.9 | 4.8 |
| Precision Instruments | 1.2 | 5.5 |
| Foods | 1.1 | - |
| Textiles & Apparel | 1.0 | 3.2 |
| Glass & Ceramics | 0.9 | 0.6 |
| Construction | 0.3 | 3.8 |
| Marine Transportation | 0.3 | - |
| Securities & Commodity Futures | 0.2 | 1.1 |
| Insurance | - | 3.3 |
| Banks | - | 2.4 |
| Non-ferrous Metals | - | 2.3 |
| ***Land*** Transportation | - | 2.2 |
| Iron & Steel | - | 1.3 |
| Electric Power & Gas | - | 0.5 |
| Total Portfolio Exposure | 116.6 | 122.2 |
| 1          Portfolio Exposure is expressed as a percentage of Shareholders' Funds |  |  |

Ten Year Record

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Historical Record  as at 31 December | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
| Total portfolio exposure (£m)1 | 135 | 114 | 105 | 70 | 77 | 79 | 68 | 75 | 79 | 92 | 137 |
| Shareholders' funds (£m) | 116 | 93 | 902 | 58 | 63 | 65 | 53 | 51 | 65 | 78 | 121 |
| NAV per ordinary share (p) - undiluted | 101.56 | 81.48 | 79.02 | 59.94 | 64.17 | 68.44 | 55.56 | 53.58 | 66.67 | 79.59 | 123.56 |
| NAV per ordinary share (p) - diluted | 99.08 | n/a | n/a | 59.91 | 62.79 | 66.21 | 55.47 | n/a | n/a | n/a | n/a |
| Ordinary share price (p) | 86.75 | 72.00 | 72.00 | 51.63 | 52.50 | 57.25 | 48.50 | 41.75 | 58.50 | 73.50 | 130.25 |
| Subscription share price (p) | 3.13 | 4.25 | n/a | 0.80 | 5.70 | 11.75 | 8.28 | n/a | n/a | n/a | n/a |
| Discount/(premium) to NAV % - undiluted | 14.6 | 11.6 | 8.9 | 13.9 | 18.2 | 16.4 | 12.7 | 22.1 | 12.3 | 7.7 | (5.4) |
| Discount to NAV % - diluted | 12.4 | n/a | n/a | 12.8 | 16.4 | 13.5 | 12.6 | n/a | n/a | n/a | n/a |
| Revenue (loss)/return per ordinary share (p) | (0.14) | (0.45) | (0.30) | (0.06) | 0.02 | (0.30) | (0.73) | (0.12) | (0.49) | (0.68) | (1.02) |
| Ongoing charges (%) (cost of running the Company) | 1.52 | 1.62 | 1.80 | 2.00 | 1.98 | 2.08 | 2.17 | 1.98 | 1.65 | 1.46 | 1.83 |
| Gearing (%)3 | 16.6 | 22.2 | 16.8 | 21.0 | 23.2 | 20.9 | 3.8 | 28.5 | 20.7 | 16.9 | 11.5 |
| NAV per ordinary share total return performance - undiluted (%) | +24.6 | +3.1 | +31.8 | -6.6 | -6.2 | +23.2 | +3.7 | -19.6 | -16.2 | -35.6 | +73.4 |
| NAV per ordinary share total return performance - diluted (%) | +21.6 | n/a | n/a | -5.7 | -5.2 | +19.4 | n/a | n/a | n/a | n/a | n/a |
| Ordinary share price total return performance (%) | +20.5 | 0.0 | +39.5 | -1.7 | -8.3 | +18.0 | +16.2 | -28.6 | -20.4 | -43.6 | +110.9 |
| Russell Nomura Mid/Small Cap Index total return (in sterling terms) (%) | +19.4 | +5.1 | +21.7 | -3.1 | -9.3 | +18.6 | -6.3 | +4.4 | -8.5 | -18.5 | +44.5 |

1   The total exposure of the investment portfolio, including exposure to the investments underlying the long CFDs. The amounts prior to 2009 represent total assets less creditors, excluding bank loans

2   The issue of 17,232,149 ordinary shares, on the exercise of subscription share rights, contributed £9.4 million to the increase in shareholders' funds

3   Total portfolio exposure in excess of shareholders' funds. The amounts prior to 2009 represent total assets, less bank loans plus cash at bank, in excess of shareholders' funds

Sources: Fidelity and Datastream

Past performance is not a guide to future returns

Directors' Report

GOING CONCERN

The Directors have considered the Company's investment objective, risk management policies, liquidity risk, credit risk, capital management policies and procedures, the nature of its portfolio (being mainly securities which are readily realisable) and its expenditure and cash flow projections and have concluded that the Company has adequate resources to continue to adopt a going concern basis in preparing these Financial Statements.

The Board has also taken into consideration the fact that a continuation vote is proposed at this year's AGM and the likelihood of shareholders voting in favour of continuation.

Statement of Directors' Responsibilities

The Directors are responsible for preparing the Annual Report and Financial Statements in accordance with applicable law and regulations. Company law requires the Directors to prepare financial statements for each financial period. Under that law they have elected to prepare the Financial Statements in accordance with UK Generally Accepted ***Accounting*** Practice.

The Financial Statements are required by law to give a true and fair view of the state of affairs of the Company and of the profit or loss for the period.

In preparing these Financial Statements, the Directors are required to:

·   select suitable ***accounting*** policies and then apply them consistently;

·   make judgements and estimates that are reasonable and prudent;

·   state whether applicable UK ***Accounting*** Standards have been followed, subject to any material departures disclosed and explained in the Financial Statements;

·   prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business; and

·   confirm, to the extent possible, that the Financial Statements are fair, balanced and understandable.

The Directors are responsible for ensuring that adequate ***accounting*** records are kept which disclose with reasonable accuracy at any time the financial position of the Company and to enable them to ensure that its Financial Statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Under applicable law and regulations the Directors are also responsible for preparing a Strategic Report, a Directors' Report, a Corporate Governance Statement and a Directors' Remuneration Report that comply with that law and those regulations.

The Directors have delegated responsibility for the maintenance and integrity of the corporate and financial information included on the Company's pages of the Manager's website at[*http://www.fidelity.co.uk/its*](http://www.fidelity.co.uk/its). Visitors to the website need to be aware that legislation in the UK governing the preparation and dissemination of the financial statements may differ from legislation in their own jurisdictions.

We confirm that to the best of our knowledge the Financial Statements, prepared in accordance with the applicable set of ***accounting*** standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company; and the Strategic Report and Directors' Report include a fair review of the development and performance of the business and the position of the Company together with a description of the principal risks and uncertainties it faces. We confirm that we consider the Annual Report and Financial Statements, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

Approved by the Board on 31 March 2016 and signed on its behalf by:

David Robins

Chairman

Income Statement for the year ended 31 December 2015

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | 2015 |  |  |  |  |  | 2014 |  |  |
|  |  |  | revenue |  | capital |  | total |  | revenue |  | capital |  | total |
|  | Notes |  | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |
| Gains on investments at fair value through profit or loss | 9 |  | - |  | 21,132 |  | 21,132 |  | - |  | 1,053 |  | 1,053 |
| Gains on derivative instruments at fair value through profit or loss | 10 |  | - |  | 2,717 |  | 2,717 |  | - |  | 2,848 |  | 2,848 |
| Income | 3 |  | 1,728 |  | - |  | 1,728 |  | 1,366 |  | - |  | 1,366 |
| Investment management fee | 4 |  | (1,130) |  | - |  | (1,130) |  | (954) |  | - |  | (954) |
| Other expenses | 5 |  | (508) |  | - |  | (508) |  | (711) |  | - |  | (711) |
| Exchange losses on other net assets |  |  | (22) |  | (762) |  | (784) |  | (26) |  | (589) |  | (615) |
|  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
| Net return/(loss) before finance costs and taxation |  |  | 68 |  | 23,087 |  | 23,155 |  | (325) |  | 3,312 |  | 2,987 |
| Finance costs | 6 |  | (88) |  | - |  | (88) |  | (77) |  | - |  | (77) |
|  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
| Net (loss)/return on ordinary activities before taxation |  |  | (20) |  | 23,087 |  | 23,067 |  | (402) |  | 3,312 |  | 2,910 |
| Taxation on (loss)/return on ordinary activities | 7 |  | (140) |  | - |  | (140) |  | (107) |  | - |  | (107) |
|  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
| Net (loss)/return on ordinary activities after taxation for the year |  |  | (160) |  | 23,087 |  | 22,927 |  | (509) |  | 3,312 |  | 2,803 |
|  |  |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |
| (Loss)/return per ordinary share - undiluted and diluted | 8 |  | (0.14p) |  | 20.24p |  | 20.10p |  | (0.45p) |  | 2.91p |  | 2.46p |
|  |  |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |

There are no gains and losses other than those reported in this Income Statement.

The total column of the Income Statement is the profit and loss ***account*** of the Company.

All revenue and capital items in the above statement derive from continuing operations and no operations were acquired or discontinued in the year.

Statement of Changes in Equity

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | share | capital |  |  |  |  |  |  |  |  |
|  |  |  | share | premium | redemption |  | other |  | capital |  | revenue |  | total |
|  |  |  | capital | ***account*** | reserve |  | reserve |  | reserve |  | reserve |  | equity |
|  | Note |  | £'000 | £'000 | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |
| Year ended 31 December 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| As at 1 January 2015 |  |  | 28,501 | 6,741 | 2,621 |  | 57,568 |  | 11,766 |  | (14,311) |  | 92,886 |
| Issue of ordinary shares on exercise of rights attached to subscription shares | 13 |  | 54 | 133 | - |  | - |  | - |  | - |  | 187 |
| Net return/(loss) on ordinary activities after taxation for the year |  |  | - | - | - |  | - |  | 23,087 |  | (160) |  | 22,927 |
|  |  |  | ---------- | ---------- | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
| As at 31 December 2015 |  |  | 28,555 | 6,874 | 2,621 |  | 57,568 |  | 34,853 |  | (14,471) |  | 116,000 |
|  |  |  | ========== | ========== | ========== |  | ========== |  | ========== |  | ========== |  | ========== |
| Year ended 31 December 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| As at 1 January 2014 |  |  | 28,489 | 6,712 | 2,621 |  | 57,568 |  | 8,454 |  | (13,802) |  | 90,042 |
| Issue of ordinary shares on exercise of rights attached to subscription shares | 13 |  | 12 | 29 | - |  | - |  | - |  | - |  | 41 |
| Net return/(loss) on ordinary activities after taxation for the year |  |  | - | - | - |  | - |  | 3,312 |  | (509) |  | 2,803 |
|  |  |  | ---------- | ---------- | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
| As at 31 December 2014 |  |  | 28,501 | 6,741 | 2,621 |  | 57,568 |  | 11,766 |  | (14,311) |  | 92,886 |
|  |  |  | ========== | ========== | ========== |  | ========== |  | ========== |  | ========== |  | ========== |

The Notes form an integral part of these Financial Statements.

Balance Sheet as at 31 December 2015

Company number 2885584

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | 2015 |  | 2014 |
|  | Notes |  | £'000 |  | £'000 |
| Fixed assets |  |  |  |  |  |
| Investments at fair value through profit or loss | 9 |  | 115,532 |  | 82,486 |
|  |  |  | ---------- |  | ---------- |
| Current assets |  |  |  |  |  |
| Derivative assets at fair value through profit or loss | 10 |  | 1,056 |  | 7,296 |
| Debtors | 11 |  | 1,063 |  | 930 |
| Cash at bank |  |  | 220 |  | 3,176 |
|  |  |  | ---------- |  | ---------- |
|  |  |  | 2,339 |  | 11,402 |
|  |  |  | ---------- |  | ---------- |
| Creditors |  |  |  |  |  |
| Derivative liabilities at fair value through profit or loss | 10 |  | (1,117) |  | (139) |
| Creditors | 12 |  | (754) |  | (863) |
|  |  |  | ---------- |  | ---------- |
|  |  |  | (1,871) |  | (1,002) |
|  |  |  | ---------- |  | ---------- |
| Net current assets |  |  | 468 |  | 10,400 |
|  |  |  | ---------- |  | ---------- |
| Net assets |  |  | 116,000 |  | 92,886 |
|  |  |  | ========== |  | ========== |
| Capital and reserves |  |  |  |  |  |
| Share capital | 13 |  | 28,555 |  | 28,501 |
| Share premium ***account*** | 14 |  | 6,874 |  | 6,741 |
| Capital redemption reserve | 14 |  | 2,621 |  | 2,621 |
| Other reserve | 14 |  | 57,568 |  | 57,568 |
| Capital reserve | 14 |  | 34,853 |  | 11,766 |
| Revenue reserve | 14 |  | (14,471) |  | (14,311) |
|  |  |  | ---------- |  | ---------- |
| Total equity shareholders' funds |  |  | 116,000 |  | 92,886 |
|  |  |  | ========== |  | ========== |
| Net asset value per ordinary share |  |  |  |  |  |
| Undiluted | 15 |  | 101.56p |  | 81.48p |
| Diluted | 15 |  | 99.08p |  | n/a |
|  |  |  | ========== |  | ========== |

The Financial Statements were approved by the Board of Directors on 31 March 2016 and were signed on its behalf by:

David Robins

Chairman

Notes to the Financial Statements

1   PRINCIPAL ACTIVITY

Fidelity Japanese Values PLC is an Investment Company incorporated in England and Wales with a premium listing on the London Stock Exchange. The Company's registration number is 2885584, and its registered office is Beech Gate, Millfield Lane, Lower Kingswood, Tadworth, Surrey, KT20 6RP. The Company has been approved by HM Revenue & Customs as an Investment Trust under Section 1158 of the Corporation Tax Act, 2010 and intends to conduct its affairs so as to continue to be approved.

2   ***ACCOUNTING*** POLICIES

The Company has for the first time applied the revised UK Generally Accepted ***Accounting*** Practice ("UK GAAP"), issued by the Financial Reporting Council ("FRC") and these Financial Statements have been prepared in accordance with FRS 102: The Financial Reporting Standard applicable in the UK and Republic of Ireland, effective for ***accounting*** periods beginning on or after 1 January 2015. The Company has early adopted the amendments to FRS 102: Fair value hierarchy disclosures, issued by the FRC in March 2016. The Financial Statements have also been prepared in accordance with the revised Statement of Recommended Practice: Financial Statements of Investment Trust Companies and Venture Capital Trusts ("SORP") issued by the Association of Investment Companies ("AIC"), in November 2014.

As a result of the adoption of the revised UK GAAP and SORP, presentation formats have been amended where appropriate. The Reconciliation of Movements in Shareholders' Funds has been renamed the Statement of Changes in Equity. A Cash Flow Statement has not been presented. The Company is exempt from presenting a Cash Flow Statement as a Statement of Changes in Equity is presented and substantially all of the Company's investments are highly liquid and are carried at market value. The net return on ordinary activities after taxation for the year and total shareholders' funds remain unchanged from what was reported under the former UK GAAP basis applied in the 2014 Annual Report and the 2014 figures have not required restatement.

a) Basis of ***accounting*** - The Financial Statements have been prepared on a going concern basis and under the historical cost convention, except for the measurement at fair value of fixed asset investments and derivative assets and liabilities.

