



HM Government

# Science and Innovation Network: Annual Report 2011–12



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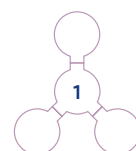
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Department  
for Business  
Innovation & Skills



Foreign &  
Commonwealth Office  
London



# Foreword

This Government recognises the vital role science and innovation play in promoting prosperity and sustainable growth, and in tackling major global challenges, from climate change and energy security to cyber crime and pandemic disease.

The UK's research base is second in the world to the US for scientific excellence. We are the most productive country for research in the G8, in per capita terms. We have much to be proud of.

We also know that, even for high-achieving countries, truly world class research and innovation is often the result of international partnerships. International collaboration provides opportunities to work with the best in the world, exchange students and researchers, and gain access to large scale international facilities. It encourages new ideas, fostering new opportunities for innovation in support of growth.

This Government is working to ensure that the UK remains a world leader in science and innovation through continuing support for the highest value research and creating or strengthening links with existing and emerging international science and innovation partners.

We do this through the excellent work of the Science and Innovation Network, which pro-actively builds the opportunities for the UK scientific community to enter into valuable partnerships with policy, business and academic counterparts around the world. We have 90 staff in 28 countries and territories, based in our Embassies, High Commissions and Consulates.

The Science and Innovation Network supports the UK's economic and social goals through international collaboration in science research and innovation and works to ensure the UK plays its part in addressing global challenges.

We are proud of the Network's record of significant achievements during the year from April 2011 to March 2012. This Report highlights some of them..



A handwritten signature in black ink that reads "David Willetts".

**David Willetts MP** Minister of State for Universities and Science, BIS



A handwritten signature in black ink that reads "Hugo Swire".

**Hugo Swire MP** Minister of State for Prosperity, FCO

# 1 Introduction

The UK's overarching objective for international science and innovation is: "To maximise opportunities for international collaboration on science, innovation and higher education to achieve the UK's economic and social goals and to play our part in addressing global challenges"<sup>1</sup>.

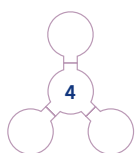
Every country that aspires to be a knowledge economy needs an excellent research base to create new knowledge, the right infrastructure to convert this into new products, processes and services and skilled people to make effective use of innovations.

But a solely domestic focus is not enough. Knowledge is increasingly developed and transferred through international collaboration. The global spread of research excellence is illustrated by the 26 countries, across every continent, represented in the top 200 world rankings for universities. Innovation hotspots are found all over the world – such as excellence in engineering in Germany, expertise in medical instruments and techniques in India and life science clusters along the East Coast of the United States. Many industries require components made all over the world. For example, the UK makes one specialised part of the Airbus wing while another is made in Australia.

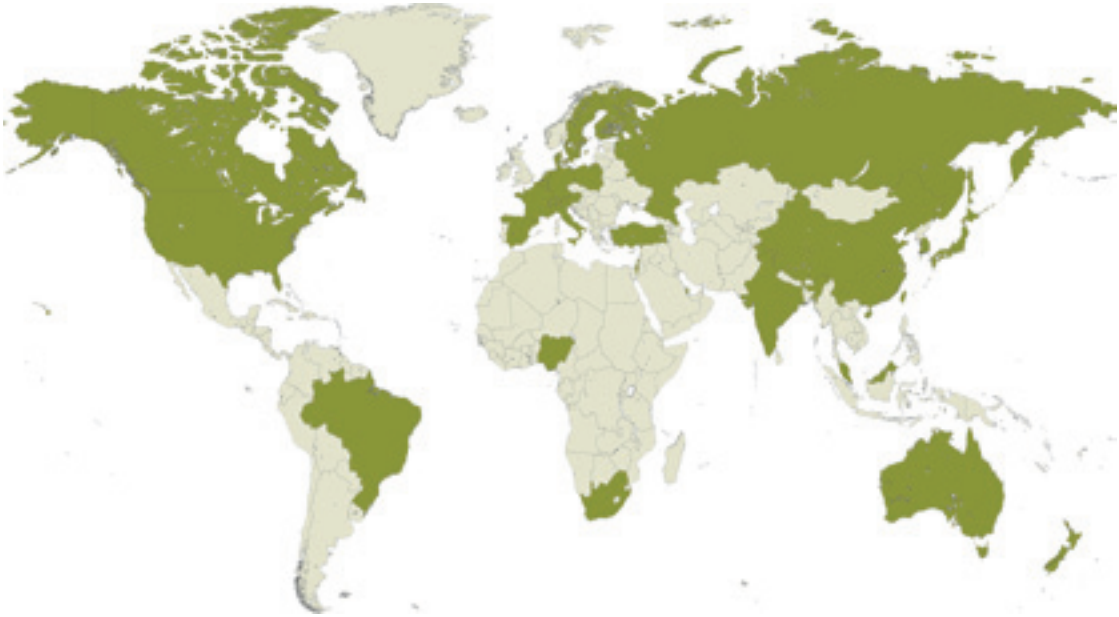
It is not surprising, therefore, that international collaboration leads to better and more impactful research. It is the best way to develop solutions to problems requiring specialised knowledge in different disciplines – including the global challenges of climate change and food security. It enables countries to share the costs and risks of large scale facilities such as the Large Hadron Collider and the opportunities of endemic research subjects like rainforests.

This is why the Department for Business, Innovation and Skills (BIS) and the Foreign & Commonwealth Office (FCO) jointly fund a network of Science and Innovation Officers (SIN) around the world. They do fantastic work identifying centres of excellence in their own countries and promoting complementary UK expertise as well as alerting us to international best practice. They support the government to government engagement that opens the door for researchers and innovators to form exciting and productive partnerships and build a network of positive relationships that provides a platform for engagement on a range of important issues for the future.

