

**Date and Time:** Monday 9 September 2024 18:01:00 CEST

**Job Number:** 233037937

**Documents (100)**

1. [*How to finance a new climate economy*](https://advance.lexis.com/api/document?id=urn:contentItem:5K3X-YMJ1-F039-641C-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** emission and energy or emission and reduction or emission and targets or emission and greenhouse gas or energy and reductions or energy and targets or energy and greenhouse gas or reductions and targets or reductions and greenhouse gas or targets and greenhouse gas

**Search Type:** Terms and Connectors

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2. [*Chicken embryo tests can prevent practice of gassing billions of cockerels Scientists create sex identification tests that can identify male chicks before they hatch*](https://advance.lexis.com/api/document?id=urn:contentItem:5JW3-R8B1-JCJY-G0JX-00000-00&idtype=PID&context=1516831)

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3. [*Countryfile - 07:15 AM GMT*](https://advance.lexis.com/api/document?id=urn:contentItem:5K6G-3G91-JBH6-C13C-00000-00&idtype=PID&context=1516831)

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4. [*Countryfile - 07:15 AM GMT*](https://advance.lexis.com/api/document?id=urn:contentItem:5K6G-3G91-JBH6-C162-00000-00&idtype=PID&context=1516831)

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5. [*UNFCCC Secretariat and Earth Day Network Launch Campaign to Mark Signing of Paris Agreement and to Celebrate Earth Day on 22 April*](https://advance.lexis.com/api/document?id=urn:contentItem:5JH9-D7S1-JDKF-61P6-00000-00&idtype=PID&context=1516831)

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6. [*Climate change delegates agree on a draft plan to reduce global emissions after FOUR YEARS of negotiations - but warn a binding agreement is STILL some way off*](https://advance.lexis.com/api/document?id=urn:contentItem:5HJ1-8R21-JCJY-G08V-00000-00&idtype=PID&context=1516831)

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7. [*Eating all your greens doesn't mean you are saving planet*](https://advance.lexis.com/api/document?id=urn:contentItem:5HNK-9F41-JBVM-Y3PX-00000-00&idtype=PID&context=1516831)

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8. [*COP21: All you need to know after historic climate change deal is agreed in Paris Global climate envoys agreed a landmark accord earlier today, setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming*](https://advance.lexis.com/api/document?id=urn:contentItem:5HKM-HT01-F021-627F-00000-00&idtype=PID&context=1516831)

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9. [*COP21: All you need to know after historic climate change deal is agreed in Paris Global climate envoys agreed a landmark accord earlier today, setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming*](https://advance.lexis.com/api/document?id=urn:contentItem:5HKM-HT01-F021-62H0-00000-00&idtype=PID&context=1516831)

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10. [*COP21: All you need to know after historic climate change deal is agreed in Paris Global climate envoys agreed a landmark accord earlier today, setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming*](https://advance.lexis.com/api/document?id=urn:contentItem:5HKP-C521-JCJY-G4WX-00000-00&idtype=PID&context=1516831)

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11. [*BBC Radio 4 - 05:42 AM GMT*](https://advance.lexis.com/api/document?id=urn:contentItem:5JJJ-HNP1-DY08-33CM-00000-00&idtype=PID&context=1516831)

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12. [*-BASF becomes official partner of World Green Building Council's Europe Regional Network*](https://advance.lexis.com/api/document?id=urn:contentItem:5JRG-JTV1-F0K1-N0XD-00000-00&idtype=PID&context=1516831)

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13. [*Climate talks: rich countries should pay to keep tropical forests standing Tropical forests provide a bargain climate service, cheaply reducing emissions. The Paris summit should agree payments for anti-deforestation programmes*](https://advance.lexis.com/api/document?id=urn:contentItem:5HHK-9PC1-F021-64M3-00000-00&idtype=PID&context=1516831)

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14. [*Sustainable development will hinge on the smooth union of private and public Business has a vital role to play in financing the sustainable development goals, but each side must recognise what the other brings to the table*](https://advance.lexis.com/api/document?id=urn:contentItem:5GW0-68F1-JCJY-G0Y7-00000-00&idtype=PID&context=1516831)

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15. [*- Solvay obtains RSPO Mass Balance certification for its Halifax, UK site*](https://advance.lexis.com/api/document?id=urn:contentItem:5JGN-GX61-JD3Y-Y03F-00000-00&idtype=PID&context=1516831)

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16. [*Climate crisis should be top of world leaders' agenda*](https://advance.lexis.com/api/document?id=urn:contentItem:5HFX-3KX1-JCJY-G0FC-00000-00&idtype=PID&context=1516831)

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17. [*Shifts in transitional protein solutions Millennials are the drivers of change in many areas of food production - Part II*](https://advance.lexis.com/api/document?id=urn:contentItem:5N8W-X6F1-DYG1-P3JG-00000-00&idtype=PID&context=1516831)

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18. [*Global climate pledges fall short of goal Analysts predict any deal struck during Paris talks won't forestall warming*](https://advance.lexis.com/api/document?id=urn:contentItem:5H1H-C5N1-DYR7-C00J-00000-00&idtype=PID&context=1516831)

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19. [*IT was a pleasant surprise [...] COLUMNIST*](https://advance.lexis.com/api/document?id=urn:contentItem:5H5X-TYD1-JBVM-Y39M-00000-00&idtype=PID&context=1516831)

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20. [*China's cloned cows: meat on the table or environmental disaster? Plans to clone cattle to meet China's growing demand for beef threaten to take the country down a dangerous road to pollution, food insecurity and ill health*](https://advance.lexis.com/api/document?id=urn:contentItem:5HK8-K491-JCJY-G1HJ-00000-00&idtype=PID&context=1516831)

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21. [*Hot Topic Tackling climate change is a global issue, but Ireland must not shirk its responsibilities. Our leaders have to take action*](https://advance.lexis.com/api/document?id=urn:contentItem:5HRH-GGH1-F021-62NJ-00000-00&idtype=PID&context=1516831)

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22. [*'We need to grow our economy while cutting emissions - that's some ask...' How do you tackle climate change when half the Irish population doesn't care? Environment Editor Paul Melia reports from Paris*](https://advance.lexis.com/api/document?id=urn:contentItem:5HKF-F0R1-DY9P-N0GK-00000-00&idtype=PID&context=1516831)

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23. [*Getting better as well as bigger*](https://advance.lexis.com/api/document?id=urn:contentItem:5MSS-R9G1-JC02-S0J8-00000-00&idtype=PID&context=1516831)

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24. [*There is no Planet B and Ireland is not immune to climate change Our weather is going to change, in some ways quite dramatically, in the decades ahead, writes Dr Conor Sweeney*](https://advance.lexis.com/api/document?id=urn:contentItem:5HJ6-JPS1-JBVM-Y3MM-00000-00&idtype=PID&context=1516831)

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25. [*Alberta 's new Cabinet focused on jobs, economic growth and diversification*](https://advance.lexis.com/api/document?id=urn:contentItem:5J15-C5R1-JD3Y-Y18H-00000-00&idtype=PID&context=1516831)

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26. [*Alberta 's new Cabinet focused on jobs, economic growth and diversification*](https://advance.lexis.com/api/document?id=urn:contentItem:5J15-C5R1-JD3Y-Y145-00000-00&idtype=PID&context=1516831)

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27. [*Lettuce is not green. Who knew?*](https://advance.lexis.com/api/document?id=urn:contentItem:5HMX-SDK1-JCS0-D3N5-00000-00&idtype=PID&context=1516831)

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28. [*Hello, cool world*](https://advance.lexis.com/api/document?id=urn:contentItem:5J58-T6S1-DY5K-Y0XX-00000-00&idtype=PID&context=1516831)

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29. [*Hello, cool world*](https://advance.lexis.com/api/document?id=urn:contentItem:5J58-T5S1-JBPJ-73GB-00000-00&idtype=PID&context=1516831)

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30. [*-BASF becomes official partner of World Green Building Council's Europe Regional Network*](https://advance.lexis.com/api/document?id=urn:contentItem:5JRG-JTV1-F0K1-N0NP-00000-00&idtype=PID&context=1516831)

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31. [*From boat building to farming, all together in the bio-economy*](https://advance.lexis.com/api/document?id=urn:contentItem:5GY5-1281-F0BB-S41P-00000-00&idtype=PID&context=1516831)

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32. [*At climate summit in Washington, UN officials call to take action 'to the next level'*](https://advance.lexis.com/api/document?id=urn:contentItem:5JPK-PFS1-F0K1-N0TM-00000-00&idtype=PID&context=1516831)

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33. [*Philippines calls for adaptation funds in climate change talks*](https://advance.lexis.com/api/document?id=urn:contentItem:5HJ0-P5W1-DYRV-332G-00000-00&idtype=PID&context=1516831)

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34. [*What will fill the hole left by coal? When mines close in Victoria, local people fear for their future and predict whole towns will die. But if the Coalition and Labor are serious about their climate change targets, are they also ready to replace the lost Australian jobs?*](https://advance.lexis.com/api/document?id=urn:contentItem:5K40-9S31-F021-613T-00000-00&idtype=PID&context=1516831)

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35. [*At climate summit in Washington, UN officials call to take action 'to the next level'*](https://advance.lexis.com/api/document?id=urn:contentItem:5JPK-PFS1-F0K1-N0HD-00000-00&idtype=PID&context=1516831)

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36. [*Biochar Market Will Rise at a Phenomenal 14.80% CAGR From 2014 to 2020, Will Reach a Valuation of US$572.3 mn by 2020: Transparency Market Research*](https://advance.lexis.com/api/document?id=urn:contentItem:5HDH-2NT1-JB72-120K-00000-00&idtype=PID&context=1516831)

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37. [*Potential of agroforestry can no longer be ignored Combining forestry with productive grassland makes economic as well as environmental sense*](https://advance.lexis.com/api/document?id=urn:contentItem:5HSJ-XC31-JBVM-Y19D-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** emission and energy or emission and reduction or emission and targets or emission and greenhouse gas or energy and reductions or energy and targets or energy and greenhouse gas or reductions and targets or reductions and greenhouse gas or targets and greenhouse gas

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38. [*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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39. [*-Report by Capgemini Consulting and i24c: Europe Failing to Realize the Full Environmental and Commercial Benefits of its Low-Carbon Technology R&D Leadership*](https://advance.lexis.com/api/document?id=urn:contentItem:5JW4-2XK1-F0K1-N43S-00000-00&idtype=PID&context=1516831)

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40. [*Think you can't help the environment? These Europeans disagree From picking up rubbish to cleaning the sea, people across the continent are making a huge a difference*](https://advance.lexis.com/api/document?id=urn:contentItem:5HBP-9S11-F021-63P6-00000-00&idtype=PID&context=1516831)

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41. [*Think you can't help the environment? These Europeans disagree From picking up rubbish to cleaning the sea, people across the continent are making a huge a difference*](https://advance.lexis.com/api/document?id=urn:contentItem:5HCY-TH31-JCJY-G1GY-00000-00&idtype=PID&context=1516831)

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42. [*Think you can't help the environment? These Europeans disagree From picking up rubbish to cleaning the sea, people across the continent are making a huge a difference*](https://advance.lexis.com/api/document?id=urn:contentItem:5HBD-HG61-JCJY-G29X-00000-00&idtype=PID&context=1516831)

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43. [*Global Anaerobic Digestion (AD) Market 2016-2026*](https://advance.lexis.com/api/document?id=urn:contentItem:5HVN-D4F1-DXP3-R03W-00000-00&idtype=PID&context=1516831)

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44. [*Election 2016 voters focus on core messages and competing leaders*](https://advance.lexis.com/api/document?id=urn:contentItem:5J5D-PHJ1-JC8Y-84NN-00000-00&idtype=PID&context=1516831)

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45. [*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)

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46. [*Seeding recipe breakthrough could boost grasslands and feed cattle*](https://advance.lexis.com/api/document?id=urn:contentItem:5HSD-1WN1-JCJY-G4DY-00000-00&idtype=PID&context=1516831)

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47. [*Global Anaerobic Digestion (AD) Market 2016-2026*](https://advance.lexis.com/api/document?id=urn:contentItem:5HV7-FSB1-DXP3-R35X-00000-00&idtype=PID&context=1516831)

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48. [*SEEDING RECIPE BREAKTHROUGH COULD BOOST GRASSLANDS AND FEED CATTLE*](https://advance.lexis.com/api/document?id=urn:contentItem:5HRN-TJ91-JCBD-Y3DW-00000-00&idtype=PID&context=1516831)

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49. [*Seeding recipe breakthrough could boost grasslands and feed cattle*](https://advance.lexis.com/api/document?id=urn:contentItem:5HRH-N7S1-JCJY-G4WW-00000-00&idtype=PID&context=1516831)

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50. [*Hope is that Paris will galvanise whole world into o moving from fossil fuels to clean energy*](https://advance.lexis.com/api/document?id=urn:contentItem:5HKW-65C1-JBVM-Y1J8-00000-00&idtype=PID&context=1516831)

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51. [*Paris climate deal will not be a legally binding treaty*](https://advance.lexis.com/api/document?id=urn:contentItem:5HC1-VKK1-F039-61G7-00000-00&idtype=PID&context=1516831)

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52. [*Amber Rudd challenges Boris Johnson to state that he's not a climate change denier 'When I consider who to back as leader of the Conservative party, knowing where they stand on this issue, which is so important to me, will be absolutely central to who I support,' Energy and Climate Change Secretary says*](https://advance.lexis.com/api/document?id=urn:contentItem:5K44-K361-JCJY-G4H4-00000-00&idtype=PID&context=1516831)

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53. [*Amber Rudd challenges Boris Johnson to state that he's not a climate change denier 'When I consider who to back as leader of the Conservative party, knowing where they stand on this issue, which is so important to me, will be absolutely central to who I support,' Energy and Climate Change Secretary says*](https://advance.lexis.com/api/document?id=urn:contentItem:5K44-7K31-F021-61MH-00000-00&idtype=PID&context=1516831)

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54. [*Biobased polymers keep textiles green Growing demands from brand owners and consumers for fibres and textiles that are more environmentally friendly are now creating a huge market for biobased polymers produced using renewable feedstocks*](https://advance.lexis.com/api/document?id=urn:contentItem:5K4G-JP11-JCF2-H49G-00000-00&idtype=PID&context=1516831)

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55. [*Think you can't help the environment? These Europeans disagree From picking up rubbish to cleaning the sea, people across the continent are making a huge a difference*](https://advance.lexis.com/api/document?id=urn:contentItem:5HBD-HG61-JCJY-G29W-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 |

56. [*KEY QUESTIONS SURROUNDING UN CLIMATE CHANGE TALKS*](https://advance.lexis.com/api/document?id=urn:contentItem:5HG1-H9G1-JCBD-Y36X-00000-00&idtype=PID&context=1516831)

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57. [*What the Paris climate deal means for clothing*](https://advance.lexis.com/api/document?id=urn:contentItem:5HNC-8SR1-JDNW-408J-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

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58. [*Urgent action needed to improve air quality following diesel emissions scandal, MPs say 'The Government must act now to tackle this public health emergency,' Commons'environment committee says*](https://advance.lexis.com/api/document?id=urn:contentItem:5JMM-X1N1-JCJY-G2G8-00000-00&idtype=PID&context=1516831)

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59. [*UK air pollution is a 'public health emergency' after emissions scandal, MPs say Commons'environment committee says the Government must act urgently to stop up to 50,000 deaths a year*](https://advance.lexis.com/api/document?id=urn:contentItem:5JMP-2PF1-JCJY-G0VV-00000-00&idtype=PID&context=1516831)

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60. [*Italy 's AB Orders 115 of GE's Jenbacher Engines for Future Biogas Repowering Projects*](https://advance.lexis.com/api/document?id=urn:contentItem:5K2F-BHS1-JD3Y-Y22B-00000-00&idtype=PID&context=1516831)

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61. [*- Italy 's AB Orders 115 of GE's Jenbacher Engines for Future Biogas Repowering Projects*](https://advance.lexis.com/api/document?id=urn:contentItem:5K2W-8W51-F0K1-N4VR-00000-00&idtype=PID&context=1516831)

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62. [*Italy 's AB Orders 115 of GE's Jenbacher Engines for Future Biogas Repowering Projects*](https://advance.lexis.com/api/document?id=urn:contentItem:5K2F-BHS1-JD3Y-Y1S2-00000-00&idtype=PID&context=1516831)

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63. [*- Italy 's AB Orders 115 of GE's Jenbacher Engines for Future Biogas Repowering Projects*](https://advance.lexis.com/api/document?id=urn:contentItem:5K33-8371-F0K1-N2H5-00000-00&idtype=PID&context=1516831)

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64. [*Researchers question Brazil 's climate change goals through deforestation limits*](https://advance.lexis.com/api/document?id=urn:contentItem:5H9K-JP51-DYRV-30YW-00000-00&idtype=PID&context=1516831)

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65. [*Want to do good at work? Here's where to find a job in the sustainability market The historic COP21 agreement is poised to create a jump in sustainability hiring. Here are four areas of the job market expected to grow significantly in five years*](https://advance.lexis.com/api/document?id=urn:contentItem:5HY1-RPT1-F021-62S1-00000-00&idtype=PID&context=1516831)

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66. [*Want to do good at work? Here's where to find a job in the sustainability market The historic COP21 agreement is poised to create a jump in sustainability hiring. Here are four areas of the job market expected to grow significantly in five years*](https://advance.lexis.com/api/document?id=urn:contentItem:5HXP-SKP1-JCJY-G4GX-00000-00&idtype=PID&context=1516831)

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67. [*THE ART OF CHANGING THE CLIMATE DEBATE Scientific knowledge is vital but on its own will never change our environmental behaviour. The key to that is to incorporate skills from the other side of the traditional science-humanities divide, say Trinity College academics*](https://advance.lexis.com/api/document?id=urn:contentItem:5K07-DPY1-JC8Y-81YJ-00000-00&idtype=PID&context=1516831)

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68. [*COP21: Can India reconcile growth and environment?*](https://advance.lexis.com/api/document?id=urn:contentItem:5HHR-6J01-JCMN-Y0F3-00000-00&idtype=PID&context=1516831)

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69. [*A number of initiatives aim to protect Abu Dhabi 's environment*](https://advance.lexis.com/api/document?id=urn:contentItem:5WS6-C4N1-DXYV-752J-00000-00&idtype=PID&context=1516831)

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70. [*Barloworld Limited Preliminary audited year-end -2-*](https://advance.lexis.com/api/document?id=urn:contentItem:5HD3-47S1-F0CC-S51N-00000-00&idtype=PID&context=1516831)

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71. [*Politicians debate their sustainability priorities*](https://advance.lexis.com/api/document?id=urn:contentItem:5MYF-GVJ1-DYF4-G040-00000-00&idtype=PID&context=1516831)

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72. [*Water shortage is one of the top global risks, how can we avert it? Governments, civil society, corporations, farmers and grassroots organisations must co-operate to avoid the dangers ahead*](https://advance.lexis.com/api/document?id=urn:contentItem:5H2T-2201-F021-64PS-00000-00&idtype=PID&context=1516831)

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73. [*Politicians debate their sustainability priorities*](https://advance.lexis.com/api/document?id=urn:contentItem:5MNT-TGX1-JC02-S2VN-00000-00&idtype=PID&context=1516831)

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74. [*Water shortage is one of the top global risks, how can we avert it? Governments, civil society, corporations, farmers and grassroots organisations must co-operate to avoid the dangers ahead*](https://advance.lexis.com/api/document?id=urn:contentItem:5H2T-6MR1-JCJY-G1H2-00000-00&idtype=PID&context=1516831)

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75. [*Water shortage is one of the top global risks, how can we avert it? Governments, civil society, corporations, farmers and grassroots organisations must co-operate to avoid the dangers ahead*](https://advance.lexis.com/api/document?id=urn:contentItem:5H0M-BTF1-F021-62K0-00000-00&idtype=PID&context=1516831)

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76. [*Pot is power hungry: why the marijuana industry's energy footprint is growing The $3.5bn industry is one of the nation's most energy intensive, often demanding 24-hour indoor lighting rigs, heating, ventilation and air-conditioning systems at multiplying grow sites*](https://advance.lexis.com/api/document?id=urn:contentItem:5J5X-FT31-F021-63YR-00000-00&idtype=PID&context=1516831)

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78. [*Pot is power hungry: why the marijuana industry's energy footprint is growing The $3.5bn industry is one of the nation's most energy intensive, often demanding 24-hour indoor lighting rigs, heating, ventilation and air-conditioning systems at multiplying grow sites*](https://advance.lexis.com/api/document?id=urn:contentItem:5J64-45S1-JCJY-G117-00000-00&idtype=PID&context=1516831)

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79. [*Now we know that even vegetarianism is bad for the planet, it's time you Greens embraced my diet*](https://advance.lexis.com/api/document?id=urn:contentItem:5HMX-PD81-JCS0-D309-00000-00&idtype=PID&context=1516831)

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80. [*Now we know that even vegetarianism is bad for the planet, it's time you Greens embraced my diet*](https://advance.lexis.com/api/document?id=urn:contentItem:5HMT-DB91-JCJY-G1W9-00000-00&idtype=PID&context=1516831)

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81. [*Five Key Themes For Europe Agribusiness*](https://advance.lexis.com/api/document?id=urn:contentItem:5JK8-4V61-JD33-J4DY-00000-00&idtype=PID&context=1516831)

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82. [*Saudi cabinet holds session, approves number of international projects*](https://advance.lexis.com/api/document?id=urn:contentItem:5H90-G321-JC8S-C1MV-00000-00&idtype=PID&context=1516831)

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83. [*Construction in Austria - Key Trends and Opportunities to 2020*](https://advance.lexis.com/api/document?id=urn:contentItem:5JHP-TWD1-F0K1-N3RY-00000-00&idtype=PID&context=1516831)

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84. [*Construction in Austria - Key Trends and Opportunities to 2020*](https://advance.lexis.com/api/document?id=urn:contentItem:5JFT-M781-JD3Y-Y3CY-00000-00&idtype=PID&context=1516831)

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85. [*Five Key Themes For Europe Agribusiness*](https://advance.lexis.com/api/document?id=urn:contentItem:5JJ4-XXY1-JD33-J3RH-00000-00&idtype=PID&context=1516831)

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86. [*- TransCanada Corporation - Keystone Pipeline System Safely Delivers One Billionth Barrel of Oil, Bringing Jobs, Growth and Energy Security to the U.S. and Canada*](https://advance.lexis.com/api/document?id=urn:contentItem:5GGT-5681-JD3Y-Y4XR-00000-00&idtype=PID&context=1516831)

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87. [*No more 'business as usual' for Australia as climate change hits economy for $8bn Risks around extreme weather are high for Australian companies, but there are also plenty of opportunities to benefit from the 'business boom'*](https://advance.lexis.com/api/document?id=urn:contentItem:5HH3-CC61-JCJY-G3F9-00000-00&idtype=PID&context=1516831)

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88. [*No more 'business as usual' for Australia as climate change hits economy for $8bn Risks around extreme weather are high for Australian companies, but there are also plenty of opportunities to benefit from the 'business boom'What is Guardian Sustainable Business? Find out hereMeet our advisory council*](https://advance.lexis.com/api/document?id=urn:contentItem:5HH3-CC61-JCJY-G3FB-00000-00&idtype=PID&context=1516831)

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89. [*BBC Radio 5 Live - 10:42 PM GMT*](https://advance.lexis.com/api/document?id=urn:contentItem:5HGV-K8N1-DY08-30M1-00000-00&idtype=PID&context=1516831)

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90. [*Can solar cookstoves help reduce greenhouse emissions in developing countries? An Ohio startup is disrupting the clean cookstove industry with the introduction of a solar powered cookstove - but not everyone is convinced*](https://advance.lexis.com/api/document?id=urn:contentItem:5H8B-VG61-F021-61J5-00000-00&idtype=PID&context=1516831)

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91. [*Aberdeen New Thai Inv Trust PLC Annual Financial -4-*](https://advance.lexis.com/api/document?id=urn:contentItem:5JS7-RJ31-F0CC-S21N-00000-00&idtype=PID&context=1516831)

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92. [*SRI sectors in focus: Forestry*](https://advance.lexis.com/api/document?id=urn:contentItem:5H5X-T3K1-F0GS-H2K7-00000-00&idtype=PID&context=1516831)

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93. [*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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94. [*CO2 Requirements for Poland Stricter than Expected?*](https://advance.lexis.com/api/document?id=urn:contentItem:5K8F-NCW1-DYWS-R012-00000-00&idtype=PID&context=1516831)

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95. [*Cutting food waste by a quarter would mean enough for everyone, says UN With the global population rising, wastage of products including 45% of all fruit and vegetables and 20% of meat is one of the greatest challenges to achieving food security*](https://advance.lexis.com/api/document?id=urn:contentItem:5GND-YHT1-F021-60MB-00000-00&idtype=PID&context=1516831)

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96. [*-Europa-Speech by Vice-President for Energy Union MaroS Sefcovic at the meeting with local stakeholders, academia, representatives of public and regional authorities, Klaipeda University, Lithuania*](https://advance.lexis.com/api/document?id=urn:contentItem:5J57-YTX1-F0K1-N1VF-00000-00&idtype=PID&context=1516831)

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97. [*Satellite project to protect threatened ecosystems will monitor Kenya 's forests in near real-time University of Leicester researchers will visit Kenya from 25 â(EURO)" 29 April to start a new climate change initiative*](https://advance.lexis.com/api/document?id=urn:contentItem:5JKF-4F71-JD3Y-Y54P-00000-00&idtype=PID&context=1516831)

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98. [*Speech by Vice-President for Energy Union Maros Sefcovic at the meeting with local stakeholders, academia, representatives of public and regional authorities, Klaipeda University, Lithuania*](https://advance.lexis.com/api/document?id=urn:contentItem:5J53-0951-JD3Y-Y27X-00000-00&idtype=PID&context=1516831)

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99. [*Satellite project to protect threatened ecosystems will monitor Kenya 's forests in near real-time University of Leicester researchers will visit Kenya from 25 â(EURO)" 29 April to start a new climate change initiative*](https://advance.lexis.com/api/document?id=urn:contentItem:5JKF-4F71-JD3Y-Y4PY-00000-00&idtype=PID&context=1516831)

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100. [*Speech by Vice-President for Energy Union Maros Sefcovic at the meeting with local stakeholders, academia, representatives of public and regional authorities, Klaipeda University, Lithuania*](https://advance.lexis.com/api/document?id=urn:contentItem:5J53-0951-JD3Y-Y2NW-00000-00&idtype=PID&context=1516831)

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# [***How to finance a new climate economy***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K3X-YMJ1-F039-641C-00000-00&context=1516831)

FT.com

June 28, 2016 Tuesday 2:35 PM GMT

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**Length:** 971 words

**Byline:** Guest writer

**Body**

*By Felipe Calderón, Global Commission on the Economy and Climate*

Over the next fifteen years, the world needs to invest more in new infrastructure and upgrades than everything that exists today. This means we have a crucial window of opportunity to build it right, reflecting the new international priorities of the Sustainable Development Goals and the Paris Climate Agreement.

If we continue on our current high-carbon economic model, the world will need to invest more than $90tn in infrastructure. But it won’t cost much more to build our ***energy***, transport, water, and telecommunications systems in a low-carbon way. Making our infrastructure cleaner and more sustainable could add as little as 5 per cent to upfront costs, which could be fully offset by lower operating costs. It would also make our economy cleaner, more efficient, and more productive. Plus, it would ***reduce*** the enormous costs of adapting to climate change.

We know the capital exists for low-carbon infrastructure; we just need to unlock it. There are four key steps we should take to do so.

First, once and for all we need to get rid of the market distortions that are biasing investment toward high-carbon projects. Subsidies to fossil fuels cost up to $600bn per year, many times what is received by renewable ***energy***. These subsidies encourage inefficient ***energy*** use, discourage the development of clean ***energy*** technologies, and intensify air pollution.

Governments and investors who don’t take into account these costs are liable to make uninformed decisions that are bad for them, their citizens, and the planet as a whole. For the market to reflect the true value of infrastructure investments, countries ought to reform subsidies and introduce meaningful carbon prices. More than 40 countries and 500 companies have begun pricing carbon, and initiatives like the Carbon Pricing Leadership Coalition are helping others learn from each other’s successes. I expect the pace of change to accelerate now that the Paris Agreement has shifted expectations globally toward a low-carbon growth path.

Second, we need to invest in innovation. Currently, only about 2 per cent of overall R&D spending goes to low-carbon projects. Developing new, cheaper green tech solutions would go a long way in ***reducing*** upfront investment costs for infrastructure. And at the same time, more effective dissemination of existing technologies will be crucial because of the sheer volume of the power plants, buildings, roads, and rails that will be built in the next few years.

Third, we need to develop a pipeline of sustainable projects by strengthening public investment. When I was President of Mexico, our government put in place the most ambitious infrastructure program in Mexican history, raising annual investment from 3 per cent of GDP per year to almost 5 per cent.

We accomplished this by making infrastructure a national priority reflected in the public budget, cutting red tape, and partnering with the private sector. We also sought to innovate by monetising already functioning infrastructure to gather resources that could be invested in new projects through the National Infrastructure Fund. It’s essential for every government to have a national strategy to coordinate planning.

Effective project preparation, pipelines and sound investment frameworks can help ensure that there’s enough money for infrastructure projects, and that the right projects are picked in the first place. Throughout the process, multilateral development banks can offer technical assistance and ***reduce*** perceived risks through their presence.

And finally, we’ll need to better harness private finance and align it with the sustainable future we want.

There are multiple ways to shift private capital into the green economy. One that has become popular in recent years is green bonds that are earmarked for sustainable investments. Issuances of green bonds grew to $41.8bn in 2015, three times higher than in 2012.

Five years from now, China’s green bond market alone will likely be worth $230bn. Most green bonds are in the financial, ***energy***, and property sectors, but they should be diversified to include transport, ***agriculture***, waste, and adaptation. We also need to establish clear rules so investors know exactly what classifies a bond as green in each of these areas.

Green investment banks dedicated to sustainable infrastructure are another effective way to crowd-in private investment. So far, green banks have achieved attractive returns, and can leverage up to $10 from the private sector for each dollar of public spending. Dozens of green banks have emerged in recent years, including in countries like the UK, Japan, and Malaysia and in states like California, Connecticut, and New York.

And to truly green the financial system, companies and investors must acknowledge their exposure to climate risk and take it into account in investment decisions. Ignoring environmental factors that impact long-term value is a failure of fiduciary duty.

Several EU countries now mandate corporate reporting on ***greenhouse gas*** ***emissions*** or climate risk exposure. And the G20 has recently established an industry-led Task Force under the Financial Stability Board on voluntary Climate-related Financial Disclosures to come up with consistent ways for companies to disclose these risks. We look forward to its recommendations later this year as an important step forward.

Infrastructure could either be the pillar upon which we base our growth, development and future prosperity, or it could crumble beneath us. It is time for us all to realise that sustainable infrastructure is not just one potential pathway among many: it is the only growth story of the future.

*Felipe Calderon is the former President of Mexico and Chair of the Global Commission on the Economy & Climate*

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**Load-Date:** June 28, 2016

**End of Document**



[***Chicken embryo tests can prevent practice of gassing billions of cockerels; Scientists create sex identification tests that can identify male chicks before they hatch***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JW3-R8B1-JCJY-G0JX-00000-00&context=1516831)

The Guardian

May 27, 2016 Friday 1:56 PM GMT

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**Section:** ENVIRONMENT

**Length:** 605 words

**Byline:** Nic Fleming in Wageningen

**Body**

The current practice of gassing billions of male chicks within a day of hatching because they cannot lay eggs could be stopped thanks to a new embryo gender test.

Globally some 3.2 billion cockerels are killed within hours of breaking free of their eggs each year.

Now Dutch scientists have developed a simple test that identifies the sex of chicken embryos within eggs, meaning males could be terminated long before hatching.

The practice of killing day-old male chicks has been a focus of animal cruelty campaigners in the UK and elsewhere. A bill in the German parliament sponsored by the Green party that aimed to ban the practice was defeated in March.

Related: Revealed: the dirty secret of the UK's poultry industry

Now researchers at the biotech start-up company In Ovo, based in Leiden in the Netherlands, have identified several chemical biomarkers present in the eggs that they say can be used to distinguish between males and females on day nine of incubation.

Speaking at a conference on new food technologies in Wageningen in the Netherlands on Thursday, Wouter Bruins, In Ovo co-founder, said the company had completed a study showing that one of their biomarkers could be used to rapidly identify chicken embryo sex in their eggs with an accuracy of greater than 95%, and that he hopes to raise this to 99%.

The technique involves using a needle 0.7mm across to take a sample of fluid from the allantois, a membrane that surrounds the embryo which helps it obtain calcium from the shell and deal with waste.

The company then uses mass spectrometry to work out the level of a small molecule that is found in higher concentrations in males, with the result available in four seconds. In Ovo is keeping the identity of the molecules secret for commercial reasons.

"Most people think the industry doesn't care about the ethics of killing male chicks," said Bruins after presenting his novel test at the F&A Next food and ***agriculture*** innovation conference.

"In fact, having spoken to many farmers, I know many of them would prefer to stop the practice and would be willing to pay a premium to do so."

In Ovo has the backing of all four of the large Dutch hatcheries and is currently working with Danish machine manufacturer Sanovo Technology Group to optimise their process. They plan to launch a commercial device in 2018.

The company claims the technique can ***reduce*** ***energy*** consumption in hatcheries by 30% and therefore lower ***greenhouse gas*** ***emissions***, while lowering the labour costs involved in in checking the gender of chicks manually.

In Ovo says each test will initially cost about 7p, but save around 2p in ***reduced*** costs. As each hen lays some 400 eggs, the extra price to the consumer should be negligible, it claims.

Last year it was reported that the UK egg industry was facing a shortage of workers wanting to take up roles as "chick-sexers" who have to manually sort as many as 1,000 chicks per hour, despite annual salaries of around £40,000.

Other methods of gendering chicken embryos are under development in Germany and Canada, but it remains to be seen whether these are commercially viable.

Mia Fernyhough, RSPCA senior scientific officer, said: "It is upsetting to think of young chicks being killed like this.

"This work in the Netherlands is the first method we are aware of that appears to be commercially viable and so has real potential to have a positive impact on this controversial practice."

A spokesperson from the British Egg Information Service said the disposal of male chicks in the UK by exposure to argon was quick and painless, and added they are used as a source of food for pets and other animals.

**Load-Date:** May 27, 2016

**End of Document**



[***Countryfile - 07:15 AM GMT***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K6G-3G91-JBH6-C13C-00000-00&context=1516831)

TVEyes - BBC 2 Scotland

July 10, 2016 Sunday

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**Section:** U.K. REGIONAL TV; Lifestyle

**Length:** 763 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

an extraordinary machine here, but how does something like this help you ***reduce*** your ***greenhouse gas*** ***emissions***? All our machines are ten metres wide, including our combine harvester, and everything operates on the same set of wheelings. About 80% of the soil in our fields never, ever gets trafficked by any machines. And that's really important to preserve the soil's natural structure.

By not disrupting the earth, gases stored in the growing cycle can remain locked in the ground. So that means the nitrogen can be doing its work in terms of growing better crops, rather than leaking into the atmosphere and contributing to climate change. Exactly. I think it's a win-win because you've got to think long-term in farming. When we get weather events like this, droughts and storms, your crop yields are much more robust if you've got quality soils. Also we're using less diesel in the tractors. It's cutting our costs. So you don't think you have to be a sort of climate change-fighting evangelist to go down this route. No, because it's going to pay back eventually. It might take a few years, but it's going to pay back eventually. THUNDER RUMBLES Despite farmers like Julian taking action, a perfect storm is brewing. Since 1990, the UK has seen just a 16% drop in ***emissions*** from ***agriculture***, which is poor compared to other sectors. So to really make a difference, do we need to put more radical options on the menu? Maybe ***reducing*** the amount of red meat and dairy in our diets, or a complete overhaul of how we farm. Later on - after my lunch, of course - I'll be finding out. Mile upon mile of dramatic coastline. Rolling fields and acres of woodland. Pembrokeshire's landscape is glorious. But look a little deeper and you'll see the British countryside isn't perfect. It's beset by issues from tree disease to climate change, from affordable housing to rural jobs. But here, in a quiet corner of Pembrokeshire, there's a group of people who are dealing with all of those. Western Solar is a small company of passionate individuals doing their bit to make the world a better place. And this is the perfect location to start. Even on a grey day, it's one of the best places in the UK to harvest ***energy*** from the sun. So the company built Wales' first solar farm. It not only produces electricity, it also generates funding for their next big project. For that, they've taken advantage of another local resource - trees. These are larch. Now, across Wales, six million are being felled because of larch tree disease. It's a disaster for the landscape, but it also presents an opportunity. Some of those trees ended up here at the company's own rural sawmill. There we go! Just because it's diseased doesn't mean it can't be used. So you've got wood, you've got solar ***energy***, a need for affordable homes and rural jobs and a bit of investment, so what do you do? What the company did was build a prototype, affordable eco-house. It's called Ty Solar - Welsh, of course - for "solar house". The member of the team responsible for the design was architect Gareth Dauncey. Gareth, hello. Hello, Helen, how are you, all right? I'm very good. Nice to meet you. Right, so here it is. It is, Ty Solar. So tell me about Ty Solar. There's two things we're trying to do with the design. One is make the cost of living in it drastically lower than in a conventional house. But also the cost of the build has to come down. So it has to be a very efficient sort of shape. Basically, Ty Solar is a box made from prefabricated wooden panels. It's insulated with recycled newspaper. Solar panels on the roof produce twice as much electricity than is needed. And large windows face the sun for light and warmth. I've tried desperately to make the house quietly clever. So it shouldn't be any more complicated to live in this house than it should in a standard estate house. Hopefully this will prove something, improve the quality of life for the people that live in them. It's got the potential to take people who are in ***energy*** poverty - you know, not being able to afford to heat old properties. I mean, who wouldn't be happy with that? The prototype has been a success. Now the first homes are being built on wasteland in the tiny hamlet of Glanrhyd. Jens. Hello. Hello, I'm ready.

**Load-Date:** July 10, 2016

**End of Document**



[***Countryfile - 07:15 AM GMT***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K6G-3G91-JBH6-C162-00000-00&context=1516831)

TVEyes - BBC 2 Wales

July 10, 2016 Sunday

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**Section:** U.K. REGIONAL TV; Lifestyle

**Length:** 731 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:**[[2]](#footnote-3)1

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**Load-Date:** July 10, 2016

**End of Document**



[***UNFCCC Secretariat and Earth Day Network Launch Campaign to Mark Signing of Paris Agreement and to Celebrate Earth Day on 22 April***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JH9-D7S1-JDKF-61P6-00000-00&context=1516831)

NEWS Press (English)

April 11, 2016 Monday

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**Section:** International; International organizations

**Length:** 835 words

**Byline:** UNEP -United Nations Environment Program

**Body**

[*http://www.newspress.fr/common/getImageEm.ashx?imid=5431&emid=5410*](http://www.newspress.fr/common/getImageEm.ashx?imid=5431&emid=5410)

Media Alert - Plant a tree to Mark April 22 Signing of the Paris Agreement - Join Earth Day Network's 'Trees for the Earth'

There is a very special day coming up and one well worth celebrating everywhere.

In New York, on April 22, governments will sign the new Paris Climate Change Agreement en route to it coming into force as millions of people around the globe mark annual Earth Day, or International Mother Earth Day.

Earth Day's theme this year is focused on trees with the aim of mobilizing nearly eight billion plantings, or one for every man, woman and child alive by 2020-together we can maybe do it sooner!

The link between the Paris Agreement and trees is clear-forests will be key allies for combating climate change and meeting the long term goal of restoring the ecological balance of planet Earth by the second half of the century.

Trees and forests are also crucial for assisting efforts to meet the new Sustainable Development Goals given their role is absorbing carbon, cleaning and cooling the air; acting as natural water pumps to sustain river flows; stabilizing soils; recycling nutrients for ***agriculture*** and supporting habitats for wildlife to name just a few of their gifts to humanity.

So let's get planting now, in the run up to April 22 and beyond.

Our asks are simple, we want to create a buzz around the signing of the Paris Agreement; let governments know that everyone is right behind them while making a very practical difference on the ground in terms of a healthier, less risky world.

We are asking everyone to do one or all of three things:

. Plant a tree for the Paris Agreement signing and maybe attach a little plaque

. Hug a tree for the Paris Agreement signing

. Sketch or photograph your favourite tree for the Paris Agreement signing

Then post images and texts about your good work on Facebook, Twitter or any other social media network using the hashtags #ParisAgreement and #Trees4Earth, along with #EarthDay2016 if there is space.

Go the Earth Day web site and register your event and learn about more cool things you can do.

And tell governments, local authority leaders, business leaders, friends and family why you have done it and get them on board-you could even use the hashtags #ParisAgreement #Means4Me when writing to them.

Forests Key to Success of Paris Agreement

Christiana Figueres, UNFCCC Executive Secretary, said: "Planting, hugging or sketching a tree to mark the signing of the Paris Agreement and to celebrate Earth Day is an expression of solidarity, love and hope".

"The Paris Agreement, if fully implemented, offers a prospect of a far better world for billions of people. Conserving, restoring and extending the Earth's natural or nature-based infrastructure including forests will be a big part of its long term success and long term goal," she added.

Ms. Figueres, who will be in New York for the Paris Agreement signing, launched the campaign by hugging a Poro tree in her native Costa Rica.

Kathleen Rogers, President of the Earth Day Network, said on the occasion of the launch:

"Trees and forests are the most vital weapon we have against climate change. We must ***reduce*** the amount of carbon we pump into the air each and every day, but forests are the natural filter that will absorb and cleanse our air of the carbon already present. In order for the Paris climate Agreement to work as intended, individuals and nations need to get planting and help us in our effort to get 7.8 billion trees in the ground by Earth Day 2020. Without these natural carbon sinks allied to cleaner ***energy***, smarter ways of doing business and a clear commitment to solve the difficulties of the poor, the Agreement risks becoming so much hot air."

The UNFCCC secretariat will plant a tree in May in the gardens around its offices in Bonn, Germany with a special plaque marking the Paris Agreement and Earth Day in the presence of delegates from countries world-wide attending the May climate conference in advance of the 22nd Conference of the Parties to be held in Morocco in November.

About the UNFCCC

With 197 Parties, the United Nations Framework Convention on Climate Change (UNFCCC) has near universal membership and is the parent treaty of the 1997 Kyoto Protocol. The Kyoto Protocol has been ratified by 192 of the UNFCCC Parties. For the first commitment period of the Kyoto Protocol, 37 States, consisting of highly industrialized countries and countries undergoing the process of transition to a market economy, have legally binding ***emission*** limitation and ***reduction*** commitments. In Doha in 2012, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol adopted an amendment to the Kyoto Protocol, which establishes the second commitment period under the Protocol. The ultimate objective of both treaties is to stabilize ***greenhouse gas*** concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system.

[*http://unfccc.int*](http://unfccc.int)

**Load-Date:** April 11, 2016

**End of Document**



[***Climate change delegates agree on a draft plan to reduce global emissions after FOUR YEARS of negotiations - but warn a binding agreement is STILL some way off***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HJ1-8R21-JCJY-G08V-00000-00&context=1516831)

MailOnline

December 5, 2015 Saturday 3:06 PM GMT

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**Section:** NEWS

**Length:** 1442 words

**Byline:** IMOGEN CALDERWOOD FOR MAILONLINE

**Body**

* Negotiators for 195 nations created a first blueprint to stop climate change

1. Ministers will arrive in Paris on Monday to transform it into an agreement
2. It has been hailed as the most complex and consequential global pact ever
3. Meanwhile, the UK is to donate £274m to a climate fund shunned by the US

After four years of talks, negotiators from 195 nations have produced a blueprint for a pact to stop climate change - but it is still riddled with conflicting proposals on most key points.

From Monday, ministers from across the world will descend on Paris to transform the draft into an agreement that can rein in ***emissions*** that are causing the Earth's surface and oceans to heat up.

The 48-page draft has been hailed as the skeleton of the most complex and consequential global agreement ever attempted.

'In the words of Nelson Mandela, it always seems impossible until it is done,' said South Africa's negotiator Nozipho Mxakato-Diseko after the draft was presented to loud applause.

Scroll down for video

Meanwhile, more than 50 celebrities and personalities committed to the fight against climate change, from Sean Penn and Leonardo DiCaprio to U.S. billionaire Michael Bloomberg and Chinese internet tycoon Jack Ma, flocked to the conference in Le Bourget to encourage the efforts.

'Perhaps this is the most exciting time in human history,' said Penn, at a special conference event.

'Those illusions of having too many difficult choices have always created chaos. Now we live in a time where there are no choices. We have certainty.

'The days of dreams have given way to the days of doing.'

It is hoped that this month's conference - which hopes to save the planet from the effects of ***greenhouse gases*** - will avoid a repeat of the catastrophic attempt at negotiations at the annual UN talks in Copenhagen in 2009.

The UN talks, which aimed at a post-2012 deal, broke down after recriminations between rich and poor nations grew out of control.

But any deal emerging from Paris is likely to fall far short of what is needed to cap global warming at the planned 2C or below.

The key outcome, according to analysts, will be an agreement on a review every five years at which nations' commitments may be strengthened.

Several key issues are still yet to be agreed on, including: how fast and how far to slash ***greenhouse gas*** ***emissions***; who shoulders most of the burden and, critically, who should pay.

KEY POINTS OF THE CONFERENCE

Who is attending the conference?

World leaders and negotiators from the 195 countries that make up the United Nations Framework on Climate Change.

The United Nations has hosted annual conferences to tackle the vexed global warming issue since 1995, but all previous efforts have foundered, primarily due to deep divisions between rich and poor nations.

What does the summit hope to achieve?

Countries will attempt to hammer out a legally-binding deal to prevent temperatures rising by more than 2C above pre-industrial levels.

Current plans would put the world on track for a potentially disastrous warming of anywhere from about 2.7C to 3.5C by 2100.

German Chancellor Angela Merkel said proposed ***targets*** were not enough, adding: 'That means we need a follow up process and that, in my view, must be binding.'

What are the chances of success?

So far this year, 183 of 195 nations have issued long-term plans for tackling climate change, meant as building blocks for the Paris accord.

But issues may arise over how to make the deal legally binding and how it would be enforced as happened in Copenhagen six years ago when talks collapsed.

What are the sticking points?

They include climate finance to developing nations beyond an agreed goal of $100billion a year by 2020 or how to set a long-term goal to shift away from fossil fuels this century.

Many poor nations insist rich countries bear the most responsibility for tackling the problem because they have burnt the most fossil fuels since the Industrial Revolution on their way to prosperity.

But developed nations insist more must be done by emerging countries, which are voraciously burning coal - the most carbon-emitting of the main fossil ***energies*** - to power their fast-growing economiesr Hollande earlier greeted world leaders one by one as they arrived at the conference centre in Le Bourget, on the outskirts of Paris.

Poorer countries demand that they are compensated for the costly shift to renewable technologies, as well as to cope with climate change.

At stake is hundreds of billions of pounds that would need to start flowing from rich to developing nations from 2020, under the planned Paris pact.

The biggest polluting nations, such as the United States and China, want to meet the ***target*** of 2C above pre-Industrial Revolution levels.

But the weaker nations which are most at risk want the much tougher ***target*** of 1.5C, which would require the global economy to be completely reliant on renewable sources of ***energy*** by 2050.

In speeches at the opening of the Conference on November 30, both Prime Minister David Cameron and the Prince of Wales spoke of the obligation to grandchildren to stop climate change.

In an opening speech at the conference centre in Paris, the French President Francois Hollande said: 'Never have the stakes of an international meeting been so high because it concerns the future of the planet, the future of life. The hope of all of humanity rests on all of your shoulders.'

Barack Obama also painted a dire picture of the future without aggressive action to curb carbon ***emissions***, describing submerged countries, abandoned cities and fields that won't grow.

It is hoped that the decision reached at the summit in Paris will replace the last major agreement, the 1997 Kyoto Protocol, which required only rich countries to cut carbon dioxide ***emissions***, and the U.S. never signed on.

Since then, global temperatures and sea levels have continued to rise, and the Earth has seen an extraordinary run of extreme weather

It comes as scientists warn of a world that will be increasingly inhospitable to human life, with massive storms, drought and rising sea levels that swamp vast areas of land becoming routine.

Most scientists say failure to agree on strong measures would cause ever-increasing temperatures and lead to storms, droughts and rising sea levels as ice caps melt.

Global temperatures have already smashed records this year and last week an official report predicted 2015 will be the hottest year yet.

Experts have warned that global average surface temperatures in 2015 are likely to reach what they call the 'symbolic and significant milestone' of 1C (33F) above the pre-industrial era.

The conference is scheduled to end on December 11.

Britain to give £274million to climate change fund shunned by the U.S.

Britain is set to give £274million to a controversial climate change fund which the U.S. is threatening to back out of.

The Strategic Climate Fund, which was launched by George W. Bush in 2008, is supposed to help developing countries cope with climate change.

But key questions are being asked about where the money is going, what it is for, how it is being allocated and who benefits.

Britain has pledged more than any other country to the fund, which is currently the fifth largest beneficiary among international organisations supported by the aid budget.

The UK will provide almost $3billion (£1.9billion) of the Fund's $8billion (£5.3billion) budget, reported The Times.

But the Republican-heavy U.S. congress is threatening to end donations to the fund, despite the Obama administration's request to hand over $60million (£40million).

'The Strategic Climate Fund is one way we are helping developing countries to tackle climate change,' sources at the Department for International Development (DfID) told The Times.

'Examples of its projects include help to build climate-resilient roads across Mozambique following flooding in the lower Limpopo Valley in 2013.'

They said: 'More frequent extreme weather events are likely to disrupt populations, ***agriculture*** and supply chains, making political instability, conflict and migration more likely.'

The Fund's pilot programme reportedly offers support to people in Samoa by developing awareness of climate change.

It also funds a 'free mobile phone text messaging' system from Zambians to spread information about the weather.

It also does work in Burkina Faso, Ghana and Mexico.

The Office for National Statistics has revealed where the UK's aid budget has been spent.

The UL gave £238million to Sierra Leone to fight ebola; a large rise in aid to South Sudan, to combat hunger and unemployment; and Syria received £130million.

**Load-Date:** December 5, 2015

**End of Document**



[***Eating all your greens doesn't mean you are saving planet***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HNK-9F41-JBVM-Y3PX-00000-00&context=1516831)

Belfast Telegraph

December 22, 2015 Tuesday

Edition 1, National Edition

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**Section:** NEWS; Pg. 20,21

**Length:** 617 words

**Byline:** Janet Street-Porter

**Body**

If you care about saving the planet, what is the best diet? For years, smug vegans and vegetarians have asserted that they are the environmental warriors doing their bit to combat climate change. At the Paris climate conference, the Terminator, former bodybuilder and ex-California governor Arnold Schwarzenegger delivered an impassioned rant ordering us to give up meat two days a week to ***reduce*** ***greenhouse gases***.

Surely that's a bit rich coming from someone who bulked up on grass-fed protein for years and who starred in blockbusters which promoted gadgets and gimmickry powered by vast amounts of ***energy***? Actually, when I interviewed Arnie years ago, he was addicted to doughnuts rather than ribs, and we stopped at Greggs so he could stock up on a bagful.

Meat-eating has been under attack for some years - Paul Mc-Cartney and his family launched Meat Free Mondays in 2009 - but vegetarian campaigners could be fighting a losing battle. The UN Food and ***Agriculture*** organisation reckons that consumption of meat will rise by 76% by 2050, as the population increases and the Third World turns to Western-style diets.

What's indisputable, though, is that meat production and consumption account for between 28% and 50% of all the ***greenhouse gases*** generated, and a recent report from the think-tank Chatham House calls for a 15% meat tax to try to ***reduce*** the amount we eat.

Sadly, no solution is that simple. Now, a bunch of scientists in the US claim that eating healthy greens is just as bad for the planet.

According to a study conducted by the Carnegie Mellon University (which considered the impact per calorie of food in terms of ***energy*** costs, transportation, water use and carbon ***emissions***), bingeing on lettuce is more than three times as bad for the planet as gorging on bacon.

A spokesman for the researchers claimed that vegetables "require more resources per calorie than you would think - aubergines, celery and cucumbers look particularly bad when compared to pork or chicken". The report's authors agree that we need to eat less meat, but we mustn't delude ourselves that eating a healthy diet means we are saving the planet.

I don't know about you, but after reading this, I resolved to ignore the advice of Arnie and the lettuce-bashers and stick to my personal 5:2 diet. As for consuming less and fasting, telly science guru Michael Mosley will probably tell us next week that there's yet another way to live longer.

My 5:2 regime means all the conflicting arguments are covered in one week. For five days I eat a veggie breakfast of fruit, nuts and seeds followed by wholemeal heavy bread, topped with mashed avocado or raw tomato. On Saturday and Sunday, I eat a full English breakfast.

I always eat meat on Sundays and fish on Fridays - it's part of my DNA. I lead a guilt-free existence when it comes to diet, and that's without resorting to Gwyneth Paltrow for advice.

Taxing meat - particularly in countries such as the US, where steak is synonymous with masculinity - has as much chance of becoming law as gun control; in other words, zero.

I'm writing this in Australia, which does have strict gun control laws, but where the words barbie and beef are a central part of the culture. Australia is a conflicted country when it comes to diet. There's a strong alternative lifestyle culture, with passionate protection of the beautiful environment and a huge organic movement, alongside vast mining interests and huge meat production.

But the lettuce I buy at the farmers' market will have travelled less than 10 miles; it will be grown by people who use solar power, recycle and who aren't wearing shoes. It makes me feel very virtuous, but I'm not sure how I can replicate this back at home.

**Graphic**

Sweet tooth: Schwarzenegger

**Load-Date:** December 22, 2015

**End of Document**



[***COP21: All you need to know after historic climate change deal is agreed in Paris; Global climate envoys agreed a landmark accord earlier today, setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HKM-HT01-F021-627F-00000-00&context=1516831)

mirror.co.uk

December 12, 2015 Saturday 8:47 PM GMT

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**Section:** NEWS,WORLD NEWS

**Length:** 721 words

**Byline:** By mirror

**Body**

An historic deal has been struck to limit global warming.

Global climate envoys agreed a landmark accord earlier today in Paris setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming.

French Foreign Minister Laurent Fabius took just minutes to declare the pact adopted to the standing applause and whistles of delegates from almost 200 nations.

Here are the key questions about the deal.

What has been achieved?

The world's first comprehensive climate change agreement which will see action to curb rising temperatures by all countries.

Why do we need this deal?

If we continue to pump ***greenhouse gases*** into the atmosphere on current trajectories, we are facing a world with temperatures of more than 4C above pre-industrial levels by 2100 - hotter globally than at any time in human history.

Rising temperatures will lead to sea level rises, more intense storms and flooding, more extreme droughts, water shortages and heatwaves - as well as massive loss of wildlife and ***reduction*** in crop yields, potentially sparking conflict and mass migration.

The higher temperatures rise, the worse the situation will be - so we need to curb the ***emissions*** that cause global warming.

We've known about climate change for decades, why are we only doing something now?

This deal has effectively been 20 years in the making. A first treaty, the Kyoto Protocol - which was adopted in 1997, only covered the ***emissions*** of developed countries - and the US never ratified it.

It runs out in 2020 and the Paris Agreement will be its successor.

2020 is not very far away - why has it taken until now to negotiate a new deal?

World leaders tried to secure a deal in Copenhagen, Denmark, in 2009, at talks which are generally thought to have been a failure. A weak agreement came out of acrimonious talks which scarred the UN climate process and everybody involved.

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**Load-Date:** December 12, 2015

**End of Document**



[***COP21: All you need to know after historic climate change deal is agreed in Paris; Global climate envoys agreed a landmark accord earlier today, setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HKM-HT01-F021-62H0-00000-00&context=1516831)

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December 12, 2015 Saturday 9:01 PM GMT

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**Section:** NEWS,WORLD NEWS

**Length:** 725 words

**Byline:** By mirror

**Body**

An historic deal has been struck to limit global warming.

Global climate envoys agreed a landmark accord earlier today in Paris setting the course for a "historic" transformation of the world's fossil fuel-driven economy within decades in a bid to arrest global warming.

French Foreign Minister Laurent Fabius took just minutes to declare the pact adopted to the standing applause and whistles of delegates from almost 200 nations.

Prescott climate change

Here are the key questions about the deal.

What has been achieved?

The world's first comprehensive climate change agreement which will see action to curb rising temperatures by all countries.

Why do we need this deal?

If we continue to pump ***greenhouse gases*** into the atmosphere on current trajectories, we are facing a world with temperatures of more than 4C above pre-industrial levels by 2100 - hotter globally than at any time in human history.

Rising temperatures will lead to sea level rises, more intense storms and flooding, more extreme droughts, water shortages and heatwaves - as well as massive loss of wildlife and ***reduction*** in crop yields, potentially sparking conflict and mass migration.

The higher temperatures rise, the worse the situation will be - so we need to curb the ***emissions*** that cause global warming.

We've known about climate change for decades, why are we only doing something now?

This deal has effectively been 20 years in the making. A first treaty, the Kyoto Protocol - which was adopted in 1997, only covered the ***emissions*** of developed countries - and the US never ratified it.

It runs out in 2020 and the Paris Agreement will be its successor.

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December 13, 2015 Sunday 10:55 AM GMT

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**Section:** NEWS,WORLD NEWS

**Length:** 724 words

**Byline:** By mirror

**Body**

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[***BBC Radio 4 - 05:42 AM GMT***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JJJ-HNP1-DY08-33CM-00000-00&context=1516831)

TVEyes - BBC Radio 4

April 17, 2016 Sunday

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**Section:** U.K. NATIONAL RADIO

**Length:** 800 words

**Body**

**Speech to text transcript:**[[3]](#footnote-4)1

1st farmers to be involved in a new project set up by McDonald's the aim was to provide a detailed analysis of the farm's carbon footprint at the time by knew very little about this extremely involved topic and my limited knowledge led me to believe that we would be measuring electricity use water use as a farm and fertilizer use and discovered everything for the few years to buildings have to the Fiji used to breed of cattle you have it was quite daunting analysing how much water that we were using how much electricity was using how much to use that we're using we also looked at fertilizer use we also looked at inputs into feeding the animals this included how the song it was produced and then if we're using any other concentrated feed to rear are our laws once you have been measured and once she gone through the process what kind of things surprised you what did you learn the biggest surprise to me was the amount of influence that ruminant ***emissions*** from the stomach of the animals of the catalogue got a moist farm affected the carbon footprint of my farming enterprise be graphic as you like just explain what you mean by that well it means that instead of expecting all of their ***emissions*** to the from the heat ***energy*** water Fuele and fertilizer use on the farm it was actually from water is going on in the animal's stomach they are producing methane and nitrous oxide ***emissions*** and help farmers like Stephen develop ideas to not only ***reduce*** ***emissions*** but also improve profitability another strand to the project has been created so called beef clubs which provide an opportunity for foreigners to meet up next James experiences and swaps Lucian's the clubs now running across the UK so with the latest estimates putting UK ***agriculture*** as the source of around 10 % of total ***greenhouse gas*** ***emissions*** how Mike any of this make a difference in practice income into a different shares shed where person all the cattle to cattle the adjusting finished off and then just moved to have one of the cows just 20 never my notes that moment but commas with me down a corner what does supply chain director McDonald actually mean what do you do myself my team were accountable for sourcing products that we serve up but are restaurants on a day today basis from farm from suppliers right the way through from kinder so we serve somewhere in the region of 3 and a half million customers on a Daily basis and we source a little over 200 ingredients from menus so not necessarily a great number of products but enormous scale and depth to the amount of product that we buy commutes blame Why you are thinking about carbon and why you work in the farms to ***reduce*** carbon ***emissions*** from beef production increasingly policymakers are looking at this area and also customers are starting to talk to us about wanting to understand more about what we're doing is a number of drivers they're beef is what are business was built upon so in order for us to be able to grown the future we need to have an efficient prosperous and sustainable beef industry a within a programme we identified a means to bring a life which was through the what if it will the what if tool is quite simply a computer program open to any farmer it's a piece of software that the judges wanted to see it in action come into the warmth of the kitchen on Stephen's farm and as well as coffee and cake on the table we have a large computer screen this is part of the story of this sustainable beef a mission to feel for a with a mouse Stephen moves around the screen explaining to me and food and farming awards judge Mike Gooding how it measures the various missions across the farm what there is is a column uf keep form its indicators that the farm is quite normal things about the performance of Stephen's beef herd the light weight gain of his animals the sale white the price and against that we can see the performance of all the other farmers not as individuals but it gives us a benchmarking against which Stevens own from is performing and then we have a column which allows him to do is what if calculations if I change my feet ration what does it do to the overall score and wide on the right-hand side of the screen we've got a blue dashboard a speedometer if you like with a needle changes depending on the changes Stephen makes his farming system it is a very clear and concise illustration of all the key measures that showed the performance of his enterprise this screen here it just highlights how as

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[***-BASF becomes official partner of World Green Building Council's Europe Regional Network***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JRG-JTV1-F0K1-N0XD-00000-00&context=1516831)

ENP Newswire

May 10, 2016 Tuesday

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**Length:** 1055 words

**Body**

London, United Kingdom / Ludwigshafen, Germany - BASF has today become an official Regional Partner of the World Green Building Council's Europe Regional Network.