A resolution proposing the continuation of the Company as an investment trust will be put to shareholders at the AGM on 24 May 2016. The Directors are recommending that shareholders vote in favour of this resolution. In accordance with this recommendation and given that the Company's assets consist mainly of securities which are readily realisable and that the Directors have a reasonable expectation that the Company has adequate resources to continue for the foreseeable future, the Directors believe that it is appropriate to prepare the Financial Statements on a going concern basis. Accordingly the Financial Statements do not include any adjustments that may arise from a reconstruction or liquidation of the Company. Such adjustments would include expenses of reconstruction or liquidation along with any costs associated with realising the portfolio.

b) Segmental reporting - The Directors are of the opinion that the Company is engaged in a single segment of business being investment business.

c) Income- Income from equity investments is credited to the Income Statement on the date on which the right to receive the payment is established. Overseas dividend income includes withholding tax deducted at source. Interest receivable on short term deposits is dealt with on an accruals basis. Where the Company has elected to receive its dividends in the form of additional shares rather than in cash, the amount of the cash dividend foregone is recognised in the revenue column of the Income Statement. Any excess in the value of the shares received over the amount of the cash dividend foregone is recognised in the capital column of the Income Statement. Derivative income from dividends on long contracts for difference ("CFDs") is credited to the revenue column of the Income Statement on the date on which the right to receive the payment is established.

d) Special dividends- Special dividends are treated as a capital receipt or a revenue receipt depending on the facts and circumstances of each particular case.

e) Expenses- Expenses, including investment management fees, are ***accounted*** for on an accruals basis and are charged in full to the revenue column of the Income Statement.

f) Finance costs- Finance costs represent interest paid on long CFDs and are ***accounted*** for on an accruals basis using the effective interest method. They are charged in full to the revenue column of the Income Statement.

g) Taxation- Deferred taxation is recognised in respect of all timing differences that have originated, but not reversed, at the Balance Sheet date, where transactions or events that result in an obligation to pay more, or a right to pay less, tax in the future have occurred. A deferred taxation asset is only recognised when it is more likely than not that the asset will be recoverable.

h) Foreign currency - The Directors, having regard to the currency of the Company's share capital and the predominant currency in which its investors operate, have determined the functional currency to be UK sterling. Transactions denominated in foreign currencies are translated into UK sterling at the rate of exchange ruling as at the date of the transaction. Assets and liabilities in foreign currencies are translated at the rates of exchange ruling at the Balance Sheet date. All capital gains and losses, including exchange movements on the translation of foreign currency assets and liabilities, are dealt with in the capital column of the Income Statement.

i) Investments - The portfolio of investments and derivative instruments is managed and its performance is evaluated on a fair value basis in accordance with a documented investment strategy. Information about the portfolio is provided on this basis to the Company's Board of Directors. Investments are measured at fair value with changes in fair value recognised in profit or loss, in accordance with the provisions of both Section 11 and Section 12 of FRS 102. The fair value of investments is initially taken to be their cost and is subsequently measured as follows:

·   Investments listed overseas are valued at bid prices, or last market prices, depending on the convention of the exchange on which they are listed, or otherwise, at fair value based on published price quotations.

In accordance with the AIC SORP, the Company charges transaction costs incidental to the purchase or sale of investments to 'Gains on investments at fair value through profit or loss' in the capital column of the Income Statement. These costs are disclosed in Note 9 below.

j) Derivative instruments - Some of the Company's portfolio exposure to Japanese equities is achieved by investment in long CFDs. Long CFDs are measured at fair value with changes in fair value recognised in profit or loss, in accordance with the provisions of both Section 11 and Section 12 of FRS 102. The fair value of long CFDs is measured as follows:

·   Long CFDs are valued at the difference between the price of the shares underlying the contract when the contract was opened and their closing price at the valuation date (calculated in accordance with policy 2(i) above).

k) Capital reserve- The following are ***accounted*** for in capital reserve:

·    Gains and losses on the disposal of investments and derivative instruments;

·    Changes in fair value of the investments and derivative instruments held at the year end;

·    Foreign exchange gains and losses of a capital nature; and

·    Dividends receivable which are capital in nature.

As a result of technical guidance issued by the Institute of Chartered Accountants in England and Wales in TECH 02/10: Guidance on the determination of realised profits and losses in the context of distributions under the Companies Act 2006, changes in fair value of investments which are readily convertible to cash, without accepting adverse terms at the Balance Sheet date, can be treated as realised. Capital reserves realised and unrealised are shown in aggregate as 'capital reserve' in the Statement of Changes in Equity and on the Balance Sheet. At the Balance Sheet date all investments held by the Company were listed on a recognised stock exchange and were considered to be readily convertible to cash.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Year ended  31.12.2015 |  | Year  ended  31.12.2014 |
|  |  |  |  | £'000 |  | £'000 |
| 3 | INCOME |  |  |  |  |  |
|  | Income from investments at fair value through profit or loss |  |  |  |  |  |
|  | Overseas dividends |  |  | 1,404 |  | 1,071 |
|  | Income from derivative instruments at fair value through profit or loss |  |  |  |  |  |
|  | Dividends on long CFDs |  |  | 324 |  | 295 |
|  |  |  |  | ---------- |  | ---------- |
|  | Total income |  |  | 1,728 |  | 1,366 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | year ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  | £'000 |  | £'000 |
| 4 | INVESTMENT MANAGEMENT FEE |  |  |  |  |  |
|  | Investment management fee |  |  | 1,130 |  | 954 |
|  |  |  |  | ========== |  | ========== |

A summary of the terms of the Management Agreement is given in the Directors' Report in the Annual Report and ***Accounts***.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | year  ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  | £'000 |  | £'000 |
| 5 | OTHER EXPENSES |  |  |  |  |  |
|  | AIC fees |  |  | 7 |  | 6 |
|  | Custody fees |  |  | 12 |  | 11 |
|  | Depositary fees1 |  |  | 14 |  | 4 |
|  | Directors' expenses |  |  | 41 |  | 38 |
|  | Directors' fees2 |  |  | 142 |  | 118 |
|  | Legal and professional fees |  |  | 48 |  | 103 |
|  | Marketing expenses |  |  | 77 |  | 84 |
|  | Printing and publication expenses |  |  | 51 |  | 48 |
|  | Registrars' fees |  |  | 33 |  | 26 |
|  | Subscription share issue costs |  |  | - |  | 193 |
|  | Sundry other expenses |  |  | 59 |  | 57 |
|  | Fees payable to the Company's Independent Auditor for the audit of the annual financial statements |  |  | 24 |  | 23 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 508 |  | 711 |
|  |  |  |  | ========== |  | ========== |
|  | 1          The Depository was appointed with effect from 17 July 2014  2          Details of the breakdown of Directors' fees are provided in the Directors' Remuneration Report in the Annual Report and ***Accounts***. |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | year  ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  | £'000 |  | £'000 |
| 6 | FINANCE COSTS |  |  |  |  |  |
|  | Interest paid on long CFDs |  |  | 88 |  | 77 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | year ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | £'000 |  | £'000 |
| 7 | TAXATION ON RETURN ON ORDINARY ACTIVITIES |  |  |  |  |  |  |
|  | a) Analysis of taxation charge for the year |  |  |  |  |  |  |
|  | Overseas taxation suffered (Note 7b) |  |  |  | 140 |  | 107 |
|  |  |  |  |  | ========== |  | ========== |

b) Factors affecting the taxation charge for the year

The taxation charge for the year is lower than the standard rate of UK corporation tax of 20.25% (2014: 21.49%). A reconciliation of the taxation charge based on the standard rate of UK corporation tax to the actual taxation charge is shown below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | year ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  |  |  |  |
|  |  |  |  | £'000 |  | £'000 |
|  | Net return on ordinary activities before taxation |  |  | 23,067 |  | 2,910 |
|  |  |  |  | ========== |  | ========== |
|  | Net return on ordinary activities before taxation multiplied by the standard rate of UK corporation tax of 20.25% (2014: 21.49%) |  |  | 4,671 |  | 626 |
|  | Effects of: |  |  |  |  |  |
|  | Gains on investments not taxable1 |  |  | (4,675) |  | (712) |
|  | Income not included for taxation purposes |  |  | (285) |  | (230) |
|  | Increase in excess expenses for the year |  |  | 289 |  | 316 |
|  | Overseas taxation |  |  | 140 |  | 107 |
|  |  |  |  | ---------- |  | ---------- |
|  | Taxation charge for the year (Note 7a) |  |  | 140 |  | 107 |
|  |  |  |  | ========== |  | ========== |
|  | 1          Investment trust companies are exempt from UK corporation tax on capital gains if they meet the HM Revenue & Customs criteria set out in Section 1159 of the Corporation Tax Act 2010 |  |  |  |  |  |

c) Deferred taxation

A deferred taxation asset of £3,601,000 (2014: £3,901,000), in respect of excess expenses of £20,005,000 (2014: £18,578,000), has not been recognised as it is unlikely that there will be sufficient future taxable profits to utilise these expenses.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | year  ended  31.12.2015 |  |  |  |  |  | year  ended  31.12.2014 |  |  |
|  |  |  |  | revenue |  | capital |  | total |  | revenue |  | capital |  | total |
| 8 | (LOSS)/RETURN PER ORDINARY SHARE - UNDILUTED AND DILUTED |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Net (loss)/return per ordinary share - pence |  |  | (0.14) |  | 20.24 |  | 20.10 |  | (0.45) |  | 2.91 |  | 2.46 |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |
|  | Net (loss)/return on ordinary activities after taxation for the year - £'000 |  |  | (160) |  | 23,087 |  | 22,927 |  | (509) |  | 3,312 |  | 2,803 |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |

The (loss)/return per ordinary share is based on 114,076,562 ordinary shares (2014: 113,966,379) being the weighted average number of ordinary shares in issue during the year. There are no diluted (losses)/returns for the year (2014: none) as in both years the average ordinary share price was below the exercise price of the subscription shares in issue.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  | 2014 |
|  |  |  |  | £'000 |  | £'000 |
| 9 | INVESTMENTS |  |  |  |  |  |
|  | Investments at fair value through profit or loss |  |  |  |  |  |
|  | Listed overseas investments |  |  | 115,532 |  | 82,486 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Opening fair value of investments |  |  |  |  |  |
|  | Opening book cost |  |  | 75,964 |  | 80,293 |
|  | Opening investment holding gains |  |  | 6,522 |  | 3,738 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 82,486 |  | 84,031 |
|  | Movements in the year |  |  |  |  |  |
|  | Purchases at cost |  |  | 165,380 |  | 64,119 |
|  | Sales - proceeds |  |  | (153,466) |  | (66,717) |
|  | Sales - realised gains/(losses) on sales |  |  | 12,378 |  | (1,731) |
|  | Movement in investment holding gains in the year |  |  | 8,754 |  | 2,784 |
|  |  |  |  | ---------- |  | ---------- |
|  | Closing fair value of investments |  |  | 115,532 |  | 82,486 |
|  |  |  |  | ========== |  | ========== |
|  | Closing book cost |  |  | 100,256 |  | 75,964 |
|  | Closing investment holding gains |  |  | 15,276 |  | 6,522 |
|  |  |  |  | ---------- |  | ---------- |
|  | Closing fair value of investments |  |  | 115,532 |  | 82,486 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | year  ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  | £'000 |  | £'000 |
|  | Gains on investments at fair value through profit or loss for the year |  |  |  |  |  |
|  | Realised gains/(losses) on sales of investments |  |  | 12,378 |  | (1,731) |
|  | Investment holding gains |  |  | 8,754 |  | 2,784 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 21,132 |  | 1,053 |
|  |  |  |  | ========== |  | ========== |
|  | Costs of investment transactions for the year |  |  |  |  |  |
|  | Transaction costs incurred on the acquisition and disposal of investments, which are included within gains on investments above, were as follows: |  |  |  |  |  |
|  | Purchase transaction costs |  |  | 97 |  | 61 |
|  | Sales transaction costs |  |  | 93 |  | 52 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 190 |  | 113 |
|  |  |  |  | ========== |  | ========== |

The portfolio turnover rate for the year ended 31 December 2015 was 128.7% (2014: 56.7%).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  |  |  | 2014 |  |  |
|  |  |  |  | fair  value |  | portfolio  exposure |  | fair  value |  | portfolio  exposure |
|  |  |  |  | £'000 |  | £'000 |  | £'000 |  | £'000 |
| 10 | DERIVATIVE INSTRUMENTS |  |  |  |  |  |  |  |  |  |
|  | Derivative instruments at fair value through profit or loss |  |  |  |  |  |  |  |  |  |
|  | Long CFDs - assets |  |  | 1,056 |  | 6,426 |  | 7,296 |  | 28,109 |
|  | Long CFDs - liabilities |  |  | (1,117) |  | 13,294 |  | (139) |  | 2,954 |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
|  |  |  |  | (61) |  | 19,720 |  | 7,157 |  | 31,063 |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | year  ended  31.12.2015 |  | year  ended  31.12.2014 |
|  |  |  |  | £'000 |  | £'000 |
|  | Gains on derivative instruments at fair value through profit or loss |  |  |  |  |  |
|  | Gains on long CFD positions closed |  |  | 9,935 |  | 1,533 |
|  | Movement in investment holding (losses)/gains on long CFDs |  |  | (7,218) |  | 1,315 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 2,717 |  | 2,848 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  | 2014 |
|  |  |  |  | £'000 |  | £'000 |
| 11 | DEBTORS |  |  |  |  |  |
|  | Securities sold for future settlement |  |  | 752 |  | 375 |
|  | Amount receivable on ordinary shares issued |  |  | - |  | 1 |
|  | Accrued income |  |  | 243 |  | 187 |
|  | Other debtors |  |  | 68 |  | 367 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 1,063 |  | 930 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  | 2014 |
|  |  |  |  | £'000 |  | £'000 |
| 12 | CREDITORS |  |  |  |  |  |
|  | Securities purchased for future settlement |  |  | 255 |  | 404 |
|  | Other creditors |  |  | 499 |  | 459 |
|  |  |  |  | ---------- |  | ---------- |
|  |  |  |  | 754 |  | 863 |
|  |  |  |  | ========== |  | ========== |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  |  |  | 2014 |  |  |
|  |  |  |  | number  of  shares |  | £'000 |  | number  of  shares |  | £'000 |
| 13 | SHARE CAPITAL |  |  |  |  |  |  |  |  |  |
|  | Issued, allotted and fully paid: |  |  |  |  |  |  |  |  |  |
|  | Ordinary shares of 25 pence each |  |  |  |  |  |  |  |  |  |
|  | Beginning of the year |  |  | 114,002,375 |  | 28,501 |  | 113,954,834 |  | 28,489 |
|  | Issue of ordinary shares on the conversion of rights attached to subscription shares |  |  | 215,981 |  | 54 |  | 47,541 |  | 12 |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
|  | End of the year |  |  | 114,218,356 |  | 28,555 |  | 114,002,375 |  | 28,501 |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |
|  | Subscription shares of 0.001 pence each |  |  |  |  |  |  |  |  |  |
|  | Beginning of the year |  |  | 22,743,320 |  | - |  | - |  | - |
|  | Bonus issue of subscription shares |  |  | - |  | - |  | 22,790,861 |  | - |
|  | Exercise of rights attached to subscription shares and conversion into ordinary shares |  |  | (215,981) |  | - |  | (47,541) |  | - |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |
|  | End of the year |  |  | 22,527,339 |  | - |  | 22,743,320 |  | - |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |
|  | Total share capital |  |  |  |  | 28,555 |  |  |  | 28,501 |
|  |  |  |  |  |  | ========== |  |  |  | ========== |

A bonus issue of subscription shares to ordinary shareholders took place on 27 August 2014 and was on the basis of one subscription share for every five ordinary shares held. Each subscription share gives the holder the right, but not the obligation, on the last business day of each month to subscribe for one ordinary share upon payment of the subscription price of 86.50 pence.

The final date to exercise these rights is 29 April 2016. After 29 April 2016, the Company will appoint a trustee who will exercise any rights remaining that have not been exercised by shareholders, providing that by doing so a profit can be realised. To realise a profit, the sale proceeds from selling the resulting ordinary shares in the market would need to be in excess of the 86.50 pence per share cost of exercising the rights, plus any related expenses and fees. Any resulting profit will be paid to the holders of those outstanding subscription shares.

14 RESERVES

The share premium ***account*** represents the amount by which the proceeds from the issue of ordinary shares, on the exercise of rights attached to subscription shares, exceeds the nominal value of those ordinary shares. It cannot be used to fund share repurchases and it is not distributable by way of dividend.

The capital redemption reserve maintains the equity share capital of the Company and represents the nominal value of shares repurchased and cancelled. It cannot be used to fund share repurchases and it is not distributable by way of dividend.

The other reserve was created in 1999 when the share premium ***account*** at that time was cancelled. It can be used to fund share repurchases.

The capital reserve reflects realised gains or losses on investments and derivatives sold, unrealised increases and decreases in the fair value of investments and derivatives held and other income and costs recognised in the capital column of the Income Statement. It can be used to fund share repurchases and it is distributable by way of dividend. The Board has no current intention to pay dividends out of this reserve.

The revenue reserve represents the retained revenue losses recognised in the revenue column of the Income Statement. It could be distributed by way of dividend if it were not in deficit.

15 NET ASSET VALUE PER SHARE

The undiluted net asset value per ordinary share is based on net assets of £116,000,000 (2014: £92,886,000) and on 114,218,356 (2014: 114,002,375) ordinary shares, being the number of ordinary shares in issue at the year end.

The diluted net asset value per ordinary share is calculated on the basis of what the financial position would have been if all the rights attaching to the 22,527,339 outstanding subscription shares at 31 December 2015 had been exercised on that date. This basis of calculation is in accordance with guidelines laid down by the Association of Investment Companies. Undiluted and diluted net asset values per ordinary share are provided to the London Stock Exchange on a daily basis. There was no dilution of the net asset value per ordinary share at 31 December 2014 because the net asset value per ordinary share was below the 86.50 pence per share exercise price of the subscription shares in issue.

16 FINANCIAL INSTRUMENTS

MANAGEMENT OF RISK

The general risk analysis undertaken by the Board and its overall policy approach to risk management are set out in the Strategic Report. This note refers to the identification, measurement and management of risks potentially affecting the value of financial instruments.

The Company's financial instruments comprise:

·    Equity shares held in accordance with the Company's investment objective and policies;

·    Derivative instruments which comprise of long CFDs; and

·    Cash, liquid resources and short term debtors and creditors that arise from its operations.

The risks identified arising from the Company's financial instruments are market price risk (which comprises interest rate risk, foreign currency risk and other price risk), liquidity risk, counterparty risk, credit risk and derivative instruments risk. The Board reviews and agrees policies for managing each of these risks, which are summarised below. These policies have remained unchanged since the beginning of the ***accounting*** period.

Market price risk

Interest rate risk

The Company finances its operations through share capital and its retained reserves. In addition, the Company has a geared exposure to Japanese equities through the use of long CFDs which incur funding costs and provide collateral in yen. The Company is, therefore, exposed to financial risk as a result of increases in yen interest rates.

Interest rate risk profile

The values of the Company's financial instruments that are exposed to movements in interest rates are shown below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  | 2014 |
|  |  |  |  | £'000 |  | £'000 |
|  | Exposure to financial instruments that bear interest |  |  |  |  |  |
|  | Long CFDs - portfolio exposure less fair value |  |  | 19,781 |  | 23,906 |
|  | Less: exposure to financial instruments that earn interest |  |  |  |  |  |
|  | Cash at bank |  |  | (220) |  | (3,176) |
|  |  |  |  | ---------- |  | ---------- |
|  | Net exposure to financial instruments that bear interest |  |  | 19,561 |  | 20,730 |
|  |  |  |  | ========== |  | ========== |

Foreign currency risk

The Company's net return on ordinary activities after taxation for the year and net assets are affected by foreign exchange movements because the Company has income, assets and liabilities which are denominated in yen, whereas, the Company's base currency is UK sterling. The Company may also be subject to short term exposure from exchange rate movements, for example, between the date when an investment is bought or sold and the date when settlement of the transaction occurs.

The Company does not hedge the UK sterling value of investments or other assets priced in yen by the use of derivative instruments. Long CFDs are held for gearing purposes.

Three principal areas have been identified where foreign currency risk could impact the Company:

·    Movements in exchange rates affecting the value of investments and long CFDs;

·    Movements in exchange rates affecting short term timing differences; and

·    Movements in exchange rates affecting income received.

Currency exposure of financial assets

The currency exposure profile of the Company's financial assets is shown below:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2015 |  |  |  |  |  |  |  |  |  |  |  |
|  | investments at fair value through profit or loss |  |  |  |  | portfolio  exposure  through  long  CFDs |  | short  term  debtors |  | cash |  | total |
|  |  |  |  | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |
|  | Financial assets held in yen |  |  | 115,532 |  | 19,720 |  | 995 |  | 218 |  | 136,465 |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ========== |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2014 |  |  |  |  |  |  |  |  |  |  |  |
|  | investments at fair value through profit or loss |  |  |  |  | portfolio  exposure  through  long  CFDs |  | short  term  debtors |  | cash |  | total |
|  |  |  |  | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |
|  | Financial assets held in yen |  |  | 82,486 |  | 31,063 |  | 844 |  | 3,169 |  | 117,562 |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |  | ---------- |  | ========== |

Currency exposure of financial liabilities

The Company's financial liabilities comprise the gearing effect of the long CFDs held, which is the portfolio exposure to the investments underlying the long CFDs less the fair value of those long CFDs, and other short term creditors. The currency profile of these financial liabilities is shown below:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2015 |  |  |  |  |
|  |  |  |  | gearing  effect  of  exposure  to  long  CFDs |  | short  term  creditors |  | total |
|  |  |  |  | £'000 |  | £'000 |  | £'000 |
|  | Financial liabilities held in yen |  |  | 19,781 |  | 255 |  | 20,036 |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 2014 |  |  |  |  |
|  |  |  |  | gearing  effect  of  exposure  to  long  CFDs |  | short  term  creditors |  | total |
|  |  |  |  | £'000 |  | £'000 |  | £'000 |
|  | Financial liabilities held in yen |  |  | 23,906 |  | 405 |  | 24.311 |
|  |  |  |  | ---------- |  | ---------- |  | ---------- |

Other price risk

Other price risk arises mainly from uncertainty about future prices of financial instruments owned by the Company. It represents the potential loss the Company may suffer through holding market positions in the face of price movements. The Manager is responsible for actively monitoring the existing portfolio, which is selected in accordance with the overall asset allocation parameters described above, and the Manager seeks to ensure that individual stocks also meet an acceptable risk/reward profile.

Liquidity risk

The Company's assets mainly comprise readily realisable securities, which can be sold easily to meet funding commitments if necessary. Short term flexibility is achieved by the use of overdraft facilities as required.

Counterparty risk

All securities and derivative instruments are transacted with brokers and carry the risk that the counterparty to a transaction may not meet its financial obligations. In accordance with the risk management process which the Manager employs, the Manager will seek to minimise such risk by only entering into transactions with counterparties which it believes have an adequate credit rating, by ensuring that formal legal agreements covering the terms of the contract are entered into in advance and through adopting a counterparty risk framework which measures, monitors and manages counterparty risk through the use of internal and external credit agency ratings and evaluates derivative instrument credit risk exposure.

For Over The Counter ("OTC") derivative transactions, in accordance with the terms of International Swap Dealers Association ("ISDA") market standard derivative contracts, collateral is used to reduce the risk of both parties to the contract. Collateral is managed on a daily basis for all relevant transactions. At 31 December 2015, £92,000 (2014: £7,916,000) was held in government bonds on behalf of the Company, in a segregated collateral ***account***, to reduce the exposure to counterparty risk of the Company.

Credit risk

Investments may be adversely affected if any of the institutions with which money is deposited suffers insolvency or other financial difficulties. All transactions are carried out with a large number of brokers and are settled on a delivery versus payment basis and limits are set by the Manager on the amount that may be due from any one broker. All security transactions are through brokers which have been approved as an acceptable counterparty. This approval is reviewed on an ongoing basis. At the year end, the exposure to credit risk includes outstanding securities transactions, the fair value of long CFDs and cash at bank.

Derivative instruments risk

The risks and risk management processes which result from the use of derivative instruments are included within the other risk categories disclosed previously. Derivative instruments are used by the Manager to gain unfunded long exposure to equity markets, sectors or single stocks. "Unfunded" exposure is exposure gained without an initial outflow of capital. The risk and performance contribution of these instruments to the Company's portfolio is overseen by the Manager's specialist derivative instruments team which draws on over forty years of specialist experience in derivative risk management. This team uses portfolio risk assessment tools to advise on portfolio construction.

RISK SENSITIVITY ANALYSIS

Risk sensitivity analysis is used by the Manager to measure the Company's exposure to risks.

Interest rate risk sensitivity analysis

If interest rates had increased by 0.25% and the Company's net exposure to financial instruments that bear interest at 31 December 2015 had been held throughout the year, with all other variables remaining constant, net return on ordinary activities after taxation for the year and net assets would have decreased by £49,000 (2014: £52,000). A decrease in interest rates by 0.25% would have had an equal but opposite effect.

Foreign currency risk sensitivity analysis

If the UK sterling exchange rate had strengthened against the yen by 10% at 31 December 2015, with all other variables remaining constant, net return on ordinary activities after taxation for the year and net assets would have decreased by £10,584,000 (2014: £8,477,000). A 10% weakening of the UK sterling exchange rate against the yen would have increased net return on ordinary activities after taxation for the year and net assets by £12,936,000 (2014: £10,361,000).

Other price risk sensitivity analysis

Changes in market prices other than those arising from interest rate risk or foreign currency risk may also affect the value of the Company's net assets and its total return on ordinary activities. Details of how the Board sets risk parameters and performance objectives can be found in the Strategic Report.

Investments exposure sensitivity analysis

An increase of 10% in the price of shares held as investments at 31 December 2015 would have increased net return on ordinary activities after taxation for the year and net assets by £11,553,000 (2014: £8,249,000). A decrease of 10% would have had an equal but opposite effect.

Derivatives instruments exposure sensitivity analysis

The Company also invests in long CFDs to gain exposure to the equity markets. An increase of 10% in the price of shares underlying the long CFDs at 31 December 2015 would have increased net return on ordinary activities after taxation for the year and net assets by £1,972,000 (2014: £3,106,000). A decrease of 10% would have had an equal but opposite effect.

FAIR VALUE HIERARCHY

The Financial Reporting Council defines a fair value hierarchy that classifies financial instruments measured at fair value at one of three levels, according to the relative reliability of the inputs used to measure their fair value.

Classification                          Valued by reference to

     Level 1                                     The unadjusted quoted price in an active market for identical assets or liabilities that the entity can access at the measurement date.

     Level 2                                     Inputs other than quoted prices included within Level 1 that are observable (i.e. developed using market data) for the asset or liability, either directly or indirectly.

     Level 3                                     Inputs are unobservable (i.e. for which market data in unavailable) for the asset or liability.

The table below sets out the fair value hierarchy of the Company's financial instruments held at fair value on the Balance Sheet.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | 2015 |  |  |  |  |  | 2014 |  |  |
|  |  |  |  | Level  1 |  | Level  2 |  | Total |  | Level  1 |  | Level  2 |  | Total |
|  |  |  |  | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |  | £'000 |
|  | Financial instruments held  at fair value |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Fixed assets - investments in listed equities |  |  | 115,532 |  | - |  | 115,532 |  | 82,486 |  | - |  | 82,486 |
|  | Derivative assets - long CFDs |  |  | - |  | 1,056 |  | 1,056 |  | - |  | 7,296 |  | 7,296 |
|  | Derivative liabilities - long CFDs |  |  | - |  | (1,117) |  | (1,117) |  | - |  | (139) |  | (139) |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |
|  |  |  |  | 115,532 |  | (61) |  | 115,471 |  | 82,486 |  | 7,157 |  | 89,643 |
|  |  |  |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |  | ========== |

17 CAPITAL MANAGEMENT

The Company does not have any externally imposed capital requirements. The capital of the Company comprises its gearing, which is managed by the use of long CFDs, and its issued share capital and reserves, as disclosed on the Balance Sheet above. Capital is managed in accordance with the Company's investment policy and in pursuit of its investment objective, both of which are detailed in the Strategic Report. The principal risks facing the Company and their management are disclosed in the Strategic Report and in Note 16 above.

18 RELATED PARTY TRANSACTIONS

The Company has identified the Directors as related parties. Key management compensation paid was £155,000 (2014: £130,000). This includes fees and travel expenses paid to the Directors and £13,000 (2014: £12,000) of Employer's National Insurance contributions. Details of Directors' remuneration and their interests in the shares of the Company are disclosed in the Directors' Remuneration Report in the Report and ***Accounts***.

Neither the contents of the Company's website nor the contents of any website accessible from hyperlinks on the Company's website (or any other website) is incorporated into, or forms part of, this announcement

For further information, please contact:

Natalia de Sousa - Company Secretary

01737 837846

FIL Investments International

31 March 2016

ENDS

A copy of the Annual Report and ***Accounts*** will shortly be submitted to the National Storage Mechanism and will be available for inspection at[*http://www.morningstar.co.uk/uk/NSM*](http://www.morningstar.co.uk/uk/NSM)

The Annual Report and ***Accounts*** will also be available on the Company's website at[*http://www.fidelity.co.uk/itswhere*](http://www.fidelity.co.uk/itswhere) up to date information on the Company, including daily NAV and share prices, factsheets and other information can also be found

**Load-Date:** April 1, 2016

**End of Document**



[***SRI sectors in focus: Evolution of green bonds***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H5X-T3K1-F0GS-H2KS-00000-00&context=1516831)

Global Capital Euroweek

September 29, 2015

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**Section:** GREEN BONDS,SRI,CLIMATE AWARENESS BOND,STANDARDISATION,GREEN BOND MARKET,CBI,CLIMATE BONDS INITIATIVE

**Length:** 5820 words

**Byline:** Gerald Hayes

**Body**

The green bond market, and the climate investment universe more broadly, can be assessed in two ways. On one hand, it has created out of nothing an increasingly deep and diversified pocket of the fixed income markets through which capital can be channelled directly to environmentally supportive projects. It has captured the attention of some of the world's biggest institutional investors, and put their money towards initiatives worldwide from BogotÃ¡ traffic to Swedish water filters. But on the other hand is an uncomfortable suspicion that not one project funded by climate bonds would not have been funded anyway by conventional means. Whether this is simply an evolutionary stage, or if it even matters at all, is a subject for reflection.

Certainly, the market has developed critical mass. "We are seeing a number of milestones and tipping points," says Christopher Flensborg, head of sustainable products and product development, fixed income and DCM, at SEB.

Flensborg, along with the World Bank, are considered architects of the green bond industry having helped to invent the concept in 2007.

"The product we created was basically designed to enable institutional investors to have an interaction with financial specialists and project specialists. Every day, you see new people coming in and engaging. All of them have a strength: water management, efficiency, public transport. And for every one coming on board we get a clearer picture of what's needed."

Numbers support the view of a market finding its feet. Looking at the green bond universe "" which is not the whole story "" there were $65.9bn outstanding as of June 2015. There are mixed feelings about its direction: the market doubled in size during an outstanding 2014, but has not kept up that pace in 2015, though we may see an increase later in the year in the run-up to the UN Climate Change Conference in Paris. The biggest issuers so far have been the European Investment Bank (â,¬10bn), World Bank ($8.5bn) and, lately, KfW ($4.78bn). Developments banks in Asia, Africa and Japan have been active too.

There are clear signs of market evolution. "Since 2013, the market has asked for benchmark investment instruments," says Aldo Romani, deputy head of funding, euros, at EIB, one of the major green bond issuers through its Climate Awareness Bonds, the first of which appeared back in 2007 in what is believed to be the first instance of ring-fencing proceeds in a dedicated liquidity portfolio for investment into projects contributing to climate action. "Before then, transactions were really targeted at specific pockets of demand."

EIB has been instrumental in building a benchmark curve, issuing â,¬10bn to date, including a â,¬3bn issue that remains the largest green bond outstanding in any currency, and a â,¬1.25bn 12 year bond due in 2026"" the longest green benchmark in existence. It has bellwether issues out there in euros, dollars and sterling. Between 2007-2013 alone, climate awareness bonds proceeds were allocated into 55 projects in 19 currencies.

Below the multilateral level there are signs of activity from municipalities (in the US from DC Water, and in Europe notably from the Swedish city of Gothenburg and France's ÃZle-de-France), from corporates (big early entrants were EDF and GDF Suez), and even high yield (NRG Yield, Abengoa Greenfield, Paprec and TerraForm Power being examples). Most deals come in euros and dollars, but labelled green bonds have appeared in 23 currencies from the Turkish lira to the Indian rupee.

More than labels

Moreover, there's more to climate finance than the ring-fenced green bonds one sees from the multilaterals.

"Labelled green bonds don't make up the sum of the whole of all bonds associated with climate," says Sean Kidney, chief executive at the Climate Bonds Initiative (CBI), a not-for-profit he founded to mobilise the bond markets towards climate change.

"The broader issue is how do we get capital allocated at scale to addressing climate change." He cites figures from the International Energy Agency saying that $3tr-$4tr a year needs to be committed towards climate solutions and says "we think we need about a trillion a year of bonds overtly related to climate solutions".

While that sounds an unthinkable number in the context of a $65.9bn universe of labelled green bonds, in fact it's not as distant as it might seem. The Bonds and Climate Change report the CBI put out in July, identified a far greater pool of bonds that could be labelled climate related, but do not carry the green bond badge.

Putting those into the mix, the universe becomes a $597.7bn market of 2,769 bonds from 407 issuers as of June10 2015, across transport, energy, buildings and industry, ***agriculture*** and forestry, waste and pollution, and water. Just under half of it, $266.3bn, falls within mainstream indices. (The precise methodology involves screening the Bloomberg data universe for companies for whom more than 95% of revenues are from climate aligned assets.)