The Network represents a community of 25 Green Building Councils (GBCs) and over 5,000 company members who cooperate closely to support growth of the sustainable building movement in Europe, including policy dialogue and support of sustainable construction activities.

'With this cooperation we are strengthening our position within the construction industry as the partner for sustainable construction solutions,' says Quentin de Hults, Manager Advocacy and Sustainability at BASF's European Construction Competence Center. 'Sustainability plays a major role on all corporate levels of BASF and is an essential part of our 'We create chemistry' strategy.'

Terri Wills, CEO of the World Green Building Council, underlines: 'Our regional partners have been absolutely critical in strengthening the network of GBCs in Europe. As we grow stronger collectively, our ability to develop the green building market for the benefit of all our members grows too. BASF's support of the green building movement as a member of national GBCs has been evident for many years, and we are excited they are now taking a strategic leadership role as one of our partners at the regional level.'

Green building makes an important contribution to sustainable growth on a national, regional and a global scale. Green buildings offer a range of economic benefits, including job creation and ***reduced*** business operating costs. Social benefits include improved health and well-being of occupants, and environmental benefits include lower ***greenhouse gas*** ***emissions*** and other environmental impacts.

Sustainability in construction covers the entire value chain from raw materials to construction products, to the operation of buildings and housing over their entire life cycle. GBCs are successfully engaging with stakeholders along this value chain. As a supplier of products, solutions and expertise, BASF is already engaged in several local GBCs, such as the German Sustainable Building Council (DGNB).

A number of GBCs are also applying and promoting rating tools that allow an assessment of the sustainability of construction and buildings. Such evidence-based assessments are crucial to increase market demand and innovation for more sustainable construction. BASF not only supplies innovative sustainable construction solutions, it has also incorporated sustainability in its own guidelines for Corporate Real Estate Management. It commits to exceeding legal requirements for new construction by meeting the recognized green building rating tool standards, as promoted by the GBCs.

BASF building products used on new office building

One example of BASF applying to high standards of sustainable construction is the recently opened office building D105 at BASF's main site in Ludwigshafen, Germany. The building has a total area of around 35,000 m-2 over seven floors and offers work stations for about 1,300 staff. A large number of BASF products were used in constructing the new building. The shell of the building is based on the Green Sense Concrete technology for resource-saving production and processing of concrete. The flat roofs of building D105 are covered with insulating material made of Neopor, for which BASF produces the raw material. The low thermal conductivity meets the high ***energy*** requirements of the building, ***reduces*** carbon ***emissions*** and lowers costs.

The insulation of floor panels and perimeter of the new building D105 are made of Styrodur. This extruded rigid polystyrene foam (XPS) makes a significant contribution to reducting in carbon ***emissions*** thanks to its optimal thermal insulation. Two elements of the external facade were insulated with SLENTEX. This high-performance insulation material is easy to process, non-flammable, made of inorganic aerogel and provides highly efficient thermal insulation. This micro-encapsulated phase-change material Micronal PCM from BASF was used in the meeting rooms. The latent heat storage system supplements the active cooling ceilings with its thermal buffer storage function.

In plant and break rooms, corridors and sanitary facilities the durable MasterTop flooring systems were installed. The floors are low-***emission*** and contribute to a healthy indoor climate. Ucrete polyurethane concrete was used to cover floor areas subject to heavy wear such as storage rooms and the kitchen. Ucrete is an extremely durable flooring system with joints held to a minimum.

BASF is seeking a platinum-standard certification of its new D105 office building from the DGNB. This designation requires compliance with high standards in construction, use and dismantling. The DGNB system looks at all the key aspects of sustainable building over the entire life cycle of a building, taking a number of factors into account, including ecology, economy and technology.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 112,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, ***Agricultural*** Solutions and Oil & Gas. BASF generated sales of more than EUR70 billion in 2015. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN).

Further information at [*www.basf.com*](http://www.basf.com).

About World GBC and the Europe Regional Network

The World Green Building Council is a global member network of Green Building Councils in 75 countries enabling green building and sustainable communities through leadership and market transformation. The Europe Regional Network (ERN) is a community of 25 Green Building Councils, six Regional Partners, and over 5,000 company members across Europe, which represent the full breadth of stakeholders in the buildings industry. Our Regional Partners are BASF, E.ON, Knauf Insulation, Saint-Gobain, Skanska and UTC.

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

**Load-Date:** May 10, 2016

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[***Climate talks: rich countries should pay to keep tropical forests standing; Tropical forests provide a bargain climate service, cheaply reducing emissions. The Paris summit should agree payments for anti-deforestation programmes***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HHK-9PC1-F021-64M3-00000-00&context=1516831)

The Guardian

December 3, 2015 Thursday 3:49 PM GMT

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**Section:** GLOBAL DEVELOPMENT

**Length:** 1055 words

**Byline:** Nancy Birdsall and Pedro Pablo Kuczynski

**Body**

We need to come up with innovative solutions to look after our planet, and the Paris climate change conference is the place to do it. By innovative we don't only mean new ***energy*** technology and new green financing mechanisms. We need to reimagine tropical forests as a public utility like electricity, producing a service people and governments, including in the rich world, want to buy.

Forests are beautiful ecosystems of living organisms. But like your municipal water services and your local power company, forests provide a stream of services - storing carbon and cooling the planet - that most people get for free. Just as we pay for electricity services, and thus ensure their continuing provision, so we - especially in the rich world - should pay for the climate service that tropical forests provide. It's easy to do in principle: satellite technology allows us to verify whether deforestation rates have declined in real time, and only pay for what's delivered.

Related: Tropical forests totalling size of India at risk of being cleared, study warns

Fortunately, the thousands gathered in Paris and the millions of people they speak for are eager to buy these services. But how, exactly? A simple way is for the governments of rich countries to transfer funds to forest countries that keep trees standing. Those payments buy a service; they are not charitable contributions or foreign aid to which all kinds of conditions should be attached. We don't set conditions on how Saudi Arabia can spend the money we pay for its oil - so why should we tell tropical forest countries what to do with money they earn for the forest services they provide?

Buying the climate service standing trees provide is a bargain for the rich world: a cheaper way to ***reduce*** ***emissions*** than anything else on the table. Tropical deforestation releases more ***greenhouse gases*** each year than the entire European Union, and destroys the world's most efficient system for carbon capture and storage. At current rates deforestation produces "only" around 10% of global ***emissions*** ; maybe that's why forests have been a challenge to get on the Paris agenda, and seldom make the headlines. But preserving tropical forests could take up as much as 30% of current global ***emissions***, and is desperately needed to stay within the world's carbon budget.

Forest preservation is also a development imperative. World leaders have this year agreed on a universal set of sustainable development goals ; continuing forest destruction puts such rhetoric to an immediate test.

Forests are especially important to people's livelihoods in developing countries. Tropical forests ***reduce*** drought by creating rain (their destruction in the Amazon is a likely cause of the water crisis in São Paulo ). An annual round of forest fires in Indonesia has created a serious health problem across south-east Asia. Healthy forests protect coastlines and watersheds, and provide sustainable food and timber for people living around them.

The problem for the world is that forest destruction, often illegal, generates huge profits in the short term - via exports of timber, palm oil, cattle, soy and minerals. The leadership of countries with tropical forests face a tough tradeoff between apparent quick gains - higher growth and new (if mostly low-wage, insecure) jobs versus a sustainable flow of long-run collective benefits: clean water, lower pollution, drought-protected ***agriculture***, slower silting of hydroelectric dams. Global commerce has too often made the real tradeoff between appropriation of forest assets for private wealth versus sustainable use in the public interest. And enforcing laws that protect forests is costly - resisting illegal licensing of logging or plantation development takes up money, political space and administrative capacity.

Still, many forest-rich developing countries are committed to protecting their forests, as evidence grows that the short-run gains are not worth the costs, and are often captured by a few at the expense of the many. These costs, in the worst cases, are counted in land wars and abuse of local people's rights.

Related: Malawi's forests going up in smoke as tobacco industry takes heavy toll | John Vidal

Our report, Look to the Forests, finds that developing countries want to scale up efforts to ***reduce*** deforestation, but that they need some compensation to look beyond short-term gains.

This year, 14 tropical forest nations signed up to the Lima Challenge, committing to eliminate deforestation by 2030 (pdf) if they can get some outside help in absorbing the costs, which is now happening. Brazil, Guyana, Indonesia, Liberia and Peru have agreements with Norway (and in the case of Peru the agreement also includes Germany) under which the rich countries are paying for some of the carbon capture climate service that the tropical forests provide to everyone in the world.

Brazil began to face down those pressures 10 years ago, and Norway's early promise of partial compensation has strengthened the hand of its local champions in the science community, in government and among its local civil society advocates. In the last decade, Brazil ***reduced*** deforestation by 80% without sacrificing ***agricultural*** output or growth. The head of the Amazon Fund at Brazil's national development bank, BNDES, recently acknowledged that Brazil's economy depends on maintaining the forests. Yet Brazil's efforts (themselves at risk due to a faltering economy) are not repeated widely.

The UN has the REDD+ system agreed among climate negotiators, under which tropical forest countries can be paid (with public or private funds) for the climate service they provide. It just got a boost, with an announcement on Monday from Norway, Germany and the UK of additional commitments of $5bn between 2015 and 2020 to pay tropical countries for verified performance in ***reducing*** deforestation.

But even with another $5bn on the table, REDD+ is under-used. Policymakers gathered in Paris ought to be more ambitious. Tropical forest countries will "produce" ***reductions*** in deforestation for the REDD+ market if they see more buyers for the climate service their forests provide (for all of us). The world needs an ambitious REDD+ performance payment programme in the final Paris agreement.

· Pedro Pablo Kuczynski is former prime minister of Peru

**Load-Date:** December 3, 2015

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[***Sustainable development will hinge on the smooth union of private and public; Business has a vital role to play in financing the sustainable development goals, but each side must recognise what the other brings to the table***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GW0-68F1-JCJY-G0Y7-00000-00&context=1516831)

The Guardian

September 7, 2015 Monday 7:03 AM GMT

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**Section:** GLOBAL DEVELOPMENT

**Length:** 802 words

**Byline:** Alex Evans

**Body**

At the sustainable development summit in New York later this month, much will be heard about the idea of partnerships - and rightly so. The sustainable development goals (SDGs) offer a very different agenda to the millennium development goals (MDGs), and need a correspondingly different approach.

Where the MDGs were focused on the billion or so people living in extreme poverty, the SDGs are a universal agenda designed to be relevant to all 7 billion of the world's inhabitants. Where the MDGs were mainly interested in aid as the means to delivering the goals, the SDGs will entail a far broader range of "means of implementation".

Related: Where are the concrete plans for action in the development finance deal? | Alex Evans

Above all, where the MDG agenda was mainly about actions by governments, the SDGs will involve a hugely diverse range of actors - including, crucially, a much bigger role for the private sector. Business is, after all, the key driver of job creation and growth in developing countries, accounting for an average 60% of gross domestic product, 80% of inward capital flows and 90% of jobs. The private sector is already the world's biggest engine of poverty ***reduction*** and rising prosperity in the developing world.

Looking ahead, it is the private sector that will need to provide the bulk of the trillion dollars a year needed to plug the global infrastructure gap. The private sector will also be the frontline of the global battle for sustainability, whether ***reducing*** ***greenhouse gas*** ***emissions*** or building a circular economy with zero waste.

For all these reasons, a partnership approach is essential, as the Organisation for Economic Co-operation and Development's latest development cooperation report sets out. But at the same time, as I argue in my chapter in the report, we need to be much clearer about what partnership does and doesn't mean. Only then will we dispel the intense suspicion felt by many developing countries and civil society groups.

Partnership cannot be taken to imply that voluntary action by companies will be enough, or that a "leave it to the market" approach will result in sustainable development. Nor, obviously, can it be a cover for governments to break their promises on official development assistance (ODA) or climate finance, or for shirking their responsibility to set the policy and regulatory framework within which business operates.

Instead, it is getting this policy and regulatory framework right that will be the most crucial factor in realising the potential of the partnership approach.

In part, this is about creating the genuine "enabling environments" that have been such a feature of discussion in the post-2015 agenda. This starts with the nuts and bolts: ensuring that contracts are enforced and customs systems work as intended; that workforces are educated and infrastructures - from roads to electricity and communications - are reliable.

But creating such conditions also means making markets work better. For while companies' own self-interest can lead them to undertake a wide array of voluntary actions on sustainable development - ***reducing*** their waste footprint, say, or developing products and supply chains that have a high social impact - it is important to be clear that, in many instances, the business case is not there.

Related: Now nations must walk the talk of investing in our people and planet | Magdy Martínez-Solimá

While developing countries as a whole have greatly improved their capacity to access private sector finance over the past decade, this is less true of least-developed countries. Likewise, businesses often lack real incentives to invest in global public goods, like vaccine research and production or ***agricultural*** research and development. In the environmental context, too, there are hard limits to what companies can do to improve their sustainability if basic price signals fail to incorporate environmental costs, like climate change or fresh water extraction.

In all of these cases, the underlying point is that governments have responsibilities that are complementary to those of companies - for instance by making prices for goods and services "tell the truth" about environmental impacts or ***targeting*** the most concessional forms of ODA at those countries and global public goods where the case for private sector investment is least clear.

In the end, the biggest mistake with the new partnerships agenda would be to regard it as somehow an alternative to more traditional, state-led interventions in development assistance, fiscal policy, regulation and other areas. Instead, partnerships need to involve a sophisticated, holistic approach that recognises different actors can contribute in different ways, and that intelligent design of markets and incentives is the best means of going about this.

**Load-Date:** September 7, 2015

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[***-Solvay obtains RSPO Mass Balance certification for its Halifax, UK site***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JGN-GX61-JD3Y-Y03F-00000-00&context=1516831)

ENP Newswire

April 8, 2016 Friday

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**Length:** 738 words

**Body**

Paris - Solvay announces the certification of its Halifax, UK manufacturing site in accordance to the Roundtable on Sustainable Palm Oil guidelines.

Halifax joins sister sites in Zhenjiang and Zhangjiagang, China and Itatiba, Brazil in achieving the RSPO Mass Balance accreditation which is highly coveted by its home and personal care customers. Solvay aims at having all its global business unit Novecare sites using palm oil and palm kernel oil derivatives worldwide to be certified by the end of the year.

In line with Solvay Way, Novecare's sustainability ambition is structured around four main principles: build partnership with our customers, innovate for consumers' well-being, save natural resources and share value. In this context, RSPO certification is an important feature of Novecare's commitments. Its priority is to purchase sustainable raw materials and to meet the traceability requirements of its customers to: select the suppliers engaged in the transformation of the palm value chain; help suppliers to progress responsibly (i.e: support POIG initiative...); promote the conservation and the restoration of High Carbon Stock areas; engage our customers to increase the proportion of RSPO certified ingredients.

Solvay uses palm oil and palm kernel oil derivatives to manufacture specialty surfactants and help its customers to develop innovative formulations that enter into body cleansing, skin care and hair care applications. Novecare is now able to offer its customers RSPO Mass Balance certified palm-based ingredients from Europe, Asia and Latin America. This certification enables Novecare to control purchases and sales of RSPO certified palm oil and its derivatives, which will be also audited by an external and independent party. Solvay is a member of RSPO since 2011.

Beyond RSPO certification, Novecare is engaging in specific projects to help smallholders to develop good ***agricultural*** practices to increase yields while preserving the environment and ending deforestation. Building both on its experience with other small landowners projects such as the 'Sustainable Guar Initiative' in India and its agro-chemistry know-how, Novecare will start field trials this year with its Enhanced Efficiency Fertilizer solutions. The technology can positively act to promote sustainable yields while limiting ***greenhouse gas*** ***emissions*** derived from nitrogen-based fertilizers.

Solvay Way - 'doing business, being responsible' - is our CSR approach. Because sustainable chemistry means respecting people and the environment, we act as a responsible player taking into account and meeting the sustainable challenges faced by our various stakeholders. By 2025, Solvay commits to generate 50% of revenues with solutions addressing the challenges of sustainable development.

An international chemical and advanced materials company, Solvay assists its customers in innovating, developing and delivering high-value, sustainable products and solutions which consume less ***energy*** and ***reduce*** CO2 ***emissions***, optimize the use of resources and improve the quality of life. Solvay serves diversified global end markets, including automotive and aerospace, consumer goods and healthcare, ***energy*** and environment, electricity and electronics, building and construction as well as industrial applications. Solvay is headquartered in Brussels with about 30,000 employees spread across 53 countries. It generated pro forma net sales of EUR 12.4 bn in 2015, with 90% made from activities where it ranks among the world's top 3 players. Solvay SA (SOLB.BE) is listed on Euronext in Brussels and Paris (Bloomberg: SOLB:BB - Reuters: SOLB.BR).

Solvay Novecare offers solutions based on specialty surfactants, polymers, amines, solvents, guar and phosphorus derivatives for the agrochemicals, coatings, home & personal care, industrial manufacturing, and oil & gas industries. Novecare strengthened its surfactant position with the successful acquisitions of US-based personal care manufacturer the McIntyre Group, China's leading amines and surfactants producer, Feixiang Chemicals and lately with Sunshield Chemicals Limited, an Indian surfactants producer. Based in Cranbury, New Jersey, Novecare employs more than 3,300 professional and operates 28 production sites and 7 R&D centers around the world.

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[***Climate crisis should be top of world leaders' agenda***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HFX-3KX1-JCJY-G0FC-00000-00&context=1516831)

The Guardian

November 25, 2015 Wednesday 7:38 PM GMT

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**Section:** ENVIRONMENT

**Length:** 1251 words

**Byline:** Letters

**Body**

Your article ( Paris attacks cast shadow over climate talks, 23 November) helpfully draws attention to the different responses we have to crises. The shockingly violent events in Paris and their aftermath received almost blanket media coverage for about a week, during which we appear to have become collectively ready to sacrifice billions of pounds and who knows how many lives to a quick response (bombing Isis in Syria) which, by most rational judgments, will do more harm than good for our interests in the long term. Notwithstanding the emotional and psychological imperative to "do something", would it not be wiser to do nothing until we know what it would be useful to do?

Meanwhile, a more dangerous and sinister enemy than terrorism looms on the horizon in the form of climate change. Despite knowing about this menace for over 20 years and having developed the resources and know-how to defeat it, we have simply allowed the situation to worsen. We know the identity of the "evil masterminds" (the leaders of heavy-carbon industries) behind this ongoing atrocity which is in the process of slaughtering many millions of people and could quite conceivably wipe out civilisation. We also know the identities and whereabouts of the "terrorists" - every one of us who carries out the wishes of the masterminds by burning fossil fuel as if there was no tomorrow and neglecting to invest properly in the renewable ***energies*** that can save us.

It's time we learned how to make use of a crisis. The Paris attacks can be a catalyst for world leaders and their administrators attending the forthcoming climate summit to work collaboratively with courage and determination, charged with the new sense of solidarity and urgency referred to in your article, to begin solving a problem which - though immensely difficult, complicated and challenging - we actually know how to solve. Chris NeillPeper Harow, Surrey

· Remember in March the impact of the Guardian's climate change covers with extracts from Naomi Klein's book? The next day's front page had Bill McKibben describing the Paris climate conference as "a last chance for humanity". My immediate hope was for similar prominence ahead of the conference itself next week, but this Monday's cover was all advertisements - particularly disappointing when recent carbon news deserves front page treatment.

For example, the UK government is going almost naked into the Paris conference chamber. Subsidies to the UK's successful solar PV and onshore wind industries have been savagely cut. Recently the replacement was announced: a major expansion of natural gas electricity generation. Every kWh that would have been generated by the continued growth of PV or wind power if replaced by natural gas will increase ***greenhouse gas*** ***emissions*** substantially: nine times more when substituting for PV and 13 times more when replacing wind.

The successes of the renewable industries also deserve front page exposure. Good ***Energy*** reports that wind and PV have ***reduced*** wholesale electricity prices. Data that I reported with European colleagues in Nature Materials shows that the UK was catching up with Germany in PV and wind power before the cuts. Germany has seen a 37% fall in wholesale electricity price in three years. If the cuts were reversed, such a fall would be achievable in the UK by 2018 and wind and PV power could reach their ***target*** contributions to an all-renewable UK electricity supply by 2022. Emeritus professor Keith BarnhamLondon

· Sam Knight offers an optimistic view of the UN's proposed forest conservation mechanism - ***Reducing*** ***Emissions*** from Deforestation and Forest Degradation (REDD+) ( The long read, 24 November). However, the proposed market-based version of REDD+ that will be discussed at the climate summit in Paris in December is badly flawed.

Where there are pressures to convert forests to alternative land uses, the scheme would only succeed when the money that a forest owner would receive from selling REDD+ carbon credits were to exceed the money they would receive from deforestation and using the cleared land for, say, beef or palm oil farming. When this is so, a rational owner would in theory opt to conserve their forests. But should the price of carbon credits fall, and the price of other commodities rise, so that the revenues from farming exceed that which can be earned from REDD+, then the rational response would be to move from conservation to conversion. So a market-based mechanism could only succeed as a durable conservation mechanism when the money that forest owners gain from "selling" carbon exceeds all other alternatives over the long term. And there is absolutely no basis in economic theory - nor evidence from the many REDD+ pilot projects carried out to date - to suggest that this should be so. David HumphreysReader in environmental policy, The Open University

· The urgency of the climate crisis requires meaningful action on a scale commensurate with the problem, ie rapidly phasing out the use of fossil fuels, stopping the destruction of forests and other ecosystems and allowing damaged ones to regenerate. Promoting unproven technologies as "solutions" is dangerous because it distracts from those urgent tasks.

Unfortunately, many of the supposed "solutions" that Tim Flannery so optimistically writes about ( Seaweed, coffee and cement could save the planet, Review, 21 November) are entirely unproven and in some cases quite impossible. Take carbon sequestration in seaweed farms: Flannery proposes using vast seaweed farms to produce fuel as well as food. Such uses would swiftly return all the CO 2 in the seaweed to the atmosphere. There are problems with various other claims, too. For example he speaks of "carbon negative cement", yet the company he cites in his book doesn't claim that its technology is "carbon negative", only that it ***reduces*** carbon ***emissions***. Or take the "CO 2 snow": the lead author of the scientific study that Flannery appears to rely on has pointed out on a blog that Flannery has misunderstood the findings: temperatures in Antarctica aren't low enough and pressure isn't high enough for CO 2 to turn into snow.

Flannery admits that those are not proven solutions, yet he still says "some of the third way approaches are likely to be in the frontline of the future battle to stabilise our climate". It's a far safer bet to stop putting ever more carbon into the atmosphere than to hope that one day we'll find some technofix that will suck it out again. Almuth ErnstingEdinburgh

· History provides us with several examples of societies collapsing through force of habit, including an addiction to meat ( Tax on meat not too hard to swallow, study suggests, 24 November). When the Vikings colonised Greenland in the 10th century, they were determined to preserve their tribal customs, which included raising cattle. Because pasture was limited and the growing season only three months, virtually all of the land was used to grow silage to see the cattle through the winter. After nine months indoors, cattle were so weak they had to be carried out to pasture. When the climate turned harsher this ***agricultural*** system became unsustainable and the Vikings of Greenland perished. I wonder whether the modern world will fare any better as we career towards climate catastrophe. Dr Robin Russell-JonesStoke Poges, Buckinghamshire

· Join the debate - email [*guardian.letters@theguardian.com*](mailto:guardian.letters@theguardian.com)

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[***Shifts in transitional protein solutions; Millennials are the drivers of change in many areas of food production - Part II***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5N8W-X6F1-DYG1-P3JG-00000-00&context=1516831)

Fleischwirtschaft International

October 2, 2015

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**Section:** EATING HABITS; Pg. 41;; No. 5

**Length:** 5454 words

**Body**

**ABSTRACT:**

By Henk Hoogenkamp Growing numbers of transformative changes, with increasing meat and dairy consumption, as well as rising demand for food and nutritional quality, will put additional pressure on the ***agricultural*** eco-systems. To meet world needs by 2030, it is estimated that about 40% more food must be produced from less land and fewer inputs such as chemical pest control, less water, and less fertiliser. On top of that, the inequities between developing and affluent societies must be solved in order to improve economic and societal imbalances.

**FULL TEXT:**

***Agricultural*** productivity rates have failed to keep up with global population growth. Overuse of priceless fresh water poses not only serious environmental hazard, but also a risk to social and political stability. It is inevitable that water scarcity could cause certain food shortages in the next decennia. In 2015 and beyond, water withdrawals will in certain world regions be in excess of sustainable supply and this discrepancy will only widen.

The world of soy transition

Soybean cultivation can serve as an example of how difficult it will be to navigate the world of future requirements and its environmental impact. The average EU citizen consumes 61kg of soy yearly, 93% (57kg) of which is embedded as animal feed in the animal-derived foods that most consumers eat daily. By far the highest amount of embedded soy (109g per 100g) is present in chicken breast meat (Fig.1), closely followed by eggs (55g of soy per 100g), pork chops (51g of soy per 100g of meat), hamburgers (46g of soy per 100g of meat) and cheese (25g of soy per 100g of product).

Although soy is an essential part of the global food supply, these high-protein crops have negative ecological and environmental impact if grown irresponsible. There is no doubt that the explosive growth of the soy crop has come at the expense of millions of hectares of grassland, forest, savannah and wilderness taken away and converted to ***agriculture*** harvest land around the world. In particular South America has been affected, destroying most valuable eco-systems such as the Amazon. In addition, in 2015 about 95% of all soybeans harvested in the US will be of GMO origin.

When it comes to protein, consumers have a lot to choose from. Plant protein ingredients like derived from legumes, cereals, vegetables, and fruits are rapidly transforming into a valuable functional and nutritional cost-effective ingredient in various food formulations (Box). A good protein has a handful of components: stellar nutrition, great flavour, process adaptability, versatility and performance in more ways than one. Plant proteins - or vegetable proteins - are widely regarded as functional and versatile. There is no question that the harvest needs to transform plants into premium and sustainable protein foods to nourish the world.

It is clear that modern consumers want more lean protein in their diet, and many are looking to lower the cost of protein sources. In theory, plant proteins should be less expensive, although in reality this is not always true, especially when it concerns so-called high moisture extruded meat analog foods. More consumers are willing to look beyond animal-based proteins to satisfy their need for protein. While generally the interest in protein is growing, plant-based meat-alternatives are emerging as a viable option. The number of grocery shoppers that seek out protein-enriched foods is increasing, and many are willing to pay a premium for these foods, especially when formulated from natural wholesome components.

Sustainable as well as renewable food production is a fundamental human need. There are basically two options to feed the world: to get more food out of the land currently farmed, or increase the hectares or acreage to farm on. Nevertheless, sustainability will still depend on whether farming can successfully continue to produce food over the long term with little or no damage to environment including deforestation, depleting groundwater, and inefficient use of nitrogen and phosphorus fertilisers. Take note that phosphorous fertiliser is a finite resource. In addition, global warming and carbon dioxide ***emissions*** could ultimately be the deathblow to sustainability.

Whichever choice is made, it will need to be coupled on concerted efforts to feed fewer crops to raise animals as well to significantly ***reduce*** food waste. To secure sufficient food for the fast growing world population, the answer might well be that mega-farms are the most appropriate way to move forward. Hence, the environmental impact of large-scale meat and dairy production, with livestock estimated to produce over half of the world's ***greenhouse gases***.

Too fat and too skinny

Never before has food been such a global issue. Both sides of the spectrum show overweight and obese people sharing the planet with chronically malnourished and hungry populations. All things considered, the bottom line is how to produce more food from less land, ***reduce*** waste, and improve equal access to wholesome food at less price volatility.

Besides the availability of sufficient cropland, food waste, spoilage, politics and economics are increasingly infringing upon the basic human right of access to food for a great many of the underprivileged of the world citizens. According the Joint UN report (September 2014) slightly more than 800 mill. people are still chronically undernourished. Asia - the world's most populous region - is the home of the majority of the hungry, 525mill. people and most of the balance is in sub-Saharan Africa. Hunger kills more people than malaria, tuberculosis and aids combined. Actually, hunger kills about 1.3mill. more people than cancer. Hunger ***reduction*** requires sustained political commitment and an integrated approach that needs to include public and private collaboration. This is especially true for the vulnerable, particularly to address the micronutrient deficiencies in mothers and children under five years of age.

Almost every country in the world, affluent and poor, faces a serious public health risk due to malnutrition, either from undernutrition, obesity or micronutrient deficiencies. The cost of poor nutrition is huge: stressed health systems, premature death and a severe drag on economic progress. (UN FAO/WHO, Nov. 2014). Food fortification is needed to combat undernutrion and malnutrition.

Governments are presently shelving possible solutions for the looming food shortages because of the current financial crisis. Currently, so many political and financial issues are hounding governments that they no longer have the stomach to tackle issues causing future food uncertainties and possible shortages. For now, it seems that food security has moved to the back burner.

There is little doubt that providing enough food, particularly sufficient protein, for the rapidly increasing world population is a challenging task. The fact is that more than 500mill. people are suffering from protein deficiency, while emerging research also pinpoints that the aging population will require extra protein supplementation in their diet to prevent sarcopenia.

Undoubtedly, the sustainable ***agricultural*** production of food of animal origin represents the biggest environmental challenge. The love of consumers for meat might well be on a collision course with the need to rebalance the consumption of more resource-efficient plant proteins. In other words, it is time to actively move to a more environmentally balanced diet to ***reduce*** the consumption of foods with a higher environmental impact such as meat and dairy.

Health and environmental agendas are not always aligned with the current dietary recommendations. For example, in affluent countries, the recommended amount of meat consumption is significantly less than the current levels. People are encouraged to eat more vegetables, fruits, whole grains, low-fat dairy products, and omega-rich seafood. Instead they consume more processed foods containing hidden levels of sugar, sodium, transfat, and refined grains. The price differences between healthy and unhealthy foods are widening and may contribute towards food insecurity and increasing health inequalities. The latter could further exacerbate social inequalities in health.

Americans are at the top of the global carnivores. US consumption of beef per person is 38kg in 2014, while chicken consumption is at 45kg per person. The overall meat consumption stands at 122kg a year, which is considerable more than the average body weight of an adult. When these numbers are extrapolated on the world population, the question of sustainability is an easy answer.

Especially consumers in developing countries such as China, India, Indonesia are gobbling up more meat and dairy products (Fig.2). It is mainly increased purchasing power that is intensifying appetite for protein. This is especially true for consumers in emerging economies. To "feed and meat", livestock farmers expand their production and heavily rely on sharply increased harvests of the main crops soy, corn, wheat and rice.

China in transition

In developing and poorer countries, protein deficiency remains a problem for at least one billion people - or some 15% of the world population. Yet, as income rises, meat and dairy are foremost sources of protein that people prefer (Fig.3). Despite the fact that international organisations would like to ***reduce*** meat intake, the opposite will happen. For example, in 2015 worldwide meat consumption will rise 2.0% a year over the next decade (USDA). The United Nations FAO has projected that the average person will consumer about 45kg of meat, versus 40kg in 2007, and 35kg in 1991.

Continued Chinese growth in meat demand and a willingness of consumers to spend more will further drive consumption including the creation for value-added meat products. As a matter of fact, premium priced beef is the fastest growing meat choice in China, ahead of poultry and pork. The Chinese beef market has grown by almost 5.0% from 1995 to 2015, compared to pork growth 3.5% and poultry 3.4% over the same time frame. To put these numbers in a different perspective: per capita consumption pork 40kg, poultry 13kg and beef 6kg (2015). The total Chinese per capita meat consumption of 59kg in 2015 will increase significantly in the years ahead with beef prices outpacing those of pork and poultry.

A country in rapid transition such as China usually is confronted with opposite medical observations. Improved nutrition has made Chinese markedly taller on average since 2000, with women grown more than men. The average height of fully-grown men increased 4mm to reach 167.1cm and women grew by an average of 7mm to 155.8cm. These are significant growth numbers and mostly the result of increased animal protein intake such as meat and dairy. However, with more prosperity also come signs that China is shifting to typical western chronic diseases. Smoking, excessive alcohol use, insufficient physical exercise and high sodium and increased fat consumption are the main causes. About 30% of Chinese adults are overweight and more than one in ten are obese, a number that is quickly reaching Western "standards".

Chinese citizens have more disposable income, which allows buying more meat and processed foods. Unfortunately, there is lack of nutritional education and subsequently very few Chinese know about the importance of a balanced diet and the importance of regular physical activity.

Sustainable livestock farming

Needless to say that the sharp increase in demand for dairy and meat products has raised environmental and ecological concerns. The UN estimates that livestock production is responsible for about 15% of global greenhouse ***emissions***. It is clear that it can be argued that meat especially is a relatively ineffective source of protein, and that it would be smarter to convert ***agricultural*** crops directly into food, instead of feeding and raising animals first. However, animals should be part of a sustainable and ecologically balanced ***agricultural*** infrastructure, and its products contribute to a nutritionally sound and good-tasting healthy diet.

There is no question that the sustainable production and consumption of animal-origin foods is the biggest environmental challenge. The Western world, spoiled with high levels of meat availability at relatively low prices, cannot point fingers at developing countries considering that they also increase consumption of these premium high-impact animal protein based foods and meat products. After all, many developing countries have been deprived of eating quality meat and enjoying dairy foods. With the increasing economic standard in developing countries, it is very likely that the consumption of animal origin foods will rise exponentially through at least 2050. In fact, it is projected that the world meat and dairy consumption to increase by at least 50% as compared to the 2015 numbers.

Although food production accounts for about 8% of the ***greenhouse gas*** ***emissions***, in general terms, animal-based foods are responsible for more ***greenhouse gas*** ***emissions*** than plant-based foods. For example, while beef accounts for only 4% by weight of the food available, it contributes 36% of the associated ***greenhouse gases***. Cattle - which have a long outgrow cycle - don't efficiently convert plant-based feed into muscle meat and/or milk. Growing feed often involves the use of fertilisers and other substances through ***energy***-intensive processing methods. In addition, cows release lots of methane and their manure also releases this potent ***greenhouse gas***.

Cows in particular are not very efficient at converting feed to muscle protein for human consumption. Compared to other farmed and harvested animals such as hogs and poultry, beef produces 5times more heat-trapping gases per calorie, takes 11times more water for irrigation and uses 28times the land. In addition, cows burb major amounts of methane, a ***greenhouse gas*** that is significantly more potent than carbon dioxide (Journal Proceedings of the National Academy of Sciences, July 21, 2014).

Actually, pork, poultry, dairy and eggs all have comparable environmental footprints. US government data calculate air and water ***emissions*** and how much water and land are used in the lifetime production of the harvested animals: beef, pork, poultry, dairy and eggs. This calculation gives a rather accurate environmental cost profile of different meats and other types of animal proteins.

The finite amount of ***agricultural*** land, the availability of clean water combined with resource depletion will force policy makers to rebalance diets towards more plant-based foods. In other words, they will accept the need to ***reduce*** the consumption of foods with a higher environmental impact such as meat and dairy, and increase lower-impact foods such as quality plant proteins derived from cereal grains, legumes, potato, vegetables and fruits.

For the future of food security, most especially in developing countries where people do not get enough protein, it is essential not to rely on farmed animals as the primary source. By relying less on an inefficient meat protein-delivery system, people should instead utilise the nutritive value of the world's five major commodity crops - rice, corn, wheat, soy and potatoes. Moreover, the many other plant proteins in the world can be further explored for the production of meat alternatives that could fundamentally reshape our food supply.

Protein quality

Most plant proteins show a conversion factor of 30% to animal-derived protein sources such as those present in meat, dairy, and eggs. In order to match the animal protein sources, the way forward is to blend different types of plant proteins in order to optimise and harmonise nutritive values and obtain advantageous amino acids content. For example, wheat and rice protein typically have low lysine levels, and blending other plant protein sources like pea, soy, algae, and canola can boost these lower levels.

For now, soy plant protein is the world's main source to deliver functionality, immunological characteristics, and nutritive values. However, pea protein and rice protein is rapidly making advancements in formulated food products, especially in specific categories such as "all-natural" allergen-free and gluten-free.

The plant protein industry was surprised about the new measuring protein quality by the Food and ***Agriculture*** Organization of the United Nations (FAO/2013) recommending using the Digestible Indispensible Amino Acid Score (DIAAS) as the new preferred method, as opposed to the Protein Digestibility Corrected Amino Acid Score (PDCAAS), which favoured plant protein and especially soy protein.

The new DIAAS method clearly demonstrates the superiority of dairy protein over plant proteins. Rice protein may be the exception because of its high levels of arginine and leucine - the highest levels in all cereals and grains. This feature will make rice protein ideally suitable not only as a stand-alone protein for hypoallergenic foods but also as a partner for dairy protein with special relevance to the nutrition in general and to special food segments such as clinical nutrition, sports performance, weight management and sarcopenia.

Protein and, to a lesser extent, fibre are parts of a larger trend of consumer concerns about the benefits of foods. This trend can be clearly seen on labels where protein is increasingly given a more prominent position. Protein enrichment is the new buzz in affluent societies. Protein and fibre have a very positive consumer perception and increased awareness, although these ingredients mean differently to various people.

Protein definitely has the widest range of consumer acceptance, ranging from muscle building to weight loss. For most consumers, quality protein equates strength, endurance and prolonged ***energy*** including mental and cognitive alertness. The truth is, in relation to consumer appeal and perception; plant protein ingredients still have a long way to go. There is little doubt the dairy protein - especially whey protein - is seen as the golden standard to which every other protein comes second. The plant protein ingredient manufacturers, specifically soy protein companies, need to learn to be more modest in their claim to fame. Soy proteins are indeed unique but, when it comes to nutrition, they often perform nutritionally better when blended with other sources of protein, especially whey protein, meat protein and egg albumen.

Protein continues to go from strength to strength, even without specific accompanying health claims. Everyday food products, like breakfast cereals, nutri-bars, beverages, hybrid meat including meat-free, and plant protein-enhanced dairy foods are ideal platforms to deliver these dietary protein solutions. Fruit smoothies including protein beverages appeal to consumers throughout the day, gaining popularity as a breakfast cereal replacement in the hurried morning hours.

In a sense, protein is often seen as a "health halo effect" that goes beyond basic nutritive delivery. Food labels usually have a limited lifespan and only go as long as the latest fad lasts. Protein might be an exception to this rule. In the Greek language, "protein" means "first in life", and this has never faded from people's minds throughout history. Protein has always been a component for well-being and survival.

Plant protein is primed to deliver ingredient innovations that can provide consumers with more comprehensive food security as well as advanced food diagnostics monitoring. Food diagnostic ingredient services offer formulation know-how, improve texture and taste, as well as extend shelf life. These plant protein solutions can assist in providing customers with a unique range of effective and cost-efficient formulas as well as nutritive contributions to global food security and ecological sustainability.

Nutrient-dense vegetables, beans, fruits and nuts - specifically walnuts and almonds - make a significant part of a healthy diet, not only to keep the heart healthy but also to manage body weight and avoid long-term degenerative diseases. Such diseases as prostate cancer, colon cancer, heart disease, and macular degeneration can be slowed down or prevented by a healthy and moderate diet. The medical and social costs associated with degenerative diseases will eventually rise to astronomical levels and choices will have to be made as to which patients deserve to receive treatment as well as life extension.

Plant protein-formulated food including hybrid-meat products meet all modern nutritive and organoleptic requirements, and its "all-natural" status provides consumers with multiple positive health benefits (Fig.4). Most of these are not only environment-friendly and ecologically sound, but are also keen in addressing certain looming issues that are presently still under the radar screen: slowing of aging, healthy immune systems, strong ***energy*** levels, healthy skin, strong bones, alertness, cancer, and a healthy heart. Just for cancer alone, worldwide trends indicate a rising number of cancers linked to hormones, diet, and reproduction in less developed countries going through rapid economic and societal change, including a shift towards Western dietary habits. Tumors are not detected and diagnosed in developing countries as frequently as in affluent countries. These inequalities between rich and poor countries explain the rapid growing cancer-related deaths.

Capital venture push

More lifestyle choices (vegetarianism/flexitarianism) and livestock welfare are fueling increased demands for meat-free or meat-hybrid foods. New generations of the food-tech ventures aims to change the way people eat. Venture capital firms as well as social media billionaires such as Google co-founder Sergei Brin, and Microsoft's Bill Gates fund start-up food related companies that try to find plant-based alternatives to meat, poultry, and eggs. This trend is now widening and has attracted other major name "investors" including the Twitter founders Biz Stone and Evan Williams as well as venture capitalist Li Ka-Shing. These people look at meat-free with a somewhat different perspective: coupling the ecological wellbeing of the world to strong opportunities for building great financial returns.

"Global health is the cornerstone of global prosperity. With billions of people adding more animal protein to their diets - meat consumption is expected to double by 2050. It seems clear that arable land for raising livestock won't be able to keep up" (Bill Gates, March 2013 - [*www.gatesnotes.com*](http://www.gatesnotes.com)).

Replacing these animal-based protein sources can significantly ***reduce*** land, water, and crops needed to feed animals, while at the same time benefit people's health and ***reduce*** outbreaks of diseases. For the next generation, sustainability of food security will be a major challenge. Besides the fundamental economic and technology challenges, the biggest hurdle is how to convince consumers to try the plant-based equivalent of the "real or original" food.

Erratic weather patterns can quickly cause havoc in harvest yields. It does not take much to create an imbalance when projected crop yields of wheat, corn, soy, rice and potatoes do not meet the needs of the world population. The pressure on resources is intensifying, not only due to soaring populations but also because of desertification, droughts, floods, land grabbing, and lack of GM progress.

Prolonged spells of drought - like happening in California 2010 to 2015 - ultimately require mandatory regulation to draw down water use. Being denied irrigation water, forces farmers to leave ***agricultural*** land unplanted. Farmers who don't have access to surface water may decide to increase the amount of water pumped from limited groundwater supplies, though this option can only go so far until dead zones start to occur. Limited fresh water supply is a wake-up call and may require drastic action to curb water use ranging from landscaping, lush lawns including golf courses, shower-time, car washing, industry and food production.

The Organisation for Economic Cooperation and Development (OECD) predicts that almost half the world population will be living in areas with high sea water stress by 2030. Based on 2015 estimates, ***agriculture*** is responsible for about 70% of fresh water consumption globally, while the industry requires another 22%. Both the food and meat industries are especially heavy users because water is a key component for nearly every single part of the production process: from outgrow to final point of food consumption. The pressure on food security is further compounded by the availability of suitable ***agricultural*** farmland, biofuels, climate change, clean ***energy*** and manpower.

Population surge

The world population in 1950 was about 2.5bn., less than the anticipated 3bn. increases expected by 2050 reaching a total of 9.4bn. people. While developed countries accounted for close to one-third of the world's population in 1950, they will have only 15% of the total by 2050 since the expected population growth will primarily be in the developing world. The combined populations of China with 1.36bn. people and India with 1.1bn. will reach about 2.5bn. people in 2015.

While China's population will rise slightly, India's population is expected to increase by almost 50%. Together, the two countries will have well over 3bn. people by 2050 and will account for about one-third of all the people on Earth. If indeed China will relax the "one-child policy" all projections are out of the window and will likely surge well beyond the current estimates.

Contrary to earlier projections, the world's population is likely to soar through the end of 2100. This is largely due to sub-Saharan Africa's higher than expected birth rates. According new statistical models, there is an 80% likelihood that the number of people on the planet will increase to between 9.6 and 12.3bn. by 2100. In this model, the Africa's population will rise to between 3.5 and 5.1bn. by 2100 from about 1bn. today. Big populations and high fertility levels are expected to drive this growth. (Journal of Science, September 2014). Of course, model projections do not take natural disasters into considerations such as a medical catastrophe that potentially could dwindle calculated or projected populations, not to mention mass immigration or geographically driven asylum migration.

Food inflation

The dynamic change of increased basic food prices is not only stressing economies all over the world but also exacerbating hunger and sparking political unrest in poorer countries. Food costs need to be seen in perspective: The cost of growing food accounts for only 15% of the final consumer price. The balance goes to processing, packaging, marketing, transportation and profit. The forces behind the cost of food and functional ingredients as well as rising ***energy*** prices will likely increase the cost of everything else, and the strong demand for meat and dairy in developing countries like China, India, and Southeast Asia (Fig.3). The cost of livestock feed, together with competing demand from ***agricultural*** biomass to manufacture biofuels, can play havoc on both the pricing of staple commodities and specialty crops.

Fortunately, some governments are backpedalling on mandated use of biofuels. Taking food from the mouth and putting it into a car is not something that is sustainable. It's more sensible to limit the use of crop-based biofuels such as corn ethanol and try to make the economics work to produce biofuel harvested from inedible waste. Mandated use of subsidised biofuels not only drives up fuel prices but also ***reduces*** fuel efficiency. As such, it is highly questionable if food-to-fuel conversion is sustainable.

How much longer can political inaction continue if even highly affluent countries like the US and UK have increasing numbers of people living off food stamps and receiving emergency food supplies from food banks? Yet, another 2bn.+ people will join planet Earth by 2050. 210.000 more mouths need to be fed every single day. The challenges ahead to manage food security are very complex and totally immense. Even affluent countries like the US will have a total of approximately 50mill. people in 2015 living on government-issued food stamps and food donations, now renamed SNAP (Supplement Nutrition Assistance Program).

Food and land waste

A new approach is definitely needed to determine how food is grown and shared while securing affordability and ecological sustainability. Of course, one can still argue that the world is capable of growing sufficient food for future generations and that inequality is not a matter of sufficient food but rather of shameful waste.

It is indeed true that a very large amount of food is wasted between harvest and mouth. Ill-harvest, poor storage, hoarding, political maneuverings, processing, point of sale inefficiencies and, last but not least, waste by consumers are all guilty parameters that food does not reach actual consumption. It can therefore be stated that the greater the affluence of society, the higher the food waste. On a worldwide basis, it is estimated that nearly 25% of bread and cereal products waste occur in high-income countries.

US Government data estimate that nearly a third of food available for consumption in the US goes uneaten. Probably similar numbers are true for many EU countries. Consumers don't understand the impact of food waste and most underestimate how much food is thrown away. Although consumers are now more attuned than ever to the purity of ingredients, organic, natural and locally grown, most consumers don't really care about the environmental impacts of food waste. It is estimated that food waste makes up more than 20% of what's in landfills and it is a significant source of methane gas as it rots. (US Environmental Protection Agency/2015). Methane is a potent ***greenhouse gas*** that contributes to global warming. The wasted food accounts for about 2% of ***greenhouse gas*** ***emissions***, not to mention huge freshwater losses, cropland and fertiliser inefficiencies. (John Hopkins - Public Health, PLOS Journal).

Feeding valuable plant protein to animals with the objective of converting into animal protein - meat, milk and eggs - can be considered as waste to a certain extent. In order to sustain healthy diets for current and future generations, it is essential to capture the abundant nutritional value of plant protein ingredients - such as for example rice bran - that still remains largely wasted.

All these variables make it imperative to put more emphasis on the use of plant protein ingredient solutions, including the use of these proteins to formulate sustainable and healthy foods like meat analogs and formulated meat products. The world can ill-afford to continue business as usual, knowing that about 80mill. more people will live on planet earth every single year with no decline in sight.

To sum: plant-based nutrition is more sustainable with less ***greenhouse gas*** ***emissions***, less use of clean water, and less ever-expanding land utilisation. Slowly but surely, plant-based foods like meat-free products, will achieve considerable consumer popularity and wellness status (Fig.5). Hopefully the protein paradigm will shift to increased plant protein formulated foods. Yet, don't make the mistake to rule out meat. Meat is not only a valuable source of high-quality protein but also a universal favorite across most societal cultures and will continue to dominate meal solutions for many years to come.

Although meat and dairy consumption in developing countries will skyrocket, plant protein is the new normal. For the sake of health and eco-sustainability, the developed and affluent world has no other choice.

Henk Hoogenkamp is a protein specialist, publicist and author. He has been previously President of DMV USA (now FrieslandCampina), and Senior Director Strategic Technology, DuPont Protein.

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**Vegetable protein = Plant protein**

The collective term vegetable protein was coined (1992) by the soy industry to diffuse negative consumer bias against the word soy. Vegetable protein is misleading and a more accurate catch-all name is plant protein. As a category, plant protein includes some of the following protein types:

Soy = legume protein

Pea = pulse protein

Lupin = pulse protein

Wheat = cereal protein

Oat = cereal protein

Rice = cereal protein

Potato = root protein

Alfalfa = legume protein

Corn = cereal protein (zein)

Fruit seed = fruit protein

**Graphic**

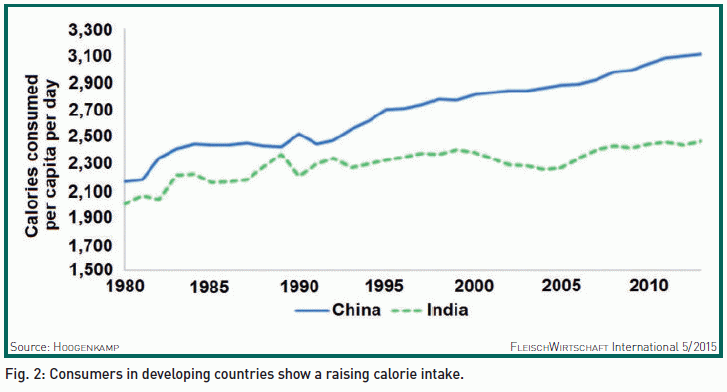


Fig. 2: Consumers in developing countries show a raising calorie intake.

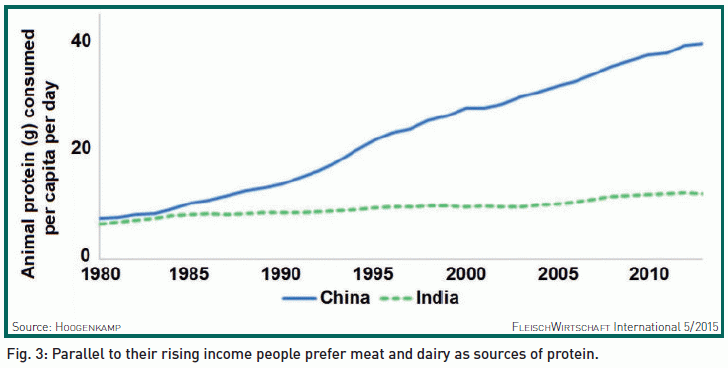


Fig. 3: Parallel to their rising income people prefer meat and dairy as sources of protein.

**Load-Date:** April 10, 2017

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[***Global climate pledges fall short of goal; Analysts predict any deal struck during Paris talks won't forestall warming***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H1H-C5N1-DYR7-C00J-00000-00&context=1516831)

International New York Times

September 29, 2015 Tuesday

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**Section:** NEWS; Pg. 8

**Length:** 1201 words

**Byline:** JUSTIN GILLIS and SOMINI SENGUPTA

**Body**

**ABSTRACT**

With a plan announced by Brazil on Sunday, every major country except India has now made a commitment to take to the Paris conference.

**FULL TEXT**

The pledges that countries are making to battle climate change would still allow the world to heat up by more than 6 degrees Fahrenheit, a new analysis shows, a level that scientists say is likely to produce catastrophes ranging from food shortages to widespread extinctions of plant and animal life.

Yet, in the world of global climate politics, that counts as progress.

The new figures were to be released Monday in New York as a week of events related to climate change comes to an end. The highlight was an urgent moral appeal at the United Nations on Friday from Pope Francis, urging countries to reach ''fundamental and effective agreements'' when they meet in Paris in December to try to strike a new global climate deal.

For much of this year, countries have been issuing pledges about how much ***emissions*** they are willing to cut in coming decades. With a plan announced by Brazil on Sunday, every major country except for India has now made a commitment to take to the Paris conference.

An analysis by researchers at Climate Interactive, a group whose calculations are used by American negotiators and by numerous other governments, is expected to be released Monday and was provided in advance to The New York Times. It shows that the collective pledges would ***reduce*** the warming of the planet at century's end to about 6.3 degrees, if the national commitments are fully honored, from an expected 8.1 degrees Fahrenheit, if ***emissions*** continue on their present course.

That would be the biggest ***reduction*** in the history of global climate politics, and a sign that 20 years of disappointing negotiations may be giving way to an era when countries start to move the needle on the projected global temperature.

Yet the analysis also shows that the nations are still a far way from meeting their own shared ***target***, set in 2010, of limiting global warming to about 3.6 degrees Fahrenheit. That level of warming, while potentially producing dire effects on ***agriculture***, sea level and the natural world, might at least be tolerable, some experts believe.

The pledges countries have made ''are a big step forward, but not sufficient - not even close,'' said John D. Sterman, a professor of management at the Massachusetts Institute of Technology. Climate Interactive, a Washington organization with extensive ties to M.I.T., receives foundation money to build tools that help governments and the public understand climate policy.

Making any serious pledge has been a political challenge in many countries, including the United States, where President Obama has encountered vociferous opposition in Congress. Governments are unlikely to want to reopen those fights in the remaining two months before the Paris talks. Thus, many analysts expect that any final deal struck in Paris will probably not be enough to forestall dangerous levels of global warming.

''Everyone is now convinced there will be agreement in Paris,'' President François Hollande of France said Sunday afternoon at the United Nations. ''But the question is, what kind of agreement?''

Despite the uncertainty, optimism is growing among some diplomats and scientists that progress has become possible. Intensive engagement between China and the United States over the past two years helped break the logjam in global climate politics, and for the first time, virtually every country is now offering to pitch in to help limit ***emissions*** growth.

Janos Pasztor, United Nations assistant secretary general for climate change, said the task in Paris would be to put mechanisms into the deal to encourage countries to ramp up their ambitions over time. Requirements for periodic reviews and fresh pledges are under discussion as a potential part of the agreement.

At a luncheon the United Nations secretary general, Ban Ki-moon, gave for dozens of world leaders Sunday, the heads of state and government ''agreed that Paris must be the floor, not the ceiling, for collective ambition,'' Mr. Ban said afterward.

Gavin A. Schmidt, head of the NASA unit in New York that studies climate change, said that the history of environmental cleanup suggested that once countries got started on the problem, they would discover that solving it was cheaper and easier than expected.

The planet has already warmed by about 1.5 degrees Fahrenheit above the temperature that prevailed before the Industrial Revolution, representing an enormous addition of heat. Virtually every piece of land ice on Earth is melting, the sea ice in the Arctic is collapsing, droughts and other weather extremes are intensifying, and the global food system has shown signs of instability.

At a meeting in Cancun, Mexico, in 2010, climate negotiators from nearly 200 countries agreed that they would try to limit the warming to 3.6 degrees Fahrenheit, or 2 degrees Celsius, above the preindustrial temperature, a level that would require that ***emissions*** from fossil fuels largely cease within a few decades.

Subsequently, recognizing that many governments were reluctant to agree to binding limits, the diplomats essentially asked each country to volunteer its best efforts. That decision, controversial at the time, has unlocked a willingness by many nations to participate, including countries like China that had long resisted climate deals.

India is the biggest holdout so far, but that nation's environment minister, Prakash Javadekar, said in an interview in New York on Sunday that a plan would be submitted to the United Nations on Oct. 1, the eve of the national celebration of Mahatma Gandhi's birthday - apparently an effort to limit domestic criticism that India is bowing to Western pressure. The plan is not expected to include a ***target*** year for India's ***emissions*** to peak, but will be ''anchored'' by a major commitment to renewable ***energy***, Mr. Javadekar said.

Last week, China announced plans for a nationwide system that would put a price on ***emissions*** of ***greenhouse gases***. Brazil became the latest major country to pledge action, on Sunday, with a plan that makes it the first large developing nation to offer an absolute cut in ***emissions*** over the next decade, instead of just restraints on continued growth. Brazil also committed to ending illegal deforestation and to restoring millions of acres of degraded forest.

Bruising fights are still expected at the Paris conference, especially over money. Poor countries that have had little to do with causing global warming, but are likely to suffer the worst effects, are demanding billions from rich countries to help them manage.

Moreover, protests are expected from advocacy groups, island countries threatened with inundation, and many others over the perceived inadequacy of the deal. At a minimum, these groups are likely to demand strong procedures for ratcheting up national commitments over time.

''No one doubts that coming out of Paris, there's going to be an ambition gap on the table,'' said Alden Meyer, who follows climate negotiations for the Union of Concerned Scientists, in Washington. ''The question is going to be, what prospect do we have to shrink it, and how quickly?''

**Load-Date:** September 28, 2015

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[***IT was a pleasant surprise [...]; COLUMNIST***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H5X-TYD1-JBVM-Y39M-00000-00&context=1516831)

The Journal (Newcastle, UK)

October 19, 2015 Monday

Edition 1, National Edition

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**Section:** FEATURES; Pg. 18

**Length:** 686 words

**Byline:** PAUL BRANNEN

**Body**

IT was a pleasant surprise to read this week that the region has claimed a new world record with the highest ever yielding wheat crop produced on a farm overlooking Holy Island in Northumberland this year. Congratulations to Rod Smith of Beal Farm.

We plough the field and scatter the good seed on the land' was sung at harvest festival services in churches across the country yesterday. It's an iconic image, the tractor working its way across the stubble, the blades of the plough turning over the brown earth, the seagulls following.

But this much-loved scene may be something we need to see less of in the battle against climate change. Our soils are a major depository of CO2, the same as our forests, and the more biomass they contain (think compost) then the more CO2. Soils that are fed fertilisers may produce high yielding crops but the soil itself is increasingly devoid of nutrients and carbon matter. The act of ploughing breaks the surface, turns the soil and releases CO2 into the atmosphere.

On a recent ***agriculture*** visit to the south of France I met with farmers who are experimenting with a no till approach. In the autumn they sow what is called a cover crop, say turnip and sweet pea.

Through the following months the crop soaks up the free ***energy*** of the sun, which would be wasted on a fallow field (think turning off solar panels in the winter), and at the same time holds onto winter rainfall, ***reducing*** wasted run-off.

Come the early spring the cover crop is not harvested - rather, it's crushed by the roller on the front of a tractor while on the back of the same tractor the seed drill plants the main cereal crop for the year. The cover crop is now rotting and releasing nutrients into the soil, increasing the capacity of the soil to hold more CO2. Fertiliser consumption goes down, saving carbon ***emissions***, and diesel use is also down as the tractor only traversed the field once to both 'fertilise' and plant.

As Labour's spokesperson in the European Parliament on ***Agriculture*** and Rural Development I'm lucky enough to meet a wide range of people representing also sorts of different organisations and outlooks. At one level it is totally fascinating but at another it is completely bamboozling, so many issues!

A few of the live issues on which it is tricky to know exactly what position to take include: Genetically Modified Organisms, the cloning of animals, biomass for ***energy*** (think Drax fuelled by woodchips from North America) and novel foods (foods that have so far been unknown to the EU market and are therefore either freshly discovered, like stevia or the newly engineered, like the cholesterol-beating ingredient of bread spreads or foods like goji berries).

In addressing any such thorny problem it is good to have a guiding star or some clear bigger goals into which to place the issue at hand. After just over a year in my role I'm of the view that the battle against climate change, and the numerous threats it presents, is potentially the predominant guiding star.

In addressing climate change, a primary focus must be on ***agriculture***, which produces a third of the world's ***greenhouse gas*** ***emissions*** - think farting animals and heavy use of fertiliser.

Why fertiliser? Because fertiliser is heat intensive to manufacture and the ***energy*** source is usually fossil fuels.

There are also hopeful signs too. If the rich world halved meat consumption, recycled animal and crop waste better, and used biofuel crops better, we could feed 9.3 billion by 2050 without destroying more forests.

If we had more agro-forestry, the introduction of trees to farming, we could increase ***agricultural*** production by up to 40%. These were some of the many fascinating facts I learnt from a hugely informative encounter with Patrick Worms of the World Agroforestry Centre, a German who lives at Waterloo, just outside Brussels and who was fresh off the plane from Tanzania.

Now, where did I put that packet of lentils? Paul Brannen is Labour MEP ¦for the North East Twitter: @PaulBrannenNE ¦

On a recent ***agriculture*** visit to the south of France I met with farmers who are experimenting with a no till approach

**Load-Date:** October 19, 2015

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[***China's cloned cows: meat on the table or environmental disaster?; Plans to clone cattle to meet China's growing demand for beef threaten to take the country down a dangerous road to pollution, food insecurity and ill health***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HK8-K491-JCJY-G1HJ-00000-00&context=1516831)

The Guardian

December 11, 2015 Friday 12:11 PM GMT

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**Section:** GLOBAL DEVELOPMENT

**Length:** 1312 words

**Byline:** Jian Yi

**Body**

A biotech consortium in China has announced that it intends to open a facility near Beijing with the aim of cloning up to a million cows a year to meet the country's growing demand for beef. The factory won't stop at cows. It also plans to clone racehorses, pets and even sniffer dogs. But the vast majority of animals it produces will be calves for meat production.

In Beijing I read this news with incredulity and dismay. In 2009, I directed the first documentary about China's rising consumption of meat and the growing industrialisation of its food sector, including livestock production. In the film, What's for Dinner?, I explored a nexus of problems related to intensive animal ***agriculture***: environmental pollution, food security, public health (including the use of antibiotics and hormones in feed), climate change and animal welfare.

Since then, I've promoted public awareness on these issues, screening the film around China and employing popular social media platforms. We're attracting more attention from a growing number of people concerned about the environmental and moral implications of eating animal products.

Unfortunately, meat production and consumption in China continue to rocket. The country is already the world's top producer of meat; on average, each person consumes about 60kg a year (mainly pork, plus chicken and beef). In the US, each person eats almost twice as much meat as someone in China. But since China has four times as many people, overall it consumes about double the meat eaten in the US.