By far the largest part of this is transport, and, within that, rail which ***accounts*** for over $400bn of the total. Energy is next, making up $118.4bn of the climate-aligned universe through a range of hydropower, wind, solar, bio-energy, geothermal and nuclear production.

The report calculated that the climate-aligned universe had increased by $95bn in the space of a year, $30.6bn in new labelled green bonds and most of the rest in issues financing rail from China and India to France and the UK. It also provided some reassuring context around range of maturities "" most relevant outstanding issues having tenors exceeding 10 years, reflecting the long-term nature of assets such as rail infrastructure bonds "" and diversity, with 37 currencies represented. It would be a shrewd market commentator who guessed the most widespread one: the renminbi, because of the many Chinese rail and hydro-electric bonds.

While it's almost entirely an investment grade market, it is quite widespread in rating; filtered through some mainstream index-like rules to make a $266.3bn accessible universe, the market breaks down as $70.1bn triple-A, $79.4bn double-A, $47.4bn single-A, and $69.4bn triple-B.

A long way from success

While all of this sounds positive, it hasn't cheered Sean Kidney.

"In the long run what we are trying to do is green the whole economy," he says. "By any axis of measurement, we're a long way from success. All we have really been able to do is gently get a few shoots up through the soft earth. To be useful, it needs to be a whole tree. A ***forest***, in fact.

"We should not be about issuing bonds that make us feel soft and cosy now because they're called "~green bonds'," he says. "It should be about designing a trillion dollar plus a year market which can contribute to making a difference which the current market palpably does not. Theinvestment flow is nowhere near large enough to make a difference and we are under no illusion of the work ahead of us."

Kidney gets angry when discussing the failure of government to do enough to shift policy away from fossil fuels and towards climate mitigation. "As Jeffrey Sachs says, we've spent 20 years pissing in the wind and wasting our money on lawyers in Paris and ***emissions*** have continued to increase," is a fairly representative comment.

But whatever governments do, there is clearly opportunity in the attitude of private investment if it can only be harnessed, and that is largely the point of what Kidney is trying to achieve. "The big win so far is that we now have investor demand. We have investors left right and centre saying they want these bonds: "~give me a deal'. But they can't find enough issuance to buy.

"We have $45tr-worth of pension funds in the world who have signed up to statements on the importance of acting against climate change," he says. "Every one of them is interested in green "" if they can also meet their fiduciary obligations." And this is the point: finding a way to attract finance that does meet the compliance obligations of vast and cautious retirement savings vehicles.

Governments, Kidney says, have a role here, rolling out investments at scale that create buying opportunities similar to the assets that pension funds already hold: "shifting portfolios," as Kidney puts it, "from green crap to brown good. But governments have to pick up part of the risk here."

A sea of green demand

Kidney is absolutely right to say that investors are ready to take part. If anything, investor demand exceeds supply. Public promises to build significant green bond portfolios have come from Zurich Insurance, Deutsche Bank treasury and KfW among others, while fund managers building green bond funds include SEB Asset Management, BlackRock, Nikko Asset Management, State Street and the specialist Natixis subsidiary Mirova, which recently launched a green mutual fund.

"There are sufficient bonds out there now for a diversified fund," says Wigley, who manages Mirova's fund. "We've got more than 40 in our dedicated green bond fund, diversified notjust by issuer but by currency, maturity and credit rating. There's a lot more diversity than when the market started."

Not only are they willing, they are increasingly savvy and demanding too. Romani at the EIB says: "The question of accountability has changed from a quantitative dimension "" a transparent description "" to a qualitative one, which is people asking: "~What is the impact of the projects that are receiving allocations?'"

The key to the success of green bonds is that a fund manager does not have to do anything different in order to be allowed to buy one. As Flensborg puts it: "If you can buy a bond, you can buy a green bond. Why wouldn't you?" This is crucial, since it's not easy for a fund manager or institution to completely change their stance on investment. "Our first consideration is financial return," says Ashley Schulten at Blackrock, which manages more than a billion dollars worth of green bonds, including a significant mandate from Zurich.

"It all has to be done with a view on the market, spreads, rates, curves and available supply," says Schulten. "It's a work in progress: issuance has definitely gotten better and as standards have improved, the process becomes easier."

So if issuers can qualify as green bonds and there is a fervent investor base waiting for them, why are most of them not doing so? The CBI hopes they will do so, "taking advantage of the marketing benefits of the green label, winning new investors, reinforcing investor loyalty, and being seen to be part of a larger, more liquid bond universe."

Some are doing so "" Vestas, the wind power company, for example, has issued mainstream bonds for years, but only in 2015 decided to label a corporate bond as green "" and perhaps others will do the same.

"Companies just have to track and be able to report annually on qualifying assets, and get a certification or credible independent review," says the CBI. "Simple."

Is it? Questions of certification, endorsement and standardisation pepper discussions around green bonds. And here things become a little more complicated.

Standardisation

Standardisation is a tricky subject. The idea is that if there is a standard template that all investors can look at when assessing a green bond, showing precisely what green project the proceeds will go to and what the environmental impact will be, it will be easier for them to participate. The argument against is that something as complex and diverse as climate challenge cannot be boxed and partitioned like other credit.

"I've always said that with the green bond market, because it is young and growing, that we are walking a tightrope in terms of standardisation," says Wigley at Mirova. "On one hand, we do not want the market to be too rigid. It needs to be flexible as it grows, and it needs to be innovative, so great are the challenges from climate change that it needs to address. On the other hand, the green bond market has always held integrity to be very important and we need to maintain that."

Issuers see this too. "For smaller investors who cannot do all their own research, standardisation is helpful," says Tom Meuwissen at NWB Bank, which finances the Dutch water authorities and has completed two labelled green bonds to date. "But bigger investors might rely on their own research and standards anyway, judging projects on their own regardless of the general opinion on their greenness."

For those bigger names, a cookie-cutter standard that removes diversity from the market might actually be off-putting.

Asked if standardisation is necessary for the market to grow, Flensborg responds: "I disagree, heavily. I do agree that standardisation is needed on the definitions of what is what"" what is a green bond "" but too much standardisation will kill the market, not create it.

"It is unrealistic to believe that any two cities will have the same challenges around infrastructure or pollution, or have the same definitions of what is green, or the same solutions. Those cities need to be allowed to have that difference in order make a transition to a green economy."

Still, one argument for standardisation is that it reduces the risk of sub-standard issuance getting into the market, because reputation, here, is enormously important.

"We don't want to see any disappointments, or anything that weakens the market in any way," says Wigley. There is a danger, already, that this could be happening. "It's been the case this year that at least two issues have come to market and been self-labelled as green, but with no link to identifiable projects," he says, declining to name them beyond being green technology specialists. "It is vital any green bond has a link to an identifiable project, otherwise that money could be used elsewhere."

Equally, though, it is perhaps part of the evolution of any market that there will be missteps. "When we started out, the World Bank was being extremely careful and prudent in what it was doing "" it still is," says Flensborg. "But now we are seeing people trying to loosen the quality quite a bit, to allow people to have different approaches and philosophies. And as that very strict policy of the early issuers is built out into a loose one, we will see some failures." That's not all bad, he suggests. "It will cause the market to find a more strict definition of what is and is not acceptable."

The Green Bond Principles are an attempt to impose some order on the burgeoning field; their first iteration came out in 2014, they were strengthened and revamped in March 2015, and will likely evolve again by 2016.

The principles are governed by a membership secretariat of green bond issuers, investors and intermediaries, and represent a voluntary set of best practice guidelines for labelled green bonds, focusing on transparency of use of proceeds, the process for project evaluation, and reporting. The principles are hosted by the International Capital Markets Association.

Alongside that, in acceptance of the fact that standards of greenness are not going to be the same for every-one, the green assessment group Cicero has launched something called a Shades of Green methodology.

Director Kristin Halvorsen explains that Cicero has three shades: dark green, implementing a 2050 climate solution today; medium green, on the way to a 2050 climate solution; and light green, offering short-term gains but not a long-term climate solution.

In practice, renewables like solar or wind tend to get the deep green methodology; efforts in sustainable buildings and energy efficiency are more likely to be medium; and projects that bring a short-term reduction in ***greenhouse gas*** ***emissions***, but do not move away from fossil fuels will be light green.

"Our shades of green aim at giving investors a better indication of how green the projects they want to invest in really are," Halvorsen says.

Certification and impact

This brings us to a second key issue: certification, which is clearly crucial for investor confidence. The most common method is to seek an independent review, often known as a second opinion, most commonly issued by Cicero or Vigeo. "A Cicero second opinion gives investors and issuers comfort," says Meuwissen.

Beyond certification, there is also increasing interest in understanding impact. Possibly the most widely discussed document in the industry right now is the World Bank's Impact Report, a June 2015 document that spells out in detail the 77 green bond eligible projects that have so far been supported by the IBRD's Bank's 100 green bonds up to June 30, involving $13.7bn of commitments (total loan amounts that will be disbursed over time) and $5.6bn of disbursements sofar.

It discusses each project, the data around projected impacts, such as energy savings, or other results, depending on the sector and project.

The results themselves are not really the point, so much as their actual disclosure, and the guidance this gives to the industry to encourage them to do the same.

"The impact report not only tells you how money is used, but what to expect to obtain in terms of an environmental outcome," says Laura Tlaiye, sustainability advisor at the World Bank. "The importance was in demonstrating that it is possible to provide investors with information that they can use, whether by project by region or by sector, to get an idea of the scale of the outcomes and impacts of their investment."

Heike Reichelt, head of investor relations and new products at the World Bank, adds: "Any information issuers can provide about expected impact gives investors additional information that will hopefully feed into every investment decision that they make."

Fund managers seem encouraged. "Issuers who were reluctant to provide reporting a year ago have come around and see the investor arguments for it. We've been working with the World Bank and EIB to create a uniform template for impact reporting," says Schulten at Blackrock. "When we request impact information from issuers, they often say: "~What do you want to see?' We're working with the World Bank to answer that."

There are, for example, potential nuances about how reports are given over the life of the project, and what exactly needs to be reported.

"There are some issuers I have been pleasantly surprised by what they provide, and some where I have been disappointed. But we are all in a learning process," she says. "Impact reporting is what we need to push the market further."

Much of this process is just a question of a new and improved dialogue.

"What is happening with climate finance is that you are merging two languages," says Flensborg. "There is impact management on the environmental side, and also the economic side. We talk about break-evens and returns, and the environmental people talk about CO2, methane and pollution, and these languages actually meet at the end of the day, but until now they have not been spoken in the same room. Green bonds are now allowing that to happen."

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| - | The activist viewWhat do the big activist groups make of climate finance? Groups like the World Wildlife Fund (WWF) have clear and sophisticated objectives around climate change, and see the mobilization of capital as a critical part of it.Samantha Smith in Oslo heads the WWF's Global Climate &amp; Energy Initiative. For her, direct finance to clean energy is as much about stopping it going anywhere else "" specifically fossil fuels "" as it is about getting it into renewables. "One of the obstacles in the transition out of fossil fuels into energy efficiency and renewables is that money is still flowing into fossil fuel projects "" a lot of public money, often in the form of subsidies for both consumers and producers, but without many benefits to the poor," she says.Groups like the WWF put considerable effort into stopping that flow, by advocating a phase-out of fossil fuel subsidies and divestment. WWF highlights examples such as Norges Bank Investment Management (which runs the more than $800bn Government Pension Fund Global sovereign wealth fund) divesting its interest in coal, and a similar commitment from the California legislature, as examples of the changes they want to see.Nevertheless, they very much support green bonds too, at least in principle. "Having vehicles to aggregate finance for renewables and energy efficiency is very important to attract institutional investors. In fact, it will be critical," saysSmith.Aggregation is a key word, because she notes that renewable energy projects tend to be decentralised and local rather than bigger utility-type projects. Their small size is a challenge. "My sense is that green bonds are funding some projects which otherwise wouldn't get done, not necessarily because they are not commercially viable but because the projects taken one by one are too small to attract investment," she says. "Green bonds can be a way of aggregating projects and providing a fixed return from them."Unsurprisingly, groups like the WWF want a green bond to be bright green, rather than some opaque shade of lime."Green bonds need to be really green, and there need to be agreed criteria on what greenness is," she says. "We say the standard of greenness needs to be high not just because we are environmentalists, but because if you are trying to encourage investors to make long-term decisions "" particularly institutional investors "" you want to provide them with something that is still going to be seen as green three, five or even 10 years from now."If there is one thing we know, it's that technology improvements, climate science and climate impacts will increasingly raise the bar for what is green enough."There is much less discussion of carbon credits these days, and the WWF does not seem inspired by their potential. "Carbon pricing can be an important tool at the national level," says Smith. "The main thing it does is to change some of the economics of using fossil fuels for power and stimulates some energy efficiency in manufacturing and industrial production. But it's not sufficient. We also need targets and other incentives for massive scaling up of renewables and energy efficiency."We don't see carbon credits as playing a major role in financing now," she says. "Many renewables and energy efficiency projects are commercial. The bigger issue is the mismatch between big investors and small projects, and the need for better vehicles for green investment. Carbon credits don't really help you with that."The other issue with carbon credits is that there is massive oversupply and the prices are very low. That is all about political will, because that's what creates the demand." | - |
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A question of timeBeyond questions of structure and regulation is a more fundamental and awkward question: is any green project being funded today through green bonds that wouldn't be funded anyway through conventional means?"The straight answer is no," says Flensborg. "But it is creating a financial infrastructure that can accommodate new flows towards climate finance."It's a conundrum that bothers Eugene Howard, economic advisor in the energy department at the EIB. "The next real challenge is "~how does this market translate into an impact on the actual project?'," he says. "Does the fact that we are looking for a supply of bonds have any impact at all on the initiation of that project? Atthe moment there isn't a direct connection between green bonds and projects: projects do not get added benefits, consumers do not pay extra, they are commercially rated bonds with no green premium. A future step is making a connection between the deployment of green bonds, and more direct and real impacts on the development of projects. But I don't foresee how or over what time period this may be developed."A common response is that it's just a question of time, and all part of what has already been a rapid evolution.Tlaiye at the World Bank says: "You could say green bonds fund investments that might have happened in any case because people were planning to do them, but are labelled in a very different manner. The next generation of bonds will be for projects that would not have happened without green bonds." Or, if not that, then at least green bonds will influence the way a project is done."I think as the green bond market takes hold, what we hope you'll begin to see is that issuers will re-think some of the projects they might otherwise have been trying to finance," says Peter Ellsworth, senior manager of investor programmes at Ceres, a non-profit in Boston that advocates for sustainability leadership. "They will find ways not only to characterise them as green, but actually transform them into green "" perhaps considering an energy efficiency measure requiring finance that they might not have considered without the green bond market."As with all things, price will be a factor. "We will get that [financing of projects that wouldn't otherwise happen]," says Schulten at Blackrock. "At some point you will find that green finance bonds may trade at better levels than non-green. If momentum continues, issuers will therefore get more attractive funding for being green than not."And even if the answer is no and all these projects would happen anyway, perhaps it doesn't matter."We believe they are transparent and that actual projects are benefiting from them, but some people say perhaps these projects would have been financed anyway," says Wigley. "But we feel the green bond market is growing and that increasingly it will be seen as a pool of capital available for further green projects." Greed and egoIn considering where the green bond market goes from here, it's worth evaluating the challenges it faces, which vary from logistical to personal."The biggest challenge is greed and ego," says one banker. "There is a risk that some people or institutions will focus on how they can benefit from this and try to drag the market in a way that takes it away from its intentions."On the practical side, some things will presumably sort themselves out in time, like liquidity and issuer range."The bid-side liquidity is as good as in any non-green fund," says Schulten. "But on the offer side, bonds tend to get put away and you don't see them floating around in the secondary market. There is strong investor demand to buy and hold "" and once you sell, you can't get them back."She notes wryly that "bankers always promise more supply and it doesn't materialise. But I would like to see better supply, not just more supply. If an issuer is not ready with third party verification or an impact report, I'd rather not see them issue."Ellsworth would like to see more corporate issuance, but accepts there is a natural progression to take place. "It's easier being second than it is first, and third rather than second," he says. "You are going to see an entire second tier of corporate issuers emerge because they are being shown the way. The first hurdle is to get a critical mass of top tier companies issuing green bonds that are credibly received by the market, and after that it's going to be a lot easier."In five years we will look back and wonder what the fuss was about in 2015, when we were not seeing as many new issues of green bonds as we thought we might."Getting more issuance below the supranationals does require there to be something in it for the issuer. "The reason for the success [of EIB's issues] is that a link is established between funds and disbursement, but the investor continues to be exposed to the risk of EIB, not the project," says Romani. "Now we need more participation in the market by corporate issuers, and there, things become a little more difficult. In order to issue these bonds a company needs to put in place parameters on impact assessment, disbursement, monitoring"¦ The responsibility has a cost, but there is no funding advantage, yet."The benefit then is mainly reputational at this stage, "a positive picture they can provide of themselves", but if that's not enough of a reason then corporates won't issue. Getting them to do so will otherwise be a question of policy.A more fundamental question is whether we will eventually see a market that puts its money where its mouth is and is priced differently, even at a premium, to conventional, so that there is a clear additional sum of money that serves an environmental purpose "" in other words, institutional investors not just getting to feel good about their green bonds but paying extra to support that environmental mandate. Today, the tyranny of expected returns is a barrier for investors spending more on a bond for its green characteristics."Until the way investor performance is measured changes, it will be hard for that [different pricing or additional cost for a green bond] to happen," says Reichelt. "Right now performance is based on benchmarks that don't factor in climate cost. There isn't a "~price on carbon' for every investment yet. If that's what you have to benchmark against, that's what you have to beat. The next generation might be different."Indices are beginning to appear, which is a start; S&amp;PDJ indices launched a Green Project Bond Index in 2014. There is a Barclays MSCI green bond index, and State Street is believed to be launching a tracker fund linked to it.Also, one must not forget investors are always driven by returns; we can, perhaps, go too far in the admiration we give the investment management sector for its green aspirations."People sometimes overestimate how much investors can care," says Reichelt. "They will invest in a bond based on its financial merits, because that's what they are measured against. If it's green that's an added bonus. A green bond might get you on to the radar screen of more investors who wouldn't otherwise have heard of you, or to those who manage dedicated green funds but the market has a long way to go before it is priced differently" to conventional bonds."I believe that green bonds are catalysing an overall development in the capital markets that will take a generation," she concludes.Nevertheless, it's striking how far the market has come already, and its pioneers have no problem admitting that it's a work in progress."It's difficult to be first but we have created a reference, a model for how it can be done," says Flensborg. "Eventually we will see critical mass, with 10, 15, 20 issues in each category, and then eventually it becomes more odd not to do it than to do it."That's the acceleration we are seeing, day by day and week by week. The awareness-building is done. People are aware of it. Now it's more about timing and policy."Reichelt believes green bonds are "a piece of the puzzle", alongside other elements such as donor money coming through climate investment funds and putting a price on carbon. "What the green bond market has done is give mainstream investors a chance to be part of an environmentally effective market through a product that they understand and know anyway."There is a lot more to do, not all of it easy. "We will see failures. Some people will be very angry about them," says Flensborg. "But the key principle will be that investors will need to do their homework, and as more due diligence is put on the table, it will be easier to make decisions. Failures won't kill the market. They will just be hiccups. The market will continue."Flensborg sees the green bond as "abeta product, at its first stage. It's not a solution yet, but it has allowed people to understand these projects, and we can use our experience to create an alpha product."Similarly, Reichelt at the World Bank calls green bonds "a starter product, to put your toes in the water as an investor, and move on from there. But it might change completely how you look at your investments overall in fixed income."