The world's governments and thousands of civil society representatives are meeting in Paris to confront the challenge of climate change. The Chinese government wishes to be a global leader, greening its ***energy*** sources and ***reducing*** its ***greenhouse gas*** ***emissions***.

Beijing is acutely aware of how unhappy we citizens are to breathe the smog in our cities or smell the foul odours of our polluted rivers. Yet, by expanding exponentially our commitment to intensive animal ***agriculture***, China will increase ***emissions*** of methane, carbon dioxide and another potent ***greenhouse gas***, nitrous oxide, which has nearly 300 times the warming power of carbon dioxide.

The project to clone cows is a response to increasing demand for beef and China's urge to compete with agribusinesses overseas. (In 2014, China produced 11.5% of the world's beef, nearly 7m tonnes , according to the US Department of ***Agriculture***.) Traditionally, beef wasn't a staple in local cuisine in most parts of China. In the south of the country, where I grew up, oxen and buffaloes were more valuable alive; they were how rural families sustained their livelihoods.

It was only in my teenage years, in the late 1980s, that I had my first taste of beef. Then, and even more so now, beef represents the affluence and abundance of the western diet. This diet, in the form of burgers and fried chicken in fast-food restaurants, and high-end steaks, has spread across China over the past two decades.

It is ironic that China should be embracing so wholeheartedly western food habits along with capitalism. For all their scientific novelty, these cloned cows (should they materialise) will probably still end up on industrial-scale factory farms. The facilities are already notorious for the dangers they pose to human health via zoonotic diseases.

Given that cloned animals share the same genes, they have even higher risks of succumbing when diseases strike. China's pigs were recently subject to global scrutiny for harbouring drug-resistant strains of bacteria. This came about because of producers' overuse of the antibiotics that enable densely packed animals to fend off infections and grow bigger, faster. So extensive is the abuse of antibiotics in Chinese and global animal ***agriculture*** that some scientists believe the world may be entering a "post-antibiotic era" in which antibiotics used to treat common human illnesses will have lost their power to cure.

Of course, we might ultimately clone farmed animals that no longer need antibiotics. However, genetically engineered food has met with resistance from the Chinese public in recent years. It is possible to imagine that the beef from these cloned cows will receive even greater hostility (unless the factory manages to hide the source of its animals).

Even if these animals survive disease and public rejection, they will still need to eat, and will still produce waste and climate-warming methane. China, like every other country that has adopted the western-developed, factory-farming model, generates more animal waste than it can handle. Some of it makes its way into our waterways and lakes - half of which are already severely polluted by industrial effluent and chemical fertilisers. And industrial ***agriculture*** is now responsible for a larger share of China's water pollution than industrial factories.

If we massively increase our animal production, what will we do with the lagoons of manure? How will we protect our precious potable groundwater, or keep enough of it for us - especially when a beef cow, depending on its stage of growth, consumes up to 27 gallons of water a day. (Cows raised for beef are the most resource- consuming and ***greenhouse gas***-emitting of all farmed animals.) Parts of China are already water-insecure, and the government is spending billions of dollars to channel fresh water from the south to China's more industrialised north.

One of the routes will bring water to Beijing and Tianjin, where the cloning factory will be built. Tianjin is already experiencing drought. Are we really planning to take river water from the south and give it to cows so that the newly rich can eat more beef? Tianjin is also where several deadly explosions at a chemical warehouse in August claimed the lives of more than a hundred people and spewed large quantities of toxic chemicals into surrounding neighbourhoods.

The Chinese government is acutely aware of food insecurity (it has a strategic pork reserve in case supplies are constrained). With the world's largest population, a recently relaxed family planning policy, and an economy that threatens to exhaust our finite natural resources, it is not difficult to envision a future China where farmed animals compete for the little land and even less water remaining.

Our country used to have enough grain to feed itself. Now we have become the world's largest importer of soybeans - nearly all of which go to feed animals. In 2013-14, imports of soybeans (mainly from the US and Brazil) totalled 70.4m tonnes , almost six times the level of domestic production. Corn imports are rising, too. Does China want to rely even more heavily than it already does on the economic and political stability of foreign countries in order to obtain commodity crops?

Enormous factories such as the one in Tianjin will lead to ***reduced*** space and greatly compromised animal welfare for cows. The health of the people who eat them will also be compromised. It will only be a matter of time before more animals are cloned, as long as it makes profit. If they are imperfect, they will be slaughtered or discarded on a scale virtually unprecedented in human history.

It is hard to imagine this commercialisation of science wouldn't be subject to protests or regulatation by western governments. But China's helter-skelter commitment to capitalism and its lack of genuine "cultural conservatism" reflects a marginalisation of values that society used to hold dear, such as Confucian harmony, Daoist concerns for nature, and the Buddhist honouring of all life.

China no longer needs to replicate the worst excesses of the west. We have a responsibility to our country, our natural resources, the global climate and our own consciences to stop this madness before it is too late.

· Jian Yi is an independent film-maker and cultural activist based in China.He is aYale World Fellow (2009)

**Load-Date:** December 11, 2015

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[***Hot Topic; Tackling climate change is a global issue, but Ireland must not shirk its responsibilities. Our leaders have to take action***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HRH-GGH1-F021-62NJ-00000-00&context=1516831)

thetimes.co.uk

December 31, 2015 Thursday 12:01 AM GMT

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**Section:** IRISH OPINION

**Length:** 627 words

**Body**

"Lord, make me chaste - but not yet," came the plea from St Augustine. It is a plea, it seems, that our leaders have adopted in the face of the threat of climate change. Enda Kenny's speech in Paris last month stressed how Ireland was "determined to play its part" in efforts to curb ***emissions***, but it would seem that he was effectively adding the proviso "but not yet".

Using the dubious logic that the financial crisis had set back our ability to tackle ***emissions***, he said that it wouldn't be until after 2020, and when the economy had recovered, that Ireland would be in a position to meet the ambitious ***targets*** that have been set out to address this global challenge.

One can only wonder what some of the developing countries made of the leader of one of the richest nations in the world effectively putting on the poor mouth.

There's no question that the Paris agreement has massive implications for Ireland. Not least for our ***agriculture*** sector, which accounts for one eighth of our GDP, and nearly one third of our ***greenhouse gas*** ***emissions*** - the highest proportion in the EU. The government is planning to increase the number of cattle in Ireland by 300,000 and it claims that this can be done without increasing ***emissions***. This seems counterintuitive to say the least. ***Agriculture*** is clearly of huge importance to the Irish economy and to many of our citizens. It's understandable that the government is looking to grow this high performing sector further, but it's hard not to think that it is sticking its head in the sand in relation to its implications.

Such an approach is hardly unique. Many of us are guilty of assuming that life can continue as normal after the climate control agreements in Paris. The argument is frequently made that Ireland is a tiny country and that our impact on the global picture is negligible, therefore exempting us from any responsibility. While on one level this is true, it misses the point that every nation big and small has to play their part for - and this is no exaggeration - the future of mankind.

We can't adopt an Irish solution to a global problem. It would be unconscionable and we won't get away with it in Brussels.

Sustainability has never been a word that has had any traction in public debate in Ireland, but it needs to from now on. We have one of the lowest density populations in the EU, which has resulted in Irish people being largely car-dependent . That clearly has a big impact on ***emissions***. Efforts to limit one-off housing have been fiercely resisted by the people and their elected representatives - the demands of the individual trumping the common good. That will need to change as it's simply unsustainable. Our dependence on fossil fuels is unsustainable, too, meaning that we will have to develop alternative ***energy*** sources - particularly wind farms, which have been resisted in many areas around the country.

Those opposing the development of wind farms now need to consider how they will power their homes in the future. It is a question that we all need to ask of ourselves. This issue is one of many: What kind of cars will we drive in the future? How will we sustainably heat our homes? Poor building regulations have ensured that many houses are poorly insulated.

These are issues that we're all going to have to face. The lack of leadership on climate change is troubling, but that's because politicians don't see it as a core issue for voters, but it must become one. A lack of leadership cannot be an excuse for inaction.

There's been a tendency in Ireland to consider global warming as somebody else's problem. It is, of course, a global issue - arguably the most important since the Second World War, but it's a domestic one, too. We owe it to future generations to face up to that.

**Load-Date:** December 31, 2015

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[***'We need to grow our economy while cutting emissions - that's some ask...'; How do you tackle climate change when half the Irish population doesn't care? Environment Editor Paul Melia reports from Paris***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HKF-F0R1-DY9P-N0GK-00000-00&context=1516831)

Irish Independent

December 12, 2015 Saturday

Edition 1, National Edition

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**Section:** REVIEW;NEWS; Pg. 4,5

**Length:** 1162 words

**Body**

One storm doesn't mean our climate has irrecoverably changed, but the events of the past week certainly paint an apocalyptic picture of a future ravaged by extreme weather events.

Storm Desmond has caused utter devastation across large parts of the country, with householders, businesses and ultimately the Government facing a massive clean-up bill. And the science tells us we should get used to more of the same - extreme winter-weather events, coupled with summer droughts - which will become more frequent as climate change takes hold.

It highlights the great dilemma facing every nation across the globe - Governments get elected by promising to grow the economy, but that growth comes at an environmental cost.

The Coalition is committed to ***reducing*** ***emissions*** over time and the weather events of the past week are yet another example of why we need to.

However, half the population remain unconvinced that climate change is a serious issue requiring urgent attention. Could Storm Desmond be the catalyst to change the minds of that 50pc and make them begin to sit up and take notice? We are not alone in displaying an unwillingness to address climate change, believing it's a problem for future generations.

The latest Eurobarometer survey shows a slight drop in the number of people across the EU who believe it is the single most serious problem facing humanity. Just one in four believes they have personal responsibility for tackling it. That's borne out in the comments made by almost 150 heads of state gathered in Paris for the 21st Conference of the Parties (COP21).

They all spoke about the need for action and the moral imperative to protect the planet for future generations.

But behind the rhetoric lay cold, hard electoral politics, exemplified by Taoiseach Enda Kenny, who told the UN climate summit that while all countries had to play their part, Ireland would not jeopardise its economic recovery and tackle ***agriculture*** ***emissions*** in the near future.

He was clearly courting the votes of 140,000 farming families in the run-up to next year's General Election, but he wasn't alone in speaking out of both sides of his mouth. The world's biggest emitter, China - which this week raised warnings about air pollution to their highest level - is seen as likely to support a weak deal, despite making all the right noises during the plenary.

India has genuine concerns about its economic growth being curtailed, and while the US is committed to an ambitious deal, it's worth noting that Barack Obama is on his way out of office.

Back in 2009, at COP15 in Copenhagen, when he was less than a year in the White House, Obama's administration was widely seen as scuppering an ambitious agreement due in part to domestic opposition. There's still the very real prospect of Congress refusing to ratify any deal. But the inaction to date flies in the face of science. Climate change is already happening, despite what sceptics would have us believe. Even oil-rich country Saudi Arabia accepts this.

Average temperatures in Ireland and across the globe are up almost 1° C this century. Last winter was the stormiest on record. Some of the highest global temperatures on record have been seen in the last decade, with 2015 looking like being the hottest ever.

We are experiencing more frequent flooding, and it's going to get worse. Research from the University of Oxford also suggests that ***greenhouse gas*** ***emissions*** released to date have increased the likelihood of winter storms by as much as 25pc. It's no longer a question of 'if' but 'when' the worst effects become a feature of our weather. And therein lies the problem. How do you mitigate against further change, while allowing economies to grow? The costs of tackling warming are put at less than 1pc of global GDP, an enormous amount but not that much in the grander scheme of things.

The costs of inaction will be far higher, as nations spend billions installing flood defences and replacing damaged infrastructure, dealing with food poverty and coping with climate refugees forced to flee their homes.

But there are numerous benefits from making the right decisions. For example, if we invest in public transport and ***reduce*** the use of cars, there is less congestion. This cuts journey times, helps economic growth and gives citizens extra time in their daily lives.

Fewer cars on the road mean less fossil fuels are burnt, improving air quality and public health. Less traffic means less wear and tear and lower road-maintenance costs, and money for other public services.

We need to focus on what we're good at, and look at where we could improve. We're good at producing food sustainably, but we don't debate the fact that 30,000 farms have an output of less than (EURO)4,000 a year - could these farmers, many part-time, be encouraged to move away from beef and dairy to forestry or biomass, for example? Our focus on renewables is helping ***reduce*** ***emissions***, but many communities are opposed. What policies can be enacted to encourage take up? A stake in projects? Limiting a wind farm's lifespan to 20 years? Or should we continue to send money to oil and gas-rich nations, many with dubious records on human rights? We have made positive strides towards ***energy*** efficiency, and our domestic retro-fitting programme has cut heating bills and created jobs.

But we could be doing more, particularly on public buildings, which would give the Government more money for public services.

We must also ask if we really need to change the car, or upgrade the television, when the old one works perfectly well? We throw away as much as 30pc of the food we buy - not only a waste of money but a waste of the water, fertilisers and feed required to produce that food.

Growing the economy and ***reducing*** ***emissions*** appear to be mutually exclusive goals, in the short to medium-term at least.

But the trick is to achieve growth with the least environmental [*www.impact.No*](http://www.impact.No) one is suggesting that growth be curbed or farmers forced off the land.

What is being suggested is a bit of wit and ambition to help ***reduce*** risk, otherwise Ireland faces being left behind as the world moves to a low-carbon future.

An interesting study was published during COP21, which asked the UK public how much they were willing to pay to fight climate change.

The study, published in the Journal of Environmental Economics and Policy, revealed not very much, about £27 a year, which researchers said amounted to no more than the cost of a year's stamps. Among the reasons? "A belief that climate change is caused by nature allows some people to absolve themselves of responsibility toward those who will be negatively impacted by climate change," they wrote.

It is nature that is the cause of problems for so many families this weekend. That in itself should give pause for thought and reflection on what is happening to our planet and our seeming unwillingness to do anything about it.

How do you mitigate against further change, while still allowing economies to grow?

**Load-Date:** December 12, 2015

**End of Document**



[***Getting better as well as bigger***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5MSS-R9G1-JC02-S0J8-00000-00&context=1516831)

AgendaNi

February 8, 2016

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**Section:** environment; uncategorised

**Length:** 1216 words

**Body**

The Irish Association joins Ireland's agri-food strategy debate.

In recent times, conscious of the very significant era of commemorations and centenaries that Ireland has now entered, cross-border think tank the 'Irish Association' has joined forces with northern peace-building organisation the Corrymeela Community, to review and audit comprehensively, the overall state of north-south relations and cross-border cooperation. The review aims not only to examine the state of social and political progress generally but also the detailed status and potential of north-south cooperation in each social and economic sector.

In this context, in 2014, an expert agri-food strategy group was established by the Association to bring forward a report on the possible strategic responses to an array of challenges facing ***agriculture*** and food production in Ireland. The panel, which was chaired by Professor Michael Monaghan, head of ***Agriculture***, Food Science and Veterinary Medicine at UCD, consisted of a wide range of sectoral experts drawn mainly from industry, academia and economic development agencies.

The result of the panel's deliberations was a report entitled 'Opportunities for Irish ***Agriculture*** - Some Strategic Initiatives towards Getting Better as well as Getting Bigger' - which was launched toward the end of 2015 by Ireland's EU ***Agriculture*** Commissioner Phil Hogan.

**Sustainable competitiveness**

The report highlights some of the strategic challenges facing the Irish agri-food sector, not least the unprecedented international volatility and unpredictability of markets and pricing structures, as well as significant issues around animal health and husbandry, food security and overall sustainability. While it acknowledges that growing, fast moving markets also provide Ireland (as a significant food exporter) with an opportunity to expand the sector, the report emphasises the overriding need not just to grow bigger but to do things better.

In particular the report focuses on the need to disseminate efficiently the best and most up to date information on agri-food best practice in order to drive up productivity through higher yields and better resource utilisation. However, productivity improvement and the ability to win in challenging open marketplaces is only one part of the picture - the other being the need to preserve resources and capacity so that long-term food security issues can be successfully addressed.

The principal strategic recommendation in the report therefore is that policymakers should be informed by an overriding concept of 'sustainable competitiveness' in planning the future for the sector.

**Strategic challenges**

The panel's report systematically identified a series of strategic challenges which the new concept of 'sustainable competitiveness' would have to address, including:

·   exploiting the opportunity to expand Ireland's dairy sector: Following the lifting of quotas, this is where the greatest export potential and therefore national economic benefit exists.

·   improved financial planning and management of risk: Here the key is education and training at the level of the family farm - and getting more women involved in decision making. Also there needs to be much greater cooperation between producers/processors/retailers etc across the supply chain.

·   improved farming practice: In particular improving animal husbandry, disease management, soil fertility, grass yield and nutrient management (with knock-on benefit for the environment).

·   creating an 'Aligned Food business Model': Other industries have had to 'realign' to ensure efficiency in relating reward to risk and assets employed. This has not yet really happened in agri-food and it is a potential barrier to growth and investment.

·   addressing food security: From an Irish perspective, policy needs to be addressed at the European level with appropriate reform of the Common ***Agricultural*** Policy (CAP).

·   ***greenhouse gas*** ***emissions***: The fundamental question is can Ireland ***reduce*** ***emissions*** from ***agriculture*** while expanding the national cattle herd? Progress lies in productivity improvement and carbon offset and accurate measurement.

**Some practical proposals**

The report recommends a number of specific measures to address many of these strategic challenges. Foremost among these is the recommendation to conduct a 'forward-looking' review of agri-food education and training systems in Ireland so that services provided can create the next generation of multi-functional agriculturalists with a focus on farm profitability/producer flexibility, efficiency and sustainability. An updated education and training system also needs to address low levels of uptake around best-practice initiatives, as upskilling farmers is considered an essential prerequisite for future success.

Another recommendation is more measurement. This means benchmarked ***targets*** set both nationally and at the enterprise level and against which performance is continuously monitored.

In addition to measurement, there is a strong recommendation for more research. This includes research into production-related diseases and ruminant nutrition as well as greater, more accurate quantification of how the various proposed mitigation measures around ***greenhouse gas*** ***emissions*** can assist in the context of higher cattle numbers.

**Communications and delivery**

Overall the Agri-Food Strategy Group has produced a report which requires an unprecedented free-flow of information across all sectors and up and down the ***agriculture*** and food supply chain. To this end some modest structural innovations are proposed including the establishment of an 'Agri-food Action Board' which would operate in a public-private partnership with government to ensure that strategy was translated into action on the ground. It is suggested that a substructure to this Board might exist at the level of each county.

In addition the report floats the idea of an independent advisory panel, broadly representative of stakeholders, which would assist Government in the Irish agri-food policy development process.

Overall the strategy group's report, while relatively concise, is a substantive expert overview of the main issues facing Ireland's agri-food sector in the years and decades ahead. It clearly indicates that progress needs to be made on a broad front, both at a policy level and on the ground, if the full potential of the sector is achieved.

'Better not just Bigger' insists that Ireland needs a 'smart' strategy, not just a growth strategy.

"policymakers should be informed by an overriding concept of 'sustainable competitiveness' in planning the future for the sector."

**Promoters of North/South Review and Audit**

The Irish Association (for cultural economic and social relations) was founded in 1938 to ensure that the political division of Ireland did not sever cultural and economic links between North and south. Its aim is to give a platform for discussion on north south matters is based on reason and goodwill rather than emotion and prejudice.

The Corrymeela Community was established in 1965 to build peace and reconciliation on the island particularly from a Christian faith perspective. Corrymeela, near Ballycastle Co Antrim has been a place of gathering and discussion between people of different backgrounds for over 50 years.

**Load-Date:** February 2, 2017

**End of Document**



[***There is no Planet B and Ireland is not immune to climate change; Our weather is going to change, in some ways quite dramatically, in the decades ahead, writes Dr Conor Sweeney***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HJ6-JPS1-JBVM-Y3MM-00000-00&context=1516831)

Sunday Independent

December 6, 2015

Edition 1, National Edition

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**Section:** NEWS; Pg. 15

**Length:** 1234 words

**Byline:** Conor Sweeney

**Body**

IF you thought that negotiators from 195 countries hammering out a deal to cut ***emissions*** had little enough to do with dear old Ireland - blessed with a temperate climate, cool summers, relatively warm winters and all the rain we need - then think again.

The stakes are high. World leaders are meeting to create a binding climate agreement. The aim is to keep global warming below two degrees celsius. If an agreement is not reached, the future climate will change in ways we have never experienced before - more heatwaves, droughts, extreme rain, stronger storms. The climate is a powerful force that we need to respect.

Climate change is not a new phenomenon. In fact, the climate of the Earth has always been changing. But since the industrial revolution, a new and destructive factor has been influencing the ways in which climate is changing.

That factor is Man.

Thirty years ago, the leaders of the world faced a crisis in the Earth's system. Scientists had discovered that chemicals called CFCs (Chlorofluorocarbons) - chemicals then used in fridges - were drifting high up into the atmosphere and causing a reaction that ***reduced*** ozone levels. Without the ozone to protect us, harmful UV rays from the sun were reaching dangerous levels on the surface of the Earth.

In the face of this threat to our planet, world leaders found common purpose and moved quickly to ban CFCs. As a direct consequence of this action, the ozone layer is now recovering. Humans, it seems, can fix the Earth as well as damage it.

Now, in the 21st Century, the threat to our climate comes not from CFCs but from ***greenhouse gases***. These are gases in the atmosphere that allow ***energy*** from the sun to reach the surface of the Earth, but then trap some of the ***energy*** of the Earth from radiating back out to space.

***Greenhouse gases*** are not all bad. Indeed, life would be difficult without them. It is because of ***greenhouse gases*** that the temperature on Earth generally stays in a range that we can live with. Without them, we would be faced with daytime temperatures of over 100 degrees, while at night the temperature would plummet to under -200 degrees.

We wouldn't last long in that climate.

The problem we face is that we are releasing extra ***greenhouse gases*** into the atmosphere and they are causing the global climate to change in ways it hasn't before. This time - unlike CFCs - it won't be so easy to ban or replace them as ***greenhouse gases*** are released when we use fossil fuels to generate electricity, heat our homes and drive our cars.

They are even linked with the food that we eat.

If we continue to release ***greenhouse gases*** at the current rate, scientists estimate that the world will breach the two degrees of warming barrier within the next 50 years.

How do we know this? In climate science centres around the world, like the one that I work in, we take huge quantities of climate data and use highly complex computer programmes to model how the climate is likely to change.

But wouldn't a bit of warming give us better summers and ease those cold winters? Not necessarily. Two degrees is the average figure - it's not the whole picture. Different parts of the earth will experience different changes in temperature.

In Ireland, our climate is strongly influenced by a current in the Atlantic Ocean, which brings warm water from Florida to the west of Ireland. This ocean current buffers us from the stronger changes in temperature that will be felt elsewhere.

Having said that, Ireland will still get warmer by around 1.8 degrees overall, with areas in the east warming more than in the west.

The real area of concern for us will be the extremes in temperature - very hot and very cold days. These extreme events have a more dramatic impact on our lives. When our climate gets warmer, extremes can change by more than the average. We will have less cold nights, less frosty days, and our number of cold spells will halve. These changes will generally be welcomed.

However, changes will also happen at the other extreme. Our hottest days will be up to four degrees hotter, meaning that we could expect to experience temperatures in the 30s, and this will have an impact on the health of our nation.

Three-quarters of weatherrelated deaths in first-world countries are due to extreme temperatures, mainly heatwaves: 72,000 people died in the heatwave in Europe in 2003. In a world that is two degrees warmer, Ireland can expect heatwaves to occur more frequently.

This isn't just bad for our health, it's bad for our ***agriculture***, ***energy*** and ecosystems. Heat stress ***reduces*** crop yields, increases ***energy*** demand for cooling and can cause fish to move into deeper, colder waters.

The future won't always be warmer. Strange though it may seem, a warmer climate can cause cold weather extremes too. When the edge of the polar jet stream - a mass of cold air blowing around the North Pole - dips down over Ireland in winter, we experience bitterly cold weather. Climate change means the arctic region will become warmer in the future and this may cause the polar jet stream to move south on a more frequent basis.

Global warming also involves changes in rainfall levels and patterns. In Ireland, we usually get around 1,000mm of rain each year, although the mountains in the west get twice as much as this. Dublin actually has one of the lowest rainfall amounts in Ireland, at around 850mm per year.

In a two-degree-hotter future, Ireland will get slightly less rainfall each year. This doesn't mean that all rain showers will be lighter. Instead, there will be changes to the pattern of our rain. Summers will get drier and winters wetter.

Given that summers are going to get drier, it's not surprising to learn that we're going to have more droughts in the future too. Droughts are bad for ***agriculture***, which will need to make greater use of irrigation. It will also impact our water reservoirs, which will need to be managed more efficiently to avoid restrictions. This further stresses a water system that is already in urgent need of upgrading.

What about when it rains? It becomes more worrying when we look at the extremes. Wet days (over 20mm rainfall) and very wet days (over 30mm rainfall) will occur more often in our future winter months. An increase in heavy rainfall events will have serious effects. In 2011, heavy rainfall in Dublin caused widespread damage and two fatalities, while in Cork in 2009, a flooding event caused tens of millions of euro in damage.

Flooding is not only caused by heavy rainfall. The string of storms in winter 2013-14 caused serious coastal damage and flooding in Ireland.

Strong winds coupled with high sea levels are the culprits here. Scientists agree that sea levels will continue to rise in the future and some research also points to an increase in intense storms in the future. Whichever way you look at it, flooding events seem set to increase.

These changes to the Irish climate are based on the presumption that the Earth's warming will be limited to two degrees. However, as things stand, we are likely to exceed that limit. To ensure that global warming stays within two degrees, we need the leaders of the world's nations to agree upon many challenging, and perhaps unpalatable, actions.

We need to act now to avoid problems that await us decades in the future.

Dr Conor Sweeney is a lecturer at UCD. He tweets @ConorSy

'Different parts of the Earth will see different changes in temperature'

**Load-Date:** December 6, 2015

**End of Document**



[***Alberta's new Cabinet focused on jobs, economic growth and diversification***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J15-C5R1-JD3Y-Y18H-00000-00&context=1516831)

M2 PressWIRE

February 3, 2016 Wednesday

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**Length:** 697 words

**Body**

February 2, 2016

"Together, our new Cabinet team will deliver on the government's plans to create jobs, diversify the economy during difficult times and put our province in the best position possible for future growth." Rachel Notley, Premier Highlights of changes

- Sarah Hoffman becomes Deputy Premier, while continuing to serve as Minister of Health.

- Five new ministers and one new associate minister have been named. This allows for a more evenly shared workload, with most ministers now responsible for a single portfolio.

- Alberta's Cabinet is still smaller than any previous Cabinet in the province over the past decade, and remains the smallest in western Canada.

- The department of Jobs, Skills, Training and Labour is renamed Labour.

- The department of Aboriginal Relations is renamed Indigenous Relations, reflecting the preference of Indigenous communities.

- The Minister of Labour will also be responsible for democratic renewal.

- Oneil Carlier becomes Deputy House Leader. Deron Bilous also continues to serve as Deputy House Leader.

The Premier also announced the creation of the Alberta Climate Change Office, which will report to Environment and Parks Minister Shannon Phillips. It will assist in the implementation of Alberta's Climate Leadership Plan, which will support green research and infrastructure, economic diversification and renewable ***energy***. Alberta Cabinet in order of precedence

Rachel Anne Notley

Premier of Alberta

President of Executive Council

Sarah Marjorie Hoffman

Deputy Premier

Minister of Health

Brian Mason

Minister of Infrastructure

Minister of Transportation

Government House Leader

David Manson Eggen

Minister of Education

Deron Michael Bilous

Minister of Economic Development and Trade

Deputy Government House Leader

Joseph Anthony Ceci

President of Treasury Board and Minister of Finance

Kathleen Teresa Ganley

Minister of Justice and Solicitor General

Shannon Phillips

Minister of Environment and Parks

Minister Responsible for the Climate Change Office

Oneil John Carlier

Minister of ***Agriculture*** and Forestry

Deputy Government House Leader

Danielle Marie Larivee

Minister of Municipal Affairs

Margaret Ellen McCuaig-Boyd

Minister of ***Energy***

Irfan Sabir

Minister of Human Services

Lori Dawn Sigurdson

Minister of Seniors and Housing

Richard John Feehan

Minister of Indigenous Relations

Christina Gray

Minister of Labour

Minister Responsible for Democratic Renewal

Stephanie Veronica McLean

Minister of Service Alberta

Minister of Status of Women

Ricardo Miranda

Minister of Culture and Tourism

Marlin Robert Schmidt

Minister of Advanced Education

Brandy Lynn Payne

Associate Minister of Health Backgrounder Climate Change Office and Democratic Renewal Climate Change Office

The Government of Alberta released its Climate Leadership Plan in November 2015. To facilitate implementation of the plan, the government will establish a Climate Change Office, which will report to Environment and Parks Minister Shannon Phillips.

The Climate Leadership Plan affects many government programs and initiatives. To ensure effective co-ordination of all aspects of implementation, the Climate Change Office will lead a "whole of government" approach as it works with ministries and agencies.

The implementation of the Climate Leadership Plan will ***reduce*** Alberta's ***greenhouse gas*** ***emissions*** and contribute to long-term diversification of the Alberta economy. Democratic Renewal

To support the Government of Alberta in responding to forthcoming recommendations of the Select Special Ethics and Accountability Committee, Premier Rachel Notley has appointed Christina Gray as Minister Responsible for Democratic Renewal.

On June 25, 2015, a motion was passed in the Legislative Assembly to create the all-party committee consisting of 17 Members of the Legislative Assembly of Alberta.

The committee was appointed to review the Election Act, the Election Finances and Contributions Disclosure Act, the Conflicts of Interest Act, and the Public Interest Disclosure (Whistleblower Protection) Act. It will report to the Assembly by June 2016.

Minister Gray will have the mandate to review the committee's recommendations and bring forward options for amending legislation and/or changing government policy.

**Load-Date:** February 4, 2016

**End of Document**



[***Alberta's new Cabinet focused on jobs, economic growth and diversification***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J15-C5R1-JD3Y-Y145-00000-00&context=1516831)

M2 PressWIRE

February 3, 2016 Wednesday

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**Load-Date:** February 4, 2016

**End of Document**



[***Lettuce is not green. Who knew?***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HMX-SDK1-JCS0-D3N5-00000-00&context=1516831)

i-news

December 19, 2015

First Edition

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**Section:** NEWS; Pg. 17

**Length:** 1022 words

**Byline:** Janet Street-Porter on Saturday Twitter: @the\_real\_jsp

**Body**

If you care about saving the planet, what is the best diet? For years, smug vegans and vegetarians have asserted that they are the environmental warriors doing their bit to combat climate change.

At the Paris climate conference, the Terminator, former bodybuilder and ex-California Governor Arnold Schwarzenegger delivered an impassioned rant ordering us to give up meat two days a week to ***reduce*** ***greenhouse gases***. Surely that's a bit rich, coming from someone who bulked up on grass-fed protein for years and who starred in blockbusters which promoted gadgets and gimmickry powered by vast amounts of ***energy***. Actually, when I interviewed Arnie years ago, he was addicted to doughnuts rather than ribs, and we stopped at Greggs so he could stock up.

Arnie (pictured below) is just one of a gang of stars who "really care" about the planet. Why world leaders in Paris would take any notice of concerned crusaders such as Arnie, Robert Redford and Leonardo DiCaprio telling them how important it is to fight climate change is beyond me. After all, these stars regularly fly using private jets and own vast amounts of property, which is bound to be air-conditioned.

Meat-eating has been under attack for some years - Paul McCartney and his family launched Meat Free Mondays in 2009 - but vegetarian campaigners could be fighting a losing battle. The UN Food and ***Agriculture*** organisation reckons that consumption of meat will rise by 76 per cent by 2050, as the population increases and the Third World turns to Western-style diets. What's indisputable, though, is that meat production and consumption account for between 28 per cent and 50 per cent of all ***greenhouse gases*** generated, and a recent report from the think-tank Chatham House calls for a 15 per cent meat tax to try to ***reduce*** the amount we eat.

Sadly, no solution is that simple. Now, a bunch of scientists in the US claim that eating healthy greens is just as bad for the planet. According to a study conducted by the Carnegie Mellon University (which considered the impact per calorie of food in terms of ***energy*** costs, transportation, water use and carbon ***emissions***), bingeing on lettuce is more than three times as bad for the planet as gorging on bacon. A spokesman for the researchers claimed that vegetables "require more resources per calorie than you would think - aubergines, celery and cucumbers look particularly bad when compared to pork or chicken". The report's authors agree that we need to eat less meat, but we mustn't delude ourselves that eating a healthy diet means we are saving the planet.

I don't know about you, but after reading this, I resolved to ignore the advice of Arnie and the lettucebashers and stick to my personal 5:2 diet. As for consuming less and fasting, telly science guru Michael Mosley will probably tell us next week that there's yet another way to live longer, ***reduce*** ***emissions*** and eliminate constipation, dementia and arthritis.

My 5:2 regime means all the conflicting arguments are covered in one week. For five days I eat a veggie breakfast of fruit, nuts and seeds followed by wholemeal heavy bread, topped with mashed avocado or raw tomato. On Saturday and Sunday, I eat a full English breakfast: bacon, egg, mushrooms and toast with marmalade. I always eat meat on Sundays and fish on Fridays - it's part of my DNA. I lead a guilt-free existence when it comes to diet, and that's without resorting to Gwyneth Paltrow for advice.

Taxing meat - particularly in countries such as the US, where steak is synonymous with masculinity - has as much chance of becoming law as gun control; in other words, zero.

I'm writing this in Australia, which does have strict gun control laws, but where the words barbie and beef are a central part of the culture. Australia is a conflicted country when it comes to diet. There's a strong alternative lifestyle culture, with passionate protection of the beautiful environment and a huge organic movement, alongside vast mining interests and huge meat production. But the lettuce I buy at the farmers' market will have travelled less than 10 miles; it will be grown by people who use solar power, recycle and who aren't wearing shoes. It makes me feel very virtuous, but I'm not sure how I can replicate this back in Blighty.

Meanwhile, Christmas is the time of feasting, and even Arnie will not deter me from roasting a turkey and a ham. I'll just have to go through January redressing the balance on my carbon balance sheet.

STOP PATRONISING THE ELDERLY AND HELP TO INTEGRATE THEM The Government's health advisory body, Nice, says loneliness is a serious health issue and wants councils and the NHS to do better at informing older people what activities exist in their area and how they can join in, from singing in a choir to reading to schoolchildren. The advice follows research from the University of Chicago, indicating that loneliness could be twice as likely as obesity to lead to an earlier death.

A million people in the UK say they are lonely; up to 15 per cent of those are over 65. Those who have recently lost a partner are particularly vulnerable. While I applaud the intentions behind the Nice guidance, the reality of council cuts means there will be no consistent strategy throughout the UK.

The single biggest aid to combat isolation is use of the internet and communication tools such as Skype and Snapchat. Where are the Saga-sponsored laptops and a nationwide squad of young people teaching the old about the internet as part of their school studies? As for joining choirs and reading to children, where is the funding for rural transport? Each council should appoint a single executive whose task it is to enable older people to participate in activities and events that already exist. It would ***reduce*** health and care costs, because independence goes hand in hand with good mental health.

My idea of hell would be singing in a choir, but community yoga in the village hall is another matter. Above all, let's not patronise older people - they don't need "special" activities, but the means to join in.

We mustn't delude ourselves that eating a healthy diet means we are saving the planet

**Load-Date:** December 18, 2015

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[***Hello, cool world***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J58-T6S1-DY5K-Y0XX-00000-00&context=1516831)

New Scientist

February 20, 2016

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**Byline:** Fred Pearce

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All plausible futures with just 1.5 °C of global warming require massive negative ***emissions***, says Joeri Rogelj of International Institute for Applied Systems Analysis in Austria (see main story). On the other hand, we could have a 2 °C world simply by kicking our carbon habit. No negative ***emissions*** required. Is the extra effort worth it?

Yes, says Johan Rockström <a href="ed to subs: need an umlaut on the o: [*http://www.stockholmresilience.org/21/contact/staff/1-16-2008-rockstrom.html*](http://www.stockholmresilience.org/21/contact/staff/1-16-2008-rockstrom.html)">, director of the Stockholm Resilience Centre: "Two degrees contains significant risks for societies everywhere." By contrast, 1.5 °C could prevent the disappearance of Arctic sea ice, save forests, dramatically ***reduce*** the risk of crop failures in sub-Saharan Africa, and curb sea level rise. Michiel Schaeffer of Wageningen University in the Netherlands calculates that 1.5 °C would limit sea level rise over the next two centuries to 1.5 metres, whereas 2 °C would lock in 2.7 metres. <a href="   [*http://climateanalytics.org/files/schaeffer\_et\_al\_\_2012\_\_long-term\_slr.pdf*](http://climateanalytics.org/files/schaeffer_et_al__2012__long-term_slr.pdf)">That is good news for low-lying island states such as Kiribati, an archipelago of Pacific atolls none of which rises more than 2 metres above the waves. Kiribati led the push in Paris for the conference to adopt a 1.5 °C ***target***. Anything more, it argued, would consign their nation to oblivion.

But peeking barely 50 centimetres above the waves will not save many island states. There will be no high ground to run to when seasonal hurricanes throw storm surges at their shores. Pacific atoll nations - those most fixed on a 1.5 °C ***target*** - may be doomed already.

Biochar (far left) and managed forests could help suck CO2 out of the atmosphere for a cooler world

**Load-Date:** February 24, 2016

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[***Hello, cool world***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J58-T5S1-JBPJ-73GB-00000-00&context=1516831)

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1.5 °C versus 2 °C

All plausible futures with just 1.5 °C of global warming require massive negative ***emissions***, says Joeri Rogelj of International Institute for Applied Systems Analysis in Austria (see main story). On the other hand, we could have a 2 °C world simply by kicking our carbon habit. No negative ***emissions*** required. Is the extra effort worth it?

Yes, says Johan Rockström <a href="ed to subs: need an umlaut on the o: [*http://www.stockholmresilience.org/21/contact/staff/1-16-2008-rockstrom.html*](http://www.stockholmresilience.org/21/contact/staff/1-16-2008-rockstrom.html)">, director of the Stockholm Resilience Centre: "Two degrees contains significant risks for societies everywhere." By contrast, 1.5 °C could prevent the disappearance of Arctic sea ice, save forests, dramatically ***reduce*** the risk of crop failures in sub-Saharan Africa, and curb sea level rise. Michiel Schaeffer of Wageningen University in the Netherlands calculates that 1.5 °C would limit sea level rise over the next two centuries to 1.5 metres, whereas 2 °C would lock in 2.7 metres. <a href="   [*http://climateanalytics.org/files/schaeffer\_et\_al\_\_2012\_\_long-term\_slr.pdf*](http://climateanalytics.org/files/schaeffer_et_al__2012__long-term_slr.pdf)">That is good news for low-lying island states such as Kiribati, an archipelago of Pacific atolls none of which rises more than 2 metres above the waves. Kiribati led the push in Paris for the conference to adopt a 1.5 °C ***target***. Anything more, it argued, would consign their nation to oblivion.

But peeking barely 50 centimetres above the waves will not save many island states. There will be no high ground to run to when seasonal hurricanes throw storm surges at their shores. Pacific atoll nations - those most fixed on a 1.5 °C ***target*** - may be doomed already.

Biochar (far left) and managed forests could help suck CO2 out of the atmosphere for a cooler world

**Load-Date:** February 24, 2016

**End of Document**



[***-BASF becomes official partner of World Green Building Council's Europe Regional Network***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JRG-JTV1-F0K1-N0NP-00000-00&context=1516831)

ENP Newswire

May 10, 2016 Tuesday

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**Length:** 1077 words

**Body**

London, United Kingdom / Ludwigshafen, Germany- BASF has today become an official Regional Partner of the World Green Building Council's Europe Regional Network. The Network represents a community of 25 Green Building Councils (GBCs) and over 5,000 company members who cooperate closely to support growth of the sustainable building movement in Europe, including policy dialogue and support of sustainable construction activities.

'With this cooperation we are strengthening our position within the construction industry as the partner for sustainable construction solutions,' says Quentin de Hults, Manager Advocacy and Sustainability at BASF's European Construction Competence Center. 'Sustainability plays a major role on all corporate levels of BASF and is an essential part of our 'We create chemistry' strategy.'

Terri Wills, CEO of the World Green Building Council, underlines: 'Our regional partners have been absolutely critical in strengthening the network of GBCs in Europe. As we grow stronger collectively, our ability to develop the green building market for the benefit of all our members grows too. BASF's support of the green building movement as a member of national GBCs has been evident for many years, and we are excited they are now taking a strategic leadership role as one of our partners at the regional level.'

Green building makes an important contribution to sustainable growth on a national, regional and a global scale. Green buildings offer a range of economic benefits, including job creation and ***reduced*** business operating costs. Social benefits include improved health and well-being of occupants, and environmental benefits include lower ***greenhouse gas*** ***emissions*** and other environmental impacts.

Sustainability in construction covers the entire value chain from raw materials to construction products, to the operation of buildings and housing over their entire life cycle. GBCs are successfully engaging with stakeholders along this value chain. As a supplier of products, solutions and expertise, BASF is already engaged in several local GBCs, such as the German Sustainable Building Council (DGNB).

A number of GBCs are also applying and promoting rating tools that allow an assessment of the sustainability of construction and buildings. Such evidence-based assessments are crucial to increase market demand and innovation for more sustainable construction. BASF not only supplies innovative sustainable construction solutions, it has also incorporated sustainability in its own guidelines for Corporate Real Estate Management. It commits to exceeding legal requirements for new construction by meeting the recognized green building rating tool standards, as promoted by the GBCs.

BASF building products used on new office building

One example of BASF applying to high standards of sustainable construction is the recently opened office building D105 at BASF's main site in Ludwigshafen, Germany. The building has a total area of around 35,000 m-2 over seven floors and offers work stations for about 1,300 staff. A large number of BASF products were used in constructing the new building. The shell of the building is based on the Green Sense Concrete technology for resource-saving production and processing of concrete. The flat roofs of building D105 are covered with insulating material made of Neopor, for which BASF produces the raw material. The low thermal conductivity meets the high ***energy*** requirements of the building, ***reduces*** carbon ***emissions*** and lowers costs.

The insulation of floor panels and perimeter of the new building D105 are made of Styrodur. This extruded rigid polystyrene foam (XPS) makes a significant contribution to reducting in carbon ***emissions*** thanks to its optimal thermal insulation. Two elements of the external facade were insulated with SLENTEX. This high-performance insulation material is easy to process, non-flammable, made of inorganic aerogel and provides highly efficient thermal insulation. This micro-encapsulated phase-change material Micronal PCM from BASF was used in the meeting rooms. The latent heat storage system supplements the active cooling ceilings with its thermal buffer storage function.

In plant and break rooms, corridors and sanitary facilities the durable MasterTop flooring systems were installed. The floors are low-***emission*** and contribute to a healthy indoor climate. Ucrete polyurethane concrete was used to cover floor areas subject to heavy wear such as storage rooms and the kitchen. Ucrete is an extremely durable flooring system with joints held to a minimum.

BASF is seeking a platinum-standard certification of its new D105 office building from the DGNB. This designation requires compliance with high standards in construction, use and dismantling. The DGNB system looks at all the key aspects of sustainable building over the entire life cycle of a building, taking a number of factors into account, including ecology, economy and technology.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 112,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, ***Agricultural*** Solutions and Oil & Gas. BASF generated sales of more than EUR70 billion in 2015. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information at [*www.basf.com*](http://www.basf.com).

About World GBC and the Europe Regional Network

The World Green Building Council is a global member network of Green Building Councils in 75 countries enabling green building and sustainable communities through leadership and market transformation. The Europe Regional Network (ERN) is a community of 25 Green Building Councils, six Regional Partners, and over 5,000 company members across Europe, which represent the full breadth of stakeholders in the buildings industry. Our Regional Partners are BASF, E.ON, Knauf Insulation, Saint-Gobain, Skanska and UTC.

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**Load-Date:** May 10, 2016

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[***From boat building to farming, all together in the bio-economy***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GY5-1281-F0BB-S41P-00000-00&context=1516831)

Irish Examiner

September 17, 2015 Thursday

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**Section:** SUPPLEMENTS

**Length:** 863 words

**Body**

Food beverages and tobacco sector second only to pharmaceutical for value added in manufacturing

( [*eamonnpitts@gmail.com*](mailto:eamonnpitts@gmail.com) )

How important are ***agriculture***, fishing, forestry and the marine to the Irish economy.

Not at all important. according to some figures; but other figures indicate that they are vital.

Let s start with the discouraging bit. ***Agriculture***, fisheries and forestry accounted for only 2.5% of the income generated in the economy in 2010, while food production and processing together accounted for about 4.5%, giving a total of 7% for the sector.

Farming as a proportion of the total has been in decline for decades. It is a mark of every developing economy that the share of ***agriculture*** declines.

The direct contribution of these sectors to employment was somewhat larger, at 7.7%.

Of this employment, 55% was in farming, 35% in food processing, 4% in drinks processing, 3% in wood processing, 2% in forestry, and 1% in fishing.

***Agricultural*** output has grown by 1.9% per annum from 2008 to 2013, while the national income had declined by 2% per annum over the same period. But in the past two years, things have begun to change again, with a projected increase of 5% in the overall national income this year, on top of an increase of more than 3% last year.

Of the value added in manufacturing industry in 2013, food beverages and tobacco accounted for just short of 25% of the total, and the sector is second only to the pharmaceutical industry in that regard.

The value generated in the food and drink sector increased by 30% during the recession years since 2008, while the overall value added in manufacturing declined by 4%.

Now let s look at exports.

***Agriculture*** and food account for about 40% of net foreign earnings.

In 2008 (and it would not have changed since), every 100 of exports from the sector generated 52 in net foreign earnings. In contrast, every 100 of exports from the non-bio sector generated only 19 of net foreign earnings.

This difference arises because ***agriculture*** and food have a low import requirement, are mostly home-owned, with no repatriation of profits abroad, and have much higher purchases of goods and services from the local economy.

A related issue which appears to disadvantage ***agriculture*** and food, compared with multinational investments, is the relatively low increase in direct labour associated with an increase in ***agriculture*** or food output.

However, because of the links with other businesses in rural areas, the increase in indirect labour associated with an increase in ***agricultural*** output is much higher than for many other enterprises, but may be ignored or forgotten in the bureaucratic debates.

New Economic Model

Many of these issues came up in discussion at the launch last week of a new bio-economic model of the economy, which seeks to quantify the scale and interactions between the green economy (***agriculture*** and forestry), and the blue economy everything associated with the sea.

Much of the latter has not been quantified before, but there is now a collaboration between Teagasc economists and those in a new institute in NUI Galway, called SEMRU (Socio-Economic Marine Research Unit) to model these two predominantly rurally based sectors.

All economic models are wrong (like weather forecasts!), but some are useful.

The aim of this new model is to calculate the impact of policy changes.

The Government has set out ***targets*** for both the agri-food and the marine sectors.

The first task with the new bio-economic model is to calculate the overall impact on the economy, and in particular on employment, if these ***targets*** are met.

Foodwise ***Targets***

We are familiar with the Food Harvest ***targets*** to 2020 for the ***agriculture*** and food sectors, but these have been added to in recent times by new ***targets*** for 2025, in a report called Foodwise .

These ***targets*** are ambitious, and include

\* increasing the value of exports by 85%

\* increasing the value added (or income generated) in farming, fishing and forestry by 65%

\* increasing the value added in the processing industry by 70%

\* adding 23,000 jobs in the farming and food processing industries.

All of these increases are relative to the average figures in the period 2012 to 2014.

Teagasc researchers have set out to calculate the impact on the economy and in particular on employment, if these ***targets*** were achieved.

The researchers do not question the validity of the ***targets*** (despite pressure to ***reduce*** ***greenhouse gas*** ***emissions*** in the beef and dairy sectors; it is also questionable whether ambitious ***targets*** for doubling the output of the poultry sector can be achieved, given our lack of an obvious competitive advantage in this area).

The best research estimate is that if Foodwise ***targets*** were achieved, 23,200 extra jobs would be generated, of which 11,900 would arise in farming, 10,000 in processing and 1,300 in other sectors of the economy.

Dairy growth accounts for about two thirds of the increase in employment.

The econometric models behind these projections are at an early stage of development, and researchers readily admit, for example, that data on forestry is poor, and out-of-date, and environmental implications are not being captured in models.

**Load-Date:** September 17, 2015

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[***At climate summit in Washington, UN officials call to take action 'to the next level'***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JPK-PFS1-F0K1-N0TM-00000-00&context=1516831)

M2 PressWIRE

May 6, 2016 Friday

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**Length:** 675 words

**Body**

May 5, 2016

Recalling that just two weeks ago, 175 countries came to the United Nations to sign the historic Paris Agreement on climate change, Secretary-General Ban Ki-moon today said it is time to take climate action to the next level.

"We need to accelerate the speed, scope and scale of our response, locally and globally," Mr. Ban told participants of the Climate Action Summit 2016 in Washington D.C, a two-day meeting that started today and aims to strengthen the multi-stakeholder approach to climate implementation.

In particular, it is expected to deepen and expand the action coalitions of government, business, finance, philanthropy, civil society and academic leaders launched at the Secretary-General's Climate Summit 2014 in New York.

"I have been looking forward to this event because it is about solutions - innovation and imagination; collaboration and partnerships between the public and private sectors. Today as never before, the stars are aligning in favour of climate action. Everywhere I look, I see signs of hope," he said.

Noting that the current Summit would focus on six, high-value areas of multi-stakeholder partnership: sustainable ***energy***; sustainable land-use; cities; transport; and tools for decision-making, the UN chief underscored that strong partnership would be needed at all levels to tackle those challenges.

"No sector of society and no nation can succeed alone. I encourage you to collaborate. Innovate. Invest. Together we can build the world we want," he said.

The signing of the Paris Agreement on 22 April received overwhelming support from all regions of the world; never before had so many countries signed an international accord in one day.

Adopted in Paris by the 196 Parties to the UN Framework Convention on Climate Change (UNFCCC) at a conference known as COP21 last December, the Agreement's objective is to limit global temperature rise to well below 2 degrees Celsius, and to strive for 1.5 degrees Celsius. It will enter into force 30 days after at least 55 countries, accounting for 55 per cent of global ***greenhouse gas*** ***emissions***, deposit their instruments of ratification.

"Two of the world's largest emitters - China and the United States - have pledged their continued commitment and collaboration," Mr. Ban stressed, noting that leaders must turn the "promise of Paris" into action and implementation as soon as possible.

The UN chief also announced that in September, on the margins of the G20 meeting, he intends to co-convene a meeting in China similar to this one to further solidify coalitions.

Also speaking at the event, the President of the World Bank Group, Jim Yong Kim said there is no time waste.

"Political agreements are critical but they are just the beginning. We must regain the sense of urgency we all felt on the eve of COP21. Inaction means we will not meet our ***targets*** set in Paris, and the global temperature will soar above 2 degrees Celsius. That would spell disaster for us, for our children, and for the planet," he warned. Mr. Kim highlighted the World Bank Group's Climate Action Plan, developed soon after the Paris agreement, which aims to increase its support in a range of areas - from water to crowded cities and from forests to ***agriculture***.

"One part of our plan is to help countries put a price on carbon, which will create incentives for investments in renewable ***energy*** and in ***energy*** efficiency," he explained. "In many parts of the world, we have seen the price of renewables like solar and wind falling fast - so fast that they are now competitive with fossil fuels. Private sector investments are pouring in. But we need to expand these breakthroughs and help countries establish the right policies that will drive down the cost of renewable ***energy*** even further."

Over the course of two days, the Summit is expected to drive high-level engagement with "global luminaries" addressing plenary sessions on how to deliver on climate commitments and embed the transformation agenda across the globe in government, key sectors and among the general population.

**Load-Date:** May 6, 2016

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[***Philippines calls for adaptation funds in climate change talks***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HJ0-P5W1-DYRV-332G-00000-00&context=1516831)

BBC Monitoring Asia Pacific - Political

Supplied by BBC Worldwide Monitoring

December 5, 2015 Saturday

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**Length:** 797 words

**Body**

Text of report published by Philippine newspaper The Daily Tribune website on 4 December

Paris, France - On the fourth day of UN climate change negotiations on Dec. 3, the Philippines calls for adaptation funds that will not result in additional financial burden for Filipinos.

Alicia Ilaga, the country's lead negotiator for adaptation and director of the Climate Change office of the Department of ***Agriculture***, said that they want the Paris agreement to reflect that adaptation finance must be grants-based. "Assistance for infrastructure improvement, the relocation of communities to places that are safer require money. We shouldn't have to be subjected to having more debt from the international community to get that help," she said.

Funding adaptation measures is a critical aspect of the allocation of climate finance. Adaptation support is crucial for the country as it experiences extreme weather events that affect farmers, fisherfolk and other vulnerable sectors. This has implications on the country's food security and economic stability.

The UN Framework Convention on Climate Change 2007 report on "Investment and Financial Flows to Address Climate Change" projected that developing countries would need 28 billion-67 billion dollars annually by 2030 for adaptation. The maximum projection of 67 billion dollars is more than half of the 100 billion dollars to be provided under the Green Climate Fund, the main funding mechanism for mitigation and adaptation initiatives in developing countries.

But it is not just a question of how much money is needed, it's also an issue of how the funds would be provided. Finance for adaptation should not come in the form of loans as this will make it harder for developing countries - which are also the most vulnerable to the effects of climate change - to access funds. Loans should be repaid and incur interest. Grants, on the other hand, do not carry such conditions.

Ilaga said these could best support adaptive measures that would strengthen livelihoods, food security and ecosystems. This also complements the country's position that adaptation finance must be needs-based - this means that the country would seek and use funds for their priorities that have been identified in their national adaptation plans or NAPS. The country is in the process of completing its own plan.

The Philippines also wants to ensure that there is parity between mitigation and adaptation in climate finance. The country believes that adaptation has mitigation co-benefits; hence, funding for adaptation should not be seen as additional costs but as investment to make mitigation also more effective.

The Climate Vulnerable Forum, a coalition of 43 middle-sized economy and small-island developing countries headed by the Philippines, called for strong support of adaptation actions. They said that adaptation will help them meet their goal of ***reducing*** their ***greenhouse gas*** ***emissions*** to below 1.5oC.

"Adaptation needs are inseparable from the long-term goal. The approximately 3-degrees of warming that current commitments have the world on track for will require enormous adaptation efforts compared with current needs," the CVF said in its Manila-Paris Declaration released on Nov. 30.

"Holding the rise in temperatures below 1.5oC ***reduces*** adaptation costs significantly even if major additional efforts are already required simply to manage impacts associated with the current 0.75 to 0.85oC degrees of warming."

The CVF pointed out that developing countries are already "leading the design of adaptation plans" as reflected in the intended nationally determined contributions or INDCs in 2015. INDCs capture the mitigation and adaptation ***targets*** of each country.

"The Paris agreement can make a difference on the ground if it supports the implementation of these proactive adaptation actions, and further efforts to lead by example," the CVF stressed.

President Aquino said also pointed out at the CVF forum that even if we are getting "better at adaptation," we still need more help.

"People still die and whole communities are displaced; businesses are affected, thus stunting economic activity. Funds that could otherwise be used for other development needs and services are channeled toward the costly efforts involving relief, rehabilitation, and reconstruction."

Secreatry Emmanuel de Guzman, head of the Philippine delegation at the 21st Conference of Parties or CoP21 in Paris, said that they will push for strong adaptation support from developed countries. "We need predictable, scaled-up funding to adapt to the consequences of climate change. The world must heed this call if they are sincere in helping developing nations. There should be no strings attached in this assistance."

Source: The Daily Tribune website, Manila, in English 04 Dec 15

**Load-Date:** December 5, 2015

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[***What will fill the hole left by coal?; When mines close in Victoria, local people fear for their future and predict whole towns will die. But if the Coalition and Labor are serious about their climate change targets, are they also ready to replace the lost Australian jobs?***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K40-9S31-F021-613T-00000-00&context=1516831)

The Guardian

June 28, 2016 Tuesday 10:36 PM GMT

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**Section:** AUSTRALIA NEWS

**Length:** 5746 words

**Byline:** Gay Alcorn and Kate Stanton

**Body**

Greg Dunn, coffee in hand, has just finished a 12-hour night shift at the Hazelwood power station. He is tired, but in his low-key way, he is resigned, too. He rattles off the members of his family who have worked in the electricity industry in Victoria's Latrobe Valley, a list that almost certainly will end with him.

Dunn's father worked as a boilermaker in the valley. His grandfather worked here too, back in gentler days when electricity was thought an essential service for governments to run. In the valley, it was the state electricity commission (SEC).

"My mother's father, he was a rigger in the SEC," says Dunn. "Three of my uncles worked for the SEC. My mother worked for the SEC in the front office, that's where she met my father."

Dunn is 47. His life, like thousands of people in towns throughout the valley east of Melbourne, has been defined by an accident of nature - beneath the earth lies one of the world's largest deposits of brown coal.

He grew up in the SEC town of Yallourn, with planned streets, swimming pool and art deco cinema, the pride of the valley until it was decided that it should be demolished to dig up the coal beneath the houses. The town was gone by 1983. Dunn is resigned to something similar happening to valley towns like Morwell, Traralgon, Moe and Churchill, if not physically, then slowly, and perhaps more painfully.

"Once this industry closes, these towns will die, these towns will go," he says. He is already thinking about moving to find new work, but he's proud to have worked in the industry for almost 30 years. "I love the fact that I generate electricity. People take it for granted. It's three in the morning, they get up to go to the toilet, they flick the light on. Someone's sitting there all night supplying that power."

Climate change and coal are heated side issues in this election campaign, apart perhaps from the dangers to the Great Barrier Reef. But whatever happens on 2 July, no party will be able to ignore out-of-the-way places such as the Latrobe Valley, as well as other coal regions such as the Hunter in NSW and Collie in Western Australia.

Change is imminent. The mayor of the Latrobe Valley, Michael Rossiter, wrote an opinion piece after Labor announced its climate policies that include a process for closing down coal-fired power plants. "The transition away from brown coal is not the thing we fear," he wrote. "What we fear is being abandoned."

The reason why the valley, with its four big power stations and three open cut coalmines, is on the frontline is simple enough. If Australia has any chance of ***reducing*** our carbon ***emissions*** even to the extent that the parties have agreed so far, we must replace our reliance on fossil fuels to produce our electricity, especially coal, with cleaner and renewable ***energy***. This much is not in dispute.

Related: Climate change: John Hewson accuses Coalition of 'national disgrace'

Among those modelling the myriad ways Australia could shift to a clean economy, there is close to a consensus about one thing: we must begin to shut our coal-fired power stations long before they are due to shut. And it makes sense that the ones that should shut first should be the dirtiest. These are the stations that spew out carbon dioxide, the biggest contributor to global warming, at the greatest intensity, pumping more into the atmosphere for each unit of electricity produced than any other source of power.

These are the brown coal-fired power stations, and all of them are in the Latrobe Valley. There are just four of them - Hazelwood, Yallourn, Loy Yang A and Loy Yang B, great hulking things, beautiful in their way, rising from the horizon almost everywhere you look. The mines feed the nearby power stations, and they alone account for about 12% of Australia's green house ***emissions***, the highest intensity of ***emissions*** of any electricity source in the nation.

One of them, Hazelwood, for years a symbol for protesters, is 50 years old. Its red "Hazelwood" sign is faded, its maintenance falling away, and security men swoop if any journalist stops to take a photograph. Still, it has done good service - it alone provides a quarter of Victoria's base load electricity needs. Yet if this single power station closed tomorrow, Australia's carbon ***emissions*** would at least theoretically drop by close to 3%. There are rumblings that at least a partial closure will be announced soon.

If elections test what the role of government should be, this is a classic case study. Labor says there is a role for governments in shutting the most polluting stations. "Electricity is an essential service," Labor's environment spokesman Mark Butler tells Guardian Australia. "We are not talking about moving from DVD stores to Netflix here." The Greens agree, with a detailed plan listing every coal-fired power station in the country, with a timeframe for their closure. The government is less convinced, saying renewable ***energy*** such as wind and solar will pick up the slack as older power stations reach the end of their natural lives, and that cleaner stations will continue to be part of the mix. It has no plans to facilitate closing coal-fired power stations.

And herein lies the problem - the toxic state of Australia's environmental politics. "The last 10 years have been a roller coaster," says John Connor, CEO of the Climate Institute, an independent research group. Connor's position is clear: this is urgent, and governments have a critical role. "We need an actual transition plan for all of the existing coal-fired power stations, and that needs to happen over the next two decades."

We have this thing in Australia around power stations. They seem to have this sacred status

Nick Aberle, Environment Victoria

The argument about whether Australia should be opening new coalmines particularly for export to countries such as China and India is about the black coalmines in Queensland and New South Wakes, and whether the economics of them - let alone their contribution to climate change - stacks up.

In Australia, coal is king. Fossil fuels provide 85% of the electricity we generate - a huge percentage by international standards. Coal alone provides about 60% and renewables such as wind and solar account for just 14.9%. There are other industries that pump out carbon dioxide, such as ***agriculture*** and transport, but electricity generation is the single biggest challenge, accounting for a third of all our ***emissions*** - and rising.

Australia's 16 active black coal power stations provide more of our electricity than brown, but brown is the most polluting. It contains much more moisture, meaning that more of it needs to be burned to produce ***energy***. And it's as cheap as chips. There's no export market for it because of its water content and its volatility, so it's all ours. The coal is easy to dig up, and transport is as simple as sending it up a conveyor belt to the adjacent power stations to burn it and convert it into electricity.

Because they are so cheap to run and because Australia is in the unique situation of producing more electricity than it needs at the moment, they are holding up investment in renewables. "There's a real log jam now because it's very hard to build new wind farms or new solar power stations because there's already so much generating capacity in the system," says associate professor Mark Diesendorf, from the University of New South Wales, who has worked on modelling for how renewables could provide our power needs 24 hours a day.

It's easy to say shut them down, but it's proved devilishly hard to do. "We have this thing in Australia around power stations," says Nick Aberle from Environment Victoria. "They seem to have this sacred status."

The Coalition government joined almost 200 other countries in Paris last year in a historic agreement to keep the increase in global average temperatures to "well below" two degrees above pre-industrial levels, with the aim of avoiding the most catastrophic impacts of climate change. It agreed, too, to shift away from burning fossil fuels, the main contributor to global warming.

The government has pledged to ***reduce*** carbon ***emissions*** by 26% to 28% on 2005 levels by 2030, a start, but inadequate according to many experts, although it could be ramped up later. Labor has gone further, promising to cut ***emissions*** by 45% by 2030 - better, but still not enough, say many experts - and for Australia to have zero net ***emissions*** by mid century. After the political traumas over climate policy over the past few years, both sides are wary of discussing the details, particularly during an election campaign. Both will have "reviews" of policy - but not until after the election.

After the Paris agreement, Connor said that amidst the cautious optimism, the "elephant in the room" was old power stations. "We still have this massive problem of these old hulking coal burning power stations which are dominating our power system because they're so cheap to operate," Connor says now.

It's not as though we haven't had time to think about this. Way back in 2010, then Victoria premier John Brumby announced Hazelwood would close. "If you want to tackle greenhouse [***emissions***], if you want to tackle climate change - you can't do that without tackling the worst of the coal generators, which is Hazelwood," he said.

In those days the idea was for governments to buy them out, but Julia Gillard's government abandoned paying for five high polluting generators to shut - three of them in Victoria - because the owners wanted too much money. Hazelwood - the dirtiest power station in the country - and Yallourn, almost as bad, chug on.

Why it matters, says Dr Roger Dargaville, a senior ***energy*** analyst at the Melbourne ***Energy*** Institute, is that if we are to decarbonise our economy by 2050 at the latest - an outcome needed to play our part in limiting global warming - it will need a suite of policies. It needs a market-based limit on carbon ***emissions*** by big polluters, a renewable ***energy*** ***target*** and huge investment in clean ***energy***, and it needs a plan to close coal-fired power stations in an orderly way. Renewable ***energy*** ***targets*** are important, he says, but it's a "sideway step to the ultimate goal" - ***emissions*** ***reduction***. If the mix isn't right, and if each part doesn't complement the others, strange things can happen.

"Imagine a scenario where you say, let's have 50% renewables but you could keep all the dirtiest brown coal generators still in the system. Your ***emissions*** wouldn't go down that much," he said.

The least cost path to a low carbon economy means "obvious things" need to happen and they need to happen in order. "You phase out brown coal quickly, you phase out black coal reasonably quickly after that. You build a lot of wind in the next couple of decades." Gas, a cleaner fossil fuel than coal, could be used as an interim measure. Beyond 2030 or 2040, says Dargaville, it would need a big investment in what's called "dispatchable renewables" - more controllable than wind and solar, which depend on the wind blowing and the sun shining.

There are many technologies around, and there is optimism about the possibility of large-scale storage of wind and solar power. "The problem is we don't really know how much any of those are going to cost yet," says Dargaville. "There's a lot of uncertainty as to how to get there." And we need to keep our electricity system smooth and affordable. "It's a lot more difficult than you think."

Everything is interconnected. Closing stations overnight in the Latrobe Valley would affect the electricity mix in other states because NSW, Victoria, South Australia, Tasmania and the ACT are connected to a national market, designed to ease problems popping up in any one region.

Yet we could close Hazelwood today with no impact on the reliability of electricity. The authority that manages the national market, the Australian ***Energy*** Market Operator, said in 2014 that Australia had a surplus of electricity generation capacity, a result of ***reduced*** demand and the high take-up of rooftop solar. The excess was more than 7,000 megawatts - in rough terms, enough to power 120 million 60W light bulbs.

Hazelwood has a capacity of around 1,700 megawatts, which means that's the maximum amount of electricity it can produce at any time. So shut it today and we wouldn't notice. But close the other three today and things would start to wobble, particularly on hot summer days when demand soars.

We could assume, or hope, that power stations will shut as they age and renewables coming on board will pick up the slack, but Dargaville and other experts in this area say that given the complexity, government oversight is needed. Hazelwood's license expires in 2034. Yallourn, more than 40 years old, will run out of coal reserves in 2032. Loy Yang A actually pumps out more ***emissions*** than Hazelwood - but at less intensity - and is due to shut in 2048. Loy Yang B is the youngest of them, having begun operations in the 1990s. Why can't we just sit it out and wait for them to shut down?

"It's a bit like grandfather's axe," Dargaville says. "You can keep on reconditioning these things and keep them going almost forever."

Related: AGL boss: regardless of climate science, it's time to drop the '***emissions*** business'

Labor agrees. The details of how and when Labor will close stations is not yet clear, and will be reviewed after the election. But Labor is backing an innovative proposal by Frank Jotzo and Salim Mazouz, from the centre for climate economics and policy at the Australian National University. They have come up with a market system to shut them down because the notion that taxpayers would pay for power stations to close offends everyone.

"If nothing is done, then the most likely scenario is that all of these really old power plants are just going to hang on for some years," Jotzo tells Guardian Australia. "Then the exit that we will see would most likely be a black coal-fired power plant, which is not as bad in ***emissions*** as a brown coal-fired plant." That's because cleaner black coal plants are more expensive to run, particularly in the absence of some sort of carbon price - brown coal generation of electricity started to decline under the previous Labor government's carbon tax, then picked up again after the current government repealed it.

This is how Jotzo's idea would work. There are four stations owned by three companies. Each would bid competitively on how much money they would accept to shut down straight away. The federal regulator would have a look at the bids, and choose the most cost effective one. The remaining power stations would pay the winning bidder to shut. There is a brilliance to it - the owners know that at some point several of them will close, but no one wants to be first because it would leave the others to make more profit.

"You can expect that Hazelwood would put in a very competitive bid under that scenario because it is the oldest plant and would have a relatively low remaining lifetime," says Jotzo. It couldn't ask for too much money or it might be beaten by another bidder. "It's not meant as a cure-all or even a medium to long-term policy mechanism. It's meant as a short-term approach to a very particular short term problem."

There is real interest in the idea, even among the owners of the power stations. Andy Vesey, the chief executive of AGL ***Energy***, which owns Loy Yang A, says it has merit. AGL has announced it will get out of the coal-fired electricity business no later than 2050 - too late, according to critics - but an intention at least. Crucially, the company believes the stalemate over the most polluting power stations is "one of these rare instances" that needs government intervention. Other owners agree: Mark Collette, from ***Energy*** Australia, the owner of the Yallourn power station, says "detailed planning" is needed, but "we support an orderly, realistic transition from large, older coal-fired power stations to cleaner forms of ***energy***".

Labor's Mark Butler says if the ALP wins the election, "the clean ***energy*** regulator would oversee a tender essentially based on the Jotzo model". Shutting down the dirtiest stations is a part of its clutch of policies, some of which lack detail so far, including an ***emissions*** trading scheme for heavy industry, another for the electricity sector, a renewable ***energy*** ***target***, tougher standards for vehicles, and a $300 million "just transition" fund for workers and communities affected by such big change.

There are questions about how much the idea would affect electricity prices, and Butler concedes "everyone including Frank has recognised that this model needs a lot more work to develop". But he says the "the fundamental framework is one that we support after talking pretty closely to people in industry about it".

The government is convinced, as foreign minister Julie Bishop told reporters after the Paris meeting, that "coal-fired power generation is here to stay". It also has a suite of policies to ***reduce*** ***emissions***, including its direct action scheme involving paying companies to pollute less - a costly way to doing it, according to most experts, and as it stands unlikely to meet our long-term commitments. The coalition is committed to a review after the election.

It has a renewable ***energy*** ***target***, less than Labor's, and believes renewables will gradually replace old stations as they retire, some of them before their natural lifespan. The rest could be cleaned up.

"There are many people who think that there will be dramatic breakthroughs that allow those fuels to be used with extremely low or even approaching zero ***emissions*** as we go forward," environment minister Greg Hunt has said. During this election campaign, he has dismissed Labor's plan to close the dirtiest stations as a "vague aspiration" that could hit consumers with higher bills.

There may not be the same heat in this issue as there was before the last election, when one of Tony Abbott's core promises was to "scrap the carbon tax". One reason may be that the mood has shifted as the impacts of climate change have become more obvious and because Abbott's hostility towards renewable ***energies*** have softened under Malcolm Turnbull. An opinion poll of three marginal Victorian seats released this week by Environment Victoria found concern overall about climate change at 78%, and support for shutting Hazelwood "in the next few years" at 77%.

Related: Climate change: poll finds support for strong action at highest level since 2008

Still, there are hints of old-style politics, with the coalition warning Labor's plans will again amount to a "big thumping electricity tax" on families, as treasurer Scott Morrison has put it, a notion Labor leader Bill Shorten dismissed as a scare campaign.

The federal resources minister, Josh Frydenberg, has demanded the Victorian government reveal how it would meet its ambitious new environment plans, including a 40% ***target*** for renewable ***energy*** by 2025 (a big jump from the 12% the state gets from renewables now), and "net zero" carbon ***emissions*** by mid century. It would be impossible for those ***targets*** to be achieved while the four big stations continue as they are.

"We need to ensure that the transition to increased renewable ***energy*** takes place in a smooth and cost effective way, without interruption to electricity supply," warned Frydenberg. "With this in mind, coal-fired power plants will continue to play an important role."

So sensitive is the Victorian government to the politics of this that, despite boasting the state now "leads the nation" on climate action, it won't say the obvious about its own power stations, even Hazelwood.

"There are many decision makers on Hazelwood," said Victoria's premier Daniel Andrews. "It's a private company and the decisions about its future as a business are a matter for them." Which is odd, because the federal ALP says it will look to close power stations, and it has embraced a plan specifically for the brown-fired ones in Victoria. State ministers declined to be interviewed, but the government is due to release a coal policy later this year, and has said it is looking at "barriers to exit" for the stations.

Victorian Greens MP Ellen Sandell has visited the Valley a half dozen times to talk to locals and develop the party' s policy, including a visit with party leader Richard Di Natale. Greens policy is based on the intensity of carbon dioxide ***emissions***. It would set limits that would ***reduce*** over time, forcing power stations to shut one by one, with a proviso that there would be no impact on reliability.

"Every time I bring it up in parliament Daniel Andrews says, 'oh well it's not up to us to decide when coal shuts, it's up to the operators'," says Sandell. "It's like, since when? Since when has government thrown up its hands and said 'we have a huge environmental and social disaster coming down the line and there's nothing we can do about it'. There is something you can do about it, you're the government."

It is the states that issue mining and power station licenses, and there are many ways they could shut them down, although nobody suggests that each state should go it alone.

'Transition' is the buzzword, a word tossed about with optimism, or resignation, or cynicism

The Victorian government could revoke their licenses, although that is unlikely because it could raise concerns about future investment. (The UK, however, late last year announced it would close all its coal-fired power stations by 2025 because it was "perverse" to be so reliant on the "dirtiest fossil fuel").

It could, as Victoria has recently done, boost the royalties the companies have to pay and gradually squeeze the stations' profitability - the companies complained bitterly about the trebling of royalties, although analysis suggested they would still be cheaper to run than interstate black coal stations.

It could, as Canada has done, simply set a lifetime limit - requiring plants to close once they reach a certain age, say 50, which would close Hazelwood (and begin to close some ageing plants in other states, too). Or it could do what US president Barack Obama has done through the Environmental Protection Agency, requiring states to make major cuts to their green house ***emissions*** which would close hundreds of coal-fired power plants. Interestingly, the Victorian government has recently flagged it will give its EPA the explicit power to regulate ***greenhouse gas*** ***emissions***.

Whichever way it is happens, by design or accident, some people will suffer more than others. Brown coal was discovered in the Latrobe Valley in 1873, with the sod turned for its first power station in 1921. That was an earlier version of Yallourn, an Aboriginal word meaning "brown fire". That fire has been the emotional and economic heart of the Valley since. With 500 years worth of brown coal still sitting there to be dug up, it's impossible for many people to imagine a future without it.

There have been rumours about the power stations closing for years but most now accept change is coming. "Transition" is the buzzword, a word tossed about with optimism, or resignation, or cynicism.

We lost about 15,000 jobs in the Latrobe Valley ... there were middle aged people who never worked again.

Graeme Middlemiss

There is an extra layer of anxiety born of experience. In the 1990s, Jeff Kennett's government privatised the power industry, disbanding the benevolent SEC and selling off the stations to different companies. People say they heard the word "transition" then, too, but it was a hard one.

"We lost about 15,000 jobs in the Latrobe Valley in a community of 75,000," says Graeme Middlemiss, a local councillor "born and bred" in the valley who worked for 30 years in the power industry. "That's enormous. There were middle aged people who never worked again. And they slipped in society, their feeling of self worth, a much higher level of suicide, we had domestic violence. I saw all that happen. We can't let it happen again."

The valley slowly crawled back from that disaster, but it remains disadvantaged. It has higher unemployment and lower education results than the state average. Men and women die earlier, and it has seven times the rate of asbestos disease, partly because of its use in the early days of the power stations.

The town of Morwell, just a few hundred metres from the giant Hazelwood coalmine - you can see it if you stand on the southern side of town - is especially disadvantaged. Its 14,000 people suffered severe health problems from a fire that took hold at the Hazelwood mine in 2014, blanketing the area in smoke and ash for 45 days.

There is a sense here that it's time the valley was given a leg-up after decades of providing prosperity for others. There won't be as many jobs to go as there were after privatisation. There are now more people employed in health and social services than in the electricity industry, although it remains the biggest contributor to the local economy.

Related: Catholic orders take their lead from the pope and divest from fossil fuels

The mines and the power stations employ a couple of thousand people directly. Then there are contractors who rely on the mine, and towns and businesses that need the workers to spend money every week. The jobs are well paid and the average age of workers is about 54, according to the key union, the CFMEU.

The union's Victorian mining and ***energy*** president, Luke van der Meulen, is 64 and about to retire. He is open about what the union has achieved for power workers. His own salary is $170,000 a year, linked to the average member's wage, which includes shift work and compensation for danger. There are good conditions for redundancy. Those nearing retirement will be looked after, but he worries about jobs for younger workers, and for teenagers in the valley who will struggle to find jobs. And he fears for the future of the valley.

"As far as a steady, full-time, high-wage group of people who are putting lots of money into the community, when Hazelwood shuts down, there'll be something like 800 full time jobs that'll cease to inject money into the community. You're talking big money."

He knows the mines will close - his best guess is Hazelwood will announce at least a partial closure this year. As for transition to something else - new industries, new jobs, new hope - he fears politicians might make promises, and "there might be shingles here and shingles there. But doing something? No, I don't think there's going to be a lot. It's going to be another sad story."

Not everyone is so pessimistic. There are are ideas popping up all over the place. The state government has pledged $40m for transition, although there is no detail yet about what the money will be used for, and many locals believe it's a pittance.

The local council's motto is "a new ***energy***" and it is preparing a transition plan to be put to the government. It proposes the valley could be the "engineering capital of Australia", a centre for education and training. Who knows? Perhaps there could be an "engineering hall of fame and museum". Or a new chicken meat factory or opportunities in timber manufacturing. Why couldn't the government shift some department headquarters to the valley?

But Middlemiss, a councillor as well as a long-time union official, is deeply worried. The valley's problem is that it has few natural advantages, he says. Apart from the electricity industry, the region's big employer is a paper mill, owned by Japanese giant Nippon Paper. The mill has also gone through hard times, and has announced a "turnaround" plan after years of financial struggles. Its maintenance workers recently accepted ***reduced*** hours and a wage freeze.

Middlemiss is not arguing against the science of climate change, but he says the truth is the only future for the valley lies in its best asset - brown coal. The council's recently released economic development plan holds to the same faith, that brown coal must be part of the solution.

"The best case scenario is continued research into alternate cleaner uses of brown coal so we can establish manufacturing or processing industry around what is Australia's second largest source of ***energy***, which is Victoria's largest source of ***energy***. We're sitting right on it," said Middlemiss.

He's talking about ideas that have been around for years, such as using brown coal to help produce ***agricultural*** fertiliser. "What I'm saying is that it's an avenue that we neglect at our peril. We've got a couple of patches of good soil [for ***agriculture***]. But the valley is a multimillion-year-old swamp which has turned into brown coal."

Middlemiss believes politics has prevented serious research money being put into alternative uses for coal but, whether he is right or not, the promises haven't been delivered. In 2008, the front page of the local paper, the Latrobe Valley Express, trumpeted a $2bn project to produce ***agriculture*** fertiliser using brown coal. It would create 1,000 construction jobs and 180 ongoing roles, and would start operating in 2012.

Company chairman Allan Blood said it would showcase clean coal technology to the world. But a year after it was due to be opened, Blood, a champion of the potential of brown coal for more than a decade, was reported in the paper stating "very cautiously [that the project] is a long way from a done deal."

"I don't want to give false expectations and false hopes that I've been accused of contributing to before." Still, work goes on.

Also in 2013, the Herald Sun reported more hope for the valley. "Pollution from the ­Latrobe Valley could be halved and jobs created under a plan to clean up coal-fired power stations," it said. As well, this "could be one of the first funded by prime ­minister Tony Abbott's ­Direct ­Action plan to replace the ­carbon tax".

Related: Australia's dirtiest power station may be closed or sold, French owner says

The CSIRO was involved with private industry for a "direct-injection carbon engine" which could ***reduce*** brown coal ***emissions*** by as much as 50%. "It is a potential jobs bonanza as well as a clean ***energy*** bonanza for the Latrobe Valley," Greg Hunt told the paper. Three years on, this has stalled, too, for lack of investment.

A CSIRO source, who declined to be named, said initial work had been done, but the project needed between $30m to $40m to do a full-sized engine trial, and the coal industry was reluctant to commit the money. "It needs investment to take it to the next level and the policy situation isn't conducive to investment," said Phil Gurney of Brown Coal Innovation Australia. There has been no application to get funding through Direct Action because it's just not ready.

Wendy Farmer has no confidence that brown coal has a future in the valley - she says she has heard it all before. Farmer had little interest in the politics of coal and climate change, either, until the Hazelwood mine fire in 2014. She set up Voices of the Valley to demand answers about the fire and its impact, especially on people's health. The environmental disaster politicised her and there is no doubt the community group had an impact. The Labor government re-opened an inquiry into the fire and is pouring millions into monitoring health problems and improving health more generally.

Now, she and a small band of volunteers are shifting their ***energies*** into what might replace coal when it goes. "People fear it because we're talking about transition and you can't talk about transition because so many people think we'll have coal forever," she says. The day before, Hazelwood's French owners Engie flagged that it was withdrawing from coal-fired power generation over time and "we are studying all possible scenarios" for Hazelwood, including closure or a sale. Farmer almost cries when she talks about it.

"It's just too soon for the community," she says. "Even three years, if we can get three years before Hazelwood closes, a staged closure. It can't displace the community more than it's been displaced already."

The group has a transition plan before the state government, although Farmer concedes it is tentative and needs work. It suggests that if the valley has always been the home of ***energy*** in Victoria, why couldn't it be the centre of renewable ***energy*** in some way? It is not the best place in the nation to run wind or solar farms - other places are windier and sunnier - but could it be a centre for innovation, education and research, or perhaps one day a hub for storage or distribution? Because "all lines lead to the Latrobe Valley", could it play a role in a new, green grid?

Ron Ipsen, also with Voices of the Valley, says the group is sometimes accused of being negative about the power stations, of talking the valley down. "We don't want to shut the power stations down," he said. "The economics will shut them down, the public pressure will shut them down. This ship is dying, let's build some lifeboats for our people."

Middlemiss dismisses the idea of a renewable future for the valley as "all airy fairy interesting fabulous stuff". Farmer thinks the council's obsession with brown coal means it has its head in the sand. But the ideas are starting to be refined, and there's heat and passion in the debates. "Let's forget our differences," says Farmer, "and work towards what we're going to leave our children and our grandchildren".

Greg Dunn will start another night shift at Hazelwood at 7pm. He's not a climate change denier, but is sceptical about the arguments for Hazelwood and other stations being shut. He doesn't think it will make much difference to global warming overall. "It's just a token gesture," he says.

Dunn began his career as an apprentice boilermaker. He has worked his way up and is now a unit manager at Hazelwood - a skilled, technical job that sees him overseeing two of the plant's eight units. He doesn't know where he'd find another job, but he wants a good job, a challenging job, not flipping burgers at McDonald's.

Dunn and his wife Lisa are raising two teenage daughters, and he doesn't want to uproot his family. But he might have to.

"I'm not one to sit on me hands," he says. "All I see is places closing. Ford's going, Holden's going. People won't hang around if there's no work, and I won't hang around."

This story was written in collaboration with The Citizen, a University of Melbourne journalism website

**Load-Date:** June 28, 2016

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[***At climate summit in Washington, UN officials call to take action 'to the next level'***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JPK-PFS1-F0K1-N0HD-00000-00&context=1516831)

FinancialWire

May 6, 2016 Friday

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**Body**

Recalling that just two weeks ago, 175 countries came to the United Nations to sign the historic Paris Agreement on climate change, Secretary-General Ban Ki-moon today said it is time to take climate action to the next level.

"We need to accelerate the speed, scope and scale of our response, locally and globally," Mr. Ban told participants of the Climate Action Summit 2016 in Washington D.C, a two-day meeting that started today and aims to strengthen the multi-stakeholder approach to climate implementation.

In particular, it is expected to deepen and expand the action coalitions of government, business, finance, philanthropy, civil society and academic leaders launched at the Secretary-General's Climate Summit 2014 in New York.

"I have been looking forward to this event because it is about solutions - innovation and imagination; collaboration and partnerships between the public and private sectors. Today as never before, the stars are aligning in favour of climate action. Everywhere I look, I see signs of hope," he said.

Noting that the current Summit would focus on six, high-value areas of multi-stakeholder partnership: sustainable ***energy***; sustainable land-use; cities; transport; and tools for decision-making, the UN chief underscored that strong partnership would be needed at all levels to tackle those challenges.

"No sector of society and no nation can succeed alone. I encourage you to collaborate. Innovate. Invest. Together we can build the world we want," he said.

The signing of the Paris Agreement on 22 April received overwhelming support from all regions of the world; never before had so many countries signed an international accord in one day.

Adopted in Paris by the 196 Parties to the UN Framework Convention on Climate Change (UNFCCC) at a conference known as COP21 last December, the Agreement's objective is to limit global temperature rise to well below 2 degrees Celsius, and to strive for 1.5 degrees Celsius. It will enter into force 30 days after at least 55 countries, accounting for 55 per cent of global ***greenhouse gas*** ***emissions***, deposit their instruments of ratification.

"Two of the world's largest emitters - China and the United States - have pledged their continued commitment and collaboration," Mr. Ban stressed, noting that leaders must turn the "promise of Paris" into action and implementation as soon as possible.

The UN chief also announced that in September, on the margins of the G20 meeting, he intends to co-convene a meeting in China similar to this one to further solidify coalitions.

Also speaking at the event, the President of the World Bank Group, Jim Yong Kim said there is no time waste.

"Political agreements are critical but they are just the beginning. We must regain the sense of urgency we all felt on the eve of COP21. Inaction means we will not meet our ***targets*** set in Paris, and the global temperature will soar above 2 degrees Celsius. That would spell disaster for us, for our children, and for the planet," he warned. Mr. Kim highlighted the World Bank Group's Climate Action Plan, developed soon after the Paris agreement, which aims to increase its support in a range of areas - from water to crowded cities and from forests to ***agriculture***.

"One part of our plan is to help countries put a price on carbon, which will create incentives for investments in renewable ***energy*** and in ***energy*** efficiency," he explained. "In many parts of the world, we have seen the price of renewables like solar and wind falling fast - so fast that they are now competitive with fossil fuels. Private sector investments are pouring in. But we need to expand these breakthroughs and help countries establish the right policies that will drive down the cost of renewable ***energy*** even further."

Over the course of two days, the Summit is expected to drive high-level engagement with "global luminaries" addressing plenary sessions on how to deliver on climate commitments and embed the transformation agenda across the globe in government, key sectors and among the general population.

(Distributed by M2 Communications ([*www.m2.com*](http://www.m2.com)))

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[***Biochar Market Will Rise at a Phenomenal 14.80% CAGR From 2014 to 2020, Will Reach a Valuation of US$572.3 mn by 2020: Transparency Market Research***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HDH-2NT1-JB72-120K-00000-00&context=1516831)

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**Body**

Transparency Market Research has published a new report titled "Global Biochar Market - Industry Analysis, Market Size, Share, Growth, Trends and Forecast 2014 - 2020." According to TMR's projections, the biochar market will rise at a phenomenal 14.80% CAGR in the given period. If the projection holds true, the market will reach a valuation of US$572.3 mn by 2020, increasing from US$229.3 mn in 2013. By volume, the production of biochar is slated to increase from 100 kilo tons to 300 kilo tons during the same period, expanding at a CAGR of 20.10% between 2013 and 2014.

Browse Research Report with Analysis:[*http://www.transparencymarketresearch.com/biochar-market.html*](http://www.transparencymarketresearch.com/biochar-market.html)

Presently, the biochar sector is in its developmental stage and is yet to be utilized fully for worthwhile gains. However, the biochar market will expand rapidly in the coming years due to the environmental and ***agricultural*** productivity benefits associated with biochar, says the TMR report.According to several studies that have been carried out, biochar has high usability for ***agriculture*** due to its ability to enhance soil properties such as soil fertility, nutrient retention and stability, and increased soil biodiversity. In addition, the other benefits of biochar-based products for soil are production of healthy humus and maintenance of the soil pH level. Enhanced water retention, improved seed germination, and resistance to insects and fungi are the other benefits imparted by usage of biochar. These are directly related with boosted food security and ***reduced*** deforestation.

Get Sample of this Research Report:[*http://www.transparencymarketresearch.com/sample/sample.php?flag=S&rep\_id=2863*](http://www.transparencymarketresearch.com/sample/sample.php?flag=S&rep_id=2863)

Other than this, biochar is useful in carbon sequestration, because of which soil can hold carbon for thousands of years. Thus, the amount of carbon discharged in the environment is held back, which in turn benefits the planet due to ***reduced*** ***greenhouse gas*** ***emissions***. Thus, in order to increase public awareness about the benefits of biochar, conferences and promotional campaigns are being organized, with the participation of farmers, scientists, industry stakeholders, manufacturers, and suppliers, which is expected to increase the commercial potential of biochar for the stakeholders.

Browse Press Release:[*http://www.transparencymarketresearch.com/pressrelease/biochar-industry.htm*](http://www.transparencymarketresearch.com/pressrelease/biochar-industry.htm)

For biochar to receive acceptance to be used for commercial purposes, standards and certifications have been framed, such as IBI Biochar Standards, European Biochar Certificate, IBI Biochar certification, and Biochar Risk Assessment Framework (BARF). Companies and individual farmers that use biochar need to adhere to standards pertaining to the use of biochar in the region of use.However, the biochar market is facing limited growth due to a few reasons. In some parts of the world, technological insufficiencies, lack of consumer awareness, and financial constraints are restraining the biochar market's growth. Stringent regulations pertaining to the use of carbon compounds, especially in Europe, are further slowing the growth of this market. Nevertheless, biochar companies have understood the scalability and best available technology for maximum biochar production at the least cost. Hence, the global market for biochar will rise expeditiously in the future. The biochar market is segmented on the basis of technology, feedstock, application, and geography. By technology, equipment and processes are the segments of the market.

Other Upcoming Research Reports:

1. China Biofuels Market - Industry Analysis, Size, Share, Growth, Trends and Forecast 2014 - 2020 : [*http://www.transparencymarketresearch.com/biofuels-market.html*](http://www.transparencymarketresearch.com/biofuels-market.html)

2.  ***Energy*** Harvesting and ***Energy*** Storage Market - Global Industry Analysis, Size, Share, Growth, Trends, and Forecast 2014-2020 :

[*http://www.transparencymarketresearch.com/****energy****-harvesting-storage.html*](http://www.transparencymarketresearch.com/energy-harvesting-storage.html)

The global biochar market has been segmented as below:

Global Biochar market: By Geography

    North America    Europe    Asia Pacific    RoW

Global Biochar market: By Technology

    1. By Process

Fast & Intermediate Pyrolysis.Slow PyrolysisGasificationMicrowave Pyrolysis

    2. Equipment/ Technology

Continuous Pyrolysis KilnBatch Pyrolysis KilnGasifier & Cook stoveOthers (Rotary Kiln & Microwave Pyrolysis)

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2. Global Turbine Inlet Cooling Systems Market is anticipated to surpass US$13.1 bn by 2022, at a CAGR of 6% from 2014 to 2022 : [*http://www.transparencymarketresearch.com/turbine-inlet-cooling-market.html*](http://www.transparencymarketresearch.com/turbine-inlet-cooling-market.html)

Global Biochar market: By Feedstock

    Forestry Waste    Biomass Plantation    ***Agriculture*** Waste    Animal Manure

Global Biochar market: By Application

    1. ***Energy*** Based

Source for Power Plant.Other ***Energy*** generation

    2. Non-***Energy*** Based

Carbon Sequestration.ForestryMine ReclamationGardeningAgricultureOthers

For more Chemical & Research Reports Materials : [*http://www.transparencymarketresearch.com/chemical-market-reports-2.html*](http://www.transparencymarketresearch.com/chemical-market-reports-2.html)

About Us

Transparency Market Research (TMR) is a global market intelligence company providing business information reports and services. The company's exclusive blend of quantitative forecasting and trend analysis provides forward-looking insight for thousands of decision makers. TMR's experienced team of analysts, researchers, and consultants use proprietary data sources and various tools and techniques to gather and analyze information.

TMR's data repository is continuously updated and revised by a team of research experts so that it always reflects the latest trends and information. With extensive research and analysis capabilities, Transparency Market Research employs rigorous primary and secondary research techniques to develop distinctive data sets and research material for business reports.

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[***Potential of agroforestry can no longer be ignored; Combining forestry with productive grassland makes economic as well as environmental sense***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HSJ-XC31-JBVM-Y19D-00000-00&context=1516831)

Irish Independent

January 5, 2016 Tuesday

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**Section:** FARMING;NEWS; Pg. 18

**Length:** 842 words

**Byline:** GRACE MAHER

**Body**

SCHEMES to encourage afforestation have led to the establishment of 26,000 private forest plantations in Ireland since 1980. The majority of these plantations are owned by farmers, making farmers the new foresters.

The decision to plant ***agricultural*** land with trees can be a difficult one for many farmers and most will only ever be tempted to plant marginal land. Agroforestry is changing that practice in many countries and it is beginning to gain overdue attention here.

Agroforestry essentially consists of combining forestry and productive grassland on the same tract of land. Described by the UN's Food and ***Agricultural*** Organisation as having the potential to "curb ***greenhouse gas*** ***emissions*** and soil degradation, as well as improve ecosystem services such as water retention", it is potentially a very attractive option for many Irish farmers.

Ireland has the highest proportion of land under grass in the EU at 48pc, and the second lowest amount of woodland cover at 11pc.

In order to mitigate climate change Ireland needs to plant more trees. Agroforestry allows farmers to maintain grass or arable crops but to also plant trees.

Specific measures were introduced in the 2014-2020 Forestry Programme to ***target*** farmers directly and encourage them to plant more trees.

The agroforestry measure allows a total grant of (EURO)4,450/ ha for the duration of five years. This is significantly shorter than other measures that average 15 years, and thus far has gained a lukewarm reaction from farmers.

Benefits of Agroforestry Eugene Curran, a forestry inspector with the department, says agroforestry offers a variety of benefits for Irish farmers.

"In west Cork, there are some good agroforestry silvopastoral systems, providing the land owner with access to the grass despite having trees in the same field.

Trees are planted in rows allowing plots to be grazed, and farmers can cut silage and hay in between the rows of trees.

"This flexibility will suit many farmers. Any management system that can provide land owners with a renewable ***energy*** source, offset carbon ***emissions*** from other farming practices, ***reduce*** nutrient input and runoff, stabilise drainage, enhance animal welfare, increase biodiversity, improve animal nutrition, enhance the landscape and in some cases increase productivity by 50pc is well worth a second look" he said.

Agroforestry and organics Professor Jim McAdam of Queens University Belfast has led the way on agroforestry research in Ireland since he began his trial plots 26 years ago in Loughgall, Co Antrim. The results of these trials prove the environmental benefits of agroforestry as well as documenting the economic benefits. Agroforestry looks like a natural fit for organic farmers, but the uptake on agroforestry remains low.

For those participating in the Organic Farming Scheme (OFS), the DAFM Organic Unit has confirmed that payment under both schemes on the same land parcels is not permitted.

In addition, farmers who may be negotiating numerous schemes like the OFS and GLAS are not keen to take on another scheme due to paperwork and simple logistics.

However, as the agroforestry measure is a new scheme, once farmers become familiar with the concept, it could become a favoured choice with many farmers, organic and conventional.

Demonstration plots Liam Beechinor has a demonstration agroforestry plot near Dunmanway, Co Cork. It was planted in April 2012 and is a mixture of oak and ash trees. The trees are planted at 5x5 metre spacing.

To date Liam is very happy with the plot's progress. In the first year of growth he took two cuts of silage off the ground and then grazed it with sheep later.

As a farmer Liam likes the idea of being involved in forestry and by planting an agroforestry plot on his farm it made the "decision to plant good land with trees much easier as you know you can still work the land.

"I definitely spend a lot more time in this area now that the trees are here, you find yourself coming to check on the progress and growth of the trees which is interesting. I think that this is a great way to incentivise farmers to plant trees," said Liam.

Richard Auler, a longterm organic farmer with IOFGA, based in Cahir, Co Tipperary is just starting to experiment with agroforestry. Richard always planted trees on the farm and in 2011 he put in a new plantation, 85pc of which is oak and the remainder mixed species.

His agroforestry plot was put in place last year. It is 4.2ha and is mainly apples, various walnuts, sweet chestnuts, hazelnuts and willow. The area is fenced for rabbits and the trees are planted in 10m wide rows to allow for grazing sheep and silage cutting.

"This part of the farm was always difficult to work with as there are low electric lines so I hope that the agroforestry plot will suit this area and remain extremely productive which is one of the great benefits of developing agroforestry on the farm," said Richard.

Grace Maher is development officer with the IOFGA, [*www.iofga.org*](http://www.iofga.org)

APART FROM OFF-SETTING C02 ***EMISSIONS***, AGROFORESTRY CAN ALSO BOOST PRODUCTIVITY BY UP TO 50PC

**Graphic**

Liam Beechinor has planted a mix of oak and ash trees at 5x5m spacing intervals on his agroforestry plot at Dunmanway, Co Cork

**Load-Date:** January 5, 2016

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[***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)

4. IPCC (2014)[*http://ipcc-wg2.gov/AR5/report/full-report/*](http://ipcc-wg2.gov/AR5/report/full-report/)

5. Wolf et al., (2015)[*http://www.mdpi.com/2225-1154/3/4/901?trendmd-shared=1*](http://www.mdpi.com/2225-1154/3/4/901?trendmd-shared=1)

6. UNEP (2014)[*http://www.unep.org/yearbook/2014/PDF/chapt7.pdf*](http://www.unep.org/yearbook/2014/PDF/chapt7.pdf)

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[***-Report by Capgemini Consulting and i24c: Europe Failing to Realize the Full Environmental and Commercial Benefits of its Low-Carbon Technology R&D Leadership***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JW4-2XK1-F0K1-N43S-00000-00&context=1516831)

ENP Newswire

May 27, 2016 Friday

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**Length:** 1477 words

**Body**

Paris - A report by the Industrial Innovation for Competitiveness Initiative (i24c) and Capgemini Consulting has found that while there have been notable Research and Development (R&D) successes in low-carbon technologies, Europe is struggling to industrialize promising ***energy*** related innovations and risks losing its position as a world leader.

The report analyzed and evaluated Europe's performance on ***energy*** innovation, examining the barriers and the key success factors in the transition to a competitive, low-carbon economy. It makes five key recommendations for both the public and private sector ahead of the close of the European Commission's Consultation1 on its forthcoming integrated Research, Innovation and Competitiveness strategy for the European ***Energy*** Union.

The EU's long-term goal of ***reducing*** ***greenhouse gas*** ***emissions*** by 80-95%, as set out in its ***Energy*** Roadmap 20502, is designed to protect the environment and support Europe's transition to a competitive, low-carbon economy. With its more ambitious temperature stabilization goals and 'net zero' ***emissions*** ***target*** for mid-century, there is now even greater impetus behind this agenda and Europe's role as a leader will be scrutinized and challenged as never before. Renewed action and a focus on innovation and competitiveness will be crucial to its success in this endeavour. The i24c report found that Europe has made significant strides in reaching this goal through considerable investment in R&D, with the region investing over $ 4.3bn, making it the biggest investor in green technology globally. The report also recognized Europe as a world leader in ***energy*** innovation, noting the continent is home to almost a fifth of climate change innovations and over 1.2 million jobs related to renewable ***energy***.

Region wide strategy needed to deploy ***energy*** innovation

The i24c report notes that while these efforts provide Europe with a strong platform, the region has struggled to successfully deploy these innovations due to an insufficiently cohesive industrial, economic and regulatory strategy. A region-wide strategy should focus not only on the ***energy*** sector but on encouraging collaboration across related sectors such as transport, ***agriculture***, infrastructure, digital, and the manufacturing and services industries in general. It should further set in place a framework to enable cross-border collaboration to scale innovation and provide economic growth, prosperity and competitive advantage to all EU member states.

The deployment deficit experienced across Europe is partly the result of outdated or inconsistent regulation and the perception among the investment community that projects are too risky, particularly given the high upfront investments required in ***energy*** initiatives.

With a European Commission Consultation on its forthcoming integrated Research, Innovation and Competitiveness strategy for the European ***Energy*** Union currently under way, the i24c reports notes that a European ***energy*** strategy must not only enable Europe's vibrant start-up community access to much-needed capital, but also drive new regulation to transform a fragmented market and support the uptake of new technologies.

Pascal Lamy, a member of the i24c High Level Group, said: 'This study confirms the need for an integrated and systemic approach to ***energy*** research, innovation and competitiveness, so the Commission's initiative is the right one at the right time. It underlines that successes to date cannot be taken for granted in the future, as other economies seek to develop their ***energy***-related industries to exploit the massive opportunities from the transition to a new climate economy. But with the right enabling framework, putting the consumer center-stage and smart strategic choices, Europe can demonstrate leadership through industrial success as well as achieving a clean ***energy*** revolution.'

Nicolas Clinckx, Vice President ***Energy*** and Utilities, Capgemini Consulting, said: 'Europe's leadership position in low-carbon technology R&D can provide the foundation for meeting the ambitious climate change goals set out both at COP21 and in its ***Energy*** Roadmap 2050, but only if more is done to address our deployment challenges. This isn't just an ***energy*** issue, Europe needs a cohesive strategy for ***energy*** innovation and deployment that encompasses all related sectors and works across borders to pull promising developments across the valley of death and into production. The European Union can play a key role by ensuring that regulation not only encourages investment but also deployment too.'

Region-wide changes are needed following a significant shake-up in the innovation eco-system in recent years caused by the growth of four fast-emerging and inter-related mega-trends: sustainability, digitalization, integrated services and local empowerment. These trends have caused significant disruption in the ***energy*** industry shifting consumer expectation and demands as well as business pressure and priorities. These mega-trends have underpinned the key recommendations made in the i24c report.

The report offers five key principles to help tackle the deployment deficit and spark Europe's transition to clean ***energy***:

1. Provide clarity on long-term direction

Companies and entities at a local and national level need a vision and framework that they can work to. Only by having an overarching Europe-wide industrial innovation strategy is this possible.

2. Create the right market conditions to better pull ***energy*** innovations across the 'valley of death'3 and to scale

Innovation in the ***energy*** sector requires mass investment and this is only possible if investors can see clear paths from research to deployment. Europe needs to create the right market conditions and regulation to make this a reality

3. Accelerate the empowerment of local and regional authorities

The power of data is fuelling the growth of IoT and smart cities in particular. Cities such as Singapore are demonstrating how a holistic view can empower an entire region

4. Empower customers and citizens yet further

Citizen engagement is key in order to create desire and buy-in for change. Governments need to help private organizations to mobilize individuals at a grass-roots level in order to move Europe forward

5. Be more results-orientated and selective in nurturing ***energy*** innovation

With finite budgets, innovation should not be supported if it does not lead to concrete action. The focus for all R&D projects should be the efficiency of investment.

The i24c report is the result of a four month study conducted by the Industrial Innovation for Competitiveness Initiative (i24c) and Capgemini Consulting involving more than 30 interviews, two in-depth workshops with 25 key stakeholders from the private and public sector, a deep review of 11 ***energy*** related innovations and a survey of 80 European leaders. The main authors are: Julia Reinaud (i24c), Nicolas Clinckx, Katia Ronzeau and Paul Faraggi (Capgemini Consulting).

To find out more about the i24c report, please visit: [*www.capgemini.com/resources/scaling-up-innovation-in-****energy****-union-capgemini-and-i24c-report*](http://www.capgemini.com/resources/scaling-up-innovation-in-energy-union-capgemini-and-i24c-report)

Infographic:   [*www.capgemini.com/resources/europe-to-bridge-clean-****energy****-deployment-deficit-capgemini-and-i24c-report*](http://www.capgemini.com/resources/europe-to-bridge-clean-energy-deployment-deficit-capgemini-and-i24c-report)

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With more than 180,000 people in over 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2015 global revenues of EUR 11.9 billion. Together with its clients, Capgemini creates and delivers business, technology and digital solutions that fit their needs, enabling them to achieve innovation and competitiveness. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience, and draws on Rightshore, its worldwide delivery model.

1The EU Consultation ran from 4 March for 12 weeks.   [*http://ec.europa.eu/research/index.cfm?pg=newsalert&year=2016&na=na-010316*](http://ec.europa.eu/research/index.cfm?pg=newsalert&year=2016&na=na-010316)

2   [*http://www.roadmap2050.eu*](http://www.roadmap2050.eu)/

3Refers to a place in the process cycle between innovations being developed and commercially deployed

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[***Think you can't help the environment? These Europeans disagree; From picking up rubbish to cleaning the sea, people across the continent are making a huge a difference***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HBP-9S11-F021-63P6-00000-00&context=1516831)

The Guardian

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**Section:** WORLD NEWS

**Length:** 2824 words

**Byline:** Kate Lyons, Nabeelah Shabbir, Michael Bauchmüller, Tomasz Ulanowski, Rémi Barroux and Alberto Simoni

**Body**

Climate change has vanished from the headlines since the financial crisis elevated other economic concerns to the top of the agenda. But across Europe there is no shortage of activists trying to make a difference before this month's UN climate summit.

**' I've cut our household *emissions* by 89%'**

Anne Bragg, 59, is a corporate consultant who lives with her husband, Tom, in Cambridge, UK, and charts their household ***greenhouse gas*** ***emissions***

We bought this house in 2001. Since then we've had an 89% ***reduction*** in our ***emissions***. One of the interesting things to me is the sheer scale of the change you can make without really noticing it, if you just keep at it. But you have to be thoughtful about what works for you.

I used to fly a lot: I was a technical consultant flying all over the world, and used to go on at least two flying holidays a year. We now try really hard not to fly. We put quite a bit of effort into thinking of what to do that would be really, really fun that doesn't involve flying. This year, we went to a chalet in Switzerland for cross-country skiing, but we went by train.

Related: No pets, no kids, no flights: how readers are ***reducing*** their carbon footprint

We've ***reduced*** our gas bill by 83% [since 2002]: it is now £11 per month. We've insulated the house well. When we moved in it was dreadful: there was zero insulation, the carpet in my study used to billow on strong wind days. We've got a wood-fired stove in the front room and that halved our gas bill because it meant we often didn't bother to turn on our central heating.

I would say that by switching everything off when we're not using it we've ***reduced*** our electricity bill by 25%, and then by changing lightbulbs and some appliances, that's another 25%.

We do have a car, but we try to cycle wherever we can. We don't eat much meat and I don't eat dairy, and we go to the market in Cambridge where the produce is grown on farms nearby. We deliberately chose to live here so we could shop in the market. We were thinking we could live out in one of the villages, have a bigger house and, more importantly, a bigger garden, but we thought, well actually then you get condemned to driving to the supermarket. So some of the lifestyle choices were about accepting a slightly smaller house and garden in order to have access to these things that make it easy to be low-carbon.

To those who think they can't make a difference I would say, by doing low-carbon things, almost no matter what, it makes you feel less despondent. Instead of feeling helpless, you feel positive and think 'Well, I made a difference last weekend, sealing up that draughty room.' There is a wave of change building and people doing things slowly influences governments and companies too. Kate Lyons

Doing low-carbon things, almost no matter what, makes you feel less despondent

Kate Lyons

**' We got our sea back '**

Marjo Nurminen, 47, is a historian and non-fiction author from Helsinki. With her husband Juha, 69, they are cleaning up the Baltic Sea

Finland doesn't have resources like Norway, but we're very into nature. The country is vast, with few people - thousands of lakes, islands, a beautiful coastal area, plenty of forests. Everyone in Finland has a summer cottage, and we accept climate change as a true fact.

Juha's great-grandfather, a a shipowner and a shipping entrepreneur, left us so many Baltic sea charts, so we started our foundation in 1992 to celebrate our maritime culture. But we realised that there's no point doing history books about the sea if the sea dies! The main issue of the Baltic Sea is eutrophication, caused by its excessive nutrient (nitrogen and phosphorus) load. So in 2004 we started our environmental work, since climate change will only worsen this load.

Eleven European countries surround the sea, which is shallow at 55 metres. We are focused on cleaning all the wastewater. Phosphorus from polluting sources such as ***agriculture*** and municipal wastewater cause the blue-green algae to grow in the summer. Cities have been trying to fix this but they have no pressure - they need a third party like a foundation.

We're the first and only ones doing this that we know of. It's a shitty business! Most people don't understand the effects and danger of the phosphorus - cutting it is by far the best way of cleaning the sea. The Helsinki Commission ( Helcom ) of all 11 countries use us as their fire corps [volunteers who help with non-emergencies]. We manage and lead the projects. We are volunteers with philanthropic financing.

The EU has norms restricting the amount of phosphorus in the water, but they're not strict enough. We've spent four years making changes but the French or Spaniards or Italians don't care about the Baltic Sea, it's too far north. There's so much talk of what we should do, but when we ask people what are you doing, they say, well, we are talking! We get tired of it!

We spent seven years dealing with the pollution in the Gulf of Finland from St Petersburg, home to five million - as many as in Finland. It wasn't easy with Russia - but we are neighbours. It took us two years to convince the water company in St Petersburg that we did not want to make money, but make clean water. The former Finnish president, Tarja Halonen, knew the [then] female governor of St Petersburg, who helped.

With Greenpeace, St Petersburg would never have got involved. We're pessimistic about Kaliningrad, 400,000 people whose toilet water runs directly into the sea ... even Putin doesn't know what's going on there.

Plus, the catchment area of the Baltic is three times bigger than the sea itself, and is home to 90 million people. We've managed to work with Belarus, which is a political outcast in the EU. Belarus doesn't have the sea, but its big rivers affect the Baltic. It helped to have Russian-speaking project managers.

Related: 'A one-off in human history': Stern's warning on climate change battle

We cut phosphorus ***emissions***, the biggest environmental problem in northern Europe, by 60%. Fifteen years ago it was awful: the algae smelled, it was poisoning dogs who drank it. We have school-aged kids. On the eastern side of the Gulf of Finland we have our summer cottage and for five years now they have been allowed to swim without restrictions. We got our sea back.

For now, the Gulf of Finland is clean - but most of the pollution comes from Poland, with its big population and rivers running straight into the Baltic. In Sweden and Finland we are orientated to our sea, but in Poland they sail less, don't have boats. One company who we had approached to clean the wastewater in Poland wrote into a local newspaper and called us an environmental terrorist organisation! They might be even worse than the Soviet Russians back in the day. Nabeelah Shabbir

'I've gone to every UN climate summit for the past two decades'

Christoph Bals, 55, executive director, Germanwatch

I started to pay attention to climate change as a journalist in 1987, when there were reports of the first authoritative temperature scenarios. An expert commission in the German parliament warned that the 21st century could see [a rise of] five degrees if carbon ***emissions*** weren't ***reduced***.

I realised that that would be a huge, uncontrolled experiment with humanity, which would fundamentally change how we lived on this planet. Five years later I became a founding member of Germanwatch. Ever since, I've been working on changing things in Germany. For the past two decades I've gone to every UN climate summit.

It's always been clear how difficult it is to get the world economy to stop running on fossil fuels in one go. But it was breathtaking to see the gigantic scale on which the lobbies work in the background in their efforts to discredit climate policies. Looking back, I have to say that they have also shamelessly exploited the naivety of environmental groups and well-meaning mediators.

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The Guardian

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**Length:** 2857 words

**Byline:** Kate Lyons, Nabeelah Shabbir, Michael Bauchmüller, Tomasz Ulanowski, Rémi Barroux and Alberto Simoni

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**' We got our sea back '**

Marjo Nurminen, 47, is a historian and non-fiction author from Helsinki. Both her husband Juha, 69, and she are passionate about cleaning up the Baltic Sea

Finland doesn't have resources like Norway, but we're very into nature. The country is vast, with few people - thousands of lakes, islands, a beautiful coastal area, plenty of forests. Everyone in Finland has a summer cottage, and we accept climate change as a true fact.

Juha's great-grandfather was a shipowner and a shipping entrepreneur. Over the decades, a sizeable collection of maritime art, maps and maritime antiquities was collected by the family company. To safeguard this cultural heritage, we started our foundation in 1992 to celebrate our maritime culture. But we realised that there's no point doing history books about the sea if the sea dies! The main issue of the Baltic Sea is eutrophication, caused by its excessive nutrient (nitrogen and phosphorus) load. So in 2004 we started our environmental work, since climate change will only worsen this load.

Nine European countries surround the sea, which is shallow at 55 metres. We are focused on cleaning the wastewater. Phosphorus from polluting sources such as ***agriculture*** and municipal wastewater cause the blue-green algae to grow in the summer. Cities have been trying to fix this but they have no pressure - they need a third party like a foundation.

We're the first and only ones doing this that we know of. It's a shitty business! Most people don't understand the effect of having an excessive phosphorus load - cutting it is by far the best way of cleaning the sea. The Helsinki Commission ( Helcom ) of all 11 countries use us as their fire corps [volunteers who help with non-emergencies]. We manage and lead the projects. We are volunteers with philanthropic financing.

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The Guardian

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I realised that that would be a huge, uncontrolled experiment with humanity, which would fundamentally change how we lived on this planet. Five years later I became a founding member of Germanwatch. Ever since, I've been working on changing things in Germany. For the past two decades I've gone to every UN climate summit.

It's always been clear how difficult it is to get the world economy to stop running on fossil fuels in one go. But it was breathtaking to see the gigantic scale on which the lobbies work in the background in their efforts to discredit climate policies. Looking back, I have to say that they have also shamelessly exploited the naivety of environmental groups and well-meaning mediators.

But that's how we have learned. The task ahead is comparable to the abolition of slavery, which took a century. It's not going to happen in one fell swoop since there are huge interests and jobs at stake, with livelihoods depending on this industry. We need political and emotional intelligence, strategic moves and long, deep breaths.

The task ahead is comparable to the abolition of slavery

I'm driven by the knowledge of what threatens us. People from everywhere - be it the Philippines, Peru or India - have taught me that. It's fascinating to see how these friends make their case for change with vision, creativity and courage. It gives me a lot of strength. And recently the signs are leading to a global turnaround in climate policy.

Last year worldwide ***emissions*** from the ***energy*** industry hardly rose, for the first time, although the global economy is growing fast. Renewable ***energy*** is booming everywhere, in Germany but also in countries such as Morocco. Both China and the US have agreed to ***reduce*** their ***emissions***. No one should think that the climate will be saved in Paris alone, but it can break down barriers. The summit must send a message to investors and the public worldwide about the gradual phasing out of oil, coal and gas. That will map the way for the debate about getting out of coal and putting a sufficiently higher price on carbon. I look forward to it.

Michael Bauchmüller @MBauchmueller

**'I'm educating society'**

Disgusted with Polish ignorance about climate change, scientist Marcin Popkiewicz set out to educate his compatriots

I launched a website called The World at a Crossroads, then set up another with Polish scientists dealing with climate research, giving information about climate myths. I started up a number of internet-based tools making this subject accessible, became a specialist in giving public addresses, and wrote books.

I do this because it's important. It's probably the biggest choice we've faced in our history. We're standing at a crossroads, and what we do (or perhaps don't do) will decide the fate of humanity, and that of the millions of other species with which we share our beautiful planet.

I first began to explore this subject in the early 1990s when, as a doctoral student in the department of nuclear physics at the University of Warsaw, I had to give a lecture on the safety of nuclear ***energy***. One of the advantages was the lack of ***greenhouse gases*** and their consequences.

After my PhD, I went into business, but I didn't lose my passion for science and teaching, and gave lectures for friends at home. One day, after a presentation on how the moon was formed, somebody asked me for the story of global warming. My presentation was based on the official scientific position that the climate is getting warmer.

While preparing the lecture, I realised how complicated the subject is (even for a physicist). But after collecting the materials I felt like I finally knew something. However, the feeling soon passed when a colleague at the lecture accused me of presenting a one-sided picture that many scientists disagreed with. He sent me information about the film The Great Global Warming Swindle.

This film argues that the current state of knowledge on climate change is problematic, that we don't know anything for sure, and that the picture of climate change presented by scientists and the media is manipulated and exaggerated. It was very convincing and seemed credible. I watched it, thinking "so what's the real story?" Worse still, with my knowledge as a physicist I couldn't even immediately identify errors - either in the film or in what I had learned when putting my talk together.

Related: Storm and drought: what Europe has to fear from climate change

I felt stupid. How could this be? I was intrigued, and spent the next few weeks getting my teeth into the subject. I read books as well as scientific and press articles, pored over graphs and analysed various sources. I soon found two instances where the director of The Great Global Warming Swindle had omitted facts. As a physicist, this manipulation of data is something I really don't like. These findings made me more cautious about the reliability of sceptics. I made sure I checked all the key assertions made in the film. But this wasn't easy - and many proved to be true.

I was annoyed to see that somebody could dupe their viewers like this, and so efficiently too. So I set about educating society. Tomasz Ulanowski

'I've picked up over 800kg of rubbish'

Hervé Pighiera, 28, has walked more than 600 miles across France picking up litter.

I'm 28, live in Aix-en-Provence in the south of France, and I've been a mason for 10 years.

I have walked 975.5km (605 miles) for the environment, from Aix-en-Provence to Paris, picking up all the rubbish left on the motorways and roads: 810kg (127st) in total. I left my home town on 12 July with my green bin in tow, wanting to raise awareness of the state of the planet and its climate change problem.

I am not an ecologist, I'm not a member of any political party, but I have a conscience - everyone should do something to avoid the worst. We're almost at the point of no return when it comes to the state that the planet and its resources are in.

My family is pro-environment and we recycled and used a composter, although we didn't particularly devote ourselves to eating organic food. I have always loved nature and going on walks with my family.

Over 57 days, I managed around 17 km of walking a day. I picked up 61kg of recyclable plastic, 3,977 cigarette packets and 2,083 cigarette butts (one butt can pollute 500 litres of water, according to a UN study), 117kg of glass, 162.5 kg of metal and 325kg of non-recyclable waste. My girlfriend, Lola, made sure it got sorted, thanks to the tow truck she had attached to a car.

I got the idea to do a walk for the environment during a trip to Latin America. I had gone to Brazil for the football world cup, and then I took a bus to see Lola, who was studying in Peru at the time. The whole way, I found it staggering just how much rubbish collected up along the motorways, outside the villages. The plastic bags, cans, tyres, boxes, empty bottles... a total shock. Lima was playing host to the COP 20 climate summit, the 20th such event which was the precursor to the climate summit in France at the end of this year.

After the UN climate summit in Paris, I'll keep going with a cooperative called Petra Patrimonia. We'll be able to do so much if we can keep recycling and sorting our rubbish properly. It's a strategic sector in promoting clean ***energy***. Lola and I will also protest against the proposed biomass plant in Gardanne, which apparently needs wood from Canada to work. It's an aberration. Rémi Barroux, Le Monde

**'I went from being a volunteer to an activist**

Luca Iacoboni runs the ***energy*** and climate campaign at Greenpeace Italy

I was at school, watching a video presented by Greenpeace volunteers, and it hit me. It was on a huge banner on the chimney of a coal factory. I had always been interested in the environment, but in that specific moment I understood that what we do in Italy has an impact elsewhere and vice versa. I started to link ***energy*** production, climate change and environmental disasters.

In 2006 there wasn't much talk about climate change, at least not in Italy where the implications of climate change were not so evident. A few months after I turned 18 I joined Greenpeace in Rome. I loved volunteering, but my passion quickly became ***energy***, especially the need to replace fossil fuels, coal and gas with renewables. At the beginning I thought 100% renewables was a bit too ambitious, but after a bit of research I realised it wasn't.

I went from being a volunteer to an activist, and I continued my interest in ***energy*** and climate when I was at university. I have a degree in environmental economy, and did my thesis on ***energy*** scenarios and carbon dioxide markets.

After seven years my passion became my profession and I now run the ***energy*** and climate campaign at Greenpeace Italy. As we edge close to the climate summit in Paris, I can say confidently that we can still save the climate, but we are running out of time. We need to abandon fossil fuels and work for 100% renewables and ***energy*** efficiency.

I don't know if a deal will be signed at COP 21 [the Paris summit], but I am sure that the climate challenge will be won thanks to citizens, associations and companies. These are the forces that have forced politics to seriously tackle the problem, and it is thanks to them that after Paris the battle for a renewable future will continue. And be won. Simoni Alberto

Translators: Nabeelah Shabbir, Alberto Nardelli, Aleksandra Sygiel/ VoxEurop

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**End of Document**



[***Global Anaerobic Digestion (AD) Market 2016-2026***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HVN-D4F1-DXP3-R03W-00000-00&context=1516831)

PR Newswire Europe

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**Length:** 1673 words

**Dateline:** LONDON, January 14, 2016

**Body**

Forecasts for Anaerobic Digester Facilities with ***Agricultural*** and Waste Feedstocks for Biogas Production

Anaerobic digestion facilities continue to receive high levels of investment, proving to be a cost-effective way of utilisingbiologicalwaste/organic material to generateenergy, as well as achieving significant ***reductions*** in ***greenhouse gas*** (GHG) ***emissions***. This report details the levels of investment in the global market, subdivided by regions, capital and operational expenditure and project type. Through extensive research and discussions with experts in the industry,visiongainhas identified a series of market trends that will impact the anaerobicdigestionmarket over the coming decade.

Visiongainhas calculated that the globalanaerobic digestionmarket will see a total expenditure of $6,425m in 2016, including both capital and operational expenditures. The global market is on the verge of rapid expansion, with major players in North America and across Europe set to massively increase the number of operational AD plants in order to combat harmful GHG ***emissions*** and unsustainable waste management practices.

The report will answer questions such as:

· What are the prospects for anaerobic digestion markets in different regions across the world?

· Where are the most anaerobic digestion facilities?

· How is the anaerobic digestion market use changing and what are the main drivers and restraints for this change?

· What impact does governmental regulation have on the growth of national anaerobic digestion markets?

· What are the typical capital expenditures necessary for bringing an anaerobic digestion facility online?

· What are the typical operation and maintenance costs associated with an anaerobic digestion facility?

· Which areas of the capital and O&M expenditures can operators cut costs?

· Where are the main areas of technological development expected to come from in the coming decade?

Five reasons why you must order and read this report today:

1. The report provides forecasts and analysis for the global anaerobic digestion market from 2016 to 2026, with submarkets provided for:

- OPEX and CAPEX

- Project CAPEX by feedstock type (waste-fed and farm-fed)

To see a report overview please email Sara Peerun [*onsara.peerun@visiongainglobal.com*](mailto:onsara.peerun@visiongainglobal.com)

2. The report provides 2016-2026 forecasts and analyses for five regional anaerobic digestion markets, providing unique insight into AD industry development:

North America

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Europe

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Central and South America

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

AsiaPacific

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Rest of the World

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

3. The report also offers 2016-2026 forecasts and analyses for seven leading national anaerobic digestion markets:

Austria

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Canada

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

France

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Germany

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Italy

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

UK

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

US

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

4. The analysis is underpinned by our exclusive interviews with 8 leading experts:

- Professor Frank Scholwin, Institute for Biogas, Waste Management and ***Energy***

- Julia Levin, Bioenergy Association of California

- Jennifer Green, Canadian Biogas Association

- Phillipp Lukas, Future Biogas

- Dean Hislop, Tamar ***Energy***

- William Jorgenson, Vanguard Renewables

- Mike Apol, Regenis

- Daniil Abubikerov and Sergey Zakrzhevsky, Evobios

5. Analysis of the main drivers and restraints behind the global AD market

- MSW generation

- ***Agricultural*** production

- Regulatory environment

Competitive advantage

This independent 200+ page report guarantees you will remain better informed than your competitors. With 148 tables and figures examining theanaerobicdigestion market space, the report gives you an immediate, one-stop breakdown of your market PLUS capital expenditure forecasts, as well as analysis, from 2016-2026, keeping your knowledge that one step ahead of your rivals.