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| - | What investors want | - |
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| - | Ceres is a non-profit in Boston that advocates for sustainability leadership and brings together networks of investors, companies and public interest groups. It has been instrumental in driving the Investor Network on Climate Risk, which combines more than 110 investors representing more than $13tr in assets committed to addressing risks and (equally crucially) seizing opportunities resulting from climate change and other sustainability challenges.Following the publication of the Green Bond Principles in January 2014, Ceres and INCR convened a group of investors active in the green market to offer an investor perspective concerning disclosure, impact reporting statements, project eligibility and second party opinions. These discussions led to a Statement of Investor Expectations for the Green Bond Market, released in February, aspects of which were incorporated into the March 2015 update to the Green Bond Principles.Peter Ellsworth, senior manager of investor programmes at Ceres, is quick to point out that what they came out with was a statement of investor expectations, not standards. "The market is in an evolutionary phase," he says. "Five years from now it's entirely possible there may be a set of more prescriptive standards." He says there is a "surprisingly strong consensus" on standards and expectations. "Issues on project eligibility, disclosure and assurance really generate a great deal of common ground."If there's a fault line, or a sense of something that needs to be done, it's probably the fact that there is no independent entity to legislate what is green and what is not. "I think we've seen a couple of cases where bonds have been labelled green and they haven't been received as well as the issuer might have been expecting. Some of them may have pushed the envelope a bit, some lacked adequate transparency. Like any market, you're going to see some excesses from time to time, but the market is doing a pretty good job of self-regulation at the moment." He says experienced green bond investors, issuers and organizations like Ceres "are also doing their part to foster a crediblemarket".Perhaps the conclusion will be that a voluntary set of standards is not enough. "There is increasing convergence around voluntary green bond principles," says Samantha Smith, leader of the Global Climate &amp; Energy Initiative at the World Wildlife Fund in Oslo, "but where we will probably need to go is a regulatory or quasi-regulatory solution that allows investors globally to evaluate the "~greenness' of a particular bond issue."International regulation would be complex, she says, but since corporations sometimes use green bonds to finance activities in multiple countries a global or co-ordinated multilateral solution is best. There is potentially a role for the rating agencies."I'm not saying this is something that will happen immediately. But when we look at the need for green financing vehicles and the speed with which this has to happen, you see that we need a high standard, it needs to be very credible with investors and it must be more than voluntary." | - |
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Global Capital Euroweek

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**Section:** GREEN BOND,GREEN BOND MARKET,ROUNDTABLE,SRI

**Length:** 9390 words

**Byline:** Mark Baker

**Highlight:** The year 2015 has seen important progress in the field of green bond investment in Asia, with the emergence of two big new markets "" China and India. For its Tokyo roundtable, GlobalCapital invited a panel of issuers, investors, analysts and bankers to discuss the trends in the sector and the potential for development as new markets open up for the asset class across the region.

**Body**

Participants in the roundtable were:

Yoshiyuki Arima, lead financial officer, Japan, World Bank

Masanori Azuma, managing director, Nomura

Brian Cahill, managing director, head of APAC corporates and financial institutions, Moody's

Mushtaq Kapasi, head of International Capital Market Association, Asia Pacific

Mariko Kawaguchi, managing director, chief researcher, Daiwa Institute of Research

Ryohei Morita, managing director, head of debt syndicate and MTNs Japan, Barclays

Hiroyuki Nakashima, director, capital markets and funding division, Japan Bank for International Cooperation

Stefan Reiner, head of sustainable capital markets, DeutscheBank

Kenichiro Shiozawa, senior financial officer, IR Tokyo, treasury department, International Finance Corporation

Yasutoyo Takada, general manager, credit investment department, Nippon Life Insurance

Kazuyuki Takigawa, foreign fixed income chief fund manager, asset management division, Resona Bank

Takeshi Tokuda, director, international debt origination, Daiwa Securities

Pierre Van Peteghem, treasurer, Asian Development Bank

Masanori Yoshikawa, director, capital markets division, treasury department, Japan International Cooperation Agency

Mark Baker, moderator, GlobalCapital

:The green bond sector is an increasingly important sector within capital markets and although green bond issuance is down a little from last year, 2015 is still expected to be a strong year for the asset class. We've seen it spread into a number of new Asian markets, in particular India and China.

Last year we started our discussion with the issue of standards, and it seems an appropriate place to start again, not least given the proliferation in the last 12 months of entities looking to design their own standards and others providing accreditation for standards that others have designed. So I'd like to start the discussion with Mushtaq, our representative from ICMA, to outline the objectives of the best-known set of standards, the Green Bond Principles.

Mushtaq Kapasi, International Capital Market Association (ICMA): The Green Bond Principles are co-ordinated by ICMA, and they have been developed from the bottom-up, from the market itself. The effort was intended to create a set of voluntary guidelines to encourage further investment in environmentally friendly projects and to combat the effects of climate change on environmental degradation.

The goal is to increase the pool of green investments, and the idea is that if we promote a set of voluntary guidelines for the industry to follow that can evolve over time, this will act as a seal of approval to give investors high level guidance and confidence on what is green.

In my opinion the strength of the Green Bond Principles is that they involve the co-operation of a very wide section of the finance world through the inputs of issuers, investors and intermediaries represented by an executive committee. We at ICMA don't sit in a room or in a black box: we work with the GBP Executive Committee to take the practices that have already been developed within the banks and issuers and the demands of investors and build a consensus as to what the principles should be.

The Green Bond Principles are not excessively stringent. As many of you know, the principles governing green bonds within some of the development banks and some of the environmental NGOs are in many cases stricter than the principles put forth by the Green Bond Principles. This is not a problem and in some ways it is an advantage that the Green Bond Principles are easier to follow, as this encourages new entrants into the market. Although of course the criticism could be made that they are not strict enough. We believe that the principles strive to get the balance right.

There are four main principles under the voluntary guidelines of the Green Bond Principles. First is use of proceeds: a green bond should state very clearly what types of investments the proceeds will be used for and why they are beneficial for the environment. There are a number of different categories that can be considered green, such as renewable energy, renewable ***agriculture***, clean water, and biodiversity, but the list is not exhaustive.

Second is a clear method and criteria for choosing projects. Again this is a matter of disclosure and having an internal procedure for deciding where that money goes. Third is segregation of proceeds: there has to be some way for investors to know how the money that has been raised through the green bond is being managed, what projects it is being put into, and what are the environmental benefits of those projects. There has to be a system in place to give investors transparency about the use of proceeds and the impact of the environmental projects.

The fourth is reporting. Many of the development banks have led the charge on this, but the basic idea on this is that there should be periodic reporting on the impact of the investments. But the basic principle here is that you should be able to measure the impact, whether it be, for example, CO2 reduction or energy saved.

As you can tell, it's very common sense-based and aims to promote the green bond market while providing as much transparency as possible.

: How important do people think the principle of having a standard set of high level guidelines is? Does that standardisation matter? And how feasible is it when you are talking about a very broad range of industries?

Yoshiyuki Arima, World Bank: Of course different issuers have varying definitions of "green" that they apply to select the kinds of projects they consider as green bond-eligible. Based on their business model and governance, they may have different policies they follow.

In the case of World Bank "" which is owned by 188 countries and lends to developing countries for poverty reduction and economic development "" our shareholders support the expansion of renewable energy, for example, but prefer to exclude nuclear power plants. This is a conservative approach considering the associated environmental issues and possible risks.

Every institution considering issuing green bonds should establish guidelines that are compatible with its business model and governance. As long as they disclose the use of proceeds and expected results with transparency, it is up to investors to decide. For example, Toyota issued a green bond to finance auto loans for hybrid car buyers.

With sufficient information, investors can choose to accept bonds that support these specific activities, considering financial aspects like looking at the spread over Treasuries and other aspects to each green bond. Ithink that's fine. The market will decide.

Pierre Van Peteghem, Asian Development Bank (ADB): I'm putting myself in the shoes of investors and my view is that investors would like to see some kind of harmonisation here because they are buying a product and they want to make sure that the proceeds are going towards financing comparable activities. So I think some standardisation is definitely good for the expansion of the market, because at the end of the day the objective is to attract more private sector financing into financing green projects or climate friendly operations.

Does that mean that we have to be extremely strict? Maybe not. The whole point is to try to harmonise the way we are reporting on the impact of our operations. But in a nutshell, yes, we think standardisation is important to clarify the asset class.

Kenichiro Shiozawa, International Finance Corporation (IFC): I agree with the views shared by Arima-san and Pierre-san. IFC has also been very active from the dawn of the green bond market and in the broader SRI space. We have a lot of experience from issuance of green bonds, and we are now providing our input into global standards and best practices.

We have co-operated with ICMA on this year's second version of the Green Bond Principles. I think that there may exist possible differences between sectors and industries, but our effort is still at the starting point. There is some competition between several guidelines, but in the medium term there may be convergence between them or some commonality in the core parts, and depending on sectors there may be some additional things that can be added.

: The conclusion is perhaps that this convergence is going to be driven more by investor requirements than anything else. I'd like to bring in one of our investor representatives. Takigawa-san, when you are considering a green investment how much does it matter to you whether there are common standards? How do you compare one green bond to another green bond?

Kazuyuki Takigawa, Resona Bank: There is no difference between greens for us, except nuclear power projects. With other projects we don't see any difference.

: Is it still helpful to have a set of common standards?

Takigawa, Resona Bank: Sooner or later a general definition will be needed. We don't need a strict one, but just rough rules for the public sector and the private sector to work from.

: Mariko, we spoke about this topic when you were on the panel last year. What is your current view, not just on the development of green bonds but on the broader question of SRI standards?

Mariko Kawaguchi, Daiwa Institute of Research (DIR): This morning I was attending a committee meeting held by the consumer agency about ethical consumption, and the theme was what do you define as "ethically good"? The result was that everybody wants transparency. People can say, "~yes we're green, we're fair trade', but lots of people don't trust that easily. This may apply more to consumer goods with long and complicated supply chains, but I think it also applies to financial products. In order for consumers and investors to believe that you are really green you need some kind of clear-cut rules.

This is very important when it comes to retail investors. If it's just institutional investors like these here today, it is perhaps easier to understand because you can talk to each other and to the issuers. But when it comes to the individual investors who are buying products from them, it's more remote, so they need more criteria, a more concrete set of ideas.

: What are the panel's views on what are sometimes called pure-play green bonds, where bonds are issued by an entity that considers itself by definition green and therefore not requiring any independent labelling, or perhaps deals done where the proceeds were not specifically targeting a green project? Perhaps this is one for our banking representatives here: when you are talking to potential issuers, how much does that topic come upin discussion?

Stefan Reiner, Deutsche Bank: We have had two issuers in the market who used the proceeds for general financing purposes: Vestas and Goldwind, which was the first green bond out of China. I think it's important to have standards, but in my experience it's more important to be transparent. Whether the issuance is for general refi purposes or for a specific project, it doesn't really matter as long as the issuer is very transparent with investors about what it is doing with the money.

I think the more standards we set, the more difficult it is for new entrants to join the market. The whole purpose of green bonds is to finance climate change initiatives. At their conference in June this year in Germany, the G7 leaders committed to ensure that global warming stays below two degrees Celsius. That needs something like $21tr of green financing by 2040. In order to achieve this I think it's important to get as many issuers to the market and to fund new projects. And therefore it's important to be transparent.

Arima, World Bank: I think investors are now asking for more information than they used to, which is a good development. I have a very interesting example related to this topic. When we distributed the first Uridashi green bond in 2008, through Daiwa Securities, we just briefly explained the concept of green bonds and didn't get project-specific questions. But recently we distributed a green bond to retail investors through Nomura Securities and Azuma-san here kindly asked me to provide many project examples in Japanese and I spent all night translating so many slides!

We have to show actual examples of how we use the proceeds. Right now we have about 80 eligible projects and I am translating all the project descriptions in order to be prepared for future requests. That's a recent change.

: Azuma-san, is it your impression that this is the main new demand from investors, for transparency and disclosure on the use of proceeds?

Masanori Azuma, Nomura: Transparency and disclosure are important and I totally agree with that, but it can be very difficult to evaluate a project. For instance, you mentioned the example of nuclear earlier, and how some people see nuclear as no good. But today nuclear is the only way that clearly reduces CO2 ***emissions***. On the other hand hydropower generation is said to be good, but it is well known that you can damage the environment by building a dam. So standard setting is very difficult. Nevertheless what we need is to be able to disclose to investors what are the specific projects that are happening and then allow investors to make their own evaluation of whether a project is really good or not.

Shiozawa, IFC: Standardisation also refers to how we provide the information properly, and how to satisfy people's transparency needs. This March, IFC and World Bank, in collaboration with other MDFIs [multilateral development finance institutions], issued basic guidelines on how to publish impact reporting and this is also a long term project. Based on this, we also enhanced our impact reporting from this year and expect to receive comments from the market which we can use to improve our impact reporting in the future. This will take time but it is a healthy and interactive process.

Van Peteghem, ADB: We are all saying the same thing. I think that this transparency is the only way to go and obviously ADB subscribes wholly to that process and especially to the impact reporting, which is still at a nascent stage. We are talking about many things "" how many ***greenhouse gases*** have been avoided, the capacity in megawatts in a renewable energy power plant. But the main issue, and I agree with Stefan on this, is transparency and that's going to be asked for more and more by investors.

If we want to be able to mobilise the many trillions ofdollars needed in the upcoming years in order to face the challenges of climate change, transparency from issuers in terms of not only what they do with the funds they are raising from green bonds but also the impact they have on the environment is completely necessary for this asset class.

: What do you think is holding back that transparency at the moment, if anything? Are there problems in getting hold of that data, or is it that issuers don't see enough of an incentive to provide that level of disclosure and take the costs and time that's involved in doing that?

Van Peteghem, ADB: It's more the former than the latter, and actually if you look at all the MDBs [multilateral development banks] around this table and those who are not, they are doing this. At ADB, for example, in two clicks on our website you get to the whole green bond programme and its reporting. I am sure it is the same with the others. In terms of the use of proceeds I don't think it is an issue. But impact reporting is much more complex and that's why once again the process is still under discussion. Full standardisation there is just not possible.

One example: evaluating the amount of ***greenhouse gases*** that you do not release into the atmosphere because of one green bond "" what is it? Is it during the full use of proceeds of that green bond for a specific operation that the green bond financed? But let's remember that disbursement "" especially in project finance "" does not happen in one shot, and a green bond as we all know is one use of proceeds payment and then one bullet payment at the end.

How do you look at this? What if the project has a 35year life? Are you going to look at this 35 year life or just the amount of gases that have been avoided during the life of the bond? I'm only talking about the most straightforward example.

: I'd like to bring in JICA and JBIC here to give a bit more information specifically on the demands of the Japanese investor base. What is your perception of the kind of standardisation or disclosure requirements that exist there?

Masanori Yoshikawa, Japan International Cooperation Agency (JICA): In terms of the domestic market, we always present ourselves as an SRI-type issuer because we were established to support socio-economic development in developing countries. All our borrowing proceeds will be used for this purpose and this is defined by law. We feel it is reasonable to call ourselves an SRI-type issuer. This has been explained to domestic investors and we feel we have some understanding from them.

Hiroyuki Nakashima, Japan Bank for International Cooperation (JBIC): JBIC has not issued a green bond yet but we have so many projects that are green "" including renewable energy and also highly efficient coal-fired power plants. So our definition will be a little different from the MDBs. We haven't decided whether we will issue a green bond, but as everybody has said, transparency and accountability are the two issues which are the most important. So if we will issue in the future, we will need to prepare information on how we are using the funds to finance which projects.

Having said that, one thing that came to my mind is that with the current guidelines as prepared by ICMA and the leading MDBs, I want to know whether you had a dialogue with NGOs. Based upon our experience when we introduced environmental guidelines, at that time we involved not only lenders and borrowers but also NGOs. What happened in the current situation when you were making these guidelines? Were the thoughts of NGOs also reflected?

Kapasi, ICMA: We do have a number of NGOs involved in the Green Bond Principles, and they are certainly involved in the dialogue. But of course the Green Bond Principles themselves are the product of a consensus. To be honest there is discussion within the industry and the different players about how strict the Green Bond Principles should be, and some of the NGOs would argue, for example, that third party certification should be a requirement.

But there are other voices involved in the principles who might say, as Stefan said, that if you have guidelines that are too strict then that might discourage new entrants into the market, and therefore we would want to keep them at a level that supports the credibility of green bonds without discouraging non-MDB issuers. So the green bond principles reflect a compromise, but there is close dialogue with all the stakeholders because they have to be involved.

What we don't want as an association is to have a perception that a set of guidelines promoted by ICMA is merely the product of the financial industry. The NGOs must have a voice in developing these principles. They have in many cases better expertise and better experience in measuring environmental impact, and ways of mitigating climate change. And they have more insight sometimes into the attitudes and requirements of the retail investor base than many of the members of ICMA.

Kawaguchi, DIR: The standardisational labelling should include transparency in that process. Listening to the discussion here, you can see that it is transparent, but if you are going to sell it to other people out there you need labelling because those people are not involved in these discussions. Being able to say it is labelled this way and the label is decided by this kind of discussion with atransparent process, that will make it credible to peopleoutside.

Another thing is that you can look at other labelling markets, like sustainable forestry management, where there are several different types of labelling, such as FSC [***Forest*** Stewardship Council]. Some issuers for example might want to use very strict criteria but others may prefer looser ones. I think you don't have to stick to just one label, but a transparent process is very important.

: There is also a role there for some of the experienced multilateral issuers who have in-house expertise at analysing and reporting to support new issuers as well, and we will come on to that later. But before we do I'd like to bring in Moody's, because in some ways the whole question of certification has parallels with the credit rating process. Brian, what scope do you think there is for traditional credit ratings agencies to contribute to green accreditation and how you are approaching that subject?

Brian Cahill, Moody's: What I've heard today is consistent with a lot of the dialogue we have heard in the last year or two, which is that there is some debate about whether there is a need for a standards-based and/or an informational product in respect of green bonds. Given our position in the fixed income markets we are obviously interested in whether there is a role we can play in respect of green bonds and that serves the needs of core customers such as issuers and institutional investors.

We have been in pretty active dialogue globally with a number of players to understand how we might meet that need. I think there are probably two or three challenges we continue to think about and they are echoed throughout this conversation today. One is, what exactly is the standard that people want, is it around the definition of "~green'? Is it around governance, ***accounting*** and reporting practices, disclosure or some combination? And then there's once you've defined it, what else do you want out of an agency, do you want them to track the proceeds and comment on how the proceeds have been used, or comment on the impact on the environment?

One thing I would emphasise is that we can't play a role unless there is transparency. We're not auditors, we can't create the transparency, all we can ultimately do is comment on what is out there in the public domain and what issuers are willing to share with us, either by providing commentary relating to some standard that we define, or in some other way. But I would say definitely that the credit rating industry has the potential to be an active participant in this business. We already rate many of the bonds as to credit, we are global and we are used to talking about standards.

: Are you having those discussions mostly with entities on the sellside or the buyside?

Cahill, Moody's: Both, but ultimately we need to understand what the buyside wants. Our product is one that is used by the buyside. I don't think the buyside necessarily understands what they need yet "" it may be that someone needs to provide a product and they say, "~yes, that's what we want'. But we are at an early stage.

Having said that, with reference to what has changed since last year, I think there is a lot of momentum. Things have certainly changed from our side, we are internally much more engaged in thinking about ESG and SRI issues than we were 12 months ago, we are open to having those dialogues, particularly so in terms of trying to understand and meet the needs of investors as they increasingly focus on ESG in fixed income.

Van Peteghem, ADB: I'd like to ask a question here. Ratings agencies are known for their main output, which is basically probability of default. That's your main output to the buyside. The whole green bond market "" where do you put the notion of credit into that, because I haven't heard that from what you have said so far. Does it have an effect on the issuer when they come out with a green bond? Where's the probability of default impacted here?

Cahill, Moody's: Well, I think it isn't, right now. If you look at the universe of green bonds that have been issued "" take whatever definition you wish "" we will have rated most of them and we will have rated them according to our usual methodologies and without reference to whether they are green or not as their structures and repayment obligations are not differentiated from ordinary bonds.

There is a broader discussion about whether ESG criteria have some role in helping identify higher or lower credit risk and that's certainly something we are actively looking at. And we want to play a role in that because the institutional market is becoming more interested in that right now. But the mere fact you have issued a green bond per se I don't think has any impact on your credit rating. It may over time, if the pool of liquidity moved away from vanilla corporate bonds and you had a much more liquid pool of capital in the green sector, then yes that could be credit-relevant.

From a credit rating perspective, we are used to providing informational products that are of interest to fixed income participants but which don't necessarily give much incremental insight into credit default risk "" we have some products we have provided in that space because we see the fixed income market is interested. That may be where we go with green bonds.

: We are moving into the area of actual issuance, and as I mentioned earlier, issuance is a little down this year although there is more diversity. So I'd like to get some thoughts from the panel on where they think activity will be coming from in the future "" which areas show the most opportunity?

Takeshi Tokuda, Daiwa Securities: I think Japan has the potential to issue more green bonds or SRI-type bonds. The Japanese market has been driven by retail investors for a long time so in order to expand the market further we need institutional investors. If Japan has those, then the SRI-type bond market in Japan will rocket, I believe. But right now on the issuer side it's going to be difficult to enter the market because of the lack of convincing reasons to come in.

Japan could also perhaps have a different type of SRI bonds. For example, there was the earthquake in 2011, and at the time everyone noticed the importance of business continuity. So maybe Japan can have business continuity as a new theme, and more themes might bring more investors in the future.

: What needs to happen to promote that development of more institutional investors?

Tokuda, Daiwa: In the global market the demand for green bonds at the early stage was from public institutions, like the Swedish public sector pension fund.

In Japan it lacks the public institutions, but for example if the Government Pension Investment Fund (GPIF) were to allocate funds to SRI products and bonds, many other pension funds would follow that standard, and so the institutional investor base would go up. That type of investor would be necessary as the model case.

I think a good example right now is insurance companies. Many are going into this market as a growth strategy right now, so maybe insurance companies can be the model case for Japanese institutional investors.

: Takada-san, maybe I can bring you in on that point. Could you outline what sort of green investments you are looking at and what you are interested in?

Yasutoyo Takada, Nippon Life Insurance: Before answering, let me explain a little about our investment philosophy. I am now in the credit investment department, which was established last year to expand our business investment opportunities in the overseas market. In Japan we are still suffering from a low interest rate environment so we have to go abroad to seek higher investment returns.

SRI is very important for us because we invest money from policyholders and they always watch how we use their money. They are often very environmentally conscious. As for green bonds, we just started to invest last year and we see some opportunities in international institutions as issuers but we see only limited corporate issuers across the world.

Last year I went to Europe to see some potential issuers, and some of them asked me what the benefit of a green bond was. They said it would cost them more and they would have to transfer the cost to investors, and so that does not make sense. I think from those conversations it will take time for many private issuers to issue green bonds.

We invested in last year's City of Paris green bond, which was the first time for them and the money was being used to construct energy-efficient public housing and build a low carbon transportation system. Also this year we invested in Transport for London's first private placement issue in the green bond market. In Japan there are companies being environmentally conscious and issuing SRI statements, but we don't see any issuance activity. It will take time.

: As you mentioned before, the question for issuers is: will investors reward us for taking this step? I sense from what you are saying that you are not prepared to do that. What would have to happen do you think for you to be happy to pay a premium to buy a green bond from an issuer instead of a non-green bond?

Takada, Nippon Life: Yes, they thought that economically it doesn't make sense for them, but they also noticed that this kind of activity is good for their public image, so even though it might cost a little bit more they might still do it.

Arima, World Bank: From an issuer's viewpoint, we see it as an opportunity to engage at a different level with investors. And another important point is that we can interest a new investor base by issuing green bonds, so it can be worthwhile for issuers to make further efforts to issue green bonds.

Kapasi, ICMA: What exactly is that incremental investor base, do you think?

Arima, World Bank: I am a Japan specialist and I don't know full details on other regions. But as far as I see it, Nordic investors, for example, seem to be very keen "" like the original Swedish investors who bought the first World Bank green bond. Buying World Bank bonds wasn't on their radar in the past as much as it has been after we developed our first green bond with SEB.

We have also been able to benefit from demand from other ***accounts*** in that region, as well as from US public pension funds, who didn't previously buy World Bank bonds. Although the US is our largest shareholder, US investors aren't as familiar with the World Bank as an issuer compared to Japan. In Japan, the World Bank is very famous because we financed many Japanese corporations, but we don't finance projects in the US, so they don't know us as well.

Van Peteghem, ADB: The specifically dedicated type of investors you mentioned "" the Norwegians, the Swedish and the US as well "" will grow more in the future, and you can imagine a growth in asset managers with green dedicated funds, where only green bonds or those type of investments will be eligible.

I would like to add one thing: investor diversification is one thing but another is the cost of funds, and I think we are already there. I make one example from ADB. Weissued a $500m green bond earlier this year. It was a 10 year issue and it priced at mid-swaps plus 1bp. You have to go back to the conditions of earlier this year, but if we had issued a standard 10 year bond I think it would have cost us one or two basis points more, although probably we would have raised more money as well. The product is different so it's not surprising that at the end of the day the clearing price is not going to be the same. And it's probably going to be lower.

: We hear that many investors in Asian issuance are looking at deals from a credit perspective in the normal way, and it doesn't much matter to them whether a deal is green or not"¦

Ryohei Morita, Barclays: At Barclays, we acknowledge that there is a high level of interest from institutional investors in green bonds, but we also note the demand we have seen for private placements from issuers like the World Bank. From these private transactions, we are seeing flexibility of issuers and the development of a market not only through benchmarks. Secondly, in addition to being a lead manager, Barclays Treasury has made a commitment to invest £1bn into green bonds for its own liquidity pool, by November 2015.

Reiner, Deutsche Bank: I just wanted to make the point on pricing. As Pierre mentioned before, if you compare green bond transactions in the primary market with non-green bonds, the biggest difference is size. Usually the transactions in the green bond market are smaller, so you can't really compare the pricing, but if you watch the secondary market, you see today that green bonds tend to trade tighter than non-green bonds. You have outstanding curves from big issuers like EIB and KfW, and we can see their green bonds are trading below their non-green bonds, so there is already a differentiation between the two markets.

: Have you seen any progression at all in liquidity in the secondary market for green bonds?

Reiner, Deutsche Bank: That is certainly a point. There is some liquidity, but you can't compare it to the bigger non-green transactions. That is probably the counter-argument when you look at the secondary markets. Those green bonds trade technically tighter than non-green bonds, but that could be explained with the outstanding issue size.

Shiozawa, IFC: Let me add one comment, and it goes back to comments by Takada-san and Morita-san. Initially IFC issued green bonds to provide initial product pipeline and liquidity as well as to engage investors and to educate them about green bonds. Now our strategy is to demonstrate issuance in local currency and in more innovative formats.

In the case of private placement format, we can tailor issues to match investor needs. Also to expand the investor base we issued a renminbi-denominated green bond and subsequently a Peruvian soles green bond. Recently we also issued our first green Masala bond. Many domestic investors generally have their assets mainly in domestic currency, so if we can expand the product line "" not only in major currencies but also in private placements and in EM currencies "" we can expand our investor base. That is what IFC is also trying to do.

: Thank you for raising that, as it's a point I wanted to come on to, which is the role you can play for other issuers who are perhaps less familiar to investors. So you mentioned the Masala bond, which was where you issued your own bond to finance an investment in a bond issued by Yes Bank. ADB I know is supporting some potential issuers like Aboitiz Power "" more along the lines of a guarantee. How are you viewing that role?

Van Peteghem, ADB: There is a general role of knowledge sharing and development that organisations like ADB and colleagues from organisations around the table are supposed to play, going across a region and helping potential issuers to structure in the most cost-efficient way or perhaps in the best environmental way.

The example you mention here is part of our local currency guarantee programme where we partially guarantee bond issuers, and what is important here is that these are issues denominated in local currency because they are using the proceeds to fund operations in their countries, which generate revenues in local currency, and therefore they are not exposed to any Forex risk.

So that's the type of product we offer to them and obviously we also share our experience in the green bond market so that in the not too distant future they could bring issues into the local market themselves. And yes, IFC has just done that deal with Yes Bank in India, which we found very interesting.

: Is that structure something you would look at?

Van Peteghem, ADB: Yes. What we are talking about here is another type of product "" instead of coming up with a typical loan product that an MDB offers, coming up with an investment in a bond issue by the client. In the case of IFC they backed up with a bond issued in the offshore rupee market.

The MDBs over the years have developed a whole toolkit of financial products that addresses their client needs better because also their clients are more sophisticated.

: Can I bring in JBIC into that same point? How does that apply to your work?

Nakashima, JBIC: We have the same kinds of guarantee programmes for foreign issuers doing Samurai bonds, for example, and we can provide a guarantee and possibly we can acquire the bonds issued by borrowers. We have done this for conventional bonds, but in the future if a client wants to issue a green bond in the Samurai market maybe we can consider providing a guarantee there.

: I want to go back to a point that was alluded to earlier and which, Brian, you also raised, which is that almost all green bonds that have beenrated have been investment grade. Do you think that reflects investor preference or is it just that all markets tend to start out with the highest quality issuers?