Who should read this report?

- Anyone within the global anaerobic digestion industry

- CEOs

- COOs

- Business development managers

- Project and site managers

- Suppliers

- Investors

- Contractors

- Government agencies

- Environmental Engineers/Technicians

Don't miss out

This report is essential reading for you or anyone in the anaerobic digestion sector. Purchasing this report today will help you to recognise those important market opportunities and understand the possibilities there. Order the GLOBAL ANAEROBIC DIGESTION MARKET 2016-2026 report now. We look forward to receiving your order.

Companies Mentioned in This Report

2G Cenergy Power Systems Technologies, Inc.

AB ***Energy***

AC Shropshire Ltd

Acti-Zyme Products Ltd.

Addinol Lube Oil GmbH

Adnams Bio ***Energy*** Ltd

AgPower Group, LLC

Agraferm Technologies AG

Agrivert Ltd

All Waste Services Ltd

Anaergia Inc.

Anaerobic Digestion Development Centre (ADDC)

Applied Technologies, Inc.

Aprovis ***Energy*** Systems GmBH

AQUA Engineers, Inc.

Arisdyne Systems

Avant ***Energy***

Awite Bioenergie GmbH

Barfoot ***Energy*** Projects Ltd

Bauer North America

BDI - BioEnergy International AG

Big Ox ***Energy***

Bigadan A/S

BioCycle

BioEarth ***Energy***

Bio-en Power Inc.

BIOFerm ***Energy*** Systems

Biogas Direct, LLC

Biogas ***Energy*** Partners

Biogas ***Energy***, Inc.

Biogas Researchers Inc

Biogest

Biogest Energie un Wassertechnik GmbH

Bio-Terre Systems, Inc.

Blue Electron

Boerger, LLC

BTA International GmbH

BTS Biogas Srl/GmbH

California Bioenergy LLC

Cambi, Inc.

Camco Clean ***Energy***

Cargill, Inc.

CG Schmidt, LLC.

CH Four Biogas, LLC

Clean ***Energy*** Fuels

Clean Fuel Partners, LLC

Clean Methane Systems LLC

ClearCove Systems

Cory Environmental (Glos) Ltd

Covanta ***Energy*** Corporation

DCO ***Energy***

Deutches BiomassForschungsZentrum GmbH

Digested Organics LLC

DODA USA, Inc

DVO, Inc.

Eco Sustainable Solutions Ltd

EcoEngineers

Ecomembrane LLC

Egmere ***Energy*** Ltd

Emerald Biogas Ltd

***Energy*** 2001 Inc

Entec Biogas USA

Environmental Fabrics, Inc.

Environmental Management Group International, Inc. (EMG)

EnviTec Biogas USA, Inc.

EUROTEC WTT

Evolution of Biogas Systems

Evonik Industries

Exergy New ***Energy***

Fernbrook Bio

FirmGreen, Inc.

Fraunhofer Institute for Wind ***Energy*** and ***Energy*** System Technology IWES

Future Biogas

Gasunie

GE Jenbacher

Geomembrane Technologies, Inc. (GTI)

GrDF

Green ***Energy*** Solutions

Greenlane Biogas

Greenlane Biogas

Greenville ***Energy***

GWE Biogas

Hallwick ***Energy***

Harvest Power, Inc

Himark BioGas

Hitachi Zosen Inova U.S.A. LLC

HRS Heat Exchangers

IES Biogas

Industrial & Environmental Concepts, Inc. (IEC)

Inland Power Group

Institute for Biogas, Waste Management & ***Energy***

Interstate Power Systems, Inc.

Kurtz Bros., Inc

KWS SAAT SE

Landwarme GmbH

Local Generation Limited

Malmberg Water AB

MT Energie GmbH

Northern Biogas

Organic Waste Systems (OWS), Inc.

Oxford Renewable ***Energy*** Ltd

Parker Hannifin GmbH

Pentair Haffmans

Pharmer Engineering

PlanET Biogas USA

Quasar ***Energy*** group

RCM International LLC

Regenis

Ringler ***Energy***

R-Qubed ***Energy***

Sattler AG

Schaumann BioEnergy GmbH

Schmack Biogas GmbH

Serge Ferrari S.A.S.

Shanks Waste Management

Siemens Industry, Inc.

Streisal GmbH

Tamar ***Energy***

The Climate Trust

Tiry Engineering, Inc.

TNO

U.S. Biogas LLC

UEM Inc.

Universal Sanitary Equipment Manufacturing Company (USEMCO)

UTS Bioenergy

Vanguard Renewables

Veolia Biothane Anaerobic Treatment

Vulcan Renewables

Waste Management, Inc.

Water Environment Federation

Weston & Sampson

Williams Engineering Associates

Wilson Engineering Services, PC

Xylem Water Solution AB

Yield ***Energy***, Inc.

Zero Waste ***Energy*** LLC

Government Agencies and Other Organisations Mentioned in This Report

Anaerobic Digestion and Bioresources Association (ADBA)

Bioenergy Association of California (BAC)

Canadian Biogas Association (CBA)

Department of ***Energy*** and Climate Change (DECC)

***Energy*** Information Administration (EIA)

European Biogas Association (EBA)

European Union (EU)

European Union Environment Agency (EUEA)

Global Methane Initiative (GMI)

Institute for Biogas, Waste Management and ***Energy***

International ***Energy*** Administration (IEA)

International Methane to Markets Partnership (IMMP)

Italian Agency for Environmental Protection and for Technical Services (APAT)

Landfill Methane Outreach Programme (LMOP)

National Waste & Recycling Association (NWRA)

US Administrative Support Group (ASG)

US Environmental Protection Agency (EPA)

UK Environment Agency (EA)

United Nations (UN)

United Nations - Convention on Climate Change (UNFCCC)

United States Geological Survey (USGS)

Solid Waste Association of North America (SWANA)

World Bank (WB)

To see a report overview please email Sara Peerun [*onsara.peerun@visiongainglobal.com*](mailto:onsara.peerun@visiongainglobal.com)

Tel: +44(0)20-7336-6100

Or click on[*https://www.visiongain.com/Report/1556/Global-Anaerobic-Digestion-(AD)-Market-2016-2026*](https://www.visiongain.com/Report/1556/Global-Anaerobic-Digestion-(AD)-Market-2016-2026)

**Load-Date:** January 14, 2016

**End of Document**



[***Election 2016 voters focus on core messages and competing leaders***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J5D-PHJ1-JC8Y-84NN-00000-00&context=1516831)

The Irish Times

February 25, 2016 Thursday

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**Section:** LETTERS; Pg. 19

**Length:** 2134 words

**Body**

Sir, - The *Prime Time* debate highlighted the unacceptable service level of some parts of our health service. Our four main political parties appear to have a shared vision on timely, equal and fair access to the services, and they also acknowledge that the issues cannot be resolved in the timeframe of one government.

I ask the leaders of each of our main parties if they would be willing to show statesmanship and participate in an all-party approach to achieve the goals of a better service for all of our citizens. - Yours, etc,

BRENDAN O'DONOGHUE,

Stilllorgan,

Co Dublin.

Sir, - The winner of the final debate was the audible squeak in the floor where the party leaders were standing. It gave a much clearer, consistent and relevant message than most of the answers given by the party leaders. - Yours, etc,

BRIAN CULLEN,

Rathfarnham,

Dublin 16.

Sir, - Climate change was raised towards the end of the final leaders' debate illustrating how the leaders of our main political parties are all unwilling to face the contradictions between ***agricultural*** policy and our ***emission*** ***reduction*** commitments. However, this most grave challenge for all our societies remained marginal to debates throughout the campaign, something that both surprised and concerned us. It further underlines the importance of our call for a citizens' convention, to raise public awareness of the issue and to generate political momentum for policies adequate to the immense challenge of ***reducing*** Ireland's ***greenhouse gas*** ***emissions*** on the scale and at the speed necessary to meet our stated aspirations under the Paris Agreement.

We welcome the fact that, at the time of writing, 633 people have signed up to our call and urge more to do so at petition.postcarbonireland.org. - Yours, etc

Dr CARA

AUGUSTENBORG,

University College Dublin;

Prof PEADAR KIRBY,

University of Limerick;

Prof BARRY McMULLIN,

Dr EITHNE O'CONNELL,

Dublin City University;

Prof JOHN SWEENEY,

National University

of Ireland, Maynooth.

Sir, - Was Enda correct when he used the word "whingers"?

What would it be like if the media organised a week of positive stories about what people have received, the services that have worked for them and the good bits about the country? It will not happen because we prefer to whinge rather than to praise. What about a week of saying "thank you" to all the public representatives who have worked hard, but who are just criticised for what they have not done. A representative from a small party told me at my door that people are *entitled* to whatever they want. Where does this attitude take us? It gives space to whinge at what we have not, rather than what we have. We live in one of the nicest countries in the world. Perhaps for one week we might even acknowledge that. - Yours, etc,

JOAN TYNDALL,

Dublin 18.

Sir, - Polling day is almost upon us, so I spent some time this morning reading through the various leaflets that have been delivered to my home. I have received 31 leaflets and three house-calls from 10 of the 14 candidates in this constituency. Most of the leaflets came in bundles of three or four. I have studied them all and have come  to the sorry conclusion that there is little or no difference to choose between the various parties. There are four main parties - Fianna Fáil, Fine Gael, Sinn Féin and Labour - and nine other Independent candidates of one kind or another. So what to do  tomorrow? Do I vote for them all, one or two of them or spoil my vote? It is a dilemma. - Yours, etc,

MUIREANN

HOURIHANE,

Sandymount,

Dublin 4.

Sir, - Should we have a poll to determine the accuracy of the polls we've had so far? - Yours, etc,

EITHNE MacFADDEN,

Carrigart,

Co Donegal.

A chara, - I look forward to the current government being "repaginated". - Is mise,

COLM WALSH,

Rathmines,

Dublin 6.

Sir, - Some young people were asked on television about the elections, and a few of them said that they would not bother voting, as their votes would not make any difference. Can you imagine the outcry if they were told that they were forbidden to vote, or if the government announced that students or women could not vote tomorrow? Every vote *does* count. - Yours, etc,

GERALDINE O'BRIEN,

Deansgrange,

Co Dublin.

Sir, - In my area, I found canvassers from the government parties had no answers for me. Simple enough concerns, such as, "What will you do about funding respite and residential services for adults with disabilities?", "What is your solution to families left homeless while bank profits are on the rise?", and "When can we expect real jobs for our generation of well-educated young people, not short-term contracts with no security?" There seemed to be a standard response assuring us that there was now money to be spent, and that we could look forward to great things if we would just give them another chance. Why am I not convinced? - Yours, etc,

MARY MARMION,

Kilcoole,

Co Wicklow.

Sir, - Niall Callan (February 24th) refers to "Lucinda Creighton's decision to leave her party" but this was not, in fact, the case. She was expelled from Fine Gael because of her opposition to the abortion law enacted by the Government and despite her stance being in accord with a promise made before the election that it would not do so. He also referred to the "majority opinion in the party". Is he really suggesting that a majority opinion is always correct? After all the matter of abortion is a life-and-death issue and not just one of the many issues that require decisions by any party. I fail to see how anyone could not admire someone who puts their principles ahead of their ambition and, even indeed, their livelihood. What is not to admire about that? - Yours, etc,

MARY STEWART,

Donegal.

Sir, - After five years in which the word "austerity" has dominated our political discourse, I find it almost surreal that the word is now virtually absent from analysis and debate. The only mention of austerity that you hear now is the Anti-Austerity Alliance! - Yours, etc,

JOHN McNAMARA,

Cork.

Sir, - Before the 2011 election there was a move in Fine Gael to replace Enda Kenny as leader of that party.

At the time, I said publicly that though I thought Enda Kenny was an honourable and decent man, he should step aside from the leadership.

Since then, he has led the country through the most difficult time it has ever known, and done so with consistency, effectiveness and dignity.

I have no hesitation in saying now, in 2016, that I was wrong. - Yours, etc,

GEMMA HUSSEY,

Dublin 4.

Sir, -I fear that whichever parties form the next government, the weight of all their election promises will overbear their ability to implement them. *Plus ça change*. - Yours, etc,

MICHAEL WILSON,

Belfast.

Sir, - It took three terms for Fianna Fáil to complete its destruction of the Irish economy, which led to extreme hardship for literally millions of our people. Fine Gael and Labour, while not perfect, made great inroads into repairing this damage. The base is now there for Ireland to prosper again. Is it too much to ask the people of Ireland to give them a second term and a chance to finish the job? - Yours, etc,

HENRY CRUISE,

Celbridge,

Co Kildare.

Sir, - I am in favour of additional expenditure on health, education, social welfare, justice, and so on. I am in favour of a ***reduction*** in income tax, USC, property tax,water charges,etc. I am also in favour of motherhood and apple pie. - Yours, etc,

TOM BERKERY,

Castletroy,

Co Limerick.

Sir, - Big-party politicians (and many commentators) decry the draining of their traditional support base to the advantage of smaller, breakaway units like Renua or the Social Democrats and the Independents. Yet, the people, demonstrating the wisdom of crowds, may be on the right side of politics and history. It is possible that they have rumbled the real story of the Dáil, that party TDs are simply lobby-fodder for an overpowerful executive? Jim Kemmy, for instance, once accused Willie O'Dea of being Mighty Mouse in Limerick and Minnie Mouse in the chamber.

Irish people are increasingly electing, and considering electing, men and women who'll give the status quo peddlers a good "goosing" and do so more regularly than their whipped, party counterparts. If this trend continues, it is possible that the demand for an executive presidency, elected separate to the Dáil, might appear attractive to the parties and the people.

Were this to occur, we might be able to break the stranglehold that the executive currently exercises over the Dáil and its business, and a true relationship of creative tension between the executive and Dáil may be established. - Yours, etc,

TOM HAYES,

Limerick.

Sir, - The article summarising the different polices of political parties seriously understated the exemplary record and policy commitments of People Before Profit in relation to environmental issues and climate change ("With climate change a hot topic again, who plans to expend most ***energy*** on it?", February 24th).

People Before Profit's manifesto has four separate sections dealing with environment, natural resources, public transport and sustainable land use, all explicitly directed towards taking urgent action to deal with climate change.

Our policies include a total ban on fracking; a major public native afforestation programme; using unused Coillte lands for community ***energy*** and afforestation projects; increased subsidies to public transport to deliver more buses and cheaper fares to ***reduce*** car use; a national retrofit and insulation scheme; supports for small farmers engaged in local food production; taking all natural resources into public ownership, with a moratorium on all hydrocarbon licensing until a new model of State management is established; major public investment to diversify ***energy*** production towards sustainable ***energy*** resources; protection of Ireland's physical heritage; and complete opposition to the Transatlantic Trade and Investment Partnership (TTIP).

Furthermore, over the last five years as a People Before Profit TD, I have played a leading role in the successful national campaign to stop the government plan to sell-off Coillte's harvesting rights, introduced the only private member's motion on Coillte and forestry, submitted dozens of amendments to both the Climate Change and Forestry Bill aimed at establishing binding ***targets***, led a successful campaign to prevent an oil rig being located in Dublin Bay, introduced a Bill to ban fracking, played a central role in establishing the Right2Water campaign to ensure water resources remain in public ownership, and campaigned inside and outside the Dáil against the cutting and privatisation of public service bus routes.

If any party has a better record over the last five years on environmental matters, I'd be surprised. - Yours, etc,

RICHARD

BOYD BARRETT,

People Before

Profit Alliance,

Dún Laoghaire, Co Dublin.

Sir, - As this most uneventful election campaign comes to a close, I think my three-year-old daughter captured the mood when she asked me when they were ever going to take down all these pictures as she's so tired of looking at them. My six-year-old son is still keen, though, and declared that he will vote for Billy Timmins or another candidate who he's calling "Egghead". A swing voter of the future, I guess. - Yours, etc,

MICHAEL BROWN,

Greystones,

Co Wicklow.

Sir, - Miriam Lord and Martyn Turner have provided me with everything I need to know about this election campaign. - Yours, etc,

SEAN LEAHY,

Bray, Co Wicklow.

Sir, - Is it too late for Enda to adopt a winning hairstyle like that sported by Donald or Boris? Desperate times require desperate measures! - Yours, etc,

MIKE BYRNE,

Limerick.

Sir, - I fondly recall a fundraising "race night" in which my horse was 10 lengths ahead of the field, with only one fence to jump! The horse passed the post, but unfortunately, had unseated its rider at the fence.

Party leaders, beware of the final fence! - Yours, etc,

JEROME KELLEHER,

Glanmire,

Co Cork.

Sir, - Let's have more Michael Noonan interviews on TV and radio, especially late at night. His *sotto voce* delivery is a guaranteed cure for insomnia. - Yours, etc,

TONY CORCORAN,

Rathfarnham, Dublin 14.

Sir, - The election campaign has been most invigorating with important debates on education, taxation and the direction of the Republic's economy. Such a campaign should be cherished by all voters who have the right to form a coalition of their choosing. But please spare a thought for those in Northern Ireland who are not afforded the same right and have to be contented with the same dismal coalition, election after election. Therefore the right of the electorate to a voluntary coalition and opposition is something it should not take for granted. - Yours, etc,

SAMUEL TG JACKSON,

Ranelagh,Dublin 6.

Sir, - My doorbell is broken. I think I'll fix it on Saturday. - Yours, etc,

MICHAEL GEARY,

Ballyagran,

Co Limerick.

**Load-Date:** February 24, 2016

**End of Document**



[***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.

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**Load-Date:** January 5, 2016

**End of Document**



[***Seeding recipe breakthrough could boost grasslands and feed cattle***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HSD-1WN1-JCJY-G4DY-00000-00&context=1516831)

Belfast Telegraph Online

January 4, 2016 Monday 1:58 PM GMT

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**Section:** REPUBLIC OF IRELAND

**Length:** 614 words

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**Load-Date:** January 4, 2016

**End of Document**



[***Global Anaerobic Digestion (AD) Market 2016-2026***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HV7-FSB1-DXP3-R35X-00000-00&context=1516831)

PR Newswire Europe

January 12, 2016 Tuesday 9:00 AM EST

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**Length:** 1705 words

**Dateline:** LONDON, January 12, 2016

**Body**

- Forecasts for Anaerobic Digester Facilities with ***Agricultural*** and Waste Feedstocks for Biogas Production

Anaerobic digestion facilities continue to receive high levels of investment, proving to be a cost-effective way of utilisingbiologicalwaste/organic material to generateenergy, as well as achieving significant ***reductions*** in ***greenhouse gas*** (GHG) ***emissions***. This report details the levels of investment in the global market, subdivided by regions, capital and operational expenditure and project type. Through extensive research and discussions with experts in the industry,visiongainhas identified a series of market trends that will impact theanaerobic digestionmarket over the coming decade.

Visiongainhas calculated that the globalanaerobic digestionmarket will see a total expenditure of $6,425m in 2016, including both capital and operational expenditures. The global market is on the verge of rapid expansion, with major players in North America and across Europe set to massively increase the number of operational AD plants in order to combat harmful GHG ***emissions*** and unsustainable waste management practices.

The report will answer questions such as:

· What are the prospects for anaerobic digestion markets in different regions across the world?

· Where are the most anaerobic digestion facilities?

· How is the anaerobic digestion market use changing and what are the main drivers and restraints for this change?

· What impact does governmental regulation have on the growth of national anaerobic digestion markets?

· What are the typical capital expenditures necessary for bringing an anaerobic digestion facility online?

· What are the typical operation and maintenance costs associated with an anaerobic digestion facility?

· Which areas of the capital and O&M expenditures can operators cut costs?

· Where are the main areas of technological development expected to come from in the coming decade?

Five reasons why you must order and read this report today:

1. The report provides forecasts and analysis for the global anaerobic digestion market from 2016 to 2026, with submarkets provided for:

- OPEX and CAPEX

- Project CAPEX by feedstock type (waste-fed and farm-fed)

To see a report overview please email Sara Peerun [*onsara.peerun@visiongainglobal.com*](mailto:onsara.peerun@visiongainglobal.com)

2. The report provides 2016-2026 forecasts and analyses for five regional anaerobic digestion markets, providing unique insight into AD industry development:

North America

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Europe

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Central and South America

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

AsiaPacific

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Rest of the World

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

3. The report also offers 2016-2026 forecasts and analyses for seven leading national anaerobic digestion markets:

Austria

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Canada

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

France

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Germany

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

Italy

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

UK

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

US

- CAPEX and OPEX Forecast 2016-2026

- Project CAPEX by feedstock type (waste-fed and farm-fed) Forecast 2016-2026

- Number of AD facilities Forecast 2016-2026

4. The analysis is underpinned by our exclusive interviews with 8 leading experts:

- Professor Frank Scholwin, Institute for Biogas, Waste Management and ***Energy***

- Julia Levin, Bioenergy Association of California

- Jennifer Green, Canadian Biogas Association

- Phillipp Lukas, Future Biogas

- Dean Hislop, Tamar ***Energy***

- William Jorgenson, Vanguard Renewables

- Mike Apol, Regenis

- Daniil Abubikerov and Sergey Zakrzhevsky, Evobios

5. Analysis of the main drivers and restraints behind the global AD market

- MSW generation

- ***Agricultural*** production

- Regulatory environment

Competitive advantage

This independent 200+ page report guarantees you will remain better informed than your competitors. With 148 tables and figures examining theanaerobicdigestion market space, the report gives you an immediate, one-stop breakdown of your market PLUS capital expenditure forecasts, as well as analysis, from 2016-2026, keeping your knowledge that one step ahead of your rivals.

Who should read this report?

- Anyone within the global anaerobic digestion industry

- CEOs

- COOs

- Business development managers

- Project and site managers

- Suppliers

- Investors

- Contractors

- Government agencies

- Environmental Engineers/Technicians

Don't miss out

This report is essential reading for you or anyone in the anaerobic digestion sector. Purchasing this report today will help you to recognise those important market opportunities and understand the possibilities there. Order the GLOBAL ANAEROBIC DIGESTION MARKET 2016-2026 report now. We look forward to receiving your order.

To see a report overview please email Sara Peerun [*onsara.peerun@visiongainglobal.com*](mailto:onsara.peerun@visiongainglobal.com)

To request an exec summary of this report please email Sara Peerun [*atsara.peerun@visiongainglobal.comor*](mailto:atsara.peerun@visiongainglobal.comor) call Tel: +44(0)20-7336-6100

Or click on[*https://www.visiongain.com/Report/1556/Global-Anaerobic-Digestion-(AD)-Market-2016-2026*](https://www.visiongain.com/Report/1556/Global-Anaerobic-Digestion-(AD)-Market-2016-2026)

Companies Mentioned in This Report

2G Cenergy Power Systems Technologies, Inc.

AB ***Energy***

AC Shropshire Ltd

Acti-Zyme Products Ltd.

Addinol Lube Oil GmbH

Adnams Bio ***Energy*** Ltd

AgPower Group, LLC

Agraferm Technologies AG

Agrivert Ltd

All Waste Services Ltd

Anaergia Inc.

Anaerobic Digestion Development Centre (ADDC)

Applied Technologies, Inc.

Aprovis ***Energy*** Systems GmBH

AQUA Engineers, Inc.

Arisdyne Systems

Avant ***Energy***

Awite Bioenergie GmbH

Barfoot ***Energy*** Projects Ltd

Bauer North America

BDI - BioEnergy International AG

Big Ox ***Energy***

Bigadan A/S

BioCycle

BioEarth ***Energy***

Bio-en Power Inc.

BIOFerm ***Energy*** Systems

Biogas Direct, LLC

Biogas ***Energy*** Partners

Biogas ***Energy***, Inc.

Biogas Researchers Inc

Biogest

Biogest Energie un Wassertechnik GmbH

Bio-Terre Systems, Inc.

Blue Electron

Boerger, LLC

BTA International GmbH

BTS Biogas Srl/GmbH

California Bioenergy LLC

Cambi, Inc.

Camco Clean ***Energy***

Cargill, Inc.

CG Schmidt, LLC.

CH Four Biogas, LLC

Clean ***Energy*** Fuels

Clean Fuel Partners, LLC

Clean Methane Systems LLC

ClearCove Systems

Cory Environmental (Glos) Ltd

Covanta ***Energy*** Corporation

DCO ***Energy***

Deutches BiomassForschungsZentrum GmbH

Digested Organics LLC

DODA USA, Inc

DVO, Inc.

Eco Sustainable Solutions Ltd

EcoEngineers

Ecomembrane LLC

Egmere ***Energy*** Ltd

Emerald Biogas Ltd

***Energy*** 2001 Inc

Entec Biogas USA

Environmental Fabrics, Inc.

Environmental Management Group International, Inc. (EMG)

EnviTec Biogas USA, Inc.

EUROTEC WTT

Evolution of Biogas Systems

Evonik Industries

Exergy New ***Energy***

Fernbrook Bio

FirmGreen, Inc.

Fraunhofer Institute for Wind ***Energy*** and ***Energy*** System Technology IWES

Future Biogas

Gasunie

GE Jenbacher

Geomembrane Technologies, Inc. (GTI)

GrDF

Green ***Energy*** Solutions

Greenlane Biogas

Greenlane Biogas

Greenville ***Energy***

GWE Biogas

Hallwick ***Energy***

Harvest Power, Inc

Himark BioGas

Hitachi Zosen Inova U.S.A. LLC

HRS Heat Exchangers

IES Biogas

Industrial & Environmental Concepts, Inc. (IEC)

Inland Power Group

Institute for Biogas, Waste Management & ***Energy***

Interstate Power Systems, Inc.

Kurtz Bros., Inc

KWS SAAT SE

Landwarme GmbH

Local Generation Limited

Malmberg Water AB

MT Energie GmbH

Northern Biogas

Organic Waste Systems (OWS), Inc.

Oxford Renewable ***Energy*** Ltd

Parker Hannifin GmbH

Pentair Haffmans

Pharmer Engineering

PlanET Biogas USA

Quasar ***Energy*** group

RCM International LLC

Regenis

Ringler ***Energy***

R-Qubed ***Energy***

Sattler AG

Schaumann BioEnergy GmbH

Schmack Biogas GmbH

Serge Ferrari S.A.S.

Shanks Waste Management

Siemens Industry, Inc.

Streisal GmbH

Tamar ***Energy***

The Climate Trust

Tiry Engineering, Inc.

TNO

U.S. Biogas LLC

UEM Inc.

Universal Sanitary Equipment Manufacturing Company (USEMCO)

UTS Bioenergy

Vanguard Renewables

Veolia Biothane Anaerobic Treatment

Vulcan Renewables

Waste Management, Inc.

Water Environment Federation

Weston & Sampson

Williams Engineering Associates

Wilson Engineering Services, PC

Xylem Water Solution AB

Yield ***Energy***, Inc.

Zero Waste ***Energy*** LLC

Government Agencies and Other Organisations Mentioned in This Report

Anaerobic Digestion and Bioresources Association (ADBA)

Bioenergy Association of California (BAC)

Canadian Biogas Association (CBA)

Department of ***Energy*** and Climate Change (DECC)

***Energy*** Information Administration (EIA)

European Biogas Association (EBA)

European Union (EU)

European Union Environment Agency (EUEA)

Global Methane Initiative (GMI)

Institute for Biogas, Waste Management and ***Energy***

International ***Energy*** Administration (IEA)

International Methane to Markets Partnership (IMMP)

Italian Agency for Environmental Protection and for Technical Services (APAT)

Landfill Methane Outreach Programme (LMOP)

National Waste & Recycling Association (NWRA)

US Administrative Support Group (ASG)

US Environmental Protection Agency (EPA)

UK Environment Agency (EA)

United Nations (UN)

United Nations - Convention on Climate Change (UNFCCC)

United States Geological Survey (USGS)

Solid Waste Association of North America (SWANA)

World Bank (WB)

To see a report overview please email Sara Peerun [*onsara.peerun@visiongainglobal.com*](mailto:onsara.peerun@visiongainglobal.com)

**Load-Date:** January 12, 2016

**End of Document**



[***SEEDING RECIPE BREAKTHROUGH COULD BOOST GRASSLANDS AND FEED CATTLE***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HRN-TJ91-JCBD-Y3DW-00000-00&context=1516831)

Regional Press Releases: Ireland

December 31, 2015 Thursday 10:57 AM BST

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**Section:** PA Newswire: Ireland

**Length:** 613 words

**Byline:** Ed Carty, Press Association

**Body**

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**Load-Date:** December 31, 2015

**End of Document**



[***Seeding recipe breakthrough could boost grasslands and feed cattle***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HRH-N7S1-JCJY-G4WW-00000-00&context=1516831)

Belfast Telegraph Online

December 31, 2015 Thursday 11:06 AM GMT

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**Section:** REPUBLIC OF IRELAND

**Length:** 614 words

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**Load-Date:** December 31, 2015

**End of Document**



[***Hope is that Paris will galvanise whole world into o moving from fossil fuels to clean energy***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HKW-65C1-JBVM-Y1J8-00000-00&context=1516831)

The Western Mail

December 14, 2015 Monday

Edition 1, National Edition

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**Section:** NEWS; Pg. 20,21

**Length:** 601 words

**Body**

What has been achieved? The world's first comprehensive climate change agreement which will see action to curb rising temperatures by all countries.

Why do we need this deal? If we continue to pump ***greenhouse gases*** into the atmosphere on current trajectories, we are facing a world with temperatures of more than 4°C above pre-industrial levels by 2100 - hotter globally than at any time in human history.

Rising temperatures will lead to sea level rises, more intense storms and flooding, more extreme droughts, water shortages and heatwaves.

We've known about climate change for decades, why are we only doing something now? This deal has effectively been 20 years in the making. A first treaty, the Kyoto Protocol - which was adopted in 1997, only covered the ***emissions*** of developed countries - and the US never ratified it. It runs out in 2020 and the Paris Agreement will be its successor.

2020 is not very far away, so why has it taken until now to negotiate a new deal? World leaders tried to secure a deal in Copenhagen, Denmark, in 2009, at talks which are generally thought to have been a failure. A weak agreement came out of acrimonious talks which scarred the UN climate process and everybody involved. But in Durban, South Africa, two years later, the EU teamed up with some of the world's poorest countries to get nations to agree to work towards a new deal to be secured in Paris this year.

Why was this time different? The costs of technology such as solar panels have fallen, while deployment has grown exponentially and countries are keen to tackle the problem for other reasons, such as to cut air pollution in China. The science is even clearer, with the UN's global climate science body warning last year that global warming was "unequivocal".

ntries. also started negotiating a rlier, with 187 countries covmore than 95% of the world's ons putting forward national e plans for action they will p to 2030, before, or in a few during, the conference.

Coun a lot ea ering m emissio climate take up cases 've already got the climate plans, why do we need an ment too? If we'v action agreem The are no curbs i the wo climate plans by countries t enough, as the ***emissions*** in the commitments still put rld on track for a 3°C rise in global temperatures by 2100.

So the deal includes a kind of "review and ratchet" system for countries to update and increase their levels of climate action every five years, based on a global assessment of how far nations are off meeting the long-term goal to tackle climate change.

Countries are being requested to submit updates, by 2020, to their existing plans out to 2030, after an initial stocktaking exercise in 2018.

Have any previous environmental treaties actually worked? Yes, though not for as wide-ranging an issue as climate change. The Montreal Protocol, for example, agreed in 1987 and ratified by all UN countries, has been successful in phasing out the use of the chemicals which cause the ozone layer to be depleted.

So has the planet been saved? Only time will tell how successful this deal will be.

Tackling climate change will involve a vast, global, transition away from fossil fuels to clean ***energy***, as well as curbing deforestation and ***emissions*** from ***agriculture*** - with experts warning of the need to ***reduce*** ***emissions*** to net zero later in the century to stabilise the climate.

But the hope is Paris will galvanise action in countries, and send a strong enough signal to the businesses and investors who will ultimately make the transition happen, that the world is serious about stopping climate change and is heading towards a zero-carbon world.

**Load-Date:** December 14, 2015

**End of Document**



[***Paris climate deal will not be a legally binding treaty***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HC1-VKK1-F039-61G7-00000-00&context=1516831)

FT.com

November 11, 2015 Wednesday 7:42 PM GMT

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**Length:** 1503 words

**Byline:** Demetri Sevastopulo in Norfolk, Virginia, and Pilita Clark in London

**Body**

John Kerry, US secretary of state, has warned that December’s  [*Paris climate change talks*](http://www.ft.com/cop21) will not deliver a “treaty” that legally requires countries to cut their carbon ***emissions***, exposing international divisions over how to enforce a deal.

The EU and other countries have long argued that the accord due to be reached next month should be an  [*“international treaty”*](http://ec.europa.eu/clima/news/articles/news_2015091801_en.htm) with legally binding measures to cut ***emissions***. But in an interview with the Financial Times, Mr Kerry insisted the agreement was “definitively not going to be a treaty”.

He said it would contain measures that would drive a “significant amount of investment” towards a low-carbon global economy. But he stressed there were “not going to be legally binding ***reduction*** ***targets*** like Kyoto”, a reference to the 1997 Kyoto protocol, a UN climate treaty that had ***targets*** for cutting ***emissions*** that countries ratifying it were legally obliged to meet.

Delegates from 195 countries are due to finalise a new global climate accord in Paris that will replace the Kyoto treaty, which failed to stop ***emissions*** rising. The US signed but failed to ratify that treaty, largely because it did not cover China, now the world’s largest carbon polluter.

The Paris deal is supposed to cover all countries, but Mr Kerry’s comments underline the differences between the US and other nations over how to ensure it is robust enough to shift billions of dollars of investment away from fossil fuels and towards greener ***energy*** sources.

A European Commission spokeswoman on Wednesday said the commission and many nations “would like the Paris agreement to be in the form of a protocol or a treaty” which would represent “the strongest expression of political will and also for the future it provides predictability and durability”.

Privately, EU officials acknowledge the Obama administration is eager for a deal in Paris, but not one containing new, legally binding measures because these would strengthen arguments that the agreement needs approval from a hostile US Senate, which must ratify all treaties.

To that end, negotiators are trying to craft an agreement that satisfies all sides, possibly by making its rules and procedures legally binding, but not the actual ***targets*** in many of the climate pledges that nearly 160 countries have made this year for the deal.

The issue is particularly sensitive ahead of the 2016 presidential election given the chasm between the Democrats and Republicans running for the White House over the need and urgency to tackle climate change.

Some Republicans have accused Mr Obama of pushing the Paris talks in a direction that would make it easier to circumvent Congressional scrutiny, echoing a charge that has been levelled at his administration on issues ranging from the Iran nuclear dealto his approach on illegal immigration.

Mr Kerry said it was too early to tell how the Republican-controlled Congress would respond to a global deal on carbon ***emissions***. While climate change has played a cameo role in some of the Republican presidential debates, the Paris talks have received very little attention in the US media.

“I suppose, depending on what comes out of it, they [Congress] may well try to review it in one form or another,” said Mr Kerry, who faced harsh criticism from Republicans on Capitol Hill in the wake of the Iran nuclear deal. “We don’t have a problem with [that]. I mean, it’s fine. I mean, it depends on whether it is a poison-pill effort or a genuine effort just to review it.”

Some experts have argued that while Mr Obama is making the case for a deal, there is no guarantee that his successor — assuming it is a Republican climate-change sceptic — would not walk away from a Paris agreement.

Mr Kerry dismissed those concerns by arguing that the Republicans had “eliminated themselves from contention in the general election” because of their approach during the campaign on issues such as climate change.

Mr Kerry said several hurdles remained to securing a deal, including ensuring the US and other developed nations firmly agree to come up with the money they have promised developing countries to help combat climate change.

The Vietnam war veteran was speaking after a visit to the USS San Antonio, a transport ship at Norfolk naval base on the Atlantic coast where he sought to reinforce the case for tackling climate change. The naval base, which is the biggest in the world, is facing threats from rising sea levels and flooding.

During a speech at nearby Old Dominion University, Mr Kerry said the threat from rising temperatures was not just the “harm that is caused to the habitat for butterflies or polar bears as some people try to mock it” but the threat to everything from ***agriculture*** to national security.

“Long story short, climate change is not just about Bambi. It’s about all of us in very personal and important ways,” he told students, military officers and climate scientists.

The task Mr Obama has given Mr Kerry in Paris is a formidable one but in the interview with the FT he argued that other countries should not worry about US politics and the chance that a Republican president could walk away from any deal reached in Paris.

“There’s just a very different electorate in the general election and I think that people will want somebody who understands climate change . . . and wants to do something about it,” the former presidential candidate told the FT.

In his speech he had also pushed back against the argument that tackling climate change was bad for the economy, saying that “four times as many Americans are employed by renewable-***energy*** companies today than are employed by the fossil-fuel industry”.

Mr Kerry acknowledged in the interview that Congress was making it hard for the US to come up with the $3bn that it has pledged ahead of the Paris deal to help developing countries combat global warming. He attributed this to “attitudes about climate change itself” and an “ideological barrier to any kind of federal expenditure that’s dealing with a kind of global issue”.

He said finding the money was a wider challenge as “the politics of moving on climate change in many countries are trumped by paying the pensions and filling up the potholes and doing some other things”. But he said Mr Obama would find a way to get lawmakers to approve the funding.

“We’ll get there, because the trade-offs of the budget are such that when something is a high enough priority for a president, you have a way of getting it done, even though it’s opposed by people,” he said. “If the president is prepared to veto the budget because it hasn’t included it, you can usually find some money.”

Mr Kerry said he thought the overall ***target*** of $100bn for the deal would be surpassed but that “whether it’s formalised or not remains to be seen”. He added that he would like the US to provide more than its current pledge of $3bn, but said “I don’t know whether it’s in the cards right now”.

Mr Kerry said another hurdle was resistance from countries that insist they should be compensated more because of their developing nation status.

“We have to break the old mentality . . . This is not 1992, this is not 1997, this is not the same Kyoto kind of breakdown,” said Mr Kerry. “China is an example. It’s now the world’s largest emitter and it’s the second-largest economy in the world . . . Now they’re not sitting there being the same. They’re putting up some money, they’re doing other things. It’s a great example.”

Mr Kerry rejected suggestions that the US recently pulled its punches in the  [*South China Sea*](http://www.ft.com/intl/indepth/asia-maritime-tensions) to avoid angering China before Paris. Several US officials told the FT recently that the White House forced the US navy to take the least aggressive option on the table when it conducted freedom of navigation operations in the area. Asked whether the US action would make China less co-operative, Mr Kerry said “I hope not and I don’t think so”.

“First of all, we’re not being aggressive in the least. We’re doing what we’ve done for 20 years,” he said. “If anything is aggressive, putting fighter jets on a man-made island in the South China Sea is pretty aggressive, and saying you’re not militarising”.

While he praised China for its role in the talks, he raised concern about other countries, including India, which he suggested was more resistant even as he applauded Narendra Modi, its prime minister.

“India has been more cautious, a little more restrained in its embrace of this new paradigm, and it’s a challenge,” he said. “We’ve got a lot of focus on India right now to try to bring them along. ”

Mr Kerry said India was “regrettably” talking about using its own domestically produced coal — which is dirtier than some imported coals — which he said was “not the direction that we ought to be moving in”.

But conscious of putting too much pressure on countries that believe the US and developed nations should take more responsibility for the current level of ***greenhouse gases***, the top US diplomat said, “we have to be careful not to be holier-than-thou or accusatory”.

Twitter:  [*@DimiSevastopulo*](https://twitter.com/DimiSevastopulo)

**Load-Date:** November 17, 2015

**End of Document**



[***Amber Rudd challenges Boris Johnson to state that he's not a climate change denier; 'When I consider who to back as leader of the Conservative party, knowing where they stand on this issue, which is so important to me, will be absolutely central to who I support,' Energy and Climate Change Secretary says***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K44-K361-JCJY-G4H4-00000-00&context=1516831)

The Independent (United Kingdom)

June 29, 2016 Wednesday 11:43 AM GMT

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**Section:** ENVIRONMENT

**Length:** 915 words

**Byline:** Ian Johnston

**Body**

Climate Change Secretary Amber Rudd has challenged Boris Johnson to make clear he is not a global warming denier, saying the issue would be "absolutely central" to her decision about who to back as the next Prime Minister.

Speaking at the Business & Climate Summit in London, Ms Rudd sought to allay fears that the UK will abandon policies designed to ***reduce*** ***greenhouse gas*** ***emissions*** after it leaves the European Union.

The prominent Remain campaigner also stressed that Britain would leave the EU as "the decision of the British people was clear" in last Thursday's referendum.

Mr Johnson is one of the leading candidates to succeed David Cameron and Ms Rudd was asked whether voters should be concerned that the next Prime Minister might be someone who has previously questioned whether climate change is real.

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31 scientific bodies tell US Congress: Climate change is real

Brexit: Environmentalists fear 'bonfire' of regulations designed to fight climate change and protect wildlife

Climate change could destroy Statue of Liberty, Venice and many other parts of the world's heritage, UN report warns

She paused, smiled and bowed her head as some in the audience laughed and applauded the question.

But Ms Rudd, who had earlier "exclusively revealed" she would not be standing for Tory leader, then said: "When I consider who to back as leader of the Conservative party and future Prime Minister, knowing where they stand on this issue, which is so important to me and I think is so important to the whole country and to everyone here, will be absolutely central to who I support.

"And I will be very, very clear about that and very vocal in holding anybody to account on that the getting the sort of commitment that will reassure all of us."

She also said the EU referendum had a lesson for those seeking to persuade people to act to address climate change.

"I felt that with the EU referendum last week that those of us campaigning on one side were very clear about the economic risks, but ultimately the decision was to leave and it was quite, to a large extent, an emotional one," Ms Rudd said.

"It is incredibly important to have the right financial structures, the green investment banks, to consider how many millions or trillions need to be invested.

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Theresa May narrowly beats Boris Johnson in poll for next PM

"But it's also incredibly important to make the emotional argument and there is an emotional argument to be made here.

"It's about protecting our planet, protecting our environment and making it clear, above all, we want to bequeath a planet ... that we as the generation now have looked after."

In January 2013, Mr Johnson wrote in his Telegraph column that the cold winter in Britain made him doubt climate change.

He said he was "all for theories about climate change, and would not for a moment dispute the wisdom or good intentions of the vast majority of scientists".

"But I am also an empiricist; and I observe that something appears to be up with our winter weather, and to call it 'warming' is obviously to strain the language," Mr Johnson added.

He cited Piers Corbyn, the brother of Labour leader Jeremy, as a scientist who believes the world is on the brink of a mini ice age.

"Now I am not for a second saying that I am convinced Piers is right; and to all those scientists and environmentalists who will go wild with indignation on the publication of this article, I say, relax. I certainly support ***reducing*** CO2 by retrofitting homes and offices - not least since that ***reduces*** fuel bills. I want cleaner vehicles," Mr Johnson said.

"I am speaking only as a layman who observes that there is plenty of snow in our winters these days, and who wonders whether it might be time for government to start taking seriously the possibility - however remote - that Corbyn is right.

"If he is, that will have big implications for ***agriculture***, tourism, transport, aviation policy and the economy as a whole. Of course it still seems a bit nuts to talk of the encroachment of a mini ice age.

"But it doesn't seem as nuts as it did five years ago. I look at the snowy waste outside, and I have an open mind."

On Monday, Lord Greg Barker, a former Conservative climate minister who has advised Mr Johnson, insisted: "He is not a denier.

"If you look at his pedigree, his dad, his brother [Jo Johnson, science minister] ... the opposition, if he starts to unstitch environmental legislation ... he will be kebabbed with a steak knife over the dining room rable."

John Sauven, director of Greenpeace, welcomed the "much needed reassurance" from Ms Rudd and also ***Energy*** Minister Andrea Leadsom, who spoke at an ***Energy*** and Climate Committee hearing on investor confidence, that the UK was still committed to taking a lead in the fight against climate change.

"But soothing words are not good enough," he said. "Green investor confidence in the UK was shaky before Brexit because of the government's ever changing and incoherent policies, which neither minister seem willing to get to grips with even now.

"Both ministers are willing to reassure Chinese and French investors in Hinkley and other new nuclear power stations, but renewables businesses are simply not receiving a fraction of the political or financial support as EDF and the Chinese state-owned companies.

"If the government intends to cut such a sweet deal for other new nuclear investors, there will be little cash left for any other renewable technologies and bills are likely to rise in the future."

**Load-Date:** June 29, 2016

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[***Amber Rudd challenges Boris Johnson to state that he's not a climate change denier; 'When I consider who to back as leader of the Conservative party, knowing where they stand on this issue, which is so important to me, will be absolutely central to who I support,' Energy and Climate Change Secretary says***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K44-7K31-F021-61MH-00000-00&context=1516831)

The Independent (United Kingdom)

June 29, 2016 Wednesday 11:13 AM GMT

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**Section:** ENVIRONMENT

**Length:** 749 words

**Byline:** Ian Johnston

**Body**

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**Load-Date:** June 29, 2016

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[***Biobased polymers keep textiles green; Growing demands from brand owners and consumers for fibres and textiles that are more environmentally friendly are now creating a huge market for biobased polymers produced using renewable feedstocks***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K4G-JP11-JCF2-H49G-00000-00&context=1516831)

ICIS Chemical Business

June 27, 2016

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**Section:** FEATURES

**Length:** 1835 words

**Byline:** Cynthia Challener

**Body**

Covestro has produced biobased PU dispersions for textile applications

Covestro

The textile market covers a broad range of materials – both woven and nonwoven – used in applications ranging from clothing and apparel to interior and decoration textiles, technical textiles, medical textiles and safety and security products.

Consequently, the textile industry has a significant impact on the environment and has faced mounting pressure across the entire value chain from end users, consumers and non-governmental organisations to improve its performance with respect to sustainability.

One response to this need has been the development of biobased fibres from renewable raw materials. Many biobased polymers have been developed, including polyethylene terephthalate (PET), polyethylene (PE), polylactic acid (PLA), starch blends, biodegradable poly-esters such as polybutylene succinate (PBS) and poly(butylene adipate-co-terephthalate) (PBAT), thermosets (epoxies, polyurethanes [PUR] and ethylene propylene diene monomer rubber [EPDM]) and cellulose acetate.

These accounted for 2% of global polymer production in 2013. Capacity for such renewable polymers is expected to increase faster than that of conventional polymers, leading to a 4% share by 2020, according the nova-institute, an organisation dedicated to advancing the use of renewable raw materials.

The textile industry share of worldwide biobased polymer production in 2013 is estimated by the group to be 18%, but expected to decline to 8% in 2020 due to more rapid growth in consumption of biobased polymers/plastics in the packaging sector (which is attributed to the fast growth of biobased PET).

In fact, nova-institute projects production capacity for PET to reach 7m tonnes/year by 2020, while production capacities for PLA and PHA will expand nearly four and tenfold, respectively, between 2013 and 2020.

Examples of leading companies producing biobased polymers and fibres intended for use in the textile industry include DuPont, NatureWorks, Invista, Corbion, Kaneka and Cathay Industrial Biotech.

DuPont offerings grow

DuPont makes Sorona (polytrimethylene terephthalate, PTT) biobased fibres (37% renewably sourced by weight) for carpet and apparel applications via continuous polymerisation of bio-PDO (1,3-propanediol), which is made from fermented sugars, and terephthalic acid (TPA).

Sorona production uses 30% less ***energy*** and releases 63% fewer ***greenhouse gas*** ***emissions*** compared to the production of nylon 6, according to Michael Saltzberg, global business director for biomaterials at DuPont.

He notes that growth in the adoption of Sorona is largely due to its unique performance properties, including softness, inherent stain resistance, stretch and recovery and durability; and secondly because of its renewably resourced content, which supports the performance. The company will be introducing new products in late 2016 or early 2017 that will expand Sorona’s colour palette capabilities and facilitate Sorona/natural textile blends.

DuPont Industrial Biosciences also announced in January 2016 that, in collaboration with Archer Daniels Midland Company (ADM), it has developed an efficient, high-yielding, low-cost method for the production of furan dicarboxylic methyl ester (FDME) from fructose. FDME is an attractive biobased raw material for the production of various polymers, such as polytrimethylene furandicarboxylate (PTF), a 100% biobased novel polyester produced via the copolymerisation of FDME and bio-PDO.

The two companies are planning to build an integrated 60 tonnes/year demonstration plant in Decatur, Illinois, to provide potential customers with sufficient product quantities for testing and research.

ChengHong Holding Group in cooperation with the Tsinghua University reported in 2014 that it was constructing a 50,000 tonne/year bio-PDO unit and 30,000 tonne/year bio-PTT plant.

The company noted that it uses crude starch and glycerine (a by-product of biodiesel) for the fermentation production of PDO and BDO (1,4- butanediol), respectively, and has gained independent intellectual property rights for its PDO and PTT processes. It also indicated that it was installing PTT spinning and fabric dyeing technologies.

Ingeo PLA from NatureWorks is used to manufacture a wide variety of textile products including apparel, furniture components, household materials, baby care products (diapers), personal hygiene goods and gardening supplies. Ingeo fibres are produced using 40% less non-renewable ***energy*** and generate 52% less ***greenhouse gases*** than conventional PET fibres, according to Robert Green, global segment lead, nonwovens and fibres with NatureWorks.

When compared to nylon 6, Ingeo fibres ***reduce*** non-renewable ***energy*** consumption by 67% and ***greenhouse gases*** by 81%, Green adds. “Most applications using Ingeo are driven by product performance. The major performance themes are moisture management, breathability and skin comfort for apparel and hygiene products, while for horticultural/***agricultural*** applications, the renewable, sustainable and compostable attributes are highly desired,” he notes.

Natureworks broadens range

NatureWorks continues to broaden the performance range with new resin grades for fibre applications and works closely with development partners to optimise processes and performance to demonstrate how Ingeo as a material can offer benefits.

For instance, customers are developing combinations of Ingeo products with natural fibres and other biobased resins to offer functional and sustainable products to the market.

Fitesa Simpsonville, for example, has developed the 100% renewable Fitesa 100% biobased spunbond nonwoven product made of Ingeo and Braskem’s I’m green 100% biobased polyethylene. This won the 2015 RISE E Durable Product Award from the Association of the Nonwoven Fabrics Industry (INDA).

CorbionPurac initially launched its biobased PLA resin portfolio for extrusion, thermoforming, injection moulding and fibre spinning in Europe in 2015, and for the North American market in May 2016. The company’s new 75,000 tonnes/year PLA production plant is anticipated to start-up within the second half of 2018, and Corbion is currently testing, validating and selling pre-marketing volumes of PLA.

The product range includes PLLA (poly L-lactic acid) and PDLA (poly D-lactic acid) homopolymer resins for high heat, high performance, as well as standard PLA grades.

Chinese polyamide development

Cathay Industrial Biotech, based in Shanghai, China, received $135m in additional financing in late 2015 that will be used to increase the production capacity at its existing Jinxiang facility and build a new production site.

The company manufacturers long-chain dibasic acids (LCDAs), including renewable dodecanedioic acid and 1,5-pentamethylenediamine (DN-5), a renewable diamine, that is polymerised with adipic acid to produce Terryl, a biobased polyamide 56, which serves as an alternative to nylon 6 and nylon 66.

The new polyamide has similar strength and wear resistance to traditional nylons, along with improved flowability, moisture absorbance, comfort, dyeability and antistatic and flame retardant properties due to disruption of some of the hydrogen bonds, which provides more sites for interaction with dyes and water, according to the company.

In addition, direct polymerisation melt-spinning provides significant cost savings. The company is currently investing an additional $500m to build a new production site for DN5, long chain diacids and biobased polyamides using its own raw monomer blocks in Xinjiang, western China.

The site is anticipated to be complete by May 2017 and will provide 50,000 tonnes/year of DN5, 100,000 tonnes/year of biopolyamides and double the current capacity for LCDAs.

Kaneka PHBH from Kaneka Corporation is a copolymer of a copolymer of 3-hydroxy-butyrate and 3-hydroxyhexanoate and a 100% biobased polyester derived from renewable plant oils. The strain development and cultivation technology were achieved through a joint research effort with RIKEN, Japan’s largest research institution.

Compared to PLA, PHBH is soft and has greater heat-resistance, biodegradability, hydrolysis resistance and water vapour barrier properties, according to the company. The production of fibres is a key end-use application.

Several other companies offer biobased fibres. INVISTA introduced a biobased version of spandex in May 2014. Approximately 70% by weight of the new Lycra bio-derived spandex fibre comes from dextrose derived from corn.

Japanese firm Toray manufactures biobased PET. Italian firm Fulgar launched in November 2015 ‘Evo by Fulgar”, a 100% biobased high-performance fibre made of a biopolymer derived entirely from castor oil seed, which is grown in arid regions not suited for other forms of ***agriculture***, according to the company.

Other firms have ***targeted*** the development of biobased additives for textile applications. Covestro introduced its Impranil eco range of waterborne, biobased polyurethane dispersions (PUDs) for use as textile coatings. The products contain 43% to 65% renewable content, offer performance that matches conventional products and can be used as drop-in replacements for existing PUDs according to the company.

Biobased collaboration

Covestro collaborated with BioAmber, a supplier of biobased succinic acid, in the development of the Impranil eco line. The products recently (May 2016) won the Innovation Award Bio-based Material of the Year 2016, an award sponsored by InfraServ GmbH & Co. Knapsack KG, a service provider for the planning, construction and operation of plants and sites.

OrganoClick AB developed OC-biobinder, a biobased fibre-binding system used to make nonwovens and textiles stronger and stiffer. The company applies click chemistry to modify and change the properties of both naturally occurring cellulosic (wood, cotton, and linen) and manmade (viscose, polyester, polyamide) fibres. “We have developed technologies to add properties such as fire resistance, water repellency, fungal resistance and increased strength,” notes CEO Marten Hellberg.

While continued growth of the market for biobased polymers used in fibres and textiles is expected in the short and long terms as expectations for both greater performance and sustainability increase, hurdles do remain for manufacturers of products manufacturers using renewable raw materials.

“Educating the market about these materials, the sustainability benefits that can be realised and the overall value proposition is one of the biggest challenges,” says Green.

Limited manufacturing capacity for the production of biobased functional fibres is an issue for Hellberg. ”Capacities need to increase further, which will also likely ***reduce*** the prices for biobased functional fibers,” he observes.

Saltzberg stresses that success in the fibre/textile industries is dependent on not only having a competitive cost structure, but also acceptable properties, and preferably higher-performing properties.

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Pic credit

**Load-Date:** June 30, 2016

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[***Think you can't help the environment? These Europeans disagree; From picking up rubbish to cleaning the sea, people across the continent are making a huge a difference***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HBD-HG61-JCJY-G29W-00000-00&context=1516831)

The Guardian

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**Section:** WORLD NEWS

**Length:** 2759 words

**Byline:** Kate Lyons, Nabeelah Shabbir, Michael Bauchmüller, Tomasz Ulanowski, Rémi Barroux and Alberto Simoni

**Body**

Climate change has vanished from the headlines since the financial crisis elevated other economic concerns to the top of the agenda. But across Europe there is no shortage of activists trying to make a difference before this month's UN climate summit.

**' I've cut our household *emissions* by 89%'**

Anne Bragg, 59, is a corporate consultant who lives with her husband, Tom, in Cambridge, UK, and charts their household ***greenhouse gas*** ***emissions***

We bought this house in 2001. Since then we've had an 89% ***reduction*** in our ***emissions***. One of the interesting things to me is the sheer scale of the change you can make without really noticing it, if you just keep at it. But you have to be thoughtful about what works for you.

I used to fly a lot: I was a technical consultant flying all over the world, and used to go on at least two flying holidays a year. We now try really hard not to fly. We put quite a bit of effort into thinking of what to do that would be really, really fun that doesn't involve flying. This year, we went to a chalet in Switzerland for cross-country skiing, but we went by train.

We've ***reduced*** our gas bill by 83% [since 2002]: it is now £11 per month. We've insulated the house well. When we moved in it was dreadful: there was zero insulation, the carpet in my study used to billow on strong wind days. We've got a wood-fired stove in the front room and that halved our gas bill because it meant we often didn't bother to turn on our central heating.

I would say that by switching everything off when we're not using it we've ***reduced*** our electricity bill by 25%, and then by changing lightbulbs and some appliances, that's another 25%.

We do have a car, but we try to cycle wherever we can. We don't eat much meat and I don't eat dairy, and we go to the market in Cambridge where the produce is grown on farms nearby. We deliberately chose to live here so we could shop in the market. We were thinking we could live out in one of the villages, have a bigger house and, more importantly, a bigger garden, but we thought, well actually then you get condemned to driving to the supermarket. So some of the lifestyle choices were about accepting a slightly smaller house and garden in order to have access to these things that make it easy to be low-carbon.

To those who think they can't make a difference I would say, by doing low-carbon things, almost no matter what, it makes you feel less despondent. Instead of feeling helpless, you feel positive and think 'Well, I made a difference last weekend, sealing up that draughty room.' There is a wave of change building and people doing things slowly influences governments and companies too. Kate Lyons

Doing low-carbon things, almost no matter what, makes you feel less despondent

Kate Lyons

**' We got our sea back '**

Marjo Nurminen, 47, is a non-fiction author and architect from Helsinki. With her husband Juha, 69, she is cleaning up the Baltic Sea

Finland doesn't have resources like Norway, but we're very into nature. The country is vast, with few people - some 10,000 lakes, 10,000 islands, a beautiful coastal area, plenty of forests. Everyone in Finland has a summer cottage, and we accept climate change as a true fact.

Juha's great-grandfather, a sailor, left us so many Baltic sea charts, so we started our foundation in 1992 to celebrate our maritime culture. But we realised that there's no point doing history books about the sea if the sea dies! The main issue of the Baltic Sea is eutrophication, caused by its excessive nutrient (nitrogen and phosphorus) load. So two years later we started our environmental work, since climate change will only worsen this load.

Eleven European countries surround the sea, which is shallow at 55 metres. We are focused on cleaning all the wastewater. Phosphorus from polluting sources such as ***agriculture*** and wastewater cause the blue-green algae to grow in the summer. Cities have been trying to fix this but they have no pressure - they need a third party like us.

We're the first and only ones doing this that we know of. It's a shitty business! No one is interested in the effects and danger of the phosphorus - cutting it is by far the best way of cleaning the sea. The Helsinki Commission ( Helcom ) of all 11 countries use us as their fire corps [volunteers who help with non-emergencies]. We manage and lead the projects. We are volunteers with philanthropic financing.

The EU has norms restricting the amount of phosphorus in the water, but they're not strict enough. We've spent four years making changes but the French or Spaniards or Italians don't care about the Baltic Sea, it's too far north. There's so much talk of what we should do, but when we ask people what are you doing, they say, well, we are talking! We get tired of it!

We spent seven years dealing with the pollution in the Gulf of Finland from St Petersburg, home to 5 million - as many as in Finland. It wasn't easy with Russia - but we are neighbours. It took us two years to convince the water company in St Petersburg that we did not want to make money. The [female] Finnish president, Tarja Halinen, knew the [then] female governor of St Petersburg, who helped.

With Greenpeace, St Petersburg would never have got involved. We're pessimistic about Kaliningrad, 400,000 people whose toilet water runs directly into the sea ... even Putin doesn't know what's going on there.

Plus, the catchment area of the Baltic is three times bigger than the sea itself, and is home to 90 million people. We've managed to work with Belarus, which is a political outcast in the EU. Belarus doesn't have the sea, but its big rivers affect the Baltic. It helped to have Russian-speaking project managers.

We cut phosphorus ***emissions***, the biggest environmental problem in northern Europe, by 60%. Fifteen years ago it was awful: the algae smelled, it was poisoning dogs who drank it. We have school-aged kids. On the eastern side of the Gulf of Finland we have our summer cottage and for five years now they have been allowed to swim without restrictions. We got our sea back.

For now, the Gulf of Finland is clean - but most of the pollution comes from Poland, with its big population and rivers running straight into the Baltic. In Sweden and Finland we are orientated to our sea, but in Poland they sail less, don't have boats. One Polish newspaper called us an environmental terrorist organisation! They might be even worse than the Soviet Russians back in the day. Nabeelah Shabbir

'I've gone to every UN climate summit for the past two decades'

Christoph Bals, 55, executive director, Germanwatch

I started to pay attention to climate change as a journalist in 1987, when there were reports of the first authoritative temperature scenarios. An expert commission in the German parliament warned that the 21st century could see [a rise of] five degrees if carbon ***emissions*** weren't ***reduced***.

I realised that that would be a huge, uncontrolled experiment with humanity, which would fundamentally change how we lived on this planet. Five years later I became a founding member of Germanwatch. Ever since, I've been working on changing things in Germany. For the past two decades I've gone to every UN climate summit.

It's always been clear how difficult it is to get the world economy to stop running on fossil fuels in one go. But it was breathtaking to see the gigantic scale on which the lobbies work in the background in their efforts to discredit climate policies. Looking back, I have to say that they have also shamelessly exploited the naivety of environmental groups and well-meaning mediators.

But that's how we have learned. The task ahead is comparable to the abolition of slavery, which took a century. It's not going to happen in one fell swoop since there are huge interests and jobs at stake, with livelihoods depending on this industry. We need political and emotional intelligence, strategic moves and long, deep breaths.