Cahill, Moody's: Highly rated supranational banks were in the vanguard of issuing green bonds, and more recently a lot of the larger and financially stronger corporates and financial institutions, along with investment grade US municipals have been dominating as new issuers and they are helping to develop the market.

At the same time, the bonds are being sold to managers targeting their largely investment grade mandates. I would also add that spec-grade companies would tend to be private companies.

Kapasi, ICMA: From ICMA's experience the answer is fairly simple, in that in the development of the green bond market itself and the Green Bond Principles, the issuers with the most expertise and the ones leading this effort have been the MDBs who are all triple-A, and the investors who have led the effort tend to be the biginstitutional investors that are the main buyers of MDB paper.

: Is there scope for that to change over time? Are bankers increasingly having those conversations with lower rated potential issuers?

Reiner, Deutsche Bank: We did a green bond for the Brazilian food company BRF. They are triple-B rated, and those green bonds are quite interesting for the investors. We were able to broaden the typical green bond investor base from traditional triple-A buyers down the credit curve to triple-B buyers. We have a couple of issuers that are single-A or triple-B rated that are looking into green bond issuance "" this is a market which continues to broaden in terms of credit ratings.

: Let's turn to China. The scale of the environmental challenge is huge, but this also means that the country has the scope to reshape the green bond and SRI space, not least because of the potential volumes. We've seen the first issue, from Goldwind, which had third-party accreditation. And China is formulating its own green bond regulations. What does the panel think the potential might be?

Arima, World Bank: I have some interesting details here. I mentioned we have 80 projects supporting green bonds at the moment, and every day we look at our portfolio and we choose new eligible projects. As of now we have about 80 and how many do you think we financed in China? We are supporting about 30 green bond-eligible projects in China.

I think this suggests that there's great potential for a green bond market in China. Right now, triple-A issuers like us are developing the green bond market globally but I have started hearing that investors would like to seehigher potential returns and are prepared to take more risk.

Perhaps this could develop so that more investors would take on risk of particular projects in the form of project bonds, for example.

: What are the biggest challenges to developing that market, do you think? I know World Bank has had discussions around doing issuance locally in the Panda bond market, which started many years ago but has seen little issuance"¦

Arima, World Bank: Of course the liberalisation of the capital markets in China will make it easier for many issuers to access the market. Things are moving in the right direction.

: Our understanding is that there is a possibility that the planned changes to Panda bond regulations may allow proceeds to be raised onshore and taken offshore"¦

Shiozawa, IFC: We are actively issuing offshore RMB bonds, but onshore we are facing similar issues with the World Bank and other MDBs. We expect that if some deregulation happens in the future, we could be more active in the onshore market.

: Mushtaq, what's your view on the potential for China?

Kapasi, ICMA: The potential is huge. Just looking high level there are a couple of factors. One is the policy at the very highest levels, state council level, to tackle the environmental problems in China through a number of directions. One of those happens to be through the financial industry and they've made it clear from the top down that the industry has a role to play in solving the environmental problems of China.

China's government seeks stability, sustained growth and harmony. The environmental problems are threatening that social cohesion, which means it's at the very top of the priorities.

So what happens when that gets filtered down? The financial regulators are directed to develop ways to encourage investment in environmentally friendly projects, so it goes down to regulators such as the banking regulator, the securities regulator, and they will then come up with more specific solutions and more specific initiatives to encourage a greening of the financial industry.

Even though there have been some efforts by the banking regulator over the past couple of years to develop more green finance, these have applied more to the state-owned banks and haven't had a wider impact. But in the last year we've seen a big push by the People's Bank of China (PBoC) to draw from research not only onshore but across the world. ICMA is involved in this as well, but PBoC has done a monumental job in bring expertise from across the industry.

Exactly what is going to happen to encourage this development is not entirely clear, but it's clear something is going to happen. My sense right now is that PBoC is going to encourage green bond issuance by state-owned banks and corporations, in soft and more direct ways. They are making efforts to expand the investor base for onshore bonds in general and I think that will have an impact on the green bond investor base, and there may be some regulatory incentives or pushes to increase investment quotas in green bonds or to make it more economically sensible to invest in them.

Those discussions are ongoing and we expect some major moves in the market later this year.

Van Peteghem, ADB: We all know that China has by far the largest renewable energy programme in the world"" it dwarfs everything else. So the need for financing is definitely there, and yes we can talk about incentives, perhaps tax, and also the perception of the regulatory background probably needs to be improved a bit. That's probably the third element that is being worked on to see the local green bond market pick up, which I don't doubt it will.

Reiner, Deutsche Bank: For me, China is the most exciting growth story in green bonds. It's not only about international issuers tapping the market and getting the funds out, it's more that the local issuers need to raise funds.

I read that $1.6tr is needed in terms of investment in the next five years to tackle this environmental challenge"" these are not only corporates like Goldwind, but also the banks, the onshore development banks, the government banks and government-owned companies.

The only reason they haven't yet tapped the market is due to the regulatory environment. We expect the PBoC to come up with the regulations as early as Q4 this year, and then issuance will come into the market. Our forecast is for something like $5bn-$6bn for the rest of the year of Chinese issuance.

: There is going to be a challenge in disclosure and transparency, in the same way that there is in analysing any Chinese onshore credit. Brian, from your perspective would that be an obvious challenge to development? Whether investors can feel secure in terms of disclosure?

Cahill, Moody's: We now rate well over 200 Chinese entities, and many have subsidiaries listed in Hong Kong. I think the global financial markets are used to dealing with informational transparency concerns regarding China and other emerging markets. I'm not sure that is as big a barrier as you would think. Partly it depends on what is led by the market itself or what is encouraged by the regulator. If the latter, you would hope it would come with some focus on reporting needs.

There are clearly pockets in China where there is limited transparency of information, and it's very hard then to develop a standards-based product, but there's quite a bit that is transparent enough.

: On the investor side, Takada-san, could you outline what you think are the opportunities for you in China as the asset class develops?

Takada, Nippon Life: China is a big country and the size of its corporate bond market is second only to the US market. But if we see the currencies being issued, only 15% is US dollar bonds and over 80% is Chinese yuan. Our liabilities are denominated in Japanese yen, so it is difficult for us to invest in yuan.

We have to swap back into yen but the swap cost is very expensive now.

But in the future China has the potential to be an attractive market. Although it is currently facing an economic slowdown, it has a chance to grow compared to other countries and we are expecting corporates to issue US denominated bonds. On top of that China has a lot of environmental issues. They need investment to fix these, and maybe there will be a chance to invest in those areas in the future.

: Aside from China, where else in the region do you see the most opportunity from an investor perspective when looking at green?

Takada, Nippon Life: A few weeks ago I visited several Asian countries to see potential issuers and we saw some interest in issuing green bonds, including from private companies. We have seen some symbolic issues in the green bond market "" India Eximbank issued a green bond for the first time, for instance, and other countries have interest too. Next to Europe we see Asia as an important market.

: I'd like to ask everyone to sum up their thoughts from today. Is there one single development that you think will take the market forward, or perhaps something you would like to see happen? Stefan, I'd like to start with you.

Reiner, Deutsche Bank: I'd like to reiterate the point about China: I hope the regulation is announced by the end of the year and the basis is laid for new issuance of China's domestic issuers.

Kawaguchi, DIR: The discussions this year have been at a high level, which means that there are more investors and issuers concerned about the green bond market. Iwanted to point out one thing. You said that issuers are often not being rewarded when it comes to pricing. Iusually watch the equities side and regarding ESG investment in equity, investors are now expecting a win-win situation. As an investor you don't have to sacrifice your performance, and you may be able to raise your performance by integrating ESG.

So when it comes to bonds, why should you have to sacrifice? The discussion is different from the equity side. "~If you want to beat the market on a long-term basis, then consider ESG,' is what we are telling equity investors. But you can't ask bond investors to sacrifice something, so probably you have to do something in order to change the situation. You should build a framework which justifies a green bond win-win situation.

Nakashima, JBIC: This is my first time attending this meeting and I found it very interesting to hear the MDBs' experiences. I was also interested to hear the price of the green bond being a little bit tighter than conventional bonds"¦

Van Peteghem, ADB: So you're interested?

Nakashima, JBIC: I was interested, yes! And also with the diversification of the investor base, maybe we want to follow this. JBIC wants to be always a green kind of a bank, as we have done in the past in providing loans to green projects. On the funding side we haven't issued green bonds yet, but we want to study this.

Takada, Nippon Life: Last year, when we attended this meeting, at that time we had just invested in a green bond for the first time. Since last year our investments in green bonds are growing. As a company we have the target to invest about $1bn in green bonds in three years.

We are keeping in contact with potential issuers and we hope we can help improve this market.

Takigawa, Resona Bank: As a portfolio manager who manages public pension funds, my job is not only to generate excess return but also to invest in good issues.

So investing in good issuers and good projects that would lead to healthier world economic growth, I think would thereafter lead to a good return for our clients, so I would like to continue investing in SRI bonds in the years ahead.

Yoshikawa, JICA: We are very much new to the global market as an issuer and it seems that there are some differences in terms of the standards. We are not yet at the stage to consider a green bond at this moment, but it seems it will be a challenge if we have to meet all investor requirements.

: What do you think will be the biggest challenge?

Yoshikawa, JICA: To us I think it will be segregation of proceeds. Because the disbursement will be made according to the progress of the project "" it's not a one-shot disbursement "" so managing the proceeds according to the actual cash requirement for certain project groups will be the biggest challenge.

: Do you think you are now less likely or more likely to issue a green bond than you were before this discussion?

Yoshikawa, JICA: I would say it will take time"¦

Van Peteghem, ADB: That's why the pricing will remaintight!

Tokuda, Daiwa: In order for the SRI bond market to grow, as Nakashima-san said, the balance between issuer and investor perceptions towards SRI bonds is important, I think.

In the European market there are many new types of SRI bonds, like the ESG bond by Lloyds Bank, or the Sustainability bond by NRW. Although there are a lot of themes right now in the global market, I think that any overall guidelines should be mainly based on ICMA's guidelines, which, I believe, could be used for all types of SRI bonds, not just green bonds.

In the current growing trend of the SRI bond market, our role as an underwriter is to balance the issuers' needs and the investors' needs by promoting a variety of types of SRI bonds, not only green bonds, with the credibility based on ICMA's guidelines. In this way, the SRI market will develop further.

Cahill, Moody's: The one thing that we have observed is that there is a real momentum around global investors' focus on SRI and ESG. And that inevitably is going to play out in terms of portfolio mandates and the demand for green bonds.

So it seems to me this is growing and we can hear from around the table that there is a lot of thought going into this. I was very interested to hear about pricing differentials "" if the economic incentive starts building then this momentum might gain real traction quickly.

Kapasi, ICMA: I don't believe there is one silver bullet that is necessary to make the market take off. In our experience the market is the product of a constellation of different market participants promoting it. I am looking forward to more input from all the market participants and stakeholders on how the GBP should further evolve.

I think particularly in India and China you'll see more involvement from the regulatory side as well.

And I also think that you will see some more innovation in terms of structuring "" IFC's bond in India is an interesting example.

There are ideas out there for different kinds of credit structures, different kinds of securitization in the green bond space, and I think we will see some experimentation there.

Shiozawa, IFC: This year our discussion was very broad and sophisticated. We have already participated in the second version of the Green Bond Principles with the support of ICMA, so in general we are moving in a healthy and right direction. We hope that we continue our efforts to make things happen and improve.

The second thing is that if you look at the second version of the Green Bond Principles you will find four types of green bond in Appendix One: (1) a Green Use of Proceeds Bond, (2) a Green use of Proceeds Revenue Bond, (3) a Green Project Bond, and (4) a Green Securitized Bond.

Even today our discussion was mainly focused on the first type, the Green Use of Proceeds Bond. It is still in an early stage for us and it would be a future subject to discuss the other three categories. In the medium term we hope we can discuss these kinds of diversified products more actively.

: Perhaps by the time of next year's discussion?

Shiozawa, IFC: Hopefully. Finally, I remember that last year we had an earthquake here just before the discussion started, and this year we have a shaky market situation. So I wonder what kind of a shake may happen for the next discussion!

Arima, World Bank: A few months ago I had the opportunity to join a green bond panel in Beijing, hosted by HSBC. At the time, I had the impression that the basic demand from Asian investors for green bonds was very strong, but I realised that they also seem to be looking for higher risk and higher potential return types of greenbond.

The World Bank and other highly-rated issuers developed the market so far, but I have the impression that in the near future, there may be more demand from investors for more complicated structures or bonds issued by lower-rated issuers.

At the World Bank, we have always been demand driven, so of course we would like to continue issuing plain vanilla green bonds based on demand from Japanese and other investors.

But at the same time we are of course happy to work together with investors to create new types of green bonds.

For example, some investors might want to take the risk of a particular project in a particular country, with a reasonable risk/return profile. We have a "Capital at Risk" Notes programme that we could use for those types of structures, if there is interest from investors.

Van Peteghem, ADB: We at ADB remain committed and very optimistic about this asset class. As I mentioned before, this type of financing is part of our climate change financing activity, including mitigation and adaptation.

If you look at the annual programme of ADB, taking together the sovereign and non-sovereign sectors, it's about 20% of the type of operations we fund, so there is ample room on the ADB side to issue further green bonds going forward.

In 2014 we financed $2.4bn of projects that are eligible for green bond purposes.

We remain committed to the market, and we will become a regular issuer of green bonds. But I would also like to add that we are also committed qualitatively as well.

We might see at the end of the day green project bonds, but I think there is still a long way to go because the amount of regular project bonds that are issued in the world is not that many. And we also continue the collaboration with other MDBs, especially in the field of impact reporting.

Azuma, Nomura: As an investment bank we would like to make a contribution to this market. As was discussed today, there is difficulty in tying the proceeds of a bond to individual projects and although we would like to encourage the use of green bonds in private sector companies, as underwriters we would also like to be disciplined in approaching this so it will not be used merely as a means of easy financing.

Morita, Barclays: International investors are increasingly focused on ethical issues. From a lead manager's perspective on the primary side, we want to bring together the demands of issuers and investors, encouraging new issuers and especially focusing on the corporate and bank side, where we hope to see furthergrowth.

In the secondary market, Barclays has dedicated SSA Green Bond trading screens whilst Barclays and MSCI have partnered to set up a Green Bond index of green bonds, which provides an additional foundation for the development of the market.

Thirdly, as an investor too, Barclays Treasury have already shown its commitment to green bonds in its liquidity pool.

: Thank you very much everyone, that wraps up our discussion. I'm grateful to all of you for attending and contributing your insights and I hope many of you will be able to participate in similar discussions in the future.

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**Section:** NEWS:LETTERS; Pg. 28-29

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**Body**

RE: LONGFIELD Road costing £7.35million - the planners were told not to do it but still went ahead. Who is being held to ***account*** and given the bill for this folly? Heads must roll if only to stop more like this and so that something is done about Pembury Road, now.

Mr Jukes, it may be too late for you to learn that if "we had worked together" years ago, none of this would have been necessary.

Even when the stupid lights have been removed, the whole thing has been gold-plated and over £7million (which we are continually being told we do not have) has been wasted. And all with no mention of the eight-month delay. As for the layout, I presume this was the worst option available?

Why was it not pointed out that two mini-roundabouts would suffice as a quick and cheap job done over a few evenings? A mini-roundabout works very well by the Pantiles, and it was originally just a fixed dustbin lid.

Richard Forth

Chiltern Walk

Tunbridge Wells

I WRITE in relation to the article published in the Tonbridge Courier on October 30 regarding Morrisons selling their plot on Vale Rise.

In particular, a quote by Town Team spokesman Howard Porter who states: "That site is away from the High Street and I think we need to try as best as we can to keep them in the High Street."

I think Mr Porter has his priorities wrong. As a Tonbridge resident for most of my life, I have witnessed the High Street declining and various big name stores leaving the town. So much so that I have to visit other towns such as Tunbridge Wells and Maidstone to shop, due to the lack of options in Tonbridge High Street.

Surely if big name stores want to move to the town, it has got to be better them going to the industrial estate and keeping shoppers in Tonbridge, instead of the shoppers going to other towns completely?

Matt Butcher

Batchelors

Pembury

(formerly of Tonbridge)

RE: THE current Tonbridge High Street blunder. Is it too late to cancel the whole mess, restore the High Street to how it was, and instead spend the remaining monies on filling in potholes and resurfacing as many of the roads and pavements as possible in the residential areas?

John Downing

Higham Gardens

Tonbridge

I WOULD like to say thank you so much for the tickets that I won in your competition for Thriller Live.

My daughter and I really enjoyed the show, it was excellent.

Maureen Bradley

Arundel Close

Tonbridge

A FURTHER review of Gatwick air traffic and flight paths has been announced. Noise pollution could get much worse if Gatwick expands, with more flights day and night regardless of any positive outcome from the planned review.

Tunbridge Wells residents need to continue to make their feelings felt. One way they can do this is to sign the petition to ban night-flights: petition.parliament.uk/petitions/106462

About 1,800 people have already signed it.

Tunbridge Wells residents should also actively engage and support the Tunbridge Wells Action Group - TW No to Gatwick - email address [*twaang@yahoo.co.uk*](mailto:twaang@yahoo.co.uk)

This has only recently been set up. They have also just set up a website: [*www.twaang.org.uk*](http://www.twaang.org.uk)

Consultation on flight paths closes in January 2016. The voice of Tunbridge Wells needs to be heard.

MP Greg Clark twice requested that Tunbridge Wells Borough Council be represented on GATCOM (the consultation committee). On both occasions his request was refused.

The number of aircraft flying low above Tunbridge Wells has significantly increased, although Gatwick insisted no changes to flight paths had been made. It was only after a Freedom of Information Act request did they admit that flight paths had shifted eastwards, to help air traffic controllers reduce the number of aircraft that cannot safely ***land*** and have to repeat their attempted ***landing***.

There is an understandable lack of trust.

David Fenwick

Calverley Park

Tunbridge Wells

THE latest attempt by Targetfollow to extract money from their ownership of the Tunbridge Wells and Rusthall commons flies directly in the face of their chief executive's claim, at a public meeting at the Town Hall in February, that it was unnecessary to increase income in order to maximise asset value.

Surely the fundamental aim of property management and development companies is to maximise income and asset value? That's their raison d'etre. Nothing wrong with that, but contentious issues as reported by the Courier, where residents are to be charged for access or for car parking, will continue to arise. The solution is for the commons to be owned by the community, an aspiration that was supported by 98 per cent of people at the February meeting.

Last year the council helped by designating the commons as an Asset of Community Value, enabling a bid to be made by the Friends of the Commons. Unfortunately this bid was turned down by Targetfollow, and any council interest in the matter seems to have fallen away like autumn leaves. That is why I have started a petition requesting the council to use all its endeavours to bring the commons into permanent public ownership. Readers can find details on the TWBC website.

Terry Cload

Herons Way

Pembury

HAVING read the planning inspector's 25-page report and decision to allow the plans for 62 dwellings on Highgate Hill, Hawkhurst, the main reason has now been made clear.

The inspector accepts the development will have a material impact on the outstanding landscape, and that Hawkhurst will meet its target of new plans set by the borough by 2026, without this gross intrusion into the countryside, but Tunbridge Wells as a borough is not meeting its allocation.

The net effect of this is that villages within the borough are having to make up the shortfall with these totally unsuitable developments.

So much for localism vaunted by the present Government, where not a single person or organisation was in favour of this development.

John Hunt

Theobalds

Hawkhurst

GREG Clark chooses his public appearances carefully - he knows when to duck and when to dive, he knows when to stay under the radar and when to step into the limelight.

He's always available, for example, to open the Greg Clark road improvement scheme at North Farm, a cycle shop, the Royal Opera House costume centre at Thames Gateway, a new primary school classroom in Broadwater, to plant a tree in a cemetery, new athletics fields in Paddock Wood and, who knows, the Greg Clark A21 dualling extension.

Strangely he's in short supply when asked questions about the new housing development in Hawkhurst, which is in his political bailiwick and, as minister responsible, is the person to challenge, so not short-listed for that particular opening I warrant. He's changed his tune too from when, in October 2010, he expressed his opposition to a proposed housebuilding plan for 198 houses in the village, setting his face against the plan to re-schedule Hawkhurst as a "town".

He remains mute on the subject of Europe too, nobody knows whether he's for it or against it - like Hawkhurst, he'll do his master's bidding on that one too.

Sam Goodenough

Broadwater Down

Tunbridge Wells

IT'S REPORTED that local authorities will be given the power to access people's internet browsing history, so I'd better come clean.

A few years ago we were going to St Petersburg for ten days and my wife wanted the "Lara" look: boots, fur hat, full-skirted military style coat with frogging - the "Doctor Zhivago" look - it was winter after all.

So, on the internet I typed in "Russian style military coats"and up came a video of three lovely Russian blondes accoutered in genuine military greatcoats. I pressed the "go" symbol to start, whereupon they peeled the coats off, leaving them as naked as babies.

If Tunbridge Wells Borough Council can get anything out of that - good luck. For me, in my eighth decade, it was a first: my first experience of porn.

Is confession good for the soul?

John Ward Moorhouse

Carlton Road

Tunbridge Wells

I READ with interest in the Courier (October 30) the vision of Tunbridge Wells council of quitting the Town Hall and creating a theatre to replace the Assembly Hall and retail outlets on that site.

Given the previous "visions", I feel that they should endeavour to get them resolved before embarking on new ones. By the previous I refer to the former cinema site, which after 17 years (at least) is still to be sorted out. Then we have the Fiveways fiasco, which is still being resolved. All of these cost money, yet they have been badly managed or not at all.

In any great town, it is essential the town hall be at its epicentre. To consider moving out is a disgrace, considering its all us council tax payers that help keep it going, and so need access to it when required. To update and upgrade the existing facilities are in order, but just moving out and creating yet more retail outlets is ridiculous, given that parking will become yet more difficult.

If an ambitious theatre is being considered, then how about across the way at the former cinema site. There is plenty of space and it will give Tunbridge Wells that added kudos. We would then have two iconic buildings diagonally opposite each other. Also, one long-standing blot would be removed in one hit.

I shall follow developments with interest.

John Pearce

Oak End Close

Tunbridge Wells

THE Garden of England ***land*** is under management depending on its usage - homes, industry, farming, forestry, etc.

In the case of farming, the controls come from Brussels and the Common ***Agricultural*** Policy. Kent farmers have to cooperate with to this, and have to display an EU logo if they wish to be in receipt of European money. The point that is being made by Europe is that Europe is more important than the individual areas it consists of.

Europe is taking the opportunity of insisting "brand Europe" is displayed wherever possible. Kent farmers have never had to fly the Union flag to be in receipt of Government money, however, they will get "no pay without display" from Europe. Be prepared, rural signs will soon to be growing in our hedgerows.

Edward La Coste

The Down

Lamberhurst

HAS the fiction section of the Tunbridge Wells library been taken over by feminists?

From my observation, there would appear to be a large preponderance of books by female authors obsessed with tales of broken hearts and tangled human relations.

Us chaps would like something a little more stirring for winter nights, please.

Digby Augustus Tidd

Culverden Park Road

Tunbridge Wells

A SATELLITE grammar school is to be opened in Sevenoaks and comprehensive school zealots are enraged.

The "one size fits all" mantra is being threatened and the high priests and priestesses of misguided egalitarian educational dogma fear a dam has been breached.

What's not to like about accepting the clearly-expressed wishes of a local community? What's not to like about democracy? What's not to like about challenging a school system that fails most children? For failing most children is certainly built into the current system, as our performance on the OECD international league table of educational performance at age 15 makes clear.

The argument against grammar schools on the grounds of selection is a non-starter. Selection is ubiquitous in the state school sector. It is based on a parent's ability to buy a house in the catchment area of a good school and, if necessary, to hire tutors.

The argument for grammar schools is that children should be educated in line with their ability and aptitude. We need grammar schools for academic children, just as much as we need gold standard vocational schools for youngsters, whose aptitude is practical rather than academic. These are the youngsters who should go on to earn lots more money than many of those who are more academically inclined. Bricklayers in London, for example, are currently earning between £50,000 and £100,000 pa, and there is a severe shortage.

It is remarkable that, according to the OECD, Britain is the only country in the developed world in which grandparents, educated under the old tripartite system of the 1950s and 1960s, outperform their grandchildren in terms of educational attainment.

Less remarkable, perhaps, is the fact that Northern Ireland, which has kept its grammar schools, consistently outperforms the rest of the UK in terms of public examination results. So let's quit denigrating the 11-plus and our grammar schools, and start championing raising academic standards and extending parental choice in education.

Christopher Luke

Kirkdale Road

Tunbridge Wells

NOT ONLY has the Neighbourhood Plan divided communities and caused no end of financial stress on local, district and county councils, but also caused turmoil within the national construction industry.

How does the Government expect public representatives, mostly without any planning, engineering or construction experience, to choose or understand the correct sites for sustainable housing and infrastructure for the generations to come?

These matters are best addressed by professionals who understand soil dynamics, drainage requirements, traffic management and social mobility, alongside employment opportunities and public sector requirements, ie, medical and community centres, schools and care homes. It is ludicrous to continue appealing for the "public" to come forward to perform important planning decisions in which they have no knowledge.

Why are professional bodies and construction companies, along with the attendant engineers and soil management agencies, not standing up for their professions?

University graduates and the construction industry as a whole face a tough future, which is continually being undermined by fierce competition undercutting fees, and with general lack of respect for professional qualifications and years of combined practical experience.

Great Britain was built by engineers and architects, not the "man on the street". We are quickly, and expensively, sending our local communities down the wrong path towards total chaos. It is not too late to rethink this strategy and bring in the experts at last.

The next headline will be "Immigrants taking all the construction work" in what should be a boom time for the construction industry. Come on "Great Britain", encourage good practice, stop chasing your tail and look to the future. Provide for the future generation in a considered sustainable way - this costly exercise is wasting good money after bad.

Fail to plan, plan to fail.

Caroline Tully

High Street

Hartfield

ON THE horizon approaches the Paris climate summit and, like the Olympic Games, it intends to outdo its former host countries both in importance and grandeur.

But just as its predecessors did, it will go on in strange paradox, deciding only to be undecided, resolved only to be irresolute, adamant for drift, solid for fluidity, all-powerful to be impotent.

The accords which have emanated from previous summits such as Kyoto, Copenhagen, Durban, Rio, etc, are meaningless. They are and always will be accords to "agree to disagree" with a sprinkle of fine semantics over a bubbling cauldron of pointless rhetoric.

Article 2 of the Convention states its ultimate objective, which is to stabilise the concentration of ***greenhouse gases*** in the atmosphere "at a level that would prevent dangerous anthropogenic (i.e human) interference with the climate system".

Well, from the first climate summit to date, man-made ***greenhouse gas*** ***emissions*** have steadily increased at such a rate that, if you drew a graph with a 45 degree line, you would have the rate of increase of ***emissions*** over the last twenty summits.

There is now no chance of maintaining the rise in global mean surface temperature at below 2C.

Given the view that reductions in ***emissions*** are not compatible with economic growth we are, in effect, conceding that avoiding dangerous (and even extremely dangerous) climate change is no longer compatible with economic prosperity. But common sense dictated we knew this all along, as what government would insist on economic suicide?

The obvious question is: Are these climate summits an exercise in complacency, denial or utter futility?

Or, are these climate summits taking the meaning of the word "sustainability" literally?

Bruce Grant

Neville Street

Tunbridge Wells

WHEN I was a youngster one of the most important benefits of a university education was that it encouraged an independence of mind and allowed students to be exposed to a range of opinions, which was as wide as possible.

Recently we have learnt censorship by the politically correct is succeeding in banning those speakers from campuses who espouse views which these so-called liberals regard as unacceptable.

This would be understandable in the case of those who advocate violence, or the persecution of minorities, but has come to include erstwhile heroines of the left such as Germaine Greer for her comments on transgender people, Muslims who dare to question whether Islam is compatible with democracy, anyone who defends Israel, or any Christian speaker who questions the morality of such things as abortion.

Of course one can disagree with what they say, but to refuse to allow them to express their views at our seats of learning is nothing less than a disgrace.

At a time when the nation needs to cut its coat according to its cloth there are clearly great savings to be made in tertiary education. We need engineers, scientists, doctors, architects, lawyers, etc. But we do not need vast numbers of arts graduates, studying pointless subjects, who have been brainwashed by the liberal left into accepting that any opinion other than that of the latter should be suppressed.

What must concern us all is that, given the adulation reserved for graduates of Oxbridge, some of these students will eventually achieve positions of power and influence, and will perceive nothing wrong in destroying free speech in order to pander to those who are nothing more than pseudo fascists.

Colin Bullen

Douglas Road

Tonbridge

HOW disappointing to read of a low rating of premises at Osborn's Southborough store.

I am sure Glenn need not worry about losing customers - most will recognise and appreciate the fact the store offers a wide range of goods, always served with friendliness and civility and saves many a trip into town for local residents.

Several elderly customers never shop elsewhere and Glenn and his staff go to any lengths to oblige. Local farm produce is an added bonus. What a shame the facilities which actually matter to customers cannot be reflected in "ratings" - Glenn would get full marks.

Jan Millington

Park Rd

Southborough

THE letter from a Green Party member last week about energy policy and how it is sourced/produced conveniently draws a veil over some disturbing facts about the position in the UK.

1) It was announced last week the regulatory authorities had to step in recently to pay high energy users to cut their consumption because "renewables" had fallen short of target production - light winds had cut wind power, and dark skies the solar element.

2) Also last week it was announced South East Asia's consumption of coal would rise by 40 per cent by 2040 resulting in an increase of 30 per cent in CO2 ***emissions***.

3) Germany, the birthplace of the Green movement, is increasing its consumption of coal - especially lignite, brown coal, because it has shut down its nuclear capacity due to pressure from, and you're ahead of me here I'm sure, the German Green Party. Brown coal is probably the filthiest source of energy on the planet, unlike natural gas from fracking, for example, one of the cleanest.

4) Yet another very recent report identified that here in the UK there is no buffer between energy production and its consumption: we are living on the very margins, there is no reserve capacity. That's like taking one breath of air without knowing where the next's coming from.

The problem with the Green Party is its zealotry, there's no halfway house, no evolution towards an ideal state. They want to drag us all kicking and screaming back to the Stone Age. They oppose nuclear, they oppose coal and oil, they oppose natural gas in all its forms, but especially from fracking here in the UK

How very Orwellian. "Idealism is fine, but as it approaches reality the cost becomes prohibitive" - William F Buckley.

Edward Baker

Hilbert Road

Tunbridge Wells

**Load-Date:** November 12, 2015

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1. 1This copy is computer generated. Text will vary in accuracy due to speaker dialect and audio quality issues. [↑](#footnote-ref-2)
2. 1New Era, 14 Sep 2015 [↑](#footnote-ref-3)
3. 2Shetekela quoted in New Era, 17 Sep 2015 [↑](#footnote-ref-4)
4. 3The Namibian, 24 Sep 2015. [↑](#footnote-ref-5)
5. 4The Namibian, 24 Sep 2015. [↑](#footnote-ref-6)
6. 5The Namibian, 24 Sep 2015. [↑](#footnote-ref-7)
7. 6The Namibian, 24 Sep 2015. [↑](#footnote-ref-8)
8. 7Namibia Statistics Agency, Annual National ***Accounts*** 2014. [↑](#footnote-ref-9)
9. 8Namibia Statistics *Agency, Annual National* ***Accounts*** *2014* [↑](#footnote-ref-10)
10. 9FIS: financial intermediation services [↑](#footnote-ref-11)
11. 10IJG Namibia, Final National ***Accounts*** 2014, 11 Sep 2015 [↑](#footnote-ref-12)
12. 11UNCTAD, World Investment Report 2015 [↑](#footnote-ref-13)
13. 12Weatherly International, Operations Update, 14 Sep 2015 [↑](#footnote-ref-14)
14. 13Weatherly International, Operations Update, 14 Sep 2015 [↑](#footnote-ref-15)
15. 14Namibia Economist, 11 Sep 2015 [↑](#footnote-ref-16)
16. 15Xin Shunkan quoted in Namibia Economist, 11 Sep 2015 [↑](#footnote-ref-17)
17. 16Namibia Economist, 14 Aug 2015; Ohorongo Cement press release 30 July 2015 [↑](#footnote-ref-18)
18. 17The Namibian, 23 Sep 2015 [↑](#footnote-ref-19)
19. 18The Namibian, 16 Sep 2015 [↑](#footnote-ref-20)
20. 19See ARC Briefing Namibia November 2014 [↑](#footnote-ref-21)
21. 20The Namibian, 16 Sep 2015 [↑](#footnote-ref-22)
22. 21The Namibian, 16 Sep 2015 [↑](#footnote-ref-23)