The task ahead is comparable to the abolition of slavery

I'm driven by the knowledge of what threatens us. People from everywhere - be it the Philippines, Peru or India - have taught me that. It's fascinating to see how these friends make their case for change with vision, creativity and courage. It gives me a lot of strength. And recently the signs are leading to a global turnaround in climate policy.

Last year worldwide ***emissions*** from the ***energy*** industry hardly rose, for the first time, although the global economy is growing fast. Renewable ***energy*** is booming everywhere, in Germany but also in countries such as Morocco. Both China and the US have agreed to ***reduce*** their ***emissions***. No one should think that the climate will be saved in Paris alone, but it can break down barriers. The summit must send a message to investors and the public worldwide about the gradual phasing out of oil, coal and gas. That will map the way for the debate about getting out of coal and putting a sufficiently higher price on carbon. I look forward to it.

Michael Bauchmüller @MBauchmueller

**'I'm educating society'**

Disgusted with Polish ignorance about climate change, scientist Marcin Popkiewicz set out to educate his compatriots

I launched a website called The World at a Crossroads, then set up another with Polish scientists dealing with climate research, giving information about climate myths. I started up a number of internet-based tools making this subject accessible, became a specialist in giving public addresses, and wrote books.

I do this because it's important. It's probably the biggest choice we've faced in our history. We're standing at a crossroads, and what we do (or perhaps don't do) will decide the fate of humanity, and that of the millions of other species with which we share our beautiful planet.

I first began to explore this subject in the early 1990s when, as a doctoral student in the department of nuclear physics at the University of Warsaw, I had to give a lecture on the safety of nuclear ***energy***. One of the advantages was the lack of ***greenhouse gases*** and their consequences.

After my PhD, I went into business, but I didn't lose my passion for science and teaching, and gave lectures for friends at home. One day, after a presentation on how the moon was formed, somebody asked me for the story of global warming. My presentation was based on the official scientific position that the climate is getting warmer.

While preparing the lecture, I realised how complicated the subject is (even for a physicist). But after collecting the materials I felt like I finally knew something. However, the feeling soon passed when a colleague at the lecture accused me of presenting a one-sided picture that many scientists disagreed with. He sent me information about the film The Great Global Warming Swindle.

This film argues that the current state of knowledge on climate change is problematic, that we don't know anything for sure, and that the picture of climate change presented by scientists and the media is manipulated and exaggerated. It was very convincing and seemed credible. I watched it, thinking "so what's the real story?" Worse still, with my knowledge as a physicist I couldn't even immediately identify errors - either in the film or in what I had learned when putting my talk together.

I felt stupid. How could this be? I was intrigued, and spent the next few weeks getting my teeth into the subject. I read books as well as scientific and press articles, pored over graphs and analysed various sources. I soon found two instances where the director of The Great Global Warming Swindle had omitted facts. As a physicist, this manipulation of data is something I really don't like. These findings made me more cautious about the reliability of sceptics. I made sure I checked all the key assertions made in the film. But this wasn't easy - and many proved to be true.

I was annoyed to see that somebody could dupe their viewers like this, and so efficiently too. So I set about educating society. Tomasz Ulanowski

'I've picked up over 800kg of rubbish'

Hervé Pighiera, 28, has walked more than 600 miles across France picking up litter.

I'm 28, live in Aix-en-Provence in the south of France, and I've been a mason for 10 years.

I have walked 975.5km (605 miles) for the environment, from Aix-en-Provence to Paris, picking up all the rubbish left on the motorways and roads: 810kg (127st) in total. I left my home town on 12 July with my green bin in tow, wanting to raise awareness of the state of the planet and its climate change problem.

I am not an ecologist, I'm not a member of any political party, but I have a conscience - everyone should do something to avoid the worst. We're almost at the point of no return when it comes to the state that the planet and its resources are in.

My family is pro-environment and we recycled and used a composter, although we didn't particularly devote ourselves to eating organic food. I have always loved nature and going on walks with my family.

Over 57 days, I managed around 17 km of walking a day. I picked up 61kg of recyclable plastic, 3,977 cigarette packets and 2,083 cigarette butts (one butt can pollute 500 litres of water, according to a UN study), 117kg of glass, 162.5 kg of metal and 325kg of non-recyclable waste. My girlfriend, Lola, made sure it got sorted, thanks to the tow truck she had attached to a car.

I got the idea to do a walk for the environment during a trip to Latin America. I had gone to Brazil for the football world cup, and then I took a bus to see Lola, who was studying in Peru at the time. The whole way, I found it staggering just how much rubbish collected up along the motorways, outside the villages. The plastic bags, cans, tyres, boxes, empty bottles... a total shock. Lima was playing host to the COP 20 climate summit, the 20th such event which was the precursor to the climate summit in France at the end of this year.

After the UN climate summit in Paris, I'll keep going with a cooperative called Petra Patrimonia. We'll be able to do so much if we can keep recycling and sorting our rubbish properly. It's a strategic sector in promoting clean ***energy***. Lola and I will also protest against the proposed biomass plant in Gardanne, which apparently needs wood from Canada to work. It's an aberration. Rémi Barroux, Le Monde

**'I went from being a volunteer to an activist**

Luca Iacoboni runs the ***energy*** and climate campaign at Greenpeace Italy

I was at school, watching a video presented by Greenpeace volunteers, and it hit me. It was on a huge banner on the chimney of a coal factory. I had always been interested in the environment, but in that specific moment I understood that what we do in Italy has an impact elsewhere and vice versa. I started to link ***energy*** production, climate change and environmental disasters.

In 2006 there wasn't much talk about climate change, at least not in Italy where the implications of climate change were not so evident. A few months after I turned 18 I joined Greenpeace in Rome. I loved volunteering, but my passion quickly became ***energy***, especially the need to replace fossil fuels, coal and gas with renewables. At the beginning I thought 100% renewables was a bit too ambitious, but after a bit of research I realised it wasn't.

I went from being a volunteer to an activist, and I continued my interest in ***energy*** and climate when I was at university. I have a degree in environmental economy, and did my thesis on ***energy*** scenarios and carbon dioxide markets.

After seven years my passion became my profession and I now run the ***energy*** and climate campaign at Greenpeace Italy. As we edge close to the climate summit in Paris, I can say confidently that we can still save the climate, but we are running out of time. We need to abandon fossil fuels and work for 100% renewables and ***energy*** efficiency.

I don't know if a deal will be signed at COP 21 [the Paris summit], but I am sure that the climate challenge will be won thanks to citizens, associations and companies. These are the forces that have forced politics to seriously tackle the problem, and it is thanks to them that after Paris the battle for a renewable future will continue. And be won. Simoni Alberto

Translators: Nabeelah Shabbir, Alberto Nardelli, Aleksandra Sygiel/ VoxEurop

**Load-Date:** November 9, 2015

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[***KEY QUESTIONS SURROUNDING UN CLIMATE CHANGE TALKS***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HG1-H9G1-JCBD-Y36X-00000-00&context=1516831)

Press Association Mediapoint

November 26, 2015 Thursday 4:09 AM BST

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**Section:** HOME NEWS

**Length:** 872 words

**Byline:** Emily Beament, Press Association Environment Correspondent

**Body**

Crucial United Nations climate change talks are taking place in Paris. Here are the key questions surrounding the talks.

What are the talks about?

They aim to secure a new international treaty limiting global temperature rises to no more than 2C above pre-industrial levels to avoid the worst impacts of climate change.

Why do we need a new deal?

If we continue to pump ***greenhouse gases*** into the atmosphere on current trajectories, we're facing a world with temperatures of more than 4C above pre-industrial levels by 2100 - hotter globally than at any time in human history.

Rising temperatures will lead to sea level rises, more intense storms and flooding, more extreme droughts, water shortages and heatwaves - as well as massive loss of wildlife and ***reduction*** in crop yields, potentially sparking conflict and mass migration.

The higher temperatures rise, the worse the situation will be - so we need to curb the ***emissions*** that cause global warming.

Who is taking part in the talks?

Around 40,000 people from the 195 countries, and the European Union, signed up to the UN's climate change convention.

As well as government negotiators and ministers involved in agreeing a new treaty, thousands of journalists, campaigners, businesses, investors and regional leaders will also be in Paris during the talks.

We've known about climate change for decades, why are we only doing something now?

This is not the first climate change deal the world has agreed, but the first treaty, the Kyoto Protocol - which was adopted in 1997, only covered the ***emissions*** of developed countries - and the US never ratified it.

It runs out in 2020 and the aim is to replace it with a much more comprehensive deal involving all countries, including the biggest emitters such as China and the US.

2020 is not very far away - why has it taken until now to negotiate a new deal?

World leaders tried to secure a deal in Copenhagen, Denmark, in 2009, at talks which are generally thought to have been a failure. A weak agreement came out of acrimonious talks which scarred the UN climate process and everybody involved.

But in Durban, South Africa, two years later, the EU teamed up with some of the world's poorest countries to get nations to agree to work towards a new deal to be secured in Paris this year.

Are we more likely to get a deal than in Copenhagen?

Yes. The situation is better: the world is not just out of recession like in 2009, the costs of technology such as solar panels have fallen while deployment has grown exponentially and countries are keen to tackle the problem for other reasons, such as to cut air pollution in China.

The science is even clearer, with the UN's global climate science body warning last year that global warming was ``unequivocal''.

Countries have also learned from Copenhagen and started negotiating a lot earlier. Already scores of countries have put forward national climate plans (snappily called their ``intended nationally determined contributions'' or INDCs) for action they will take up to 2030.

If we've already got the INDCs why do we need a treaty?

The INDCs are not enough, as the ***emissions*** curbs in the commitments still put the world on track for a 3C rise in global temperatures by 2100.

So there are calls for a ``review and ratchet'' mechanism in the deal requiring countries to revisit their pledges every few years and increase their ambition.

The INDCs are also just promises, and countries including the UK are keen to see a legally-binding deal which would enshrine long term aims to tackle climate change and the ways in which countries will get there.

Have any previous environmental treaties actually worked?

Yes, though not for as wide-ranging an issue as climate change. The Montreal Protocol, for example, agreed in 1987 and ratified by all UN countries, has been successful in phasing out use of the chemicals which cause the ozone layer to be depleted.

What could go wrong in getting a deal?

Debate over providing sufficient finance and support to help poorer countries, who will be worst hit by rising temperatures, cope with climate change and develop cleanly is a potentially huge stumbling block.

It's part of the wider issue of ``climate justice'', with many developing countries demanding industrialised nations, who historically got rich while polluting the planet, do most to tackle the problem.

In addition, the UN climate talks are an unwieldy thing, and it's possible the whole thing could just get bogged down in process.

If we get a deal, is the problem solved?

Far from it. It's clear that Paris by itself is not going to be enough, and is being seen as the beginning of the road to avoiding dangerous climate change, rather than the conclusion.

Tackling climate change will involve a vast, global, transition away from fossil fuels to clean ***energy***, as well as curbing deforestation and ***emissions*** from ***agriculture*** - with experts warning of the need to ***reduce*** ***emissions*** to zero later in the century to curb temperature rises to 2C.

But the hope is Paris can help drive that process, not least by sending a strong enough signal to the businesses and investors who will ultimately make the transition happen that the world is serious about stopping climate change and is heading towards a zero-carbon world.

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[***What the Paris climate deal means for clothing***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HNC-8SR1-JDNW-408J-00000-00&context=1516831)

just-style global news

December 19, 2015 Saturday 9:26 AM GMT

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**Length:** 916 words

**Byline:** Mark Rowe

**Body**

The global clothing industry should engage with the new Paris climate change deal, say experts, who warn that a warming planet imperils not only the raw materials the industry needs but also poses an existential threat to the sector's prevailing business model.

The apparel industry must react quickly to the Paris climate change accord if it is to head-off the gravest impacts of global warming, experts have warned.

The agreement, struck on 12 December at the 21st session of the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (or COP 21), calls on all nations to hold the increase in the global average temperature to well below 2&deg;C above pre-industrial levels.

It outlines several implications for the apparel sector, whose contribution to climate change is dominated by the requirement for burning fossil fuel to create electricity for heating water and air in production processes such as dyeing and finishing, laundering and land use for resources.

COP21 worker provision a "considerable achievement"

"The Paris conference has definitely been pertinent to the industry. We're one of the most ***energy*** intensive industries," says Orsola de Castro, co-founder of UK-based Fashion Revolution, which promotes sustainable textiles.

Dr Sally Uren, CEO of London-based sustainability group Forum for the Future, said that the Paris agreement had direct implications for the apparel sector that required swift action. "The apparel sector sees and feels that it is on a burning platform when it comes to sustainability," she says.

"Paris sends a clear message to the apparel industry about the need to rapidly decarbonise its manufacturing facilities and bring down the carbon footprint of the goods themselves."

The agreement has also raised another challenge facing the apparel sector - measures to ***reduce*** the carbon ***emissions*** involved in farming: much of the carbon footprint in cotton production happens in the growth phase, in farming, and in the final end use by consumers.

"Bringing down the ***agricultural*** footprint is equally important," says Uren. "But the hardest bit is in stopping us, the consumers, from buying things over and over again."

Uren praises efforts by companies such as Levi Strauss & Co, which has produced jeans that use dramatically less water in the production process. "The major brands are looking for opportunities to make lower-carbon products fashionable," she says.

"The biggest challenge will be a business model based on fast fashion and cheap labour. They need to get away from the narrative that people always buy clothes that can be easily and affordably be replaced."

Level playing field

Proponents of the final Paris agreement say that it puts in place mechanisms to address the issue of a level playing field for industry ***emissions*** between Europe, the US and China - where, according to management consultants McKinsey, approximately US$177bn in apparel exports were generated in 2013.

Article 4 of the accord says that all countries will aim to reach global peaking of ***greenhouse gas*** ***emissions*** as soon as possible, "recognising that peaking will take longer for developing country parties."

To respond, argue experts, is in the apparel industry's own interests, as a changing climate is forecast to involve droughts, temperature shifts and other impacts that will make apparel production more difficult and costly.

"It's true to say that climate change is already impacting the apparel sector," says Uren. "It's manifesting itself in terms of water shortages, and extreme heat. That is a major issue for workers' rights. The use of air conditioning just compounds the ***energy*** intensity."

Industry impacts

A report issued before the Paris conference by bankers HSBC, 'No Water, More Trade Offs', identified climate factors that threatened the apparel industry in China, a country in which 32% to 75% of hides, wool, cotton, chemical fibre and silk are either made in or pass through China as imports.

These include drought. China dominates the water-intensive global cotton industry, accounting for around a quarter of global cotton lint output. But the report found that climate change is altering historical patterns of water availability: droughts in southern China may leave less water available in the north.

A July 2015 report by McKinsey, 'East Africa: the Next Hub for Apparel Sourcing?' suggested that a segment of the cotton industry might relocate from China to Ethiopia, which was deemed to have 3.2m hectares of land with a suitable climate for cotton cultivation.

Bangladesh's apparel sector also faces an increase in hurricanes across the Bay of Bengal, documented by a 2014 World Bank report, 'Turn Down the Heat', which says that by 2040 shifting rain patterns could leave some areas under water and others without enough water for power generation and irrigation.

Francesco Marchi, director general of European clothing and textile industry association Euratex, says such weather patterns, combined with rising costs in Asia, could lead to more apparel companies near-sourcing and relocating to or near Europe.

Uren agrees. "We may well even see an increase in on-shoring [where companies relocate into Europe and the US]. China has had strict environmental laws for some time but they are now going to be enforced. Manufacturers of apparel there will soon find that standards are as high as in other parts of the world. "

Clothing sector helps China to green its growth Adidas tops list of greenest textile supply chains in China

**Load-Date:** December 21, 2015

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[***Urgent action needed to improve air quality following diesel emissions scandal, MPs say; 'The Government must act now to tackle this public health emergency,' Commons'environment committee says***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JMM-X1N1-JCJY-G2G8-00000-00&context=1516831)

The Independent (United Kingdom)

April 27, 2016 Wednesday 12:13 AM GMT

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**Section:** UK

**Length:** 957 words

**Byline:** Ian Johnston

**Body**

The Government must take urgent action in the wake of vehicle-***emissions*** scandal to stop the deaths of up to 50,000 people a year from illnesses caused by air pollution, according to a report by MPs.

The Environment, Food and Rural Affairs Committee called for a scrappage scheme to be set up for diesel cars over about 10 years old; greater powers for councils to set up 'clean air zones' and charge polluting vehicles to enter; and help for farmers to ***reduce*** air pollutants from ***agriculture*** such as ammonia.

They also called for tougher, EU-wide regulations on car manufacturers following revelations that Volkswagen had installed software designed to cheat official ***emissions*** tests, adding that the German company did not appear to have "fully learnt lessons" about the need for greater transparency.

The Department for Transport also reported last week that none of the 37 top-selling diesel cars actually met pollution limits in real-world conditions.

"Poor air quality is damaging the UK's environment and harming the nation's health: ***emissions*** have declined significantly over many decades, but not far enough to prevent the early deaths of 40-50,000 people each year from cardiac, respiratory and other diseases linked to air pollution," the MPs' report said.

"The Government must act now to tackle this public health emergency."

Read more

Paris introduces once a month ban on cars to tackle air pollution

Air pollution: How strong is the link to cancer?

Indoor air pollution from household products 'putting lives at risk'

Air pollution is now a global 'public health emergency', says the WHO

They called for the Government to set out how "all government policies take air quality impacts into account" within weeks and for an "overarching strategy for tackling all air pollutants" by the end of the year.

The MPs pointed to a Government estimate that two types of pollution, nitrogen dioxide and tiny particles, contribute to the early deaths of more than 50,000 people a year.

"Health impacts of all air pollutants cost the UK economy some £15-20bn a year. More importantly many thousands of people bear the human costs associated with damaged cardiac and respiratory systems and life-limiting diseases," it added.

In December, the Department for Environment, Food and Rural Affairs (Defra) published a long-awaited air quality plan which focused on bringing in clean air zones in Birmingham, Leeds, Nottingham, Derby and Southampton by 2020.

The zones will use charging to discourage the most polluting vehicles, including old diesel buses, taxis, coaches and lorries, from entering the city centres. London is also set to bring in an ultra low ***emissions*** zone in 2020, which will apply to all vehicles.

But the MPs called for all local authorities to be given the opportunity to tackle pollution in this way.

Neil Parish MP, who chairs the committee, said: "Only five cities -- Birmingham, Leeds, Nottingham, Derby and Southampton -- will have new powers to charge polluting vehicles to enter new clean air zones. Councils in the dozens of other English cities currently exceeding EU pollution limits must also be given the option of using such powers if their communities support action.

"Communities must be given legal powers to set controls that meet their own circumstances-for example, some might want to charge polluting vehicles to access zones at certain times of day or to ***target*** specific bus routes."

Mr Parish said that Government schemes designed to encourage people to use less polluting vehicles - such as grants to help people buy electric and hybrid cars - were welcome.

"But more action is needed if we are to get older, more polluting diesel vehicles off the road quickly," he added.

"People need more of an incentive to purchase the more expensive low-***emission*** vehicles: we want the Government to start planning now to introduce at the next Budget a scrappage scheme ***targeted*** at cars and vans 10 years or more old."

The report added that farmers should be given Government help to "adopt modern practices that cut ***emissions*** of ***greenhouse gases*** and local air pollutants including ammonia".

In February, the Royal College of Physicians and the Royal College of Paediatrics and Child Health warned that air pollution was damaging people from their "first weeks in the womb".

"We know that the heart, brain, hormone systems and immunity can all be harmed by air pollution. Research is beginning to point towards effects on growth, intelligence, and development of the brain and coordination," they wrote in a report called Every Breath We Take: the Lifelong Impact of Air Pollution.

"Harm to babies and children will have an impact that lasts far into the future. For the same reason, any air quality improvements we make now will have long-lasting benefits.

"When our patients are exposed to such a clear and avoidable cause of death, illness and disability, it is our duty as doctors to speak out."

A Defra spokeswoman said air quality was a "priority" for the Government.

"Our plans set out how we will achieve this through continued investment in clean technologies and by encouraging the uptake of low ***emission*** vehicles," she said.

"Cities already have powers to introduce Clean Air Zones and other air quality schemes, and our plans will require five cities to implement these zones, ***targeting*** the most polluting vehicles.

"Later this year we will also consult on a Clean Air Zone framework that will give local authorities the flexibility to make decisions about their own areas while ensuring a co-ordinated approach across the UK."

The Press Association contributed to this report

**Load-Date:** April 27, 2016

**End of Document**



[***UK air pollution is a 'public health emergency' after emissions scandal, MPs say; Commons'environment committee says the Government must act urgently to stop up to 50,000 deaths a year***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JMP-2PF1-JCJY-G0VV-00000-00&context=1516831)

The Independent (United Kingdom)

April 27, 2016 Wednesday 9:27 AM GMT

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**Section:** UK

**Length:** 957 words

**Byline:** Ian Johnston

**Body**

The Government must take urgent action in the wake of vehicle-***emissions*** scandal to stop the deaths of up to 50,000 people a year from illnesses caused by air pollution, according to a report by MPs.

The Environment, Food and Rural Affairs Committee called for a scrappage scheme to be set up for diesel cars over about 10 years old; greater powers for councils to set up 'clean air zones' and charge polluting vehicles to enter; and help for farmers to ***reduce*** air pollutants from ***agriculture*** such as ammonia.

They also called for tougher, EU-wide regulations on car manufacturers following revelations that Volkswagen had installed software designed to cheat official ***emissions*** tests, adding that the German company did not appear to have "fully learnt lessons" about the need for greater transparency.

The Department for Transport also reported last week that none of the 37 top-selling diesel cars actually met pollution limits in real-world conditions.

"Poor air quality is damaging the UK's environment and harming the nation's health: ***emissions*** have declined significantly over many decades, but not far enough to prevent the early deaths of 40-50,000 people each year from cardiac, respiratory and other diseases linked to air pollution," the MPs' report said.

"The Government must act now to tackle this public health emergency."

Read more

Paris introduces once a month ban on cars to tackle air pollution

Air pollution: How strong is the link to cancer?

Indoor air pollution from household products 'putting lives at risk'

Air pollution is now a global 'public health emergency', says the WHO

They called for the Government to set out how "all government policies take air quality impacts into account" within weeks and for an "overarching strategy for tackling all air pollutants" by the end of the year.

The MPs pointed to a Government estimate that two types of pollution, nitrogen dioxide and tiny particles, contribute to the early deaths of more than 50,000 people a year.

"Health impacts of all air pollutants cost the UK economy some £15-20bn a year. More importantly many thousands of people bear the human costs associated with damaged cardiac and respiratory systems and life-limiting diseases," it added.

In December, the Department for Environment, Food and Rural Affairs (Defra) published a long-awaited air quality plan which focused on bringing in clean air zones in Birmingham, Leeds, Nottingham, Derby and Southampton by 2020.

The zones will use charging to discourage the most polluting vehicles, including old diesel buses, taxis, coaches and lorries, from entering the city centres. London is also set to bring in an ultra low ***emissions*** zone in 2020, which will apply to all vehicles.

But the MPs called for all local authorities to be given the opportunity to tackle pollution in this way.

Neil Parish MP, who chairs the committee, said: "Only five cities -- Birmingham, Leeds, Nottingham, Derby and Southampton -- will have new powers to charge polluting vehicles to enter new clean air zones. Councils in the dozens of other English cities currently exceeding EU pollution limits must also be given the option of using such powers if their communities support action.

"Communities must be given legal powers to set controls that meet their own circumstances-for example, some might want to charge polluting vehicles to access zones at certain times of day or to ***target*** specific bus routes."

Mr Parish said that Government schemes designed to encourage people to use less polluting vehicles - such as grants to help people buy electric and hybrid cars - were welcome.

"But more action is needed if we are to get older, more polluting diesel vehicles off the road quickly," he added.

"People need more of an incentive to purchase the more expensive low-***emission*** vehicles: we want the Government to start planning now to introduce at the next Budget a scrappage scheme ***targeted*** at cars and vans 10 years or more old."

The report added that farmers should be given Government help to "adopt modern practices that cut ***emissions*** of ***greenhouse gases*** and local air pollutants including ammonia".

In February, the Royal College of Physicians and the Royal College of Paediatrics and Child Health warned that air pollution was damaging people from their "first weeks in the womb".

"We know that the heart, brain, hormone systems and immunity can all be harmed by air pollution. Research is beginning to point towards effects on growth, intelligence, and development of the brain and coordination," they wrote in a report called Every Breath We Take: the Lifelong Impact of Air Pollution.

"Harm to babies and children will have an impact that lasts far into the future. For the same reason, any air quality improvements we make now will have long-lasting benefits.

"When our patients are exposed to such a clear and avoidable cause of death, illness and disability, it is our duty as doctors to speak out."

A Defra spokeswoman said air quality was a "priority" for the Government.

"Our plans set out how we will achieve this through continued investment in clean technologies and by encouraging the uptake of low ***emission*** vehicles," she said.

"Cities already have powers to introduce Clean Air Zones and other air quality schemes, and our plans will require five cities to implement these zones, ***targeting*** the most polluting vehicles.

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M2 PressWIRE

June 21, 2016 Tuesday

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**Length:** 1117 words

**Body**

June 21, 2016

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The long block option provides an extended scope of supply that is precisely adjusted to the customer's requirements and contains a comprehensive engine test run at the Jenbacher test bench facilities. Benefits of this approach include technical upgrades and short delivery times.

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ENP Newswire

June 23, 2016 Thursday

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**Length:** 1115 words

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FinancialWire

June 21, 2016 Tuesday

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**Length:** 1122 words

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ENP Newswire

June 24, 2016 Friday

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**Length:** 1115 words

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**Load-Date:** June 24, 2016

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[***Researchers question Brazil's climate change goals through deforestation limits***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H9K-JP51-DYRV-30YW-00000-00&context=1516831)

BBC Monitoring Latin America - Political

Supplied by BBC Worldwide Monitoring

November 5, 2015 Thursday

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**Length:** 1261 words

**Body**

Text of report by leading, centre-left Brazilian newspaper Folha de Sao Paulo website on 30 October

[Article by Marcelo Leite: "Study Questions Brazilian Climate Goal"]

Sao Paulo -A letter from Brazilian researchers in the magazine Science on Friday 30 October hits the nail on the head: it will be very difficult to meet the national ***targets*** announced by President Dilma Rousseff in late September to combat climate change by 2030.

The correspondence signed by Raoni Rajao and Britaldo Soares-Filho, from the Federal University of Minas Gerais, the UFMG, is directed at the deforestation figures behind the Intended Nationally Determined Contributions or INDC as they are known in English, the bureaucratic tag for the goals of each country.

Without a restrictive regulation of the possibilities offered by the Forest Code (Codigo Florestal) and measures such as the expansion of protected areas, an area of 198,000 square kilometres of native vegetation, an area the size of Parana state, would disappear within 15 years, warns the UFMG group.

The Ministry of the Environment (MMA) says that the estimates of Rajao and Soares-Filho are overestimated because they are based on wrong assumptions about the code.

The losses projected by the researchers of 13,200 km2 per year would occur in all the national biomes, but especially in the Amazon (5,700 km2/year) and the cerrado tropical savanna area (5,300 km2/year).

But that is only taking into account the legal deforestation. In the cerrado alone, where owners can cut up to 80 per cent of their areas, there would be an area of 400,000 km2 of land that could be devastated with due authorization.

Zero Deforestation

To comply with the INDC and cut ***emissions*** of ***greenhouse gases*** by 43 per cent by 2030 compared with 2005 levels, Dilma has promised to eliminate illegal deforestation in the Amazon. In other words, authorized felling would continue.

On the other hand, the carbon released into the atmosphere by the destruction of the forest would need to be recaptured -by recuperanting forest elsewhere, for example -to reach zero net ***emissions***. The Amazon would then cease to be a major source of climate pollution in the country and would generate a surplus to offset growing ***emissions*** in the ***energy*** and ***agricultural*** sectors.

"However, it is unlikely that the current policies and additional actions announced by (the government of) Brazil based on changes to land use (deforestation) will be sufficient to achieve the ***greenhouse gas*** cuts," write Rajao and Soares-Filho in Science.

Their biggest concern relates to the environmental reserve quotas (CRA) set out in the Forest Code. This marketable title guarantees that a given private area will have its native vegetation kept untouched for a certain period.

Inflated quotas

According to the code, the CRA can be purchased by those with a negative forest balance, an environmental liability. For example, a landowner who has deforested more than the law allows and needs to replenish their legal reserve, which they can do by recovering an area or purchasing a quota.

If the cost of the CRA is too high, as the UFMG duo predicts, the prices of the title will fall and no one will have an incentive to replant the requisite area. Instead, the facility created could even encourage further deforestation.

In the estimations of the UFMG's Remote Sensing Centre, in the Amazon alone, more than 550,000 km2 could be supported by these titles. In Brazil as a whole, 1.3 million km2 would be on offer, 15 per cent of the country. The problem, it diagnoses, lies primarily in two CRA sources provided for in the code: small farms and conservation areas (national forests and state parks, for example).

The first were amnestied in the modification of the Forest Code and do not need to pay outstanding legal reserve debts. Furthermore, CRAs can be issued based on what they have a remaining of native vegetation.

This amounts to a "forest pedalling" of up to 554,000 km2, claim Rajao and Soares-Filho. Something similar would occurr with private areas within the protected areas that were expropriated by the government but not compensated: in the form of the CRA, another 169,000 km2 could be dumped on the market, depreciating it.

On the other hand, according to the estimates of the UFMG, the demand (environmental liabilities to be corrected) in the entire country would not reach 47,000 km2. In other words, the supply would be almost 28 times greater than the demand.

To avoid this imbalance, Raoni Rajao says that regulation should restrict the use of CRAs on small farms or protected areas and prevent environmental damage compensation outside of the State and the biomes. "In our view, there is still time to format a strong market for environmental compensation, especially in view of the INDC."

Questionable Assumptions

"This offer has been overestimated in the UFMG estimate," retorts Antonio do Prado, a Special Adviser at the Ministry of the Environment, "because their assumptions are wrong." According to Prado, the spirit of the law in the case of the Forest Code does not authorize the use of CRAs to compensate smallholdings with a negative balance of legal reserve.

The title could be used for the payment of environmental services -a hydroelectric plant interested in keeping forests to ensure the production of water, for example -but not to compensate for environmental damage. "A deficit cannot be used to make up another deficit."

Prado says that the restriction should be explained in a future decree, but that this regulation is still under review in the MMA. As for using CRAs as ballast in specific areas not compensated within protected areas, he would only say that the issue is still under discussion in the government.

More Doubts

Another group, from the National Institute for Space Research (INPE), on Thursday (29 October) published in the journal Global Change Biology a study of the Amazon rainforest (bit.ly/1P7Agvz) which also includes data showing the difficulty of achieving Brazil's goal for the climate with regard to deforestation.

The study, whose lead author is Ana Paula Dutra de Aguiar, generated three scenarios on the future of the Amazon.

In the first (A), the most optimistic one, the conservation measures provided for in the Forest Code would not only be fulfilled but would be exceeded. In this case, the Amazon would cease to emit carbon and would become a sinkhole.

In the second (B), the intermediate, the code would be obeyed, but legal deforestation would remain at 4,000 km2 annually after 2020, and the legal reserves would be offset by CRAs. In B, the region would continue emitting carbon -a total of 14 billion more tons of CO2 between 2015 and 2050 than in scenario A.

In the third (C), the pessimistic one, there would be a retrogression in environmental policies, disrespecting the code and with high rates of deforestation. In this scenario, the additional ***emission*** of CO2 over 35 years would be 33 billion tons -more or less what the entire world emits each year by burning fossil fuels.

"It's not impossible, but it will require a great effort. According to our calculations, only with the Forest Code would there be no net ***emissions*** (in the Amazon)," says Aguiar. "The whole point is there needs to be more discussion (on the INDC). What is the environmental gain of this (forest compensation)?"

The researcher did not say, but could have said: Brazil will only be able to meet the INDC commitment on paper, and at the cost of losing biodiversity.

Source: Folha de Sao Paulo website ([*www.folha.com.br*](http://www.folha.com.br)) in Portuguese 30 Oct 15

**Load-Date:** November 5, 2015

**End of Document**



[***Want to do good at work? Here's where to find a job in the sustainability market; The historic COP21 agreement is poised to create a jump in sustainability hiring. Here are four areas of the job market expected to grow significantly in five years***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HY1-RPT1-F021-62S1-00000-00&context=1516831)

The Guardian

January 26, 2016 Tuesday 12:28 AM GMT

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**Section:** GUARDIAN SUSTAINABLE BUSINESS

**Length:** 985 words

**Byline:** Bruce Watson and Ellen Weinreb

**Body**

The COP21 agreement was a historic milestone for climate change action, with a similarly historic price tag. According to the International ***Energy*** Agency, achieving its goals will cost an estimated $16.5tn by 2030.

By comparison, when US President Barack Obama referenced "the single biggest investment in clean ***energy*** in our history" in his 2016 State of the Union address, he was referring to a comparatively tiny $90bn investment part of the 2009 Recovery and Reinvestment Act.

But while America's prior efforts can't compare to the scale of COP21, they do hint at its impact on the sustainability job market. From international policy and financial services to research and development, the pledge to cut local carbon ***emissions*** will affect a vast range of job sectors - and create a host of opportunities.

**1. Policy**

Jobs at this level vary widely. In addition to senators and directors, cabinet secretaries and Obama himself, the US COP21 delegation included a host of lawyers, economists, scientists and public relations experts. But the most represented job title was foreign affairs officer, under the US Department of State's Bureau of Oceans, Environment and Science (OES).

Aiming to promote US foreign policy goals in areas such as climate change, renewable ***energy*** and resource scarcity, OES officers work nationally and internationally to negotiate climate policy, form partnerships and develop programs. The job requires an academic background in public policy, economics, the environment or ***energy***, as well as several years of work experience or a master's degree.

As countries work together on COP21's initiatives, international policy negotiation will become even more crucial. And, as the agreement's effects ripple around the world, negotiators, policy experts, economists, lawyers and others will be needed on the national level.

For its part, Obama's $90bn clean ***energy*** program quickly created a host of administrative, bureaucratic and negotiating jobs. Within a year of its announcement, the Department of ***Energy*** hired 200 people just to process the grants that it disbursed. On the opposite end, states, municipalities, research labs, companies and universities scurried to hire skilled grant writers, administrators and lawyers to help them take advantage of the influx of money.

**2. Renewables and construction**

The sustainability job surge is enhanced by the fact that many vital sectors are already on the upswing. For example, according to the International Renewable ***Energy*** Agency, 724,000 Americans were working in renewables in 2014 - a 16% increase over the previous year. Green construction is similarly energized: it grew by an estimated 15% between 2014 and 2015, with comparable growth predicted until 2018.

According to the White House, the clean ***energy*** program directly created 60,800 new jobs and 72,400 support jobs within its first quarter. By the second quarter of 2010, the program had "saved or created" between 2.5-3.6m jobs.

Green administrative support jobs aren't far behind. After the clean ***energy*** program passed, the Bureau of Labor Statistics found that professional and business services accounted for 36.2% of green jobs, including work in finance, market strategies, operations and business administration.

**3. Research**

Several of COP21's initiatives are designed to spur new innovations. For example, the Low Carbon Technology Partnership Initiative (LCTPI) hopes to create plans for the large scale development and deployment of low-carbon technologies. It specifically ***targets*** ***agriculture***, forestry, ***energy***, construction, chemistry, carbon capture and transport.

The partnership estimates that - if taken to scale - its programs could provide $5-$10tn in business opportunities between today and 2030, directly creating between 5-10m jobs per year, and indirectly providing another 15-35m jobs.

These jobs would range widely. On the research and development side, LCTPI's plan to develop new biofuels, insulation materials, low-carbon fuels and building materials would lead to work for researchers, administrators and grant writers at research labs and academic programs around the world.

These R&D investments would create new innovations, investments, and startups - and, not incidentally, jobs for people with backgrounds in investor relations, finance, operations and market strategies.

Another intiative, the Breakthrough ***Energy*** Coalition (BEC), also hopes to transform the green ***energy*** market by focusing on electricity generation and storage, transportation, industrial use, ***agriculture*** and ***energy*** system efficiency. Launched in November by 28 billionaires, including Bill Gates, it plans to circumvent the current research structure, which it says is too rigid. Instead, it will provide seed, angel and Series A investments, leading to a quick influx of investment into R&D followed by a quick move from lab to market.

**4. Global development**

As part of COP21, developed countries will provide the developing world an estimated $100bn per year to help them convert to greener ***energy*** and adapt to climate change. AECOM, a US-based global engineering design firm, is already positioning itself for this by calling for CVs from climate change experts with experience in adaptation and mitigation projects.

Given AECOM's previous work with large scale infrastructure projects like the Southern Africa Trade Hub, the Delhi sewer system and the Adapt Asia-Pacific program, it's likely that these specialists will work in climate adaptation, resiliency planning and ***greenhouse gas*** mitigation projects for local governments and other public agencies.

It's almost impossible to imagine the breadth of COP21's potential economic and employment impact. But, while its scale is potentially world-transforming, its mechanism will likely be very familiar. Which means that bright days are likely on the way for people in policy and negotiation, startups and finance and R&D.

**Load-Date:** January 26, 2016

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[***Want to do good at work? Here's where to find a job in the sustainability market; The historic COP21 agreement is poised to create a jump in sustainability hiring. Here are four areas of the job market expected to grow significantly in five years***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HXP-SKP1-JCJY-G4GX-00000-00&context=1516831)

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**Length:** 985 words

**Byline:** Bruce Watson Ellen Weinreb

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**Load-Date:** January 24, 2016

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[***THE ART OF CHANGING THE CLIMATE DEBATE; Scientific knowledge is vital but on its own will never change our environmental behaviour. The key to that is to incorporate skills from the other side of the traditional science-humanities divide, say Trinity College academics***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K07-DPY1-JC8Y-81YJ-00000-00&context=1516831)

The Irish Times

June 11, 2016 Saturday

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**Section:** WEEKEND; Pg. 6

**Length:** 1271 words

**Byline:** Paddy Woodworth

**Body**

It is nearly 60 years since the British scientist (and novelist) CP Snow scathingly complained, in a lecture in Cambridge, that our civilisation was dangerously split into two cultures, the sciences and the humanities.

"The great edifice of modern physics goes up," he declared, "and the majority of the cleverest people in the western world have about as much insight into it as their neolithic ancestors would have had."

Despite his warning, the academic apartheid between the sciences and humanistic studies such as literature, philosophy and history mostly remains as rigid as ever.

Poul Holm and Charles Travis, of the environmental humanities centre at Trinity College Dublin's Long Room Hub, argue that this compartmentalisation of knowledge urgently needs to be breached, locally and globally, if our societies are to respond adequately to huge challenges such as climate change. They claim that the skill sets provided by the humanities are essential to translating scientific findings into evidence-based policy options accessible to politicians, businesses and citizens.

Some scientists have recently argued the opposite, accusing social scientists of having simplified and hijacked the findings of meteorologists in the climate-change debate in the interests of radical environmental activism.

But Holm says that this is blatantly untrue. He points to the composition of the working group for the section of the Intergovernmental Panel on Climate Change 2014 report, which focused on identifying social strategies to ***reduce*** ***greenhouse-gas*** ***emissions*** and mitigate their effects. "More than half of them were engineers," he says, "and while many of the rest were social scientists, most of these were economists, talking to our wallets. There was just one psychologist, one sociologist and one historian. There were no anthropologists, not one literary scholar. No media-communications experts, either."

Why should this matter? According to Travis, it matters a great deal. Scientific knowledge is vital but on its own will never change our behaviour.

Many people continue to smoke, for example, despite the overwhelming evidence that smoking causes painful and often fatal illnesses. But many other people have given up smoking precisely because the dominant story about tobacco has changed, with major contributions from psychologists, sociologists and advertising copywriters in health campaigns.

The smoking story used to be about ultramasculine (and ultrafit) men riding horses and about glamorous women, often also in pristine outdoor settings. Smoking was the epitome of wellbeing. Now the story is all about coughing your lungs up in a terminal ward.

"Climate change is a human problem," Travis says, "and the key to tackling it is dealing with the human condition. The natural scientists have been magnificent in ringing the alarm bells, but they are not equipped to deal with human agency and human perception."

He quotes the American sociologist Kari Norgaard, who has pointed out that the Second Coming of Jesus Christ, or some other apocalyptic vision, is much more real to many Americans than the mounting evidence for climate change all around them. That's because the compelling narrative they hear from their churches, radio stations and friends and colleagues is moulded in religious dogma, while science is portrayed as a misleading deviation.

That may seem like an extreme case to most Irish people, but Holm points out that our own perceptions may be skewed in other ways. He gives the example of our ***agricultural*** policy, which is based on the view that we should enormously expand our dairy and beef industries, with consequent rapid rises in ***greenhouse-gas*** ***emissions***. Its advocates know that this will accelerate climate change but insist that there is no alternative.

"The Irish beef industry says, 'People want to eat beef, they love high-protein foods, and their habits won't change. So we have to supply this market.' But our habits do change, and quite quickly too. Thirty years ago no one would have believed there was a market for eating raw fish in Ireland. But now sushi is commonplace."

He adds that the Danish wind-***energy*** movement began with hippies and was first seen as marginal, if not simply daft. But then engineers embraced and developed turbine manufacture, and wind power now has all-party support in Denmark as a major alternative-***energy*** industry.

"When you propose change initially, you may be ridiculed, but you may be the guy who is ahead of the market. Any future vision for Ireland must involve less oil and less beef. The Irish beef industry should learn from the Danish wind industry."

Holm, Travis and the environmental humanities team at TCD have become international leaders in efforts to contribute insights from their disciplines to debates about our global and local futures.

In 2013 they became one of three centres grant-aided by the Mellon Foundation to establish a Humanities for the Environment Observatory (see panel), which aims to explore why we often fail to act decisively in the face of dangers such as climate change, and how we might learn to respond more effectively.

They are currently involved in discussions with corporate executives, environmental NGOs, the Arts Council, Dublin City Council and other agencies.

Holm says that corporate executives, despite their obvious self-interest, are often more willing to consider long-term strategies for change than government ministers are, simply because they operate on a much longer cycle than our governments do. They can see how climate change is already affecting their supply chains and customers around the world, and they know that they need to respond to it for their businesses to survive.

Is there not, however, a danger that academics may lose their independence if they get too closely involved either with corporate interests or with environmental activism?

Holm says that independence must be maintained if academics are do their work properly: "I am a staunch believer in the university as a space to stand aside, to dig deeper: we actually do need ivory towers to do this. But I'm also committed to being a passenger on the same bus as every other citizen. If I learn that that bus is driving us towards an abyss, I need to do something about it."

**Human sciences A manifesto for research and action**

n"The Humanities for the Environment

Observatories . . . aim . . . to identify, explore, and demonstrate the contributions that humanistic and artistic disciplines could make to stir wider awareness and understanding and more efficacious engagement with global environmental challenges . . ."

n"We recogni

se that science is able to monitor, measure and to some extent predict the biogeophysics of global change. However, its analytical power stops short of investigating the main driver of planetary change - the human factor . . ."

n"Human choices, we know, are hardly ever fully conscious: we often prefer to tread well-known paths rather than explore new possibilities . . ."

n"Science has discovered, to its despair, that new accretions of information may have no impact and that laying out a set of rational choices may not lead to action. Indeed, scientific understandings of the physical world may be of limited use for understanding the complexity and volatility of human values and motivations."

n"The human sciences

-the mixed bag of academic disciplines in the humanities - are, on the other hand, a fertile and largely untapped resource of insight into human motivation, creativity and agency."

The

full text of this manifesto, by Poul Holm, Charles Travis and others, is at iti.ms/1P0pQeo

**Load-Date:** June 10, 2016

**End of Document**



[***COP21: Can India reconcile growth and environment?***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HHR-6J01-JCMN-Y0F3-00000-00&context=1516831)

Deutsche Welle World

December 3, 2015 Thursday 11:52 PM EST

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**Length:** 1740 words

**Body**

Dec 03, 2015( Deutsche Welle World: [*http://www.dw.de/top-stories/world/s-1429*](http://www.dw.de/top-stories/world/s-1429) Delivered by Newstex) <nl/> India is among the countries most vulnerable to climate change. But as developing nation, it also faces a balancing act between ***reducing*** CO2 ***emissions*** and boosting economic growth. DW examines India's role in COP21. Already one of the most disaster-prone nations in the world, India is also likely to be hit hard by the effects of global warming.

The South Asian country has very dense coastal populations vulnerable to rising sea levels.<nl/> And the freak weather patterns which already taking place - such as extreme heat, drought, and the record-breaking floods in Chennai - will not only affect ***agricultural*** and food security, but also cause water shortages and disease outbreaks.<nl/> The Indian government has reacted to the growing threat by rolling out an ambitious clean ***energy*** plan. New Delhi has pledged to invest $100 billion in clean ***energy*** investments over the next five years as well as to source 40 percent of its electricity from renewable and other low-carbon sources by 2030.<nl/> Although it hasn't specified a cap on its ***emissions***, the South Asian giant wants to reach 175 gigawatts (GW) of renewable ***energy*** capacity by 2022 - up from currently 38 GW - of which 100 GW will be from solar ***energy***. In fact, at the outset of the UN climate summit taking place in Paris from November 30 to December 11 (COP21), Indian PM Narendra Modi and French President Francois Hollande launched an alliance of 121 countries to dramatically boost the use of solar power.<nl/> 'We still need conventional ***energy***'<nl/> But will this be enough? Analysts point out that while New Delhi is well aware of the dangers posed by global warming, it also wants to make sure that any deal in Paris doesn't restrict the country's ability to expand its economy, with PM Modi saying that rich countries should not force the developing world to abandon fossil fuels completely.<nl/> "We still need conventional ***energy***. We need to make it clean, not impose an end to its use," said Modi at the start of the Paris talks, calling on developed nations to meet their commitment to muster $100 billion a year from 2020 to help poor countries cope with climate change.<nl/> Moreover, India sees itself as one of the most vocal proponents of "climate justice" - the notion that historical responsibilities as well as present-day capabilities matter greatly in shaping the climate governance regime. <nl/> "From the perspective of New Delhi, it bears little responsibility for the exponential increase in ***greenhouse gas*** ***emissions*** since the industrial revolution, and also has very little capacity to address the problem when much of the country still lives in abject poverty and hundreds of millions of Indians still lack access to electricity," David Livingston, an associate at the ***Energy*** and Climate Program at the Carnegie Endowment for International Peace, told DW.<nl/> It is precisely this balancing act between boosting economic growth and reaching environmental goals that poses the greatest political challenge to leaders of developing nations such as India - which is already the world's fourth-largest emitter of carbon dioxide after China, the US and the EU, according to the International ***Energy*** Agency (IEA).<nl/> Hard to abandon coal<nl/> India is home to one-sixth of the world's population, and its third-largest economy in purchasing power parity (PPP) terms, but accounts for only six percent of global ***energy*** use, with one in five Indians - 240 million people - still lacking access to electricity, according to the IEA.<nl/> But the government's plans to lift millions out of poverty will likely to change this, as efforts to modernize and industrialize India will trigger dramatic increase in ***energy*** demand. In fact, the IEA estimates that the country's ***energy*** demand will account for roughly a quarter of the global increase in consumption by 2040.<nl/> The problem is that coal - the key source of power in the country, accounting for around 60 percent of total electricity generation - is also a key source of carbon ***emissions***. And due to the relatively low cost and large reserves of domestic thermal coal, it remains the key fuel source in India's long-term ***energy*** strategy, as Rajiv Biswas, Asia-Pacific Chief Economist at the analytics firm IHS, told DW.<nl/> The IEA estimates the expansion of coal supply will make India - which has some of the most polluted cities in the world - not only the second-largest coal producer in the world, but also the largest coal importer, overtaking Japan, the EU and China in the coming years. <nl/> "India is a coal-focused country, and it plans to double its consumption in the next 15 years. This is the crux of the problem, given that it's hard to imagine India substantially bringing down its ***emissions*** if it plans to scale up one of the most ***emissions***-intensive ***energy*** resources out there," Michael Kugelman, South Asia expert at the Washington-based Woodrow Wilson Center told DW.<nl/> But while this may seem like a dire prospect, Livingston explains that from India's perspective, New Delhi's long-term climate strategy makes sense as it not only puts the country on a growth path, but also keeps per-capita ***emissions*** far below those of other industrialized countries such as the US. Today, India's per-capita ***emissions*** are only one-third of the global average.<nl/> "The paradox here is that while India's implied ***emissions*** growth rate to 2030 is the largest in absolute terms of all large economies, the country still ends up with the smallest per-capita ***emissions*** of all these economies in 2030," Livingston told DW.<nl/> Around $2.5 trillion needed<nl/> That's why the key to the climate talks in Paris will be the level of support developing countries such as India can get from the international community to lower their dependency on fossil fuels, says climate policy expert Samir Saran.<nl/> There are two ways this can happen, the analyst at the New Delhi-based Observer Research Foundation told DW: "Either the West can provide the necessary scale of finance and clean technology that will enable India to rapidly deploy renewable ***energy*** to power its development, or, the West needs to drastically cut its ***emissions*** to allow for rising Indian ***emissions*** in the coming years."<nl/> Indian representatives at COP21 have said the country would cut back on coal if the Paris agreement ensures it receives international support that brings down the cost of expanding renewable ***energy***.<nl/> "Solar and wind is our first commitment. Hydro, nuclear, all of these non-carbon sources are what we will develop to the largest extent we can," Ajay Mathur, the director of India's Bureau of ***Energy*** Efficiency, was quoted by the Associated Press as saying. "What cannot be met by these would be met by coal," he added.<nl/> A preliminary estimate by Indian authorities suggests that at least $2.5 trillion will be required for meeting India's climate change actions in the next 15 years. They are to be met from domestic sources and leveraging of financial commitments made by developed countries, said Indian Environment Minister Prakash Javadekar in early December. Three-quarters of that investment is expected to go into the power sector. <nl/> Bill Hare, a lead author for the Intergovernmental Panel on Climate Change and founder of climate research group Climate Analytics, believes the financial effort would be worth it. The expert warns that India would be making a very risky investment for its sustainable development by going too much further into coal when the alternatives are not only cheaper and more cost effective but also place a much lower environmental, health and damage burden on the country.<nl/> "So from the development point of view, I think India has some stark choices ahead of it. If it goes into coal it will not contain its air pollution problems; if it goes into renewables, it will have a much better chance of a sustainable future," said Hare.<nl/> There's currently a lot of talk about liquefied natural gas (LNG) opportunities in India. LNG is not as polluting as coal and oil, and India has explored possible cooperative opportunities with Australia and other countries to allow for import arrangements, said analyst Kugelman. But this is all preliminary. "For now, coal will remain king in India. And that's a troubling prospect for the delegates in Paris," said the India expert.<nl/> Pivotal role in COP21<nl/> India's role in the ongoing COP21 talks is seen as pivotal - not least by virtue of its size, stature and ***emissions*** record. "India enters this climate summit with such looming development challenges, such capacity for innovation, and on such a growth trajectory that it is an indispensable nation in any meaningful global approach to climate change", said analyst Livingston.<nl/> An agreement without India's participation would not only be "practically impossible" under the legal structures of the United Nations Framework Convention on Climate Change (UNFCCC) but would also lack credibility, the climate expert added, "The country on pace to becoming the world's largest emitter in a few decades time simply cannot be left behind," he said.<nl/> Analyst Saran has a similar view. "India's role at COP21 is critical. Unless a global agreement takes into account the concerns of one-sixth of humanity, it is destined to end in failure," he said. Without financial support and technology flows from developed nations it is likely that developing nations such as India will continue to turn to cheap, highly-polluting coal to meet their development needs.<nl/> A change in economics?<nl/> But experts say that over time, the relative economics of conventional ***energy*** and new, clean technologies will change dramatically. A recent study from MIT has shown that we can expect the cost of wind ***energy*** to fall by around 25 percent, and solar by around 50 percent, based on anticipated investment, past trends and technology cost floors.<nl/> "The implications of this are tremendous - it means that by 2030, both technologies would represent a negative cost of carbon abatement relative to coal in many areas. The logic of climate action would finally be articulated in the crude but compelling logic of economics, and this is a development that India, nor any other nation, could afford to ignore," said Carnegie expert Livingston.<nl/>

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**End of Document**



[***A number of initiatives aim to protect Abu Dhabi's environment***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5WS6-C4N1-DXYV-752J-00000-00&context=1516831)

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**Body**

With its hot and arid climate, Abu Dhabi is predisposed to a number of environmental challenges that threaten its capacity to sustainably meet the needs of its growing population. In light of this, the importance of protecting the emirate's natural environment is enshrined in key policy documents, including the Abu Dhabi Environment Vision 2030.

Driving resource efficiency - in particular in water and ***energy*** - to minimise the environmental impact is a key area of work for the emirate's environmental bodies.

While it is considered a public good and a means of supporting the nation's economic development, Abu Dhabi's natural environment also presents opportunities for public and private sector investment and collaboration.

***Energy* Use**

The UAE has undergone rapid growth since it was formed in 1971, with Abu Dhabi's economy being transformed into a thriving urban economy. As with all nations that have undergone rapid economic growth and urban development, the UAE's use of fossil fuels has grown significantly over the last decade. At the national level, the UAE released 199.65m tonnes of carbon dioxide and other ***greenhouse gases*** in 2013, according to data released by the Ministry of ***Energy*** in January 2015. Of the total, some 22% (44.25m tonnes) came from road transport. The nation's oil and gas sector contributed 15% (29.6m tonnes), while the cement and aluminium industries produced 8% of ***emissions*** each in 2013. Waste contributed 6% to the total ***emissions***, while the ***agriculture*** sector was responsible for 1%.

The federal government has worked hard in recent times to significantly ***reduce*** the nation's environmental impact, and these efforts are starting to bear fruit. Electricity usage is one such areas that the government has worked to ***reduce*** in recent years. According to the Abu Dhabi Water and Electricity Company, electricity average usage per capita for the UAE as a whole was approximately 2.5 KWh in 2012. Meanwhile, in 2006 the Global Footprint Network, a non-profit environmental and sustainability advocacy organisation, calculated that the per capita footprint of the UAE was nearly 12 ha. In response, the UAE government began the Ecological Footprint Initiative in 2007, and in 2014 the county's footprint was decreased to 7.75 ha per capita.

**Water Resources**

Due to its desert location where summer temperatures average in the mid-and occasionally high-40s centigrade and annual rainfall does not typically exceed 160 mm (160 mm is applicable to mountainous areas in northern and eastern parts, while 60 mm is applicable to Liwa and interior desert), the emirate is naturally a water-scarce location. Furthermore, rapid economic growth brought with it a population boom, which in turn has put considerable pressure on the emirate's natural water resources. Yet despite being faced with limited natural freshwater reserves, the UAE's population benefits from 100% access to potable desalinated water, according to the World Bank.

Water use in the federation is high. Average per-person water usage is 550 litres per day, including all private and business use. According to the World Bank, as a whole, the UAE's annual fresh groundwater withdrawals totalled 4bn cu metres in 2013 within Abu Dhabi, which equates to approximately 26 times the annual recharge. Data from the World Bank also shows that at the federal level 83% of annual fresh groundwater withdrawals went to ***agricultural*** and forestry use, 2% to industry and 15% to domestic use in 2013. Water usage in the ***agriculture*** and forestry sectors falls under the responsibility of the Environment Agency - Abu Dhabi (EAD), which oversees access to groundwater by licensing wells and well drilling companies. According to the EAD, the ***agriculture*** sector uses more than 60% of Abu Dhabi's total water consumption in a given year.

Currently domestic water use is three times the world average. With the population of Abu Dhabi estimated to nearly double by 2030 in line with economic growth, water demand is likewise expected to double. At the national level, the UAE's population is expected to pass the 12m mark by 2030, according to the World Bank's population estimates.

One route to moderating future demand growth that has been mooted is to drive water usage efficiency by limiting the water available to an agreed "water budget". This water budget approach would result in the rationalisation of groundwater, desalinated water and treated wastewater across all user groups. The EAD partnered in 2015 with the UAE University and the UK's University of Leeds to further develop a data-driven water budget, which will encourage the sustainable use of water resources in Abu Dhabi (see analysis).

As well as efforts to manage supply, the government is also working to ***reduce*** demand. Tariffs were raised in early 2015, with the idea being that it could then help drive more sustainable usage, explained Simon Pearson, senior advisor, management support office at the EAD.

**Water Policy**

Sustainability is one of the biggest drivers of water policy, as Malcolm Haddock, planning and forecasting manager at Abu Dhabi Sewerage Services Company (ADSSC), explained in a conversation with OBG. As Haddock notes, the government has placed its full support behind the drive to become a leader in terms of green and low-carbon water treatment. ADSSC manages 800,000 cu metres per day, the equivalent of around 320 Olympic swimming pools, with over 7000 km of pipeline. According to Haddock, its treated water is fit for unrestricted irrigation use throughout the emirate. The ***agricultural*** sector currently relies primarily on groundwater, levels of which are falling. Policies are focusing on finding the optimal levels of efficiency for the "three types of water" - groundwater, recycled water and desalinated water.

A three-year plan was announced in late 2014 for reusing 100% of recycled water. Currently Abu Dhabi treats all 800,000 cu metres of the wastewater generated daily, of which 51% is reused while 49% returns to sea. According to Waterwise, Abu Dhabi's water consumption portal, "less than 20% of the total water delivered to the transmission system is returned to sewer. This means that over 80% of water ends up on the ground." Following the model in place in Al Ain, which was the first city in the UAE to reuse 100% of its recycled water (with just 5% lost during distribution), the recycled water will be free to use in ***agriculture***, forestry and landscaping.

More broadly, the ADSSC wants to ***reduce*** the environmental impact of its activities. The company is preparing to embark on a programme to determine the amount of greenhouse ***emissions*** produced from its operations. Electricity used for wastewater treatment, which is ***energy*** intensive and relies on fossil fuels, is likely the main source of greenhouse ***emissions*** from the company's operations, according to Haddock, and as such the use of solar power is likely to play an important part in their overall ***reduction***.

**Desalination**

The ADSSC is not the only agency working to ***reduce*** the environmental impact of the emirate's desalination plants. A pilot programme by Masdar - a state-owned company that invests in new-***energy*** initiatives - will be testing four smallscale desalination plants that have been designed to pilot ***energy***-efficient methods to produce drinking water. The ***energy*** footprint of desalinated water in Abu Dhabi is in the range of 3.5-5 KWh per cu metre. As a prerequisite to taking part in the trial, each project was required to demonstrate that it could desalinate water using less than 1 KWh per cu metre. Techniques used in the trial programme include innovation on traditional reverse osmosis and the use of forward osmosis.

In 2013, when the project was announced, Masdar aimed to have a large-scale, commercially viable water desalination plant, powered by renewable ***energy***, by 2020 in Abu Dhabi. "We hope that with this approach, we will be able to commercialise these technologies and become a key player in the desalination industry as a total solution provider and developer," Mohammed El Ramahi, associate director for asset management, engineering and operations at Masdar Clean ***Energy***, said about the project during the seventh annual World Water Forum 2015 in South Korea.

**Air Quality**

According to the EAD, monitoring has shown that air quality in Abu Dhabi is generally good. However, in addition to industrial and motor ***emissions***, air quality is affected by dust storms which spread dust from the desert usually in February-March and June-August.

The Abu Dhabi Air Quality Website and Online Index was launched in 2008 by the EAD in cooperation with the Norwegian Institute for Air. Currently 20 stations are operational across the emirate, checking levels of sulphur dioxide, carbon monoxide, nitrogen dioxide, ozone, particulate matter, hydrogen sulphide and methane in the air, with the data uploaded in real time to a public website.

**Waste Management**

Waste management is another key area of the emirate's sustainability agenda. Abu Dhabi's Tadweer - Centre for Waste Management is responsible for waste collection and facilities development in the emirate, as well as for licensing private and environmental service providers. One of its key responsibilities is to educate the public on sustainable practices, and in May 2015 it implemented the first of two phases of a roadmap designed to encourage recycling among residents in the emirate. Location-specific approaches will also be deployed to better tackle the recycling challenges facing the emirate.

A 25-year recycling plan will break Abu Dhabi into zones, with recycling centres being developed according to the types of waste generated in those particular areas. Tadweer is hoping that the approach will be adopted by other states in the GCC. ***Targeted*** recycling could in these cases mean providing appropriate recycling centres in proximity to areas undergoing development. Recycling and ***reduction*** of waste is a key component of the sustainable circular economy within the master plan.

Tadweer, along with Environment Agency - Abu Dhabi, has been working on developing a robust regulatory framework for waste management. In November 2015 a set of waste sector management policies and guidelines with the aim of reinforcing sustainable waste management in the emirate were enacted for implementation. The new policies include a waste planning policy; waste classification policy; waste permitting and enforcement policy; waste collection, segregation, transfer and tracking policy; waste reuse, recycling, resource recovery, treatment and disposal policy; in addition to a technical guideline for waste classification, the most important part of which is the policy and technical guideline that segregates and maximises recycling.

In addition to changing behaviours of Abu Dhabi's residents, further research and innovation into improving efficiencies in waste management and commercialising the outcomes are particularly encouraged by the government. Opportunities exist for further development in the area of waste treatment, including private sector involvement. As EAD's Pearson noted to OBG, the emirate already benefits from high-quality collection of waste and now needs to develop treatment facilities that keep so-called waste materials in productive use rather than being landfilled.

A number of such projects are being investigated. Research by the Masdar Institute of Science and Technology is being conducted on palm tree waste in order to turn it into bio-char that improves soil water retention and fertility. In a similar vein, date-palm waste, which has a high lignin content, can be digested by yeast and then used in the production of pharmaceuticals and industrial products.

An ADSSC pilot programme is currently looking into recycling bio-solids for use as fertiliser in forestry. Because solid waste in Abu Dhabi is mainly municipal - domestic waste rather than industrial - this means that bio-solids could be safely used in areas away from human interaction. ADSSC already employs ***energy*** sustainable methods using the natural drying and sterilisation of sewage sludge in the country's desert sun, which keeps the carbon footprint of the process low.

Tadweer and the EAD are also making efforts to ***reduce*** and recycle construction and demolition (C&D) waste in the emirate, and Tadweer is in the process of developing a regional standards system for C&D waste ***reduction***.

**Wildlife**

As well as enhancing the sustainability of the built environment, Abu Dhabi is working to protect more of the emirate's natural environment and create opportunities for its enjoyment by residents. In early 2015, legal moves were made by the government to endorse the expansion of the emirate's protected areas, oversight of which falls under the EAD. Four additional marine areas were recommended for protected status. At present, the emirate has two marine protected areas, the 4255-sq-km Marawah Marine Biosphere Reserve, and the 2046-sq-km Al Yasat Marine Protected Area. With the proposed expansion, the share of protected marine area would increase from 12.9% currently to 13.5% in the next couple of years.

The EAD has also recently completed the project design on an ecotourism initiative that will open three protected areas to the public. The Eco-reserve Programme promotes public use of the emirate's natural environment, with walking trails and wildlife viewing areas, among other attributes. The first in the emirate to be recognised as a Ramsar site in 2013 - wetlands of international importance designated under the Ramsar Convention - Al Wathba Wetland Reserve is included in the programme along with Mangrove National Park and Qasr Al Sarab Protected Area. The programme will introduce a nominal fee to be reinvested back into site management. The EAD intends to train and educate tour guides and operators to better enable them to teach and instil sustainable practices and values among future tour operators and the visiting public alike.

Exsitu conservation programmes made strides in 2015, the most notable of which was preparations for the initial delivery of scimitar-horned Oryx, which are extinct in the wild, to their native environment in Central and Northern Africa. In 2014, the EAD and the government of Chad initiated a project to re-introduce 500 Oryxes from Sir Bani Yas island in Abu Dhabi, which is home to the world's largest population of the animal, to a nature reserve in Chad. The first Oryxes are scheduled to arrive in Chad in 2016. The first endeavour of its kind, the large-scale re-population also serves as an model for future initiatives. The technique uses much larger numbers than what is used in the traditional approach and is based on complex software modelling for species survivability in a native habitat. It can also be seen as an indication of the true costs of species depletion in the first place, as Majid Al Qassimi, director at the EAD, told OBG, underscoring the need for conservation rather than reliance on reactionary measures. Doing "what's best for the species and the environment" is what Al Qassimi sees as the real lesson here, and the vision Abu Dhabi has in driving forward innovative initiatives when it comes to environmental protection and wildlife conservation inside and also beyond its borders.

**Oversight & Regulation**

The overarching policy agenda for the sector is Abu Dhabi Environment Vision 2030, which was developed by the EAD through a directive from Abu Dhabi Executive Council. Its objective is to ensure sustainable development and the protection of the emirate's natural environmental assets by bringing together economic, environmental and social agendas that will steer the emirate towards sustainable development.

Abu Dhabi's natural environment comes under the regulatory remit of the EAD. Established in 1996, it is the primary independent government agency tasked with protecting and preserving the environment and promoting sustainable development. The EAD is responsible for issues relating to the emirate's biodiversity, air quality, water resources, waste management, marine water quality and the effects of climate change. Its activities include raising awareness on critical environmental concerns and implementing and enforcing government policies.

The body also monitors and surveys habitats and species, and engages in conservation measures. Its groundwater resource management includes, among other things, controlling the access to groundwater by permitting the drilling of wells as well as monitoring changes in groundwater reserves and groundwater quality.

The EAD also takes a holistic approach to oversight of the management of all water resources, and is promoting a water budget approach as a way to rationalise the consumption of water, as well as supporting innovative work to conserve water and ***reduce*** the ***energy*** footprint from desalination. Its enforcement framework includes inspections, the levying of fines and overseeing fees. The emirate-based agency works in coordination with the Ministry of Climate Change and Environment on regulation and implementation of laws.

**Informed Analysis**

The UAE is taking steps to utilise data-driven analysis in environmental policymaking at the national level, and the Abu Dhabi government and the EAD are pivotal actors in this regard. The EAD places emphasis on using good data to inform policy. This is illustrated by EAD projects such as the comprehensive habitat mapping completed in 2015, the EAD's continued support for the Abu Dhabi Global Data Initiative and the Eye on Earth movement that held its second successful summit in October 2015 bringing together data experts from around the world to promote the availability and use of environmental and societal data with the goal of sustainable development.

Thanks to concerted efforts to develop and implement effective environmental policy, the UAE's national-level ranking on the Yale University Environmental Performance Index has improved since 2010, when it was ranked 152nd out of 163 countries on the list. Although it outperformed other countries in the region, in 2016 the UAE fell on the index rankings to the 92nd position out of 180 countries from 25th place in 2014.

**Building Standards**

As Abu Dhabi's skyline continues to grow, sustainability in construction is increasingly important. "Estidama", which means sustainability in Arabic, represents the vision to create a sustainable Abu Dhabi by preserving and enriching the emirate's physical and cultural identity, while improving the quality of life for its residents. The programme is managed by the Abu Dhabi Urban Planning Council (UPC). One of the key components of Estidama is the Pearl Rating System (PRS), the Arab world's first sustainability rating system designed to assess the sustainability performance of buildings, communities and villas. The PRS aims to address issues regarding the sustainability of a given development throughout its lifecycle from design through construction to operation.

September 2010 marked a significant milestone towards a transition to a more sustainable built environment within Abu Dhabi as the PRS became a mandatory requirement for all new developments within the emirate. The PRS is currently mandatory for proposed new-construction villas, buildings and community projects that fall under the ownership of developers. The PRS has been integrated into the building permit process at the various municipalities such that the construction of an applicable development is only possible if a project complies with the PRS requirements.

According to Estidama's statistics, as of January 2016, 12,187 villas and 1076 buildings had received Pearl Ratings under the programme, while the total number of projects reached 1208. The programme is founded on four pillars of sustainability: environmental, economic, social and cultural.

In 2015, the initiative "gained a new level of maturity", Falah Al Ahbabi, director-general of the UPC, told OBG. The programme has evolved from a period of education to one of refinement, in which it is now working closely together with technical experts and sustainability experts who have been trained by the UPC and independently assessed, called Estidama Pearl Qualified Professionals (PQPs). Additionally, by monitoring trends in submissions, Estidama has been able to identify gaps in "green" practices and offer additional guidance to developers. Estidama thus ensures that villas, buildings and communities are both designed and constructed sustainably. As Al Ahbabi explains, the construction phase "is where a project is at greatest risk of losing its Pearl Rating".

However, Estidama's construction audit process assists project teams with minimising risk associated with non-compliant development through closely monitoring a building's progress in line with the expected construction timeline. The PQPs work alongside building contractors and consultants to ensure a building achieves its ***targeted*** Pearl Construction Rating.

**Thoughtful Development**

Abu Dhabi international airport's Midfield Terminal Building is a key success story for the Estidama team, which is still closely involved with the project during its construction phase. As the largest single building to receive a Pearl Rating, its project team has achieved a 3-Pearl designation, 1 Pearl above the mandatory 2 Pearls for government projects. With 20m people expected to be using the airport within a few years, it will be an especially powerful tool for "sustainable communication", said Al Ahbabi, "leading by example and able to effectively demonstrate sustainable practices to a very large audience".

Another landmark development with an Estidama certification is a set of Abu Dhabi Education Council schools with a 3-Pearl rating. These are to be used as a model not only for green design and construction standards, but also for studying the benefits of these practices for end-users. Monitoring of these facilities is expected to "provide examples of how the productivity levels of those living, working and learning in healthier environments can be increased," Al Ahbabi explained.

**Outlook**

Sustainability is set to remain the fundamental cornerstone of Abu Dhabi's environmental policy in the coming years, with private and public sector collaboration key to developing cross-cutting solutions that take into account environmental, economic, social, cultural and technological considerations. Continued growth will also likely be a key driver of innovation and sustainability as the emirate strives to minimise the environmental impact of an ever-expanding population. Commitment to sustainability programmes will be critical in this regard.

The progress being made through initiatives like Estidama and the partnerships across government agencies - including with private sector players - will continue to present opportunities for investment in technology that ***reduces*** the carbon footprint and enables Abu Dhabi to develop further as an international leader in environmental innovation and sustainable development. The ability of Abu Dhabi to adapt to new realities appears certain.

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**End of Document**



[***Barloworld Limited Preliminary audited year-end -2-***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HD3-47S1-F0CC-S51N-00000-00&context=1516831)

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**Body**

The group was 7% behind its aspirational ***target*** of a 2% efficiency improvement for non-renewable ***energy*** and ***greenhouse gas*** ***emissions*** (scope 1 and 2) set for the end of this financial year off a 2014 baseline, mainly due to growing operations with relatively high intensities, as well as base ***energy*** consumption patterns of businesses with decreased activity levels.

Barloworld is a constituent of the Dow Jones Sustainability Emerging Markets Index and the FTSE/JSE Responsible Investment Index.

Stakeholder engagement informs our activities and formal structures are continually being refined to enhance their effectiveness.

Directorate

Mr Martin Laubscher, chief executive officer of the Automotive and Logistics division, retired from the Barloworld Limited board at the company's annual general meeting on 4 February 2015 and from the company with effect from 28 February 2015 due to health-related reasons. We would like to thank him for his outstanding contribution to the group over 28 years.

Outlook

In Equipment southern Africa we expect mining unit sales to remain under pressure as the major mining companies continue to minimise their capital expenditure and the business is taking steps to ensure tight control over the cost base. Our business model has, however, proven to be resilient in the current environment, underpinned by strong aftermarket growth and we expect this to remain so going forward. The order book at end September of R1.7 billion is slightly down on the comparative book of R1.9 billion at September last year.

In Iberia the ongoing recovery of the Spanish economy and the political stability which is likely following the year-end general election should have a positive impact on future public works spending. While Spain currently has one of the fastest growing economies in the Eurozone this is yet to fully translate into increased activity levels in the construction industry. We believe that the current cost structure is appropriate to position the business for future growth and any increase in activity levels will have a direct positive impact on profitability. The current Iberia order book of EUR41.5 million compares to EUR33.1 million last year and is dominated by Power Systems where activity levels remain solid.

The Russian economy is in recession and is suffering from current low commodity prices, with the weak oil price having a negative impact on the overall economy. However, our firm order book at September of US$27.7 million is well up on last year as a result of some recent mining contract awards. Additional contracts signed in October amounting to US$31 million will provide some positive momentum going into the 2016 financial year.

In Handling we expect drought conditions to continue to impact ***agriculture*** demand in South Africa. However, the disposal of the loss-making ***Agriculture*** Russia business in September will benefit results in the year ahead.

South African new vehicle sales are likely to maintain the current negative trend into next year. Consumer confidence levels remain low and are likely to be exacerbated by projected interest rate hikes in 2016. The weakening Rand should also translate into higher new vehicle price inflation. This is likely to impact our motor retail business. However, this will be mitigated by growing aftermarket and used vehicle sales.

Car Rental will continue to benefit from the addition of the Budget brand, particularly as inbound tourism is stimulated by a weak Rand, while Avis Fleet is expecting a stable performance in the year ahead.

In the Logistics Supply Chain Management business we are likely to see the positive full year earnings impact of new contracts awarded in 2015. The disposals of the loss-making logistics operations in Spain and Germany towards the end of this financial year will ensure an improved result in the Freight Management and Services business in the coming year.

While trading conditions remain challenging in certain of our businesses, we are taking appropriate strategic and operational steps which will position the group to make solid progress in the year ahead.

DB Ntsebeza CB Thomson

Chairman Chief executive officer

Group financial review

Revenue for the year increased by 1% to R62.7 billion, mainly due to increased revenues in Automotive and Logistics (R2.1 billion), offset by ***reduced*** revenue in Equipment southern Africa, Equipment Russia, and Iberia. The weakening Rand increased revenue for the year by R995 million.

Earnings before interest, taxation, depreciation and amortisation (EBITDA) increased by 5% to R6 479 million with depreciation and amortisation increasing by 6%.

The group incurred charges in the current year of R251 million related to the close out of the 2008 B--BBEE transaction, these costs comprise largely of IFRS 2 charges. Operating profit from continuing operations before the B-BBEE charge rose by 4% to R3 995 million with the group operating margin increasing to 6.4% on a comparative basis. Despite the slowdown in the mining sector, Equipment southern Africa delivered a resilient performance with operating profit of R1 894 million for the year. The growth in aftermarket activity continued to contribute positively to their results. Russia had a strong second half to produce a solid result achieving a profit of R397 million for the year. Equipment Iberia, which posted a loss of R168 million in the prior period, showed a significant turnaround to report a profit of R71 million in the current year.

The Automotive and Logistics division produced another good performance in a tough trading environment, with operating profits of R1 688 million, showing a 2.7% increase on last year.

The total negative fair value adjustments on financial instruments increased to R198 million (2014: R156 million).The current year's losses mainly comprise the cost of forward points in exchange contracts in Equipment southern Africa and gains and losses on unhedged transactions in Handling South Africa. In addition there were translation losses on local currency receivables and bank balances in Equipment operations in Africa (mainly Angola, Zambia and Mozambique), Equipment Russia and ***Agriculture*** Mozambique, resulting from local currencies having weakened against the US dollar.

Finance costs increased by R135 million to R1 252 million. The increase is a result of higher average debt levels, arising from increased average working capital levels for the year, increased fleet leasing and rental fleets and capex relating to the logistics business, further impacted by higher interest rates in South Africa.

The exceptional charge of R6 million comprises the impairment of goodwill in the Logistics Sea Air Transport business of

R33 million and the loss on disposal of the ***Agriculture*** Russia business of R88 million. This was offset by profit of R76 million from the disposal of offshore businesses in Logistics, as well as a net profit of R35 million on sale of properties and other assets.

The taxation charge for the year was R808 million. The effective taxation rate (excluding prior year taxation and taxation on exceptional items) of 37.1% (2014: 34.1%) which included deferred taxation charges of R247 million (2014: R11 million) arising in terms of IAS12:41 for currency depreciation mainly in Russia, Angola, Mozambique and Zambia.

Income from associates and joint ventures increased by 32% to R287 million (2014: R217 million) driven by strong performances from the Equipment joint ventures.

The non-controlling interest in the current year's earnings includes dividends of R48 million paid to participants of the B-BBEE transaction with the balance relating to the minorities in our NMI/DSM and Transport Solutions subsidiaries.

Headline earnings per share (HEPS) from continuing operations excluding the B-BBEE charges increased by 8% to 926 cents (2014: 857 cents). Basic earnings per share (EPS) of 809 cents is 20% below the prior year which included the profit from discontinued operations of R428 million in respect of the Australian Motor Retail operations which were disposed of last year.

Cash flow

Cash generated from operations decreased to R1.1 billion compared to R3 billion generated in 2014. ***Reduced*** activity levels in Equipment southern Africa has resulted in further working capital absorption in the second half. For the year Equipment southern Africa showed an absorption in working capital of R2 279 million and Handling R447 million, mainly as a result of higher inventories and ***reduced*** payables.

Cash applied to the net investment of property, plant and equipment together with subsidiaries and intangibles of R1 826 million mainly comprises the purchase of heavy vehicles and cranes in the Logistics transport business, and facilities in the Equipment southern Africa, Iberia and Automotive trading business. In addition approximately R328 million was invested in Angolan US$ linked bonds as protection against further currency devaluation. The group had a net cash outflow of R3 523 million at September 2015 compared to the R145 million inflow at September 2014.

Financial position and debt

Total assets employed in the group increased by R4.2 billion to R48.2 billion at September. This increase was driven by the weaker Rand (R2.5 billion) and increases in working capital, leasing and rental assets, and property, plant and equipment.

Total interest-bearing debt at September 2015 increased to R13.4 billion (2014: R11.3 billion) while cash and cash equivalents ***reduced*** to R2.4 billion (2014: R4.2 billion). While the group achieved some ***reduction*** in net debt in the second half of the year, this was hampered by higher working capital levels and the investment of US$26 million in Angolan US$ linked government bonds. Net interest-bearing debt at 30 September 2015 of R11.1 billion was R3.9 billion up on the prior year of R7.2 billion.

The group debt-to-equity ratio at 30 September 2015 was 66.9% (September 2014: 64.7%), while group net debt to equity was 55.1% (September 2014: 40.9%).

Debt

**Load-Date:** November 16, 2015

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[***Politicians debate their sustainability priorities***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5MYF-GVJ1-DYF4-G040-00000-00&context=1516831)

Eolas Magazine

December 18, 2015

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**Section:** public-affairs

**Length:** 1198 words

**Byline:** EolasAdmin

**Body**

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[***Water shortage is one of the top global risks, how can we avert it?; Governments, civil society, corporations, farmers and grassroots organisations must co-operate to avoid the dangers ahead***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H2T-2201-F021-64PS-00000-00&context=1516831)

The Guardian

October 4, 2015 Sunday 5:34 PM GMT

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**Section:** GLOBAL DEVELOPMENT PROFESSIONALS NETWORK

**Length:** 941 words

**Byline:** Dominic Waughray, Fred Boltz

**Body**

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AgendaNi

December 18, 2015

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**Section:** public-affairs

**Length:** 1198 words

**Byline:** EolasAdmin

**Body**

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The Guardian

October 4, 2015 Sunday 5:53 PM GMT

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**Section:** GLOBAL DEVELOPMENT PROFESSIONALS NETWORK

**Length:** 931 words

**Byline:** Dominic Waughray, Fred Boltz

**Body**

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[***Water shortage is one of the top global risks, how can we avert it?; Governments, civil society, corporations, farmers and grassroots organisations must co-operate to avoid the dangers ahead***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H0M-BTF1-F021-62K0-00000-00&context=1516831)

The Guardian

September 24, 2015 Thursday 8:03 AM GMT

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**Section:** GLOBAL DEVELOPMENT PROFESSIONALS NETWORK

**Length:** 936 words

**Byline:** Dominic Waughray, Fred Boltz

**Body**

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[***Pot is power hungry: why the marijuana industry's energy footprint is growing; The $3.5bn industry is one of the nation's most energy intensive, often demanding 24-hour indoor lighting rigs, heating, ventilation and air-conditioning systems at multiplying grow sites***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J5X-FT31-F021-63YR-00000-00&context=1516831)

The Guardian

February 27, 2016 Saturday 1:58 PM GMT

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**Section:** US NEWS

**Length:** 1313 words

**Byline:** Melanie Sevcenko

**Body**

Marijuana might look and smell natural , but its ecological footprint is anything but green. Pot is power hungry.

Related: Tourists with pot-related problems double in Colorado emergency rooms

The $3.5bn cannabis industry is one of the nation's most ***energy*** intensive, often demanding 24-hour indoor lighting rigs, heating, ventilation and air-conditioning systems at multiplying grow sites.

As many as 10 states could legalize recreational marijuana this year, which means the resultant electricity consumption could cause problems for public utilities and city officials.

A study by scientist Evan Mills, with the Lawrence Berkeley National Laboratory, revealed that legalized indoor marijuana-growing operations account for 1% of total electricity use in the US, at a cost of $6bn per year. Annually, such consumption produces 15m tons of ***greenhouse gas*** ***emissions*** (CO2), equal to that of three million average cars.

In 2012, Colorado became the first state to legalize recreational marijuana. Two years later, Denver's 362 marijuana grow facilities consumed more than 2% of the city's electricity usage. Statewide facilities are behind roughly half of Colorado's new power demands.

Cannabis growers are moving slowly toward ***energy*** efficient practices, largely out of fear for how changes might affect the quality of their product.

"They approach these things with a great deal of caution, especially when you talk about things that have a crop-wide effect," said Ron Flax, sustainability examiner for Boulder County, Colorado.

"Each crop cycle has a lot of dollars associated with it, so they're really hesitant to try something new and hope it works."

"But they're also paying very high utility bills.

Flax said electricity represented roughly 20% of the total cost of a cannabis operation.

In Boulder County during the second quarter of 2015, a 5,000 square foot indoor cannabis facility was eating about 29,000 kilowatt hours (kWh) of electricity monthly. A local household in the county was consuming about 630kWh.

Given cannabis' appetite for ***energy*** - coupled with Colorado's mostly coal-fired power plants - Boulder County has required commercial cannabis growers to either offset their electricity use with renewable ***energy***, or pay a 2c charge per kWh.

The fees accrued go towards the ***Energy*** Impact Offset Fund, which is used to educate and finance sustainable cannabis cultivation in the county, such as installing ***energy*** monitors at grow facilities.

But this has also kept ***energy*** efficient technologies from budding. Even after legalization in Colorado, new grow operations largely resemble underground operations. Investors have been hesitant to jump onboard.

"But it's shifting," said Flax, "as lots of ***energy*** professionals and knowledgeable product manufactures are entering the marketplace."

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The Guardian

February 27, 2016 Saturday 7:03 PM GMT

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**Section:** US NEWS

**Length:** 1314 words

**Byline:** Melanie Sevcenko

**Body**

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Related: Tourists with pot-related problems double in Colorado emergency rooms

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As many as 10 states could legalize recreational marijuana this year, which means the resultant electricity consumption could cause problems for public utilities and city officials.

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In 2012, Colorado became the first state to legalize recreational marijuana. Two years later, Denver's 362 marijuana grow facilities consumed more than 2% of the city's electricity usage. Statewide facilities are behind roughly half of Colorado's new power demands.

Cannabis growers are moving slowly toward ***energy*** efficient practices, largely out of fear for how changes might affect the quality of their product.

"They approach these things with a great deal of caution, especially when you talk about things that have a crop-wide effect," said Ron Flax, sustainability examiner for Boulder County, Colorado.

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Given cannabis' appetite for ***energy*** - coupled with Colorado's mostly coal-fired power plants - Boulder County has required commercial cannabis growers to either offset their electricity use with renewable ***energy***, or pay a 2c charge per kWh.

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The Guardian

February 28, 2016 Sunday 8:38 AM GMT

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**Length:** 1314 words

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The Independent (London)

December 19, 2015 Saturday

First Edition

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**Section:** COMMENT; Pg. 41

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**Byline:** Janet Street-Porter

**Body**

If you care about saving the planet, what is the best diet? For years, smug vegans and vegetarians have asserted that they are the environmental warriors doing their bit to combat climate change.

At the Paris climate conference, the Terminator, former bodybuilder and ex-California governor Arnold Schwarzenegger delivered an impassioned rant ordering us to give up meat two days a week to ***reduce*** ***greenhouses gases***. Surely that's a bit rich, coming from someone who bulked up on grass-fed protein for years and who starred in blockbusters which promoted gadgets and gimmickry powered by vast amounts of ***energy***. Actually, when I interviewed Arnie years ago, he was addicted to doughnuts rather than ribs, and we stopped at Greggs so he could stock up on a bagful.

Arnie is just one of a gang of stars who "really care" about the planet. Why world leaders in Paris would take any notice of concerned crusaders such as Arnie, Robert Redford and Leonardo DiCaprio telling them how important it is to fight climate change is beyond me. After all, these stars regularly fly using private jets and own vast amounts of property, which is bound to be air conditioned.

Meat-eating has been under attack for some years - Paul McCartney and his family launched Meat Free Mondays in 2009 - but vegetarian campaigners could be fighting a losing battle. The UN Food and ***Agriculture*** organisation reckons that consumption of meat will rise by 76 per cent by 2050, as the population increases and the Third World turns to Western-style diets. What's indisputable, though, is that meat production and consumption account for between 28 per cent and 50 per cent of all the ***greenhouses gases*** generated, and a recent report from the think-tank Chatham House calls for a 15 per cent meat tax to try to ***reduce*** the amount we eat.

Sadly, no solution is that simple. Now, a bunch of scientists in the US claim that eating healthy greens is just as bad for the planet. According to a study conducted by the Carnegie Mellon University (which considered the impact per calorie of food in terms of ***energy*** costs, transportation, water use and carbon ***emissions***), bingeing on lettuce is more than three times as bad for the planet as gorging on bacon. A spokesman for the researchers claimed that vegetables "require more resources per calorie than you would think - aubergines, celery and cucumbers look particularly bad when compared to pork or chicken". The report's authors agree that we need to eat less meat, but we mustn't delude ourselves that eating a healthy diet means we are saving the planet.

I don't know about you, but after reading this, I resolved to ignore the advice of Arnie and the lettuce-bashers and stick to my personal 5:2 diet. As for consuming less and fasting, telly science guru Michael Mosley will probably tell us next week that there's yet another way to live longer, ***reduce*** ***emissions*** and eliminate constipation, dementia and arthritis.

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Taxing meat - particularly in countries such as the US, where steak is synonymous with masculinity - has as much chance of becoming law as gun control; in other words, zero.

I'm writing this in Australia, which does have strict gun control laws, but where the words barbie and beef are a central part of the culture. Australia is a conflicted country when it comes to diet. There's a strong alternative lifestyle culture, with passionate protection of the beautiful environment and a huge organic movement, alongside vast mining interests and huge meat production. But the lettuce I buy at the farmers' market will have travelled less than 10 miles; it will be grown by people who use solar power, recycle and who aren't wearing shoes. It makes me feel very virtuous, but I'm not sure how I can replicate this back in Blighty.

Meanwhile, Christmas is the time of feasting, and even Arnie will not deter me from roasting a turkey and a ham. I'll just have to go through January redressing the balance on my carbon balance sheet.

Charles and Camilla beat politicians in the card game

Here in Australia, just like the UK, Christmas cards are dying out. One of the reasons, apart from the cost of postage and the rise of the e-card, is the tropical climate and the humidity in high summer. After a couple of days, most cards flop over and look pathetic. Decorations are minimal too: Blu-tack loses its grip and the sun is too bright to see the fairy lights during the day.

For years, I made Christmas cards, choosing amusing images from holidays or walks. Last year, we put together personalised calendars, but this year I have failed the test entirely.

Prince Charles, on the other hand, has scored a rare PR triumph with his 2015 Christmas card, which features an informal snap of him and Camilla actually hugging. The image, taken on their Scottish holiday last summer, has banished all moaning about the heir to the throne and substituted a cosy regal glow. Even better, Charles and his wife do not employ the horribly politically correct phrase "happy holidays", but opted for the traditional "Happy Christmas".

I loathe the way Christmas has been turned into just another holiday, a winter version of the summer break - we are celebrating the birth of Christ, after all. I'm afraid Charles has trumped Cameron and Corbyn in the card stakes this year.

Stop patronising the elderly and help to integrate them

The Government's health advisory body Nice says loneliness is a serious health issue and wants councils and the NHS to do better at informing older people what activities exist in their area and how they can join in, from singing in a choir to reading to schoolchildren. The advice follows research from the University of Chicago indicating that loneliness could be twice as likely as obesity to lead to an earlier death.

A million people in the UK say they are lonely, up to 15 per cent of those over 65. Those who have recently lost a partner are particularly vulnerable. While I applaud the intentions behind the Nice guidance, the reality of council cuts means there will be no consistent strategy throughout the UK.

The single biggest aid to combat isolation is use of the internet and communication tools such as Skype and Snapchat. Where are the Saga-sponsored laptops and a nationwide squad of young people teaching the old about the internet as part of their school studies? As for joining choirs and reading to children, where is the funding for rural transport? Each council should appoint a single executive whose task it is to enable older people to participate in activities and events that already exist. It would ***reduce*** health and care costs, because independence goes hand in hand with good mental health.

My idea of hell would be singing in a choir, but community yoga in the village hall is another matter. Above all, let's not patronise older people - they don't need "special" activities, but the means to join in.

Twitter: @The\_Real\_JSP

**Load-Date:** December 18, 2015

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**Section:** VOICES

**Length:** 1245 words

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Grace Dent: Instagram and the truth about my 2015

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Here in Australia, just like the UK, Christmas cards are dying out. One of the reasons, apart from the cost of postage and the rise of the e-card, is the tropical climate and the humidity in high summer. After a couple of days, most cards flop over and look pathetic. Decorations are minimal too: Blu-tack loses its grip and the sun is too bright to see the fairy lights during the day.

For years, I made Christmas cards, choosing amusing images from holidays or walks. Last year, we put together personalised calendars, but this year I have failed the test entirely.

Prince Charles, on the other hand, has scored a rare PR triumph with his 2015 Christmas card, which features an informal snap of him and Camilla actually hugging. The image, taken on their Scottish holiday last summer, has banished all moaning about the heir to the throne and substituted a cosy regal glow. Even better, Charles and his wife do not employ the horribly politically correct phrase "happy holidays", but opted for the traditional "Happy Christmas".

I loathe the way Christmas has been turned into just another holiday, a winter version of the summer break - we are celebrating the birth of Christ, after all. I'm afraid Charles has trumped Cameron and Corbyn in the card stakes this year.

Stop patronising the elderly and help to integrate them

The Government's health advisory body Nice says loneliness is a serious health issue and wants councils and the NHS to do better at informing older people what activities exist in their area and how they can join in, from singing in a choir to reading to schoolchildren. The advice follows research from the University of Chicago indicating that loneliness could be twice as likely as obesity to lead to an earlier death.

A million people in the UK say they are lonely, up to 15 per cent of those over 65. Those who have recently lost a partner are particularly vulnerable. While I applaud the intentions behind the Nice guidance, the reality of council cuts means there will be no consistent strategy throughout the UK.

The single biggest aid to combat isolation is use of the internet and communication tools such as Skype and Snapchat. Where are the Saga-sponsored laptops and a nationwide squad of young people teaching the old about the internet as part of their school studies? As for joining choirs and reading to children, where is the funding for rural transport? Each council should appoint a single executive whose task it is to enable older people to participate in activities and events that already exist. It would ***reduce*** health and care costs, because independence goes hand in hand with good mental health.

My idea of hell would be singing in a choir, but community yoga in the village hall is another matter. Above all, let's not patronise older people - they don't need "special" activities, but the means to join in.

**Load-Date:** December 18, 2015

**End of Document**



[***Five Key Themes For Europe Agribusiness***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JK8-4V61-JD33-J4DY-00000-00&context=1516831)

BMI Emerging Europe Food and Drink Insights

July 1, 2016 Friday

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**Length:** 877 words

**Highlight:** Russia will remove its retaliatory import ban on EU products during H216, which will be significantly positive for some peripheral EU member states and the global dairy market. Meanwhile, changes to the CAP will have a clear impact on production levels, including for milk and sugar. The dairy sector will also face consolidation in the coming years, with western EU member states outperforming.

**Body**

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**2. EU Dairy Industry To Consolidate To 2020** The EU dairy industry will undergo significant consolidation in the next five years, as the most efficient producers will benefit from a less regulated environment while smaller farmers will see their funding decrease. EU-15 countries will fare better than newer EU-N13 countries, with the exception of Poland owing to its greater investment and export prospects. Over this period, the EU will benefit from strong export opportunities, mainly for cheese and milk powder ( *see 'Three Key Trends For EU Dairy Industry', December 17 2015*).

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| Export-Driven Growth For Cheese & Milk Powder |
| EU-28 - Cheese & Whole Milk Powder Production Forecasts ('000 tonnes) |
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| *f = BMI forecast. Source: EU Ministry of* ***Agriculture****, USDA, FAPRI, BMI* |

**3. Slower Palm Oil Demand Ahead With Biofuel Policy Reform** Palm oil demand in the EU is slowing after a decade of spectacular consumption growth. We forecast this trend to continue in the coming years. Ongoing reform to the EU's renewables and biofuels policy will cap the use of palm oil-based biodiesel in the region, which has been one of the main drivers behind strong expansion in palm oil consumption over recent years. The EU is now in the process of amending its renewables policy, which we believe will come in the form of a cap on consumption of first-generation biofuels, around 6-7%. However, the reform is creating new opportunities in the form of the development of second- and third-generation biofuels production, which will boost demand for palm oil waste products *(see 'Slower Palm Oil Demand Ahead With Biofuel Policy Reform', February 112015).*

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| Sugarcane, Palm Oil Biofuels Among The Most Efficient |
| Biofuel - Net CO2 ***Emissions*** From Select Crops (% of CO2 ***emissions*** of fuel replaced) |
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| *Note: Negative percentages suggest that a biofuel produced from a given* ***energy*** *crop emits less* ***greenhouse gas*** *(GHG) than the fuel it replaces; positive percentages suggest it emits more GHG than the fuel it replaces. ILUC = indirect land use change impacts. Source: European Parliament, based on data and models from Econometrica, E4tech, LCFS II, EPA, AGLINK, IIASA, IFPRI BAU, IFPRI FT.* |

**4.France AndGermany To Strengthen Dominance Amid Sugar Consolidation Wave**In September 2017, the EU will abolish its sugar production quota, as it did with dairy quotas in March 2015. As in the case of dairy, we believe the quota removal will lead to an increase in production and subdued sugar prices, ***reducing*** the premium over world (ICE) prices that EU sugar producers can sell their crop domestically. France and Germany will strengthen their dominance of the EU sugar sector over the next five years as they increase market share while the sector consolidates at the expense of smaller and less-efficient producers. The EU will become an important global exporter of sugar once the consolidation phase is over ( *see 'France & Germany To Strengthen Dominance Amid Sugar Consolidation Wave', February 25*).

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| France And Germany To Drive EU Sugar Output Growth To 2020 |
| Select Regions - EU Sugar Production (LHC, mn tonnes) & Share Of Total EU Sugar Production (RHC, %) |
|  |
| *f = BMI forecast. RHC: 'Other EU' includes Greece, Spain, Italy, Romania, UK and Poland. Source: Eurostat, FAO, BMI* |

**5. European *Agriculture*: The Future Of The CAP** The EU's reformed common ***agricultural*** policy (CAP) came into full effect at the beginning of 2015 and will remain in place until 2020. Over this period, there will be substantial changes in European ***agriculture*** due to trade agreements, payment distribution and the removal of production quotas. Over the long term, the CAP will realign its core focus towards the environment and the sustainability of the region's farming, rather than regional commodities prices. Generally speaking, the premium between ***agricultural*** goods prices in Europe and the world will narrow, as policymakers will limit direct market intervention ( *see 'European* ***Agriculture****: The Future Of The CAP', November 20 2014*).

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| A Less Market-Focused Role... |
| Historical Development Of The CAP |
|  |
| *Source: European Commission, BMI* |

**Load-Date:** May 4, 2021

**End of Document**



[***Saudi cabinet holds session, approves number of international projects***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H90-G321-JC8S-C1MV-00000-00&context=1516831)

BBC Monitoring Middle East - Political

Supplied by BBC Worldwide Monitoring

November 2, 2015 Monday

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**Length:** 1540 words

**Body**

Text of report in English by Saudi state-owned official news agency SPA website

Riyadh, 2 November: The Custodian of the Two Holy Mosques King Salman Bin-Abd-al-Aziz Al Sa'ud chaired the cabinet's session at Al-Yamamah palace in Riyadh on Monday [2 November] afternoon.

At the outset of the session, the king briefed the cabinet on the phone calls received from King Abdallah II Bin-al-Husayn of Hashimite Kingdom of Jordan and President Barack Obama of the United States of America and made to President Vladimir Putin of the Russian Federation, the results of his talks with President Hasan Shaykh Mahmud of Federal Republic of Somalia and President Idriss Deby Itno of Republic of Chad, and his meeting with British Foreign Secretary Philip Hammond.

The Minister of Social Affairs and Acting Minister of Culture and Information Dr Majid Bin-Abdallah al-Qasabi said in a statement to Saudi Press Agency following the session that the Cabinet reviewed the latest developments in the region and the results of international meetings and consultations on them, and in this context, it was briefed on the joint statement issued in Vienna on finding a political solution to end the Syrian crisis agreed by 17 countries which reached the common understanding on a number of points, expressing hope that the participants will reach in their next discussions an agreement in the visions and the unification of ranks and discourse to ensure a better future for Syria.

The cabinet expressed the kingdom's condemnation of the continuation of Israeli occupation authorities and settlers of committing crimes against Palestinian citizens and the Islamic holy sites, and the continuation of the Israeli army's policy of field executions and committing the worst forms of the organized terrorism against the Palestinian people, calling on the international community to move quickly to provide protection for the Palestinian people and lift injustice on them.

The cabinet expressed its sincere condolences to the two governments and peoples of the Republics of Pakistan and Afghanistan on the devastating earthquake inflicted them last week, praying to Allah Almighty to bestow mercy on the souls of the deceased and a speedy recovery for the injured.

The cabinet also expressed its deep condolences to the Russian Federation, leadership and people on the victims of the Russian plane that crashed over Sinai.

On domestic affairs, the cabinet stressed on the contents of the speech of the custodian of the two holy mosques, upon receiving the minister of culture and information; senior intellectuals; newspaper editors in chief; writers and media personnel, and his keenness on kingdom's society cohesion, brotherhood, love and cooperation on the right and piety and his view that the kingdom's media is always following the approach of the holy Koran and Prophetic Sunnah upon which the state was based since its inception, enjoying security and stability.

The cabinet also expressed its strong condemnation of the terrorist bombing that ***targeted*** Al-Mashhad mosque in Al-Dhahdh in the city of Najran, stressing that the terrorist attacks have not increased citizens in the kingdom but more coherence and unity as well as more awareness of the schemes of these terrorists and those who stand behind them ***targeting*** the kingdom's security, stability and cohesion, praying to Allah Almighty to grant mercy and forgiveness on the souls of the deceased and a speedy recovery for the injured.

The cabinet also stressed the importance of the 6th ministerial meeting of pioneering forum for separating and storing carbon which will be organized by the Ministry of Petroleum and Mineral Resources under the patronage of the custodian of the two holy mosques in the presence of about 250 ministers, officials and experts in the field of ***energy***, environment and sustainable development, due to be taken place one month before United Nations climate change conference (COP 21) to be held on 30 November-11 December 2015 in Paris, which is considered as a starting base to reinforce what the Kingdom of Saudi Arabia, the host country to the forum, is provided of support and commitments over the long years for the clean ***energy*** and ***reduction*** of ***greenhouse gas*** ***emissions*** without affecting economic growth, social development or environmental protection.

The cabinet was briefed on the topics listed on its agenda, including issues the Shura Council has co-shared in their study. The cabinet decided the following:

First :

The cabinet agreed to authorize the minister of finance and chairman of the Board of Directors of Saudi Fund for Development - or his deputy - to discuss with the Sudanese side draft framework agreements between the Ministry of Finance (Saudi Fund for Development) in the Kingdom of Saudi Arabia and Ministry of Finance of the Republic of Sudan on the following:

1 - Financing dam projects.

2 - Contributing to the thirst eradication plan in the Sudanese countryside and watering for (2015-2020).

3 - An urgent project to address the electricity shortage.

And sign them, before submitting the final signed copies to complete the legal procedures.

Second:

The cabinet authorized the minister of ***agriculture*** - or his deputy - to discuss with the Sudanese side a draft framework agreement between the Ministry of ***Agriculture*** in the Kingdom of Saudi Arabia and the Ministry of Water Resources and Electricity in the Republic of Sudan regarding the partnership in ***agricultural*** investment in Upper Atbara ***agricultural*** project, and sign it before submitting the final signed version to complete the legal procedures.

Third:

The cabinet authorized the minister of commerce and industry - or his deputy - to discuss with the British side a draft cooperation programme in the field of localization of British industries in the Kingdom of Saudi Arabia and training and qualification of Saudi cadres between the Ministry of Commerce and Industry in the Kingdom of Saudi Arabia and the United Kingdom Trade and Investment (UKTI) in the United Kingdom of Great Britain and Northern Ireland, and sign it, within the framework of the Saudi-British Joint Committee.

Fourth:

The cabinet authorized the minister of labour - or his deputy - to discuss with the British side a draft memorandum of understanding for cooperation in the field of labour between the Ministry of Labour in the Kingdom of Saudi Arabia and the Ministry of Employment in the United Kingdom of Great Britain and Northern Ireland and sign it, before submitting the final signed version to complete the legal procedures.

Fifth:

The cabinet authorized the minister of foreign affairs - or his deputy - to discuss with the Dutch side a draft memorandum of understanding on political consultations between the Ministry of Foreign Affairs of the Kingdom of Saudi Arabia and the Ministry of Foreign Affairs of the Kingdom of the Netherlands and sign it before submitting the final signed version to complete legal procedures.

Sixth:

The cabinet approved the final account of Saudi Fund for Development for the fiscal year (2014-2015).

Seventh:

The cabinet approved the results reached by the technical committee in charge of developing the executive plan for the transfer of employees and posts (job vacancies and occupied posts), belongings and documents as well as the transfer of the financial allocations concerning the activity of school health from the Ministry of Education to the Ministry of Health in accordance with the details contained in the resolution.

Eighth: The cabinet approved the formation of a permanent committee in King Abdallah City for Atomic and Renewable with the participation of specialists from the relevant bodies; its mission shall be to unify and coordinate the measures to be carried out by those bodies due to the full implementation of the agreement concluded between the Kingdom of Saudi Arabia and International Atomic ***Energy*** Agency for the application of safeguards under the Treaty on Non Proliferation of Nuclear Weapons; and the committee can be assisted in need by representatives of other bodies to enable it to perform its missions.

Ninth: The cabinet approved an amendment to the regulation of Electricity and Co-Generation Regulatory Authority to be as follows: 'Regions Cooling: The central production of thermal ***energy*** and its distribution by using chilled water or any other mean by insulated pipes for cooling or warming air in buildings and facilities.

Tenth: The cabinet authorized the president of National Anti-Corruption Commission or his deputy to discuss with the Indonesian side a draft memorandum of understanding between the National Anti-Corruption Commission in the Kingdom of Saudi Arabia and Indonesian Anti-Corruption Commission in the Republic of Indonesia on prevention and fight against corruption, sign it, and then submit the final version to complete the necessary legal procedures.

The Cabinet was briefed on the annual report of General Organization for King Faysal Specialist Hospital and Research Centre for the fiscal year (1434/1435 AH), and the two annual reports of the General Authority for Survey for fiscal years (1433/1434 AH) and (1434/1435 AH), and issued its directives in this regard.

Source: SPA news agency website, Riyadh, in English 2 Nov 15

**Load-Date:** November 2, 2015

**End of Document**



[***Construction in Austria - Key Trends and Opportunities to 2020***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JHP-TWD1-F0K1-N3RY-00000-00&context=1516831)

M2 PressWIRE

April 13, 2016 Wednesday

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**Length:** 992 words

**Body**

April 13, 2016

Synopsis

In 2014, construction activity in Austria was weak due to a deteriorating business environment and weak economic performance. The country's construction industry consequently contracted by 1.5% in output value in 2014 measured at constant 2010 US dollar exchange rates. This was preceded by an annual growth rate of 0.3% in real terms in 2013.

However, due to recovery in economic conditions, the government increased its spending on infrastructure development under the Austrian Development Policy 2013-2015. Consequently, the industry recovered somewhat in 2015, and grew by 0.3% in real terms.

The industry's forecast-period (2016-2020) outlook is better than its review-period (2011-2015) performance, with its average annual growth in real terms set to accelerate from 0.03% during the review period to 1.17% over the forecast period.

This increase will be due to a rise in government investment, the anticipated recovery in regional and global economic conditions, and improvements in both consumer and investor confidence.

Summary

Construction in Austria - Key Trends and Opportunities to 2020 report provides detailed market analysis, information and insights into the Austrian construction industry including:

- The Austrian construction industry's growth prospects by market, project type and construction activity

- Analysis of equipment, material and service costs for each project type in Austria

- Critical insight into the impact of industry trends and issues, and the risks and opportunities they present to participants in the Austrian construction industry

- Profiles of the leading operators in the Austrian construction industry

- Data highlights of the largest construction projects in Austria

Scope

This report provides a comprehensive analysis of the construction industry in Austria. It provides:

- Historical (2011-2015) and forecast (2016-2020) valuations of the construction industry in Austria using construction output and value-add methods

- Segmentation by sector (commercial, industrial, infrastructure, ***energy*** and utilities, institutional and residential) and by project type

- Breakdown of values within each project type, by type of activity (new construction, repair and maintenance, refurbishment and demolition) and by type of cost (materials, equipment and services)

- Analysis of key construction industry issues, including regulation, cost management, funding and pricing

- Detailed profiles of the leading construction companies in Austria

Reasons To Buy

- Identify and evaluate market opportunities using standardized valuation and forecasting methodologies.

- Assess market growth potential at a micro-level with over 600 time-series data forecasts.

- Understand the latest industry and market trends.

- Formulate and validate strategy using critical and actionable insight.

- Assess business risks, including cost, regulatory and competitive pressures.

- Evaluate competitive risk and success factors.

Key Highlights

- With the aim of providing a better quality of life to the rural populace, the government launched the Austrian Rural Development Program (RDP) 2014-2020. Under this program, the government aims to develop ***agricultural***, transport, ***energy*** and infrastructure for an expected investment of EUR15.4 billion (US$ 21.0 billion) by 2020.

- The residential construction market is expected to benefit from the country's rising migrant population. According to Statistics Austria, migration rose from 151,280 individuals in 2013 to 170,115 in 2014. Vienna remained the prime destination, accounting for 39.0% of international arrivals, followed by Upper Austria and Lower Austria with 13.0% and 12.3% respectively. Due to the rise in migration, the government introduced the Red-White-Red Card scheme in 2011, under which non-Europeans can settle in Austria permanently. This will increase the demand for residential units over the forecast period.

- With the aim of ***reducing*** travel times and increasing trade between neighboring countries, the government is planning to expand its cross-border road and rail networks. In 2014, it signed an agreement with Hungary to increase the number of cross-border roads from 29 in 2014 to 40 by 2020, and in 2015 it announced plans to modernize the country's two cross-border rail networks, connecting Hungary to Austria, for an investment of EUR216.0 million (US$ 295.2 million) by 2020.

- Under the ***Energy*** Strategy Austria policy, the government aims to increase the share of renewables in the country's total ***energy*** mix from 32.6% in 2014 to 34.0% by 2020. Under this policy, the government also aims to ***reduce*** 16.0% of ***greenhouse gases*** ***emissions*** by 2020. Accordingly, the government is planning to increase the installed capacity of wind ***energy*** by 23.1%, going from 2,095.0MW in 2014 to 2,578.0MW by 2020. The government also aims to increase the capacity of solar photovoltaic ***energy*** to 750.0MW, and hydropower to 7,707.0MW by 2020.

- To support economic development and growth, the government launched the 100Mbps for all by 2020 strategy in 2015. Through this, the government aims to create investment opportunities, and ensure social and economic inclusion. Accordingly, the government is planning to equip all households with an internet connection speed of 100Mbps by 2020. The government allocated EUR1.0 billion (US$ 1.4 billion) under this program for the construction of related infrastructure by 2020. This will support construction activity in the telecommunications category.

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M2 PressWIRE

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[***Five Key Themes For Europe Agribusiness***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JJ4-XXY1-JD33-J3RH-00000-00&context=1516831)

Ukraine Agribusiness Report

April 1, 2016 Friday

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**Length:** 873 words

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|  |
| *f = BMI forecast. Source: EU Ministry of* ***Agriculture****, USDA, FAPRI, BMI* |

**3. Slower Palm Oil Demand Ahead With Biofuel Policy Reform** Palm oil demand in the EU is slowing down after a decade of spectacular consumption growth. We forecast this trend to continue in the coming years. Indeed, ongoing reform to the EU's renewables and biofuels policy will cap the use of palm oil-based biodiesel in the region, which has been one of the main drivers behind strong expansion in palm oil consumption over recent years. The EU is now in the process of amending its renewables policy, which we believe will come in the form of a cap on consumption of first-generation biofuels, around 6-7%. However, the reform is creating new opportunities in the form of the development of second- and third-generation biofuels production, which will boost demand for palm oil waste products *(see 'Slower Palm Oil Demand Ahead With Biofuel Policy Reform', February 112015).*

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| Sugarcane, Palm Oil Biofuels Among The Most Efficient |
| Biofuel - Net CO2 ***Emissions*** From Select Crops (% of CO2 ***emissions*** of fuel replaced) |
|  |
| *Note: Negative percentages suggest that a biofuel produced from a given* ***energy*** *crop emits less* ***greenhouse gas*** *(GHG) than the fuel it replaces; positive percentages suggest it emits more GHG than the fuel it replaces. ILUC = indirect land use change impacts. Source: European Parliament, based on data and models from Econometrica, E4tech, LCFS II, EPA, AGLINK, IIASA, IFPRI BAU, IFPRI FT.* |

**4.France & Germany To Strengthen Dominance Amid Sugar Consolidation Wave**In September 2017, the EU will abolish its sugar production quota, as it did with dairy quotas in March 2015. As in the case of dairy, we believe the quota removal will lead to an increase in production and subdued sugar prices, ***reducing*** the premium over world (ICE) prices that EU sugar producers can sell their crop domestically. France and Germany will strengthen their dominance of the EU sugar sector over the next five years as they increase market share while the sector consolidates at the expense of smaller and less-efficient producers. The EU will become an important global exporter of sugar once the consolidation phase is over ( *see 'France & Germany To Strengthen Dominance Amid Sugar Consolidation Wave', February 25*).

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| France & Germany To Drive EU Sugar Output Growth To 2020 |
| Select Regions - EU Sugar Production (LHC, mn tonnes) & Share Of Total EU Sugar Production (RHC, %) |
|  |
| *f = BMI forecast. RHC: 'Other EU' includes Greece, Spain, Italy, Romania, UK and Poland. Source: Eurostat, FAO, BMI* |

**5. European *Agriculture*: The Future Of The CAP** The EU's reformed CAP came into full effect at the beginning of 2015 and will remain in place until 2020. Over this period, there will be substantial changes in European ***agriculture*** due to trade agreements, payment distribution and the removal of production quotas. Over the long term, the CAP will realign its core focus towards the environment and the sustainability of the region's farming, rather than regional commodities prices. Generally speaking, the premium between ***agricultural*** goods prices in Europe and the world will narrow, as policymakers will limit direct market intervention ( *see 'European* ***Agriculture****: The Future Of The CAP', November 20 2014*).

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| --- |
| A Less Market-Focused Role... |
| Historical Development Of The CAP |
|  |
| *Source: European Commission, BMI* |

**Load-Date:** April 19, 2016

**End of Document**



[***-TransCanada Corporation - Keystone Pipeline System Safely Delivers One Billionth Barrel of Oil, Bringing Jobs, Growth and Energy Security to the U.S. and Canada***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GGT-5681-JD3Y-Y4XR-00000-00&context=1516831)

ENP Newswire

July 21, 2015 Tuesday

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**Length:** 2202 words

**Body**

CALGARY, ALBERTA - TransCanada Corporation (TSX: TRP) (NYSE: TRP) today announced it has safely delivered the one billionth barrel of Canadian and U.S. crude oil on the Keystone Pipeline System, contributing to U.S. ***energy*** security and generating, to date, close to US$ 200 million in property taxes for schools, roads, hospitals and more than 14,000 construction jobs for the 11 states and provinces it crosses.

The Keystone Pipeline System is one of the most extensive crude oil pipeline systems in North America, currently delivering to refineries at Wood River and Patoka, Illinois, Cushing, Oklahoma and Port Arthur, Texas.

'This is tangible evidence of how the safe delivery of Canadian and U.S. crude oil is helping to fuel the everyday lives of the American people in the safest, most efficient and least ***greenhouse gas*** intensive way possible,' said Russ Girling, TransCanada's president and chief executive officer. 'To put this achievement in perspective, it would take approximately 1.7 million train cars or 3.3 million trucks to transport one billion barrels of crude oil.

'These one billion barrels of oil have helped to fuel North American ***energy*** independence and the U.S. economic recovery, which has seen a dramatic rise in the number of oil and gas jobs as well as an increase in supply through a mix of Canadian imported and domestic production,' added Girling. 'We are proud of our employees who have helped us reach this milestone and it is a testament to the safe and reliable operations of the Keystone Pipeline System.'

Pipelines remain the safest and most efficient method of transporting large volumes of crude oil over long distances, and TransCanada continues to be committed to expanding the Keystone system with the addition of Keystone XL, a 1,179 mile (1,897 kilometre) pipeline between Hardisty, Alberta and Steele City, Nebraska. As the U.S. State Department's Final Supplemental Environmental Impact Statement for Keystone XL concluded, oil transported by rail, tanker or barge would create 28 to 42 percent higher ***greenhouse gas*** (GHG) ***emissions*** than transporting the same oil through the pipeline.

In addition to lowering GHGs and transporting crude oil in the safest manner possible, Keystone XL would bring more oil from Canada and the U.S. Bakken to Americans adding another 2,200 construction jobs to Canada and 9,000 to the U.S. The State Department concluded the pipeline project would create 42,100 direct and spin-off jobs in the U.S alone during construction.

This month marks the five-year anniversary of the official start of crude oil deliveries for the 2,639-mile (4,247-kilometre) cross-border Keystone pipeline from Hardisty, Alberta to markets in the American Midwest and in 2014 to the U.S. Gulf Coast. The project was granted a Presidential Permit in just under two years.

'Identical to Keystone, Keystone XL will ***reduce*** GHG ***emissions*** and improve public safety by transporting crude oil via pipeline versus rail. Keystone XL will also create tens of thousands of jobs, and oil imported from Venezuela and the Middle East would be replaced with American and Canadian oil,' concluded Girling.

With more than 60 years' experience, TransCanada is a leader in the responsible development and reliable operation of North American ***energy*** infrastructure including natural gas and liquids pipelines, power generation and gas storage facilities. TransCanada operates a network of natural gas pipelines that extends more than 68,000 kilometres (42,100 miles), tapping into virtually all major gas supply basins in North America. TransCanada is one of the continent's largest providers of gas storage and related services with 368 billion cubic feet of storage capacity.

A growing independent power producer, TransCanada owns or has interests in over 10,900 megawatts of power generation in Canada and the United States. TransCanada is developing one of North America's largest liquids delivery systems.

FORWARD LOOKING INFORMATION

This publication contains certain information that is forward-looking and is subject to important risks and uncertainties (such statements are usually accompanied by words such as 'anticipate', 'expect', 'believe', 'may', 'will', 'should', 'estimate', 'intend' or other similar words). Forward-looking statements in this document are intended to provide TransCanada security holders and potential investors with information regarding TransCanada and its subsidiaries, including management's assessment of TransCanada's and its subsidiaries' future plans and financial outlook.

All forward-looking statements reflect TransCanada's beliefs and assumptions based on information available at the time the statements were made and as such are not guarantees of future performance. Readers are cautioned not to place undue reliance on this forward-looking information, which is given as of the date it is expressed in this news release, and not to use future-oriented information or financial outlooks for anything other than their intended purpose.

TransCanada undertakes no obligation to update or revise any forward-looking information except as required by law. For additional information on the assumptions made, and the risks and uncertainties which could cause actual results to differ from the anticipated results, refer to the Quarterly Report to Shareholders dated April 30, 2015 and 2014 Annual Report filed under TransCanada's profile on SEDAR at [*www.sedar.com*](http://www.sedar.com) and with the U.S. Securities and Exchange Commission at   [*www.sec.gov*](http://www.sec.gov).

Backgrounder

Keystone Celebrates Five Years and One Billion Barrels

What others are saying: 'Members of North America's Building Trades Unions are proud of their work building the original Keystone Pipeline, which has helped lead North America toward ***energy*** independence with this one billionth barrel of oil transported safely over the last five years. The choice for American workers is clear: permit the Keystone XL pipeline and let's join Canada, our trusted ally to the north, and build the critical ***energy*** infrastructure our nation needs and will benefit our country for decades to come.'

Sean McGarvey, President of North America's Building Trades Unions.

'There are millions of barrels of oil every day still being imported from other countries. And there isn't any reason for it. The sooner we can get out of us depending upon foreign countries to serve us with oil, the better off I think the United States would be. If TransCanada wanted to change the route and put Keystone XL through the same easement that the other one is right now, they can come tomorrow. Because there's plenty of jobs that people need, not only in this state, but other states and provinces from Canada all the way to Texas.'

Keystone Nebraska Landowner Doug Zimmerman.

'These 1 billion barrels of oil have helped to fuel North American ***energy*** independence and power a resurgence in manufacturing in the United States, helping to drive job creation, investment and a better future for the families of the more than 12 million Americans who work in our industry.'

Jay Timmons, President and CEO of the National Association of Manufacturers.

'As Americans enjoy the extra savings from ***reduced*** gas prices at the pump this summer, the one billionth barrel of oil safely delivered from the original Keystone pipeline is a key factor making those savings possible for American consumers. How much more would Americans be saving if the Keystone XL segment of the pipeline had been approved and operational at this point Just as with the original Keystone pipeline, the Keystone XL line will benefit American workers, taxpayers, schools, communities and consumers.

It's time to move forward from partisan politics and onto creating the safe infrastructure that will ensure environmentally efficient delivery of much needed ***energy*** sources from our neighbor to the north and from US oil producers in the Bakken.'

Laborers' International Union of North America (LiUNA) General President Terry O'Sullivan.

'The Keystone XL Pipeline will create much-needed jobs, advance our domestic ***energy*** security and add to the vitality of our rural communities, all while protecting private property rights. I look forward to seeing this project continue to move forward.'

Steve Bullock, Governor of Montana.

'Having a reliable source of affordable ***energy*** is what powers our economy and allows people in the United States to enjoy a high quality of life. If this project (Keystone XL) fails to come to fruition we will continue to rely on potentially hostile ***energy*** sources to meet our needs, and we will remain vulnerable to global disruptions than can cause sudden price increases. Simply put, every barrel of oil we produce domestically or obtain from close allies, such as Canada, is a benefit to our economy and our national security.'

Dennis Daugaard, Governor of South Dakota.

'The continued success of the first Keystone project is a reminder that Keystone XL will bring good jobs and property tax revenue to Nebraska. The safety and environmental impact of Keystone XL have been thoroughly examined, and it is time for it to move forward and build the project.'

Pete Ricketts, Governor of Nebraska.

'The United Association (UA) is proud of our partnership with TransCanada in building and maintaining pipelines. TransCanada has safely and reliably transported over one billion barrels of oil through their Keystone Pipeline system, which was built with quality and pride by UA members. Today, the United States enjoys a great degree of choice when it comes to choosing ***energy*** partners, and our first choice should always be North American sources.

TransCanada's Keystone Pipeline provides American refineries with a reliable source of oil from our closest ally, Canada. A powerful economic driver for decades, the U.S.-Canadian partnership delivers the best value in return and provides a degree of safety and assurance we can't find anywhere else in the world.'

UA General President William P. Hite.

'The Keystone XL will serve as a long-term link, transporting support of domestic ***energy*** to market efficiently and safely, at a low cost to the producer, which in turn will keep costs low for the consumers. This is vital to our region's ability to continue to capitalize on our vast crude resources in a manner that benefits both our local economy and the nation as a whole. We need more pipeline capacity, and it's needed now.'

Andy Peterson, President and CEO of the Greater North Dakota Chamber of Commerce.

'The success of Keystone gives us a tantalizing glimpse of the ***energy*** and economic security benefits of infrastructure investments. Along with our own ***energy*** renaissance, crude imports from our Canadian partners are part of the reason U.S. drivers have been enjoying lower prices at the pump. Building Keystone XL will help bring more stable supply to the market and with it new jobs, consumer benefits and greater ***energy*** security.'

American Petroleum Institute (API) President and CEO Jack Gerard.

'We think they are a wonderful company to work with, they are crossing some of my land, I think when they come out and got the easement for it, they paid good, you didn't have to argue with them about what you were going to get for it.'

Virgil Novotny, Retired Tripp County, South Dakota Commissioner.

'We are in support of the pipeline, TransCanada has actually been very good to work with, they've worked with commissioners, our commission, as well as commissioners across the state. They've worked with the citizens. TransCanada has been a support to the communities, even not being here as an entity in construction. They are helping to improve fire departments, infrastructure, community events; they want to be a part of the community. TransCanada has been working in good faith with our counties.'

Matt Debow, Chairman of Harding County, South Dakota Commissioners.

'We definitely want to see the next pipeline go through, there's no reason why it shouldn't. You know, when you've already got 11,000 miles of pipeline already buried in the state of Nebraska, I don't why all the fuss is about this one. Keystone XL pipeline is important to the people of Nebraska, farmers especially because we all need the fuel. If we don't have fuel to put in our tractors, our trucks, we don't farm or run our irrigation pivots. XL pipeline whether it's one, two, three, four or five, if they want to come through me again, send them down. We'll negotiate with them.'

Charles Barber, Nebraska Landowner.

'When I first heard of the TransCanada-Keystone Project I could see the potential economic development for the area. So many times we are bypassed due to no interstate, not enough power, no natural gas, employee base, and so on. The jobs, business, and sales tax during construction could be as much as 30% increase with many permanent jobs created. Now more than ever we need to support development in our country whether it be ***agriculture***, ***energy*** exploration, manufacturing, or retail. With the ever increasing world's population counting on us to feed them we will need a reliable source of fuel.'

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[***No more 'business as usual' for Australia as climate change hits economy for $8bn; Risks around extreme weather are high for Australian companies, but there are also plenty of opportunities to benefit from the 'business boom'***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HH3-CC61-JCJY-G3F9-00000-00&context=1516831)

The Guardian

December 1, 2015 Tuesday 1:19 AM GMT

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**Section:** GUARDIAN SUSTAINABLE BUSINESS

**Length:** 1191 words

**Byline:** Amanda McKenzie

**Body**

This week, world leaders are meeting in Paris to reach a new climate agreement to keep global temperature rise to no more than 2C above pre-industrial levels. Yet the responsibility for tackling climate change, and sustainability issues more broadly, does not rest on the shoulders of politicians and diplomats alone.

Australian business also has an important role to play and there are two reasons they should care: risk and opportunity. Climate change is a massive risk to the business community. Every industry must consider its specific risk to income and expenses but most commonly these will include physical impacts, regulation, competition, insurance, changing markets, investment, ***energy*** infrastructure and litigation.

Lost productivity and absenteeism due to extreme heat is costing the Australian economy almost $8bn a year

Amanda McKenzie, Climate Council

For Australian businesses, the risks around extreme weather are particularly high. More than half of the world's natural disasters occurred in the Asia Pacific in 2014 and Australia is the most vulnerable advanced economy to the impacts of climate change. More than $226bn in commercial, industrial, road, rail and residential assets around Australia's coast are potentially exposed to flooding and erosion hazards at a sea level rise of 1.1 m - a high end but quite plausible scenario for 2100. There's also a growing body of research which looks at the possible ways in which our financial systems themselves may be vulnerable to climate risk.

Consider the physical impacts alone: so far global temperatures have increased nearly 1C. That may not sound like much, but in the past 50 years heatwaves have become hotter, last longer and occur more often. The increase in hot weather observed in the decade between 2000 and 2009 has already reached the best estimate projected for 2030.

Related: How the US started to break its fossil fuel addiction - 12 steps in 50 years

In the summer of 2013/14 - known as the "angry summer" - 156 records were broken in 90 days. Similarly 2015 is likely to surpass 2014 as the hottest year on record, while October was the hottest October on record for Australia. Recent research by David Karoly and colleagues from the University of Melbourne shows that human-driven climate change made this new record at least six times more likely than it would otherwise have been. October's temperature was also the most above-normal month globally in history and was the eighth month this year to set a new heat record.

These impacts have many consequences for business. Lost productivity and absenteeism due to extreme heat is costing the Australian economy almost $8bn a year. Recently a study from the University of Cambridge described how, as awareness of climate-related risks grows, climate-smart businesses are beginning to question how global environmental trends - such as increasing pressure on ***agricultural*** land, food security, soil degradation, local water stress and extreme weather events - will affect financial markets. This builds on the work of leading economists such as Nicholas Stern in the UK and Ross Garnaut here in Australia, who argue the benefits of early action lead to significantly higher economic growth rates and returns over the long run, especially when compared to a worst-case scenario of climate inaction. Simply put, inaction is a risky business.

Of course business is also about creating opportunities and there will be plenty as humanity weans itself off fossil fuels and creates a clean, healthy and vibrant economy. Back in 2007, the Climate Institute described how the move to a carbon-constrained global economy could deliver strategic opportunities, such as building new markets, corporate positioning, gaining regulatory intelligence and competitive advantage. "Business as usual" is no longer an option and that change is inevitable.

A recent New Climate Economy report contends it is possible to have more equitable, more sustainable and more resilient economies. An exciting area is the rapid innovation and declining costs of clean ***energy*** technologies. The price of solar photovoltaic (PV) modules, for example, has dropped 75% and onshore wind power has fallen 30% over the last five years. More than 7.7 million people are now employed globally in the renewable ***energy*** sector. Last year for the first time, global ***emissions*** shrank while the economy grew. This was driven primarily by clean ***energy*** solutions.

The United States has witnessed a swathe of corporate giants sign up to the White House's American Business Act on Climate Pledge. The pledge recognised that delaying action on climate change will be costly in economic and human terms, while accelerating the transition to a low-carbon economy will produce multiple benefits with regard to sustainable economic growth, public health, resilience to natural disasters and the health of the global environment. General Mills, a global food company and recent signatory, said addressing climate change was imperative to its long-term viability as climate change places significant pressure on vulnerable growing regions that produce many important crops.

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In Australia, the most significant business announcement to date arrived from Commonwealth Bank and NAB. Both banks have made overarching commitments to the 2C goal. Although they are still working out the finer detail, these commitments are significant because they inherently require the banks to transition funding away from fossil fuels that drive climate change.

So what can all Australian businesses do?

First, they must make their voices heard on climate change. Business is a powerful advocate for policy change and has been largely silent in the climate debate in Australia until recently.

Second, business should be powered with renewable ***energy***. Ten percent of all ***emissions*** are created by commercial buildings and addressing this is a prudent business decision as well as beneficial to the environment.

Finally there is huge scope to invest in ***energy*** efficiency in Australia, which will also impact the bottom line. These investments will provide a competitive edge as information on ***energy*** and ***greenhouse gas*** management practices are increasingly requested by customers and are required in tender documents.

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When it comes to such opportunities, the adage "first in, best dressed" holds true. While there is still time to act, the window of opportunity is finite and shrinking. Those who are nimble and forward-looking enough to act first will be in the best position to benefit from what US President Barack Obama referred to at the Asia-Pacific Forum on Economic Cooperation to as a "business boom".

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[***No more 'business as usual' for Australia as climate change hits economy for $8bn; Risks around extreme weather are high for Australian companies, but there are also plenty of opportunities to benefit from the 'business boom'What is Guardian Sustainable Business? Find out hereMeet our advisory council***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5HH3-CC61-JCJY-G3FB-00000-00&context=1516831)

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TVEyes - BBC Radio 5 Live

November 29, 2015 Sunday

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**Section:** U.K. NATIONAL RADIO

**Length:** 824 words

**Body**

**Speech to text transcript:**[[4]](#footnote-5)1

From Henry universally close Europe's vice president Geneva in to leave and so talk us talk us through the said 5 % and session of the conference of the pie resourcing will home Road and 19 issue and gather in Paris to discuss a possible new global agreement would thank me done buffing we have to focus on more can be done rather than focusing on the disagreements cos what so this is a very long road we're not gonna make progress overnight it's not silver bullet was going to be no final solution years has been going on since the 1st conference as a 9 79 and 1st signed for Paul was in 19 nineties services long slow road but what we're trying to do is to fundamentally change the way the world operates and fundamentally change the way in which we consumed stuff and use the ***agriculture*** and particularly we use fossil fuels and forceful but sources of ***energy*** and release those ***greenhouse gases*** into the atmosphere what's fundamentally trying to do here is slow and tentative gradual agreement by agreement yeah blows ***reduced*** help us with the basics 1st of all so when we consume staff Najib called or Apple's world makes your needs ***energy*** so if you were gonna television aoife your computer or her training shoes those may campaign plastics within those come from out of the ground fossil carbon out of the ground the contain metals those reminder of the ground and make call-out transport but that also needs ***energy*** most of ***energy*** everywhere in the world a cure 90 % of the ***energy*** comes from fossil copper coal oil and gas and is now beyond all reasonable doubt but that carbon ***emissions*** as cop from carbon dioxide released into the atmosphere is blanketing the year for help to trap for solar radiation inside just like sunshine in a greenhouse that's why it's called a greenhouse and that gradually warming world that carbon dioxide dissolves on the surface of the ocean maps as the defining ocean graduate and the warnings also increasing the a year rate of melting of ice causing the rise in sea level as well as the temperature rising sea levels always a bad effects but of course the ***energy*** is what gives us a great standard of industrial living and if we did not find what would happen if we do not find but there's nothing we know we're done very little or nothing to slow the rate of for carbon dioxide released since the industrial revolution started in the U.K. in the late 1600s the 1700s week now measure the temperature increase would make the acidity increase in the ocean we can measure the sea level rise we can't simulate thoughts on computers to protect future just what we try to predict whether it's not certain but got pretty good idea if we do nothing with cos we've got with blood on their way through maybe year maybe 10 for a 25th of the amount of coal one of if we carry on burning that for the temperature doesn't go off on one degrees the temperature goes up by 10 or 15 degrees what we're trying to do here the over a long period of time but if we carry on wait a millennium for written written to carry on the way we're doing at the temperatures set to increase by about 5 degrees by the end of this century by about 80 90 years time so 5 degrees doesn't sound or perhaps put that on average so that means that her London becomes likes of Spain southern Spain becomes more it was a horror for work is the rate of change as important we can't adapt to that sea level rises most of us it is a close to the coast animals and plants and ecosystems the entire natural environment on which we depend can't cope without speed of change what happened in the past geologically it for lots of things died because of that we're trying to ***reduce*** the rate of change to Something which we can manage and can we really reverse this and how quickly bowlers two ways of trying to look at this 1st thing is we have to slow the rate of increase our so we're increasing but maybe you one or two % a year at the moment and the 1st thing is to try and decrease the speed of change 1st thing to do there is to change the way we use fossil ***energy*** way we use coal and oil and gas so everybody was thinking you try and use less ***energy*** by travelling less travelling several people in the car or buying more effective low fuel consumption cough for example or we can use of resources for that ***energy*** rather than coal oil or gas we can use wind power or solar park was unconscious atomic nuclear power per week and also then try to build more efficient in the way we use a water resources the way we use our food and may get much better value of out what about so we're using small quantities to achieve the same benefit

**Load-Date:** November 29, 2015

**End of Document**



[***Can solar cookstoves help reduce greenhouse emissions in developing countries?; An Ohio startup is disrupting the clean cookstove industry with the introduction of a solar powered cookstove - but not everyone is convinced***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H8B-VG61-F021-61J5-00000-00&context=1516831)

The Guardian

October 30, 2015 Friday 6:01 PM GMT

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**Section:** GUARDIAN SUSTAINABLE BUSINESS

**Length:** 1096 words

**Byline:** Erik Hoffner

**Body**

Since Hillary Clinton announced the creation of a Global Alliance for Clean Cookstoves in 2010, the public-private partnership has helped raise more than $400m for cleaner stoves and cooking fuels, enlisted more than 1,300 partners and, by its own accounting, helped drive about 28m cookstoves into the world's poorest countries.

The vast majority of those cleaner cooking devices are powered by biomass - wood, charcoal, dung and ***agricultural*** waste. Millions more are powered by cleaner fuels like liquid propane gas (LPG), ethanol and electricity. At most, the alliance reported, 2% of the stoves distributed in 2013 relied on solar power, the cleanest fuel of all.

Although the alliance's eight priority countries - Kenya, Ghana, Nigeria, Bangladesh, India, China, Guatemala and Uganda - are blessed with ample sun, solar technology gets barely a mention in the alliance's business plan. At its last big global conference two years ago in Thailand, solar was not even on the agenda; its boosters had to demonstrate their designs in the conference center parking lot. When the alliance convenes its next global summit in November in Ghana, solar again will be absent from the program.

Despite such odds, a Cincinnati, Ohio-based startup called GoSun is betting that it can make a business out of selling solar cookers in the developed world and providing them at a lower cost to the global poor. GoSun sells solar stoves for $280 and more in developed countries, including the US, EU, Australia and Japan, and it plans to use the proceeds to subsidize the sale of a solar cookstove to the people who can benefit the most in the developing world.

Cleaner cookstoves aim to solve an important global health problem. More than 4.3 million people die prematurely every year from inhaling smoke generated as they cook over open fires, according to the World Health Organization. An estimated 2.8 billion people cook over smoky, polluting biomass fires daily.

Solar powered stoves, however, have not generally been viewed as a viable solution by the alliance because, according to detractors, they take too long to heat up and are bulky. More importantly, they don't work at night or under heavy clouds. Solar advocates respond by saying that solar should be the first choice for cooking when the sun shines, and when it doesn't, a stove that burns a fuel cleanly should be employed. Many people in developing countries already use multiple cooking methods - the open fire pit remains ubiquitous, even in homes with cookstoves - but it's yet to be seen whether the poor would be willing and able to pay for two cookstoves.

GoSun was founded by Patrick Sherwin, a serial entrepreneur in the renewable ***energy*** sector, in 2013. It has 15 employees and operates as a for-profit company, albeit one with a strong social, health and environmental mission. GoSun says the use of its stoves will ***reduce*** death and disease caused by household air pollution, limit deforestation and ***greenhouse gas*** ***emissions*** and, because users don't have to gather wood, free up time for other purposes, including education.

As the first and only solar cookstove company to receive financial support from the Global Alliance, GoSun was awarded a $75,000 grant for a participatory design process in Guatemala. Families tested a variety of designs which the GoSun team tweaked to maximize effectiveness.

GoSun has attracted an angel investor, electric car company Zap Motors co-founder Gary Starr, and has also run two successful Kickstarter campaigns ( here and here ) which together brought in over $750,000 and 1,700 stove orders, though finalizing the design promoted in the 2015 campaign has proven a challenge and units are not slated to be shipped until 2016. GoSun is concurrently pushing forward on other design projects and plans to release a new version of the compact cookstove to be sold in developing countries, featuring a thermal battery that would allow heat to be stored for later use, perhaps even at night.

GoSun's Sherwin doesn't yet see a way to make money by selling solar stoves in the global south. He is considering turning the developing country program, which is now called GoSun Global, into a nonprofit and letting the for-profit side help fund it. Matt Gillespie, the company's lead designer who led the project in Guatemala, said that half of the families who tested the designs there chose to buy one at subsidized cost, showing how the company's future business model could work.

Still, some experts in the field snub solar. Kirk Smith, who leads the Household ***Energy***, Climate and Health Research Group at the University of California at Berkeley, says that despite big questions of access and cost, gas and electricity are the best clean cooking options because they work regardless of the weather or time of day. "If you want renewable cooking, do it yourself," he told attendees at an alliance event in New York. "Don't ask the poor to do it for you."

By contrast, when EPA Administrator Gina McCarthy, a member of the alliance's leadership council, was asked if she believes solar should be part of the clean cooking solution, she said: "I absolutely think so. This effort is not just about making biomass stoves more efficient."

Julie Greene, director of Sacramento-based nonprofit Solar Cookers International, praises GoSun "for getting so much attention for solar cooking". She said: "It's been a long time since there's been a device that's captured the public's imagination in such a big way." This buzz comes despite it not being a particularly new design, she added, saying it was developed 10 years ago by a Malaysian inventor.

Crosby Menzies, owner of SunFire Solutions, a South African company that sells both solar and clean biomass cookstoves in off-grid communities, has mixed feelings about GoSun. "It looks like a very good cooker," Menzies said. "But it wouldn't work for the bulk of people in Africa. It just doesn't cook big enough amounts." He says that the most popular solar cooker he sells in rural areas can handle a 16kg pot. "And still they complain that it's not big enough!"

If GoSun Global is able to scale - producing 3,000 units for Guatemala or 100,000 units in the case of India - the cost of the stoves would hit $100 or less, Sherwin believes. While he concedes that most poor people in the developing world cannot afford a $100 stove, he thinks that a subsidy could bring the price down as low as $30 or $50.

At that price, solar stoves would have a big advantage over smoke-free stoves that use LPG, ethanol or electricity - the fuel is free.

**Load-Date:** October 30, 2015

**End of Document**



[***Aberdeen New Thai Inv Trust PLC Annual Financial -4-***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JS7-RJ31-F0CC-S21N-00000-00&context=1516831)

London Stock Exchange Aggregated Regulatory News Service (ARNS)

May 13, 2016 Friday 2:45 PM GMT

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**Length:** 1596 words

**Body**

respect to any of the Company's of risk than that usually

investments, the effect associated with investment

will generally be to ***reduce*** in major securities markets.

both the income received Through regular interaction

by the Company from its with the Manager and other

investments and/or the commentators, the Board

capital value of the affected stays up-to-date with the

investments. latest political and economic

news in Thailand.

Promoting the Company

The Board recognises the importance of promoting the Company to prospective investors both for improving liquidity and enhancing the value and rating of the Company's shares. The Board believes an effective way to achieve this is through subscription to, and participation in, the promotional programme run by the Aberdeen Group on behalf of a number of investment companies under its management. The Company's financial contribution to the programme is matched by the Aberdeen Group. The Aberdeen Group Head of Brand reports quarterly to the Board giving analysis of the promotional activities as well as updates on the shareholder register and any changes in the composition of that register.

The purpose of the programme is both to communicate effectively with existing shareholders and to gain new shareholders with the aim of improving liquidity and enhancing the value and rating of the Company's shares. Communicating the long-term attractions of the Company is key and therefore the Company also supports the Aberdeen Group's investor relations programme which involves regional roadshows, promotional and public relations campaigns.

Board Diversity

The Board recognises the importance of having a range of skilled and experienced individuals with sufficient and appropriate knowledge to allow the Board to fulfill its obligations. During the year ended 28 February 2016 there were four male Directors and one female Director.

Environmental, Social and Human Rights Issues

The Company has no employees as the Board has delegated day to day management and administrative functions to AFML. There are therefore no disclosures to be made in respect of employees. The Company's socially responsible investment policy is outlined below.

Socially Responsible Investment Policy

The Board acknowledges that there are risks associated with investment in companies which fail to conduct business in a socially responsible manner and has noted the Aberdeen Group's policy on socially responsible investment. The corporate responsibility programme of the AIFM's parent company, Aberdeen Asset Management PLC, including its environmental policy, can be found on [*http://www.aberdeen-asset.com/aam.nsf/groupCsr/home*](http://www.aberdeen-asset.com/aam.nsf/groupCsr/home).

Global ***Greenhouse Gas*** ***Emissions***

The Company has no ***greenhouse gas*** ***emissions*** to report from the operations of its business, nor does it have responsibility for any other ***emissions*** producing sources under the Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013.

Future

The Board expects the Company to continue to pursue its investment objective and accepts that this may involve divergence from the benchmark. The companies which make up the investment portfolio are considered by the Investment Manager to demonstrate resilience in the context of the Thai political situation and to offer opportunities for investors to benefit from the development of the broader Thai economy.

In addition, many of the non-performance related trends likely to affect the Company in the future are common across all closed ended investment companies, such as the attractiveness of investment companies as investment vehicles, the impact of regulatory changes (including MiFID II and the Packaged Retail Investment and Insurance Products regulations) and the recent changes to the pensions and savings market in the UK. These factors need to be considered alongside likely future developments for the Company's investments and the Board's expectations in this regard can be found in the Chairman's Statement whilst the Investment Manager's views may be found in their Report.

Nicholas Smith

Chairman

13 May 2016

INVESTMENT MANAGER'S REPORT

Overview

Thai equities fell in the year under review, during a period fraught with erratic movements in global stockmarkets. Policy missteps in China that triggered sell-offs worldwide, the slowing Chinese economy, uncertainty around the pace of normalisation of US interest rates and plummeting oil and commodity prices, all roiled investor sentiment and impacted macroeconomic conditions domestically. A moribund state of affairs in Thailand became marked by an ongoing slump in manufacturing and exports, declining inflation, lacklustre business and consumer spending, and a weakening baht. However, confidence was boosted towards the end of the review period, following a rash of government stimulus measures and commitment to increased spending on infrastructure projects. The market defied the regional trend to recover slightly, on the back of better-than-expected fourth-quarter GDP data and generally upbeat earnings news.

Portfolio

Sustained jitters in Thai equities saw the SET Index fall by 11.6%, in total return terms, over the year ended 28 February 2016. Positive stock selection meant that the portfolio outperformed the benchmark, posting a NAV decrease of 9.5%.

Holding Big C Supercenter proved beneficial, as its share price rose on news that French parent Casino Group had sold its 59% stake in the Thai subsidiary to local import-export firm Berli Jucker at 252.88 baht per share. Similarly, Eastern Water Resources held up relatively well amid the sell-off, and was spared the effects of severe droughts that hit much of rural Thailand hard.

We have exposure to the telecommunications sector via the portfolio's holding in Advanced Info Service (AIS), the largest player in a market that already has the second highest mobile broadband penetration rate in Southeast Asia. AIS' win in the auction for new 4G frequencies partially resolves the mobile operator's capacity issues and allows it to keep up with its competitors, while maintaining healthy cash flow.

Among financials, Bangkok Insurance and Tisco were resilient as their steady, dependable businesses stood them in good stead. Tisco's share price improved, despite declaring a 4.4 billion baht loan to Sahaviriya Steel Industries as non-performing. Its credit rating remains largely intact for now, and its loan quality still exceeds the industry average, particularly with regard to auto loans.

Dynasty Ceramic's margins have stayed high, on the back of lower natural gas prices and controlled operating expenses, despite softer sales volumes. Elsewhere, Electricity Generating's role as the state utility provider helped it withstand rocky periods of market volatility. Not holding PTT Public Company Ltd aided performance, as it fell heavily in tandem with declining oil prices.

Property developers Sammakorn and LPN Development were hit by sluggish macroeconomic conditions, and suffered bouts of profit-taking with the stocks having done well previously. The economic slowdown resulted in slack advertising revenues for BEC World, in a sector that has become very competitive. The diversified media company also faced pressure from costs associated with the introduction of its digital TV offering. Even so, it remains one of the dominant players in the broadcasting industry, with the economies of scale to generate high-quality content.

The worsening global commodities rout took a toll on PTT Exploration & Production as well as Banpu. While PTT Exploration & Production was hurt by the oil slump and posted a net loss on the back of impairments, its operations have been largely resilient, with sales volumes improving marginally on rising domestic ***energy*** demand. In addition, its balance sheet is robust with a net cash position. It withdrew from an offshore exploration joint-venture with Pancontinental in Kenya to ***reduce*** risk, and sold a 20% stake in its Myanmar oil fields to Mitsui Oil Exploration and Palang Sophon Offshore. By the same token, Banpu was weighed down by the collapse in coal prices, but we are heartened by its capital raising to repay debt and restructure finances.

The market did not take too kindly to Siam City Cement's change in major shareholder from Holcim to Jardine Matheson, when the former chose to divest its 27.5% stake in the lead-up to its merger with Lafarge. Nevertheless, we believe the cement producer's operations remain stable and its fundamentals sound.

In terms of portfolio activity, we introduced to the portfolio Bangkok Bank, one of Thailand's largest commercial banks by loans and customer deposits; it also has a large branch network, domestically and internationally. Against this, Siam Cement and Bumrungrad Hospital were top-sliced following good performances.

Outlook

While stocks have been trading with renewed vigour since the start of the year, Thai equities are unlikely to stage a meaningful rebound, with the macroeconomic situation still weak. The Bank of Thailand has downgraded its growth forecast to 3.1% for 2016, as ***agriculture***, manufacturing, exports and domestic consumption all continue to wane. High levels of household debt, declining consumer confidence and natural calamities may interfere with opportunities to revive spending and development. External factors such as China's slowdown and uncertainty over future US interest rate decisions could also act as a drag on the domestic market.

**Load-Date:** May 13, 2016

**End of Document**



[***SRI sectors in focus: Forestry***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5H5X-T3K1-F0GS-H2K7-00000-00&context=1516831)

Global Capital Euroweek

September 30, 2015

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**Section:** REDD BONDS,CARBON CREDITS,CBI,CLIMATE BOND INITIATIVE,GREEN BONDS

**Length:** 1818 words

**Byline:** EuroWeek Editor 1

**Body**

It is said that if all forestry management was conducted like Sweden's SCA, there would be no climate change problem. It is said, specifically, by SCA's vice president for environmental affairs, Patrik Isaksson. "Yes," he says cheerfully. "Let me explain that provocative statement."

Isaksson first spells out a miserable equation: that today, humans and their activities emit about 10bn tons of carbon ever year, and absorb just over half of it through the oceans and through land-based carbon sinks. Our net ***emissions*** are about 4.5bn tons a year, which is, given the consequent impact on climate, arguably the world's greatest environmental problem.

Sweden, though, presents a reason for faith that things can be turned around. "If we go back 100 years and look at the volume of standing timber in our forest, we can conclude that every year we have had a net increase of 1%," he says. "Over that period we have doubled the amount of standing timber in our forests, and at the same time doubled the outtake [that is harvested to create products]."

SCA's forests, Isaksson says, create a net absorption of 2.6m tons of carbon dioxide every year, thanks to its sustainable forest management. Isaksson argues that if half the world's forests could be handled in the same way and achieve a net increase of standing timber of 1% each year, that would increase the annual absorption of carbon to more than 2bn tons. If deforestation was stopped around the world, that would add more than 1bn.

And if sustainable forest management practices of the kind used in Sweden were used to ***reduce*** the damage from insect attacks, fires and storms by 50%, that would be at least another 1bn. Put it all together, and roughly all the world's carbon ***emissions*** would be absorbed. "It's a theoretical example," says Isaksson. "But it underlines the enormous impact and importance sustainable forest management can play in combating climate change."

With ambitions and practices like that, it's little surprise that SCA has been an early mover in green bonds: the first listed Swedish company to issue one, in fact, with a Skr1.5bn five year issue in March 2014 through SEB. It was oversubscribed and placed with 30 investors.

As it happens, none of that money has actually gone to forestry yet; Isaksson says the proceeds were instead used for a water project and for ***energy*** initiatives. "So far, no actual investment has gone into the forest," he says. "But we've just run this for one year now. SCA's investments have a very long horizon, sometimes 30 years." So it is entirely possible that future issues will fund investment in forestry. SCA has its own framework through which it identifies areas that should qualify for inclusion in green bonds, including the forest.

It would be fairly straightforward to do so, because there are recognised bodies for certification to make sure that, for example, forest fibres come from forests with sustainable management in place. It is still, regrettably, a minority way of thinking; only 10% of world forests today are certified, although the figure is around 25%-30% for industrial timber. But one has to start somewhere, and the existence of groups like the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) would make it fairly easy for investors to be sure that the assets they were investing in were suitably green. And that, perhaps, could have a demonstration effect encouraging others to move in the same direction.

Bleak Brazil

It is to be hoped so, because today the situation is bleak. In August the Washington DC-based World Resources Institute (WRI) published a report saying that, despite significant efforts to ***reduce*** their deforestation, Brazil saw a rate of tree cover loss that increased by more than 16% in 2013-14, and Indonesia by 30%.

And they are no longer the worst offenders: More than 62% of tropical tree cover loss in 2014 occurred outside those two countries, with new areas of concern including the Mekong Basin, the Gran Chaco of South America, West Africa and Madagascar. Indonesia and Brazil are, the WRI says, the sixth and seventh highest ***greenhouse gas*** emitting countries in the world, thanks largely to land use change. "Both countries have made ambitious commitments to ***reduce*** ***emissions*** from deforestation, and both experienced promising declines in tree cover loss in 2013 and earlier," say Mikaela Weisse and Rachael Petersen in the report. "The increase in tree cover loss in 2014 therefore comes as a disappointment."

So how exactly is SCA looking so different? How has it pulled off this double act of increasing its standing timber while also increasing the amount it harvests?

There are several elements to it, from long-term replanting schedules to age distribution in the forest, to leaving certain areas alone because of their biological diversity. "Another tool to create the situation is adopting and using the strictest international standards for forest management," says Isaksson

Forestry naturally links to house-building issues (discussed in the Housing and Building chapter) and it throws up some curious numbers. In some circumstances, a life-cycle assessment of building a house from wood can throw up a negative number "" "which suggests that it is better to build a wooden house than not to build it, from a climate perspective".

To which one's instinctive reaction is: hang on a minute. How can that be? The reason is that if you chop down a tree and burn it then plant a new one in its place, then the carbon the new tree will remove from the atmosphere is roughly equal to the carbon you put into the atmosphere by burning the old one. So if you take a tree and give it a productive use "" in housing, for example "" and plant another in its place, then there's a net gain in carbon absorption. If you cut the tree down to make a house and replace it with two, you have a very clear net increase both in standing timber and absorption of carbon dioxide.

"Some environmental organisations argue that you should not harvest the forest, that the trees should still be standing there," says Isaksson. "But from a climate perspective, that's not a good idea.

"Trees will eventually grow up, fall and rot; their impact on carbon ***emissions*** over time is plus or minus zero. But if there is demand for wood-based product, and there is an economic incentive for forest managers to do their replanting schedules in a sustainable way to create a net growth in standing timber, it is much better, because it removes more carbon dioxide from the atmosphere each year."

Forest Bond

This is all very interesting but not, at this stage, particularly closely connected to climate finance. But that may just be a matter of time. One of the Climate Bonds Initiative's (CBI) ideas is the Forest Bond "" using public funds to support private sector investment in forests, leveraging finance from global capital markets to protect and manage forests.

Noting that global forestry faces two key challenges "" time, because forests are being lost, and scale, for a variety of reasons "" the CBI notes: "The issuance of bonds directly addresses the concerns of time and scale, enabling issuers to raise large-scale finance now that will be repaid by existing and anticipated future income." It notes that prospective issuers of forest bonds will need to convince investors that cashflows are secure and predictable "" which could be through carbon markets, but they're not yet reliable enough "" and instead suggests revenue could be linked to income from other ecosystem service markets like water and biodiversity, sustainable timber and ***agricultural*** markets, regulation (through taxes and liability regulation) and forest-friendly lending. "The bond market will have two questions: is there a cashflow, and is it creditworthy," says Sean Kidney, who founded and leads the CBI. "Where it is not creditworthy, the government has to step in to support and back the cashflow."

When Kidney and his group first started looking at forest bonds, there was a lot of discussion about issuing bonds backed by carbon credits from a UN-led programme called ***Reducing*** ***Emissions*** from Deforestation and Forest Degradation (REDD). It seeks to create a financial value for the carbon stored in forests, offering a financial incentive for developing countries to ***reduce*** deforestation. The idea was a carbon offset mechanism, but today, Kidney steps back from it somewhat. "REDD carbon credits will be volatile. That means it's more likely pigs will fly than REDD bonds become a major solution."

He sees more opportunities in green bonds from forest states that support broader economic development plans that avoid deforestation at their heart. "We need an approach that supports fast-track green economic growth in ways that head off deforestation."

Another group, the Global Canopy Programme, suggests that the annual needs for tropical forest finance will be in the order of tens of billions of dollars by 2020.

***Agriculture***

Modern thinking on forestry tends to bracket it with ***agriculture***, since one has a tendency to destroy the other; the World Bank, for example, has so far put 12% of its green bond eligible projects under an "~***agriculture***' category which goes from forest and ecosystem management through to ***agriculture*** and livestock projects.

"***Agriculture*** is vulnerable to climate change and it is, with associated deforestation, the largest contributor to ***greenhouse gases***," says the World Bank Impact Report. "Climate smart ***agriculture*** has the potential to deliver a "~triple win' of increased productivity, enhanced resilience and carbon sequestration."

World Bank ***agriculture*** projects that have been allocated funds from green bonds cover a wide range of places, from Armenian ***agriculture*** resource management to the encouragement of sustainable forest management among rural communities in Mexico; China is a particular focus, often in improving ***agricultural*** techniques but sometimes simply to increase forest cover and resilience, such as a restoration project in Hunan.

While in many cases they focus on education and attempting to create some harmony between ***agriculture*** and forestry, they can take some other angles too, such as improving forest fire prevention and response in Russia.

Laura Tlaiye at the World Bank says one focus has been on sectors that have a clear impact on food security; funded projects have included cattle management in farms, for example, or collecting waste to use for cooking or other biogas purposes.

***Agriculture*** is also something of an opportunity if it could get the right policy backing, says Sean Kidney at the CBI. "For example, the work in Europe on ***agriculture*** is all about mitigation at a modest level," he says. "The EU's Common ***Agricultural*** Policy should be a Carbon ***Agricultural*** Policy focused on sequestration. Soils are a great opportunity for us to suck carbon out of the atmosphere."

**Load-Date:** October 19, 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

January 1, 2016

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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**



[***CO2 Requirements for Poland Stricter than Expected?***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5K8F-NCW1-DYWS-R012-00000-00&context=1516831)

Polish News Bulletin

July 20, 2016 Wednesday

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**Section:** ECONOMY

**Length:** 164 words

**Byline:** ogfb

**Dateline:** 19-07-2016; wnp.pl

**Body**

On Wednesday, the European Commission will present its proposal concerning ***reduction*** of ***greenhouse gas*** ***emissions*** in sectors which are not subject to the green certificates trading system (transports, construction, ***agriculture***, small industry). The ***target*** for Poland has reportedly been set much higher than expected. The proposal is based on the agreement reached at the climate and ***energy*** summit in October 2014, at which the European leaders approved ***targets*** for ***reduction*** of ***greenhouse gas*** ***emissions*** for 2030. It was agreed that member states could not increase ***emissions*** in the sectors. The upper threshold for the ***reduction*** was set at 40 percent of the levels from 2005. The ***reduction*** at EU level should reach 30 percent. The ***target*** for Poland was set at 7 percent in relation to 2005. Until 2020, Poland was allowed to increase ***emissions*** from non-ETS sectors by 14 percent. The government has been trying to secure the possibility to keep ***emissions*** from non-ETS sectors unchanged.

**Load-Date:** July 19, 2016

**End of Document**



[***Cutting food waste by a quarter would mean enough for everyone, says UN; With the global population rising, wastage of products including 45% of all fruit and vegetables and 20% of meat is one of the greatest challenges to achieving food security***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5GND-YHT1-F021-60MB-00000-00&context=1516831)

The Guardian

August 13, 2015 Thursday 5:05 PM GMT

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**Section:** ENVIRONMENT

**Length:** 1090 words

**Byline:** Kate Lyons

**Body**

If the amount of food wasted around the world were ***reduced*** by just 25% there would be enough food to feed all the people who are malnourished, according to the UN.

Each year 1.3bn tonnes of food, about a third of all that is produced, is wasted, including about 45% of all fruit and vegetables, 35% of fish and seafood, 30% of cereals, 20% of dairy products and 20% of meat. Meanwhile, 795 million people suffer from severe hunger and malnutrition.

Well-publicised attempts to combat the loss of food - such as recent laws in France that require supermarkets to distribute unsold food to charities - have highlighted the issue of food waste, identified by the UN as one of the great challenges to achieving food security.

Estimates suggest that by 2050 food production will need to have increased by 60% on 2005 levels to feed a growing global population. ***Reducing*** food wastage would ease the burden on resources as the world attempts to meet future demand.

Related: Fighting food waste: four stories from around the world

The problem is global but manifests itself in starkly different ways. In developing countries there are high levels of what is known as "food loss", which is unintentional wastage, often due to poor equipment, transportation and infrastructure. In wealthy countries, there are low levels of unintentional losses but high levels of "food waste", which involves food being thrown away by consumers because they have purchased too much, or by retailers who reject food because of exacting aesthetic standards.

In developed countries, consumers and retailers throw away between 30% and 40% of all food purchased, whereas in poorer countries only 5% to 16% of food is thrown away. According to a 2011 report, in Europe and North America each person wasted 95-115kg of otherwise edible food annually, whereas in sub-Saharan Africa and south and south-east Asia the equivalent waste was just 6-11kg.

"In the developing world, food waste is virtually nonexistent," says Robert van Otterdijk, coordinator of the UN Food and ***Agriculture*** Organisation's Save Food programme.

"Food waste is happening in countries where people can afford to throw away food. One statistic is that the amount of food wasted by consumers in industrialised countries [ 222m tonnes a year ] is almost the same as the total net food production of sub-Saharan Africa [230m tonnes].

"But food losses, on the other hand, are really rampant in developing countries because of the underdeveloped conditions they have, from management of production to transportation and distribution."

Related: Produced but never eaten: a visual guide to food waste

The environmental impact of food loss and waste is high. The carbon footprint of food produced and not eaten is estimated at 3.3 gigatonnes of CO2, meaning that if food waste were a country it would rank as the third highest national emitter of ***greenhouse gases*** after the US and China. About 1.4bn hectares, or close to 30% of available ***agricultural*** land, is used to grow or farm food that is subsequently wasted. And more surface and groundwater, or "blue water", is used to produce wasted food around the globe than is used for ***agriculture*** by any single country, including India and China.

"The whole issue of climate change has to do with our economy of production and consumption being out of balance with what the Earth can provide," says Van Otterdijk. "Production of food is one of the biggest production sectors in the world, and if one-third of all this is just produced in vain you can imagine what a huge impact this has on the natural resources - on land, water, ***energy*** and ***greenhouse gas*** ***emissions***."

The worst food waste offenders are the US, Canada, Australia and New Zealand, where consumers waste 39% of all food purchased, followed by Europe, where about 31% of all food purchased by consumers is thrown away.

In the UK, 15m tonnes of food is lost or wasted each year. British consumers throw away 4.2m tonnes of edible food each year, equivalent in weight to 86 QE2s. This means that 11.7% of all food purchased is avoidably wasted, at an estimated cost to each family of £700 a year, or almost £60 a month.

The foods most commonly found in British bins are bread, vegetables, fruit and milk. According to a nationwide analysis of food waste in UK households conducted by the food charity Wrap, the most wasted food in the UK by weight is bread, with consumers throwing away 414,000 tonnes (22.4%) of all bread purchased. By percentage, the most wasted food is lettuce and leafy salads, of which consumers throw away 38% (64,000 tonnes) of all they buy.

The most wasted meat, by both percentage and weight, is poultry, of which 13% of all edible parts (not including bones) is wasted, and the most wasted fruit by percentage is melon, with the equivalent of more than a quarter of each melon thrown in the bin.

The UK has made progress in the past 10 years after a concerted campaign to ***reduce*** wastage. It is singled out by Van Otterdijk as "one of the great successes" in combating food waste.

For every 2 tonnes of food and drink consumed in the home, another tonne is going to waste at some point in the chain

David Moon, head of ?food ??sustainability at W?rap UK

Between 2007 and 2012, the amount of avoidable food waste produced by UK households decreased by 21%, from 5.3m tonnes to 4.2m tonnes, largely due to greater awareness as a result of campaigns such as Wrap's Love Food, Hate Waste. Of the food that is not eaten, less is ending up in landfill. In 2000-01, only 14% of household waste was recycled or composted, but by 2011-12 the amount of composted food had risen to 43%.

"We have had feedback from people internationally that they do look to the UK as an example," says Dr David Moon, head of food sustainability at Wrap UK. "But considering the levels of waste we have there's considerably more to do. For every 2 tonnes of food and drink consumed in the home, there's another tonne of food going to waste at some point in the chain - whether that's production, retail or manufacturing."

Van Otterdijk says there has been a "very encouraging, unexpected, continuing interest" in the subject of food waste, enabling grass-roots campaigns around the world to gain traction.

"We have to do much more and it needs the participation of public and private sectors," he says. "But if it continues like this, with the same momentum, maybe after 10 years we'll have globally significant results."

· This article was amended on 13 August 2015 to clarify a quote from the UN.

**Load-Date:** August 13, 2015

**End of Document**



[***-Europa-Speech by Vice-President for Energy Union MaroS Sefcovic at the meeting with local stakeholders, academia, representatives of public and regional authorities, Klaipeda University, Lithuania***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J57-YTX1-F0K1-N1VF-00000-00&context=1516831)

ENP Newswire

February 24, 2016 Wednesday

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**Length:** 2090 words

**Body**

Speech by Vice-President for ***Energy*** Union MaroS Sefcovic at the meeting with local stakeholders, academia, representatives of public and regional authorities, Klaipeda University, Lithuania.

Ladies and gentlemen,

It is a pleasure to join you here today to discuss the ***Energy*** Union and what it can bring to Lithuania. Whether you're here today out of intellectual, professional, or personal interest in the topic, I believe that the presence of each person in the room today contributes directly maintaining a substantive discussion on the EU. This is part of our democratic model of which we should all take ownership.

It is our responsibility to bring the discussion from Brussels to the Member States, to the cities, to the stakeholders who will be impacted by the decisions. And I very much appreciate it when citizens assume their responsibility to join and shape such debates. That is why I have been touring the EU since May in what I call the ***Energy*** Union Tour, which I will tell you about in a moment.

The choice of holding the discussion about Europe's new ***energy*** market here in Klaipeda was also quite natural given the central role of this city in the regional gas trade, which I will talk about in a moment. As I'm sure you know, this city is not new to trade; being an ice-free port, Klaipeda has been involved in maritime trade since as early as the 13th century.

And it only made sense to come to this beautiful university which has set itself the ambitious mission of becoming a centre of excellence in marine sciences to the benefit of the entire region. I was quite impressed by your selection of degrees such as BA in Maritime Transport ***Energy*** Engineering, Sea Ports Engineering, MA in Marine Environment Engineering etc. I am sure that your students can gain significant experience by their presence here, at what is becoming a major regional hub, and that they will be able to contribute to further develop this emerging economic activity, once they graduate.

But before we speak about what the ***Energy*** Union can offer to Lithuania and the Klaipeda region, let me say a few words about the ***Energy*** Union is all about.

Ladies and gentlemen,

As you know, the current Commission took office with a promise to be different, to focus on big things and on big things only, to tackle what matters the most to European citizens.

The ***Energy*** Union was therefore high on President Juncker's list of Priorities from the very beginning. Put simply, the current situation is no longer sustainable in any sense of this term. To give you some examples:

Our ***energy*** supply is not secure enough and our use of it is often highly inefficient. In this part of Europe you are even more exposed to the risk of disruptions.

Climate change is manifesting its devastating effects all around us and a joint action is indispensable. The successful result of the recent Paris Agreement was the result of tremendous work of all parties, and to a large extent of the EU. But the challenge of delivering on this Agreement is still ahead of us.

Decarbonisation is therefore not only the call of the hour but it requires a deep transition of our entire common market. This includes rethinking manu-facturing cycles, infrastructure, innovative technologies, etc.

As you can see, such questions do not only require coordinated action among many countries and decision-making levels; they also require coordination among many different policy fields which traditionally were not always put together. These include: ***energy***, climate, transport, ***agriculture***, research, employment, education, finances, etc.

For this reason, this Commission decided to address these fields jointly by bringing all respective commissioners to work collectively as one project team. This entire project is what we mean when we speak about the ***Energy*** Union.

The overarching mission of the ***Energy*** Union, which I am in charge of, is to ensure all Europeans have access to secure, competitive, and sustainable ***energy***.

We will achieve these objectives by building an internal ***energy*** market where ***energy*** can flow freely across borders; where we decrease our ***energy*** consumption by investing in efficiency and treating it as an ***energy*** source at its own right. By ensuring that the ***energy*** that we do consume comes from diverse sources and resources; where renewables have a major share thanks to research and innovation.

Exactly one year ago (tomorrow), the Commission presented a Strategy which elaborates on how we intend to deliver on each of these fronts.

But this Strategy was only the start of a decisive process, setting the vision. In the past year since then, we have been transforming the strategy into concrete actions. In fact, our timeline is almost as ambitious as our ***targets*** as we would like to present almost the entire legislation proposals by the end of this year, three years ahead of the end of our mandate. This is in order to ensure the EU co-legislators, namely the European Parliament and the Council, have enough time to adopt them still during this term.

Ladies and gentlemen,

As I mentioned, the transition we are putting in place is deep and extensive, requiring involvement of many stakeholders across the EU. That is why it was very important for me to visit each of the Member States and to convey, in person, the implications of the ***Energy*** Union on each and every country. Of course this process also allows me to speak with the local stakeholders and listen to their/ your concerns and priorities.

During my visit I take stock of the advancement of each country towards our common European objectives in order to ensure we address the remaining gaps at the European level based on the reality on the ground. Finally, I try to find best-practices in each country so that we can better learn from each other's experience.

In fact, in the case of Lithuania, I already started the bilateral discussion with your government when I met with Minister Masiulis last year and shared with him our analysis of the Lithuanian market and how it could benefit from the ***Energy*** Union.

My visit to Lithuania yesterday and today was an opportunity to follow up on last year's discussions and to hold similar meetings with President Grybauskaite, Prime Minister Butkevicius, and Members of your national parliament.

In all these discussions, I told them how impressed I was with the tremendous progress that Lithuania has been making recently, connecting its infrastructure with your neighbours and therefore with Europe's internal ***energy*** market.

In fact, the interconnection of Estonia and Finland through submarine power cables, which we know as Estlink 1 and Estlink 2, as well as the LitPolLink between Lithuania and Poland and Nordbalt between Lithuania and Sweden - make the electricity isolation of the Baltic Sea region a matter of the past. Interconnection is finally above the 10% threshold, which is the ***target*** we set for all Member States.

Of course from a European perspective, LitPol Link is a major milestone as well: it is the very first connection with the European Continental Network. It is therefore another step towards a fully inter-connected continent, where ***energy*** can flow freely, where countries enjoy access to various ***energy*** sources, and consumers can choose between from range of suppliers.

But there's more. The connection of the Baltic countries to continental Europe is a milestone on the way towards synchronisation with the Continental European Network and de-synchronisation from IPS/UPS. I know that you, Lithuanians, and Baltics in general, are European at heart; soon your electricity will follow the same European heartbeat...

The Commission is actively supporting this process and wants it completed as soon as possible.

I am very glad to say that this success at ending the ***energy*** isolation of the Baltics is, to a large extent, due to the Baltic ***Energy*** Market Interconnection Plan initiative, the so-called BEMIP, under which all these interconnection projects were identified as priority projects, and they received significant grants (around EUR30m for LitPol Link, around EUR130m for Nordbalt).

My visit to Lithuania was also a chance to see with my own eyes the LNG Terminal 'Independence' which Minister Masiulis had the courtesy of showing me this morning. Let me say that this terminal is nothing less than a breakthrough! Thanks to its construction, LNG volume to Lithuania is expected to triple this year and for the first time in history, the amount of Norwegian gas will surpass that coming from Russia. This could be a game-changer for the regional gas market.

But here again the significance of the port is not only for Lithuania but constitutes a major strategic contribution to the entire region and our attempt to bring new (low-carbon) sources into our system.

As you might know, last week was a major milestone for the ***Energy*** Union as we presented the second legislative package of the ***Energy*** Union and the first for this year. I will not go into all its elements but we named it the Security of Supply Package because of its focus on ***energy*** security in general and gas and LNG in particular. One element of the package was a new EU LNG Strategy which specifically refers to Klaipeda as a best practice example - having improved ***energy*** security and price competitiveness not only for Lithuania but also for its neighbours.

Another aspect, on which I complimented your government, is the ***energy*** transition and decarbonisation. Lithuania met its 2020 ***targets*** for renewables already back in 2013 and we expect it would also meet its 2020 ***greenhouse gas*** ***emissions*** ***target***. As I'm sure many of you know, President Grybauskaite was a true ambassador for the ***energy*** transition in this year's World Economic Forum in Davos where leaders from all over the world heard from her how over half of Lithuanian electricity and heat production comes from renewable sources. I agree with President Grybauskaite that this is definitely something to be proud of!

But apart what's already been done and implemented, I would like to talk about what can still be done and how the ***Energy*** Union can assist Lithuania and the Baltic region along the main dimensions of the ***Energy*** Union:

***Energy*** Security: There is room for further diversification of gas sources, suppliers and routes which would further ***reduce*** Lithuania's dependence on gas supplies from Russia and will contribute to the further decrease of gas prices. The GIPL gas pipeline to Poland will help achieve that.

Internal ***energy*** market: The development of cross-border connections for both electricity and gas can further strengthen Lithuania's ***energy*** security and competition on ***energy*** markets. We can also see further use of the Klaipeda terminal once transmission infrastructure in the region is further developed and the Latvian gas market liberalised

***Energy*** Efficiency: The ***Energy*** Union puts in places financial instruments to increase investments in ***energy*** efficiency. This is particularly significant in the buildings sector where Lithuania has a large potential for improvements. The heating and cooling Strategy which we also published last week addresses specific ways to ensure we can reach pleasant temperatures indoors without inflated ***energy*** bills and without leaving an unbearable environmental footprint.

Research and innovation: The new strategy for Research and Development will help Lithuania make investments in the R&D system which is currently undeveloped and to successfully implement the smart specialisation strategy. This could be particularly interesting for some of the people in this room who are academics and researchers in the fields of renewables, new storage solutions, etc.

As you can see a lot is being done, here in Lithuania, across the Baltics, all over the EU in our attempt to create an internal ***energy*** market which is sustainable, secure, and competitive. A lot more is still to be done and as I mentioned most of it will be done still this year. 2016 is therefore the ***Energy*** Union's Year of Delivery. I invite you to keep following and engaging yourselves in the discussions as we put forward the next legislative packages throughout the rest of the year.

But let me stop here as I am sure you have questions and comments. Personally, I am very interested in what you, residents of this region which is in full transformation, have to say about the project. I would like to know how you envision the ***energy*** transition here in Klaipeda, in Lithuania and in the rest of Europe.

Thank you very much.

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

**Load-Date:** February 24, 2016

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[***Satellite project to protect threatened ecosystems will monitor Kenya's forests in near real-time; University of Leicester researchers will visit Kenya from 25 â(EURO)" 29 April to start a new climate change initiative***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JKF-4F71-JD3Y-Y54P-00000-00&context=1516831)

M2 PressWIRE

April 21, 2016 Thursday

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**Length:** 983 words

**Body**

April 21, 2016

Researchers from the University of Leicester will be travelling to Kenya from 25 - 29 April to kick off a new satellite project that aims to monitor the world's forests in near real-time.

The researchers hope that it will help forest land owners and national agencies to protect biodiversity and ***reduce*** climate change through the rapid detection of forest cover changes arising from unsustainable utilisation practices.

The project is supported by the Natural Environment Research Council (NERC).

The University of Leicester is internationally renowned for its Space and Earth Observation research. The team travelling to Kenya includes Professor Heiko Balzter, Director of the Centre for Landscape and Climate Research at the University of Leicester, together with Dr Pedro Rodríguez Veiga and Dr Ciaran Robb from the University's Department of Geography and Dr Maggy Heintz from the Research and Enterprise Division.

The United Nations Framework Convention on Climate Change includes an international initiative on '***Reducing*** ***Emissions*** from Deforestation and forest Degradation' (REDD+) whose aim include protection of carbon stocks and biodiversity in threatened ecosystems around the world. This way, carbon stays in the forest and is not released to the air, where it could lead to further global warming.

One of the main constraints for the successful implementation of REDD+ that has been identified by policy makers, investors, financiers and scientists is the need for robust and objective Measurement, Reporting and Verification (MRV) systems.

It has been recognised that satellite technology is the most feasible way to regularly monitor the world's forests in a timely fashion.

Kenya has recently set out an ambitious climate change action plan and within the context of REDD+. The University of Leicester is working with the Ministry for Environment, Natural Resources and Regional Development Authorities, Kenya Forest Service and a Kenyan company Ukall Ltd to develop a prototype for a near-real-time forest cover change, monitoring service from Sentinel-1 and 2 satellite data. The service will use national forest definitions and is delivered directly in an easily accessible reporting format via a smartphone app to community forestry associations and the Kenya Forest Service.

This will help Kenya in its REDD+ readiness efforts and demonstrate the value of satellite enabled forest monitoring and its application via mobile phone app development.

Professor Balzter said: "After the ***greenhouse gas*** ***emissions*** from fossil fuels, tropical deforestation is the second largest contributor to global climate change. We will focus the initial prototype of our monitoring system at the scale of a national forest reserve in Kenya and make sure that community forestry associations and local communities also have access to the information.

"Our aspiration is to support participatory forest management strategies to enable Kenya to manage its forests more sustainably and achieve its national forest cover ***target*** of minimum 10% by 2030. Our research has a huge potential impact if it contributes to Kenya's efforts to take up more carbon from the air and store it in the form of forest biomass.

"The prototype will allow the Kenya Forest Service and the Ministry of Environment and Natural Resources to have timely information on deforestation and forest degradation and have the means to establish a robust and objective Measurement, Reporting and Verification (MRV) system based on cutting-edge technology."

During the visit the University of Leicester, together with the Kenya Forest Service (KFS), will organise a workshop to be hosted by KFS in Nairobi. Also participating will be our Kenyan based Partner, UKALL Limited, a leading mobile app design and development company, to be represented by their lead developer and CEO Catherine Kiguru and their Executive Chairman, Paul Rees.

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[***Speech by Vice-President for Energy Union Maros Sefcovic at the meeting with local stakeholders, academia, representatives of public and regional authorities, Klaipeda University, Lithuania***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5J53-0951-JD3Y-Y27X-00000-00&context=1516831)

FinancialWire

February 23, 2016 Tuesday

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**Length:** 2064 words

**Body**

Minister Masilius,

Mayor Grubliauskas,

Rector Eimutis Juzeliunas,

Ladies and gentlemen,

It is a pleasure to join you here today to discuss the ***Energy*** Union and what it can bring to Lithuania. Whether you're here today out of intellectual, professional, or personal interest in the topic, I believe that the presence of each person in the room today contributes directly maintaining a substantive discussion on the EU. This is part of our democratic model of which we should all take ownership.

It is our responsibility to bring the discussion from Brussels to the Member States, to the cities, to the stakeholders who will be impacted by the decisions. And I very much appreciate it when citizens assume their responsibility to join and shape such debates. That is why I have been touring the EU since May in what I call the ***Energy*** Union Tour, which I will tell you about in a moment.

The choice of holding the discussion about Europe's new ***energy*** market here in Klaipeda was also quite natural given the central role of this city in the regional gas trade, which I will talk about in a moment. As I'm sure you know, this city is not new to trade; being an ice-free port, Klaipeda has been involved in maritime trade since as early as the 13th century.

And it only made sense to come to this beautiful university which has set itself the ambitious mission of becoming a centre of excellence in marine sciences to the benefit of the entire region. I was quite impressed by your selection of degrees such as BA in Maritime Transport ***Energy*** Engineering, Sea Ports Engineering, MA in Marine Environment Engineering etc. I am sure that your students can gain significant experience by their presence here, at what is becoming a major regional hub, and that they will be able to contribute to further develop this emerging economic activity, once they graduate.

But before we speak about what the ***Energy*** Union can offer to Lithuania and the Klaipeda region, let me say a few words about the ***Energy*** Union is all about.

Ladies and gentlemen,

As you know, the current Commission took office with a promise to be different, to focus on big things and on big things only, to tackle what matters the most to European citizens.

The ***Energy*** Union was therefore high on President Juncker's list of Priorities from the very beginning. Put simply, the current situation is no longer sustainable in any sense of this term. To give you some examples:

- Our ***energy*** supply is not secure enough and our use of it is often highly inefficient. In this part of Europe you are even more exposed to the risk of disruptions.

- Climate change is manifesting its devastating effects all around us and a joint action is indispensable. The successful result of the recent Paris Agreement was the result of tremendous work of all parties, and to a large extent of the EU. But the challenge of delivering on this Agreement is still ahead of us.

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For this reason, this Commission decided to address these fields jointly by bringing all respective commissioners to work collectively as one project team. This entire project is what we mean when we speak about the ***Energy*** Union.

The overarching mission of the ***Energy*** Union, which I am in charge of, is to ensure all Europeans have access to secure, competitive, and sustainable ***energy***.

We will achieve these objectives by building an internal ***energy*** market where ***energy*** can flow freely across borders; where we decrease our ***energy*** consumption by investing in efficiency and treating it as an ***energy*** source at its own right. By ensuring that the ***energy*** that we do consume comes from diverse sources and resources; where renewables have a major share thanks to research and innovation.

Exactly one year ago (tomorrow), the Commission presented a Strategy which elaborates on how we intend to deliver on each of these fronts.

But this Strategy was only the start of a decisive process, setting the vision. In the past year since then, we have been transforming the strategy into concrete actions. In fact, our timeline is almost as ambitious as our ***targets*** as we would like to present almost the entire legislation proposals by the end of this year, three years ahead of the end of our mandate. This is in order to ensure the EU co-legislators, namely the European Parliament and the Council, have enough time to adopt them still during this term.

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My visit to Lithuania yesterday and today was an opportunity to follow up on last year's discussions and to hold similar meetings with President Grybauskaite, Prime Minister Butkevicius, and Members of your national parliament.

In all these discussions, I told them how impressed I was with the tremendous progress that Lithuania has been making recently, connecting its infrastructure with your neighbours and therefore with Europe's internal ***energy*** market.

In fact, the interconnection of Estonia and Finland through submarine power cables, which we know as Estlink 1 and Estlink 2, as well as the LitPolLink between Lithuania and Poland and Nordbalt between Lithuania and Sweden - make the electricity isolation of the Baltic Sea region a matter of the past. Interconnection is finally above the 10% threshold, which is the ***target*** we set for all Member States.

Of course from a European perspective, LitPol Link is a major milestone as well: it is the very first connection with the European Continental Network. It is therefore another step towards a fully inter-connected continent, where ***energy*** can flow freely, where countries enjoy access to various ***energy*** sources, and consumers can choose between from range of suppliers.

But there's more. The connection of the Baltic countries to continental Europe is a milestone on the way towards synchronisation with the Continental European Network and de-synchronisation from IPS/UPS. I know that you, Lithuanians, and Baltics in general, are European at heart; soon your electricity will follow the same European heartbeat...

The Commission is actively supporting this process and wants it completed as soon as possible.

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But here again the significance of the port is not only for Lithuania but constitutes a major strategic contribution to the entire region and our attempt to bring new (low-carbon) sources into our system.

As you might know, last week was a major milestone for the ***Energy*** Union as we presented the second legislative package of the ***Energy*** Union and the first for this year. I will not go into all its elements but we named it the Security of Supply Package because of its focus on ***energy*** security in general and gas and LNG in particular. One element of the package was a new EU LNG Strategy which specifically refers to Klaipeda as a best practice example - having improved ***energy*** security and price competitiveness not only for Lithuania but also for its neighbours.

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As you can see a lot is being done, here in Lithuania, across the Baltics, all over the EU in our attempt to create an internal ***energy*** market which is sustainable, secure, and competitive. A lot more is still to be done and as I mentioned most of it will be done still this year. 2016 is therefore the ***Energy*** Union's Year of Delivery. I invite you to keep following and engaging yourselves in the discussions as we put forward the next legislative packages throughout the rest of the year.

But let me stop here as I am sure you have questions and comments. Personally, I am very interested in what you, residents of this region which is in full transformation, have to say about the project. I would like to know how you envision the ***energy*** transition here in Klaipeda, in Lithuania and in the rest of Europe.

Thank you very much.

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[***Satellite project to protect threatened ecosystems will monitor Kenya's forests in near real-time; University of Leicester researchers will visit Kenya from 25 â(EURO)" 29 April to start a new climate change initiative***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5JKF-4F71-JD3Y-Y4PY-00000-00&context=1516831)

FinancialWire

April 21, 2016 Thursday

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**Length:** 988 words

**Body**

Researchers from the University of Leicester will be travelling to Kenya from 25 - 29 April to kick off a new satellite project that aims to monitor the world's forests in near real-time.

The researchers hope that it will help forest land owners and national agencies to protect biodiversity and ***reduce*** climate change through the rapid detection of forest cover changes arising from unsustainable utilisation practices.

The project is supported by the Natural Environment Research Council (NERC).

The University of Leicester is internationally renowned for its Space and Earth Observation research. The team travelling to Kenya includes Professor Heiko Balzter, Director of the Centre for Landscape and Climate Research at the University of Leicester, together with Dr Pedro Rodríguez Veiga and Dr Ciaran Robb from the University's Department of Geography and Dr Maggy Heintz from the Research and Enterprise Division.

The United Nations Framework Convention on Climate Change includes an international initiative on '***Reducing*** ***Emissions*** from Deforestation and forest Degradation' (REDD+) whose aim include protection of carbon stocks and biodiversity in threatened ecosystems around the world. This way, carbon stays in the forest and is not released to the air, where it could lead to further global warming.

One of the main constraints for the successful implementation of REDD+ that has been identified by policy makers, investors, financiers and scientists is the need for robust and objective Measurement, Reporting and Verification (MRV) systems.

It has been recognised that satellite technology is the most feasible way to regularly monitor the world's forests in a timely fashion.

Kenya has recently set out an ambitious climate change action plan and within the context of REDD+. The University of Leicester is working with the Ministry for Environment, Natural Resources and Regional Development Authorities, Kenya Forest Service and a Kenyan company Ukall Ltd to develop a prototype for a near-real-time forest cover change, monitoring service from Sentinel-1 and 2 satellite data. The service will use national forest definitions and is delivered directly in an easily accessible reporting format via a smartphone app to community forestry associations and the Kenya Forest Service.

This will help Kenya in its REDD+ readiness efforts and demonstrate the value of satellite enabled forest monitoring and its application via mobile phone app development.

Professor Balzter said: "After the ***greenhouse gas*** ***emissions*** from fossil fuels, tropical deforestation is the second largest contributor to global climate change. We will focus the initial prototype of our monitoring system at the scale of a national forest reserve in Kenya and make sure that community forestry associations and local communities also have access to the information.

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M2 PressWIRE

February 23, 2016 Tuesday

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**Length:** 2061 words

**Body**

February 23, 2016

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Rector Eimutis Juzeliunas,

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Research and innovation: The new strategy for Research and Development will help Lithuania make investments in the R&D system which is currently undeveloped and to successfully implement the smart specialisation strategy. This could be particularly interesting for some of the people in this room who are academics and researchers in the fields of renewables, new storage solutions, etc.

As you can see a lot is being done, here in Lithuania, across the Baltics, all over the EU in our attempt to create an internal ***energy*** market which is sustainable, secure, and competitive. A lot more is still to be done and as I mentioned most of it will be done still this year. 2016 is therefore the ***Energy*** Union's Year of Delivery. I invite you to keep following and engaging yourselves in the discussions as we put forward the next legislative packages throughout the rest of the year.

But let me stop here as I am sure you have questions and comments. Personally, I am very interested in what you, residents of this region which is in full transformation, have to say about the project. I would like to know how you envision the ***energy*** transition here in Klaipeda, in Lithuania and in the rest of Europe.

Thank you very much.

**Load-Date:** February 23, 2016

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