SIN works to benefit the UK through influencing and sourcing opportunities in the science and innovation policies of governments, businesses and academia, informing UK policy, and promoting 'best with best' collaboration between the UK and other nations. SIN enables us to understand the local science and innovation landscape by creating strategic relationships and negotiating bilateral programmes, influencing policy, organising scientific workshops, conferences and networking opportunities.



**Figure 1. Countries and regions where the Science and Innovation Network has staff in Embassies, High Commissions and Consulates. 90 staff in 29 countries and territories**



This report showcases examples of the work of the Science and Innovation Network during 2011-12 in facilitating science collaboration, innovation collaboration and influencing policy. The final section of this report contains details of members of the SIN team worldwide.



**Maddalaine Ansell**

Deputy Director, International Knowledge and Innovation Unit,  
Department for Business, Innovation and Skills



# 2 International Science Collaboration



## Asia

### China

#### **Opening of Fudan Tyndall Centre for Climate Change Research and commercial deals worth £25 million**

SIN China facilitated the final stage of the partnership development between the UK's University of East Anglia and China's Fudan University to jointly establish the Fudan Tyndall Centre for Climate Change Research. This Centre will study the drivers of global change and manage the pathways of world development. The two universities also agreed a commercial joint venture to deliver low carbon design and promotion work and signed commercial deals worth £25 million for low carbon exemplar/demonstration science parks in Shanghai and in Hebei Province.



#### **Chancellor announces further £8 million joint UK–China energy research**

The China S&I Network identified Chinese strengths in smart electric grid technology, which can transmit renewable energy more efficiently into the home and workplace. With low carbon research being a UK priority, the team designed a high-level smart grids project to bring together key UK and Chinese academics and organisations, including the National Natural Science Foundation of China (NSFC). Interest was high and the outputs and recommendations from this workshop fed into the China and UK Engineering and Physical Sciences Research Council (EPSRC) decision to launch an £8 million joint R&D smart grids programme. This forms part of an ongoing collaborative energy programme with China in renewable energy generation, carbon capture and storage and cleaner fossil fuels of 24 Research Council joint projects worth over £22 million. The announcement was made by the Chancellor of the Exchequer, George Osborne, during a visit to Beijing in January 2012, when he said: 'I consider the programmes that I announced today as key in fostering closer scientific, technological and engineering links with China.' This is one of many examples of the S&I Network ensuring local research priorities are aligned with those of the UK.

#### **£2 million secured for tackling Global Challenges**

SIN China continued their campaign to direct more joint research to tackle the global issues underlying UK Government Chief Scientific Advisor, Sir John Beddington's "Perfect Storm" concept. Global challenges of food security, renewable energy, climate change and health were selected as priority topics for a new £2 million joint fund which SIN China brokered as the first of its kind agreed between the UK Research Councils and China's Ministry of Science and Technology.

[RCUK/MoST Collaborative Research Call](#)

#### **UK–China funding for new stem cell therapies**

SIN China used a £4,000 grant to bring together top UK and Chinese stem cell scientists to identify collaborative opportunities. Since then interest and momentum has increased significantly to the extent that the UK's Medical Research Council (MRC) and China's National Natural Science Foundation of China (NSFC) have agreed a joint £750,000 fund to develop research partnerships.

## Birmingham Guangzhou Centre £2 million in health research

SIN China supported the University of Birmingham as they developed a presence in South China by introducing and matching relevant partners, maintaining momentum and providing valuable advice and guidance throughout the negotiations. In September 2011 the university launched their Guangzhou Centre which will coordinate collaborative research, support university activities and engage with business via professional development programmes and knowledge transfer activity. Three co-funded projects – two cohort studies and a brain cognition project – worth over £2 million funded by the municipal government and local partners have been agreed. The funds will be used to improve the understanding of major diseases in Guangzhou, to advise the local health authority on policy decision making, to improve the provision of health services and to cut healthcare costs.



*Professor David Eastwood, Vice Chancellor of University of Birmingham and Madame Gong Erzhen, Vice Mayor of Guangzhou Municipal Government shake hands at the launching ceremony, September 2011*

## India

### BBSRC engagement with India

SIN India played a key role in facilitating the Biotechnology and Biological Sciences Research Council ([BBSRC](#))'s engagement with India. Together with RCUK India, SIN India ensured that a BBSRC delegation had a tailored programme on their visit to India last year, and this led to them embarking on a strong partnership with their equivalent Indian agency in three areas; bioenergy, livestock health and crop sciences. Workshops in these areas, run jointly with RCUK India, led to clear identification of future joint calls for proposals, with a joint call on bioenergy research worth £10 million already launched. The outcomes of joint research projects in areas of crop sciences and livestock are expected to have a far reaching impact on the challenging issue of food security.





## Space collaboration

SIN India played an important role in building relationships between the [UK Space Agency](#) (UKSA) and [Indian Space Research Organisation](#) (ISRO). As a result a data analysis event is to be held at the [Indian Institute of Remote Sensing](#) in Dehradun in December 2012. The improved relationships should enable UKSA to access launch facilities in the future for the Cubesat programme due in 2014 and UK Universities will also gain opportunities to work with the Indian Space Programme.



*Minister of State for Universities and Science, David Willetts, MP shaking hands with Dr T. Alex, Director, ISRO Satellite Centre (ISAC), Bangalore during his visit to India*

## Engagement on Environment Sciences

SIN India encouraged and facilitated India's engagement in the Belmont Forum, a group of the world's major and emerging funders of global environmental change research and international science councils. This is in addition to the announcement of five major projects, totalling £4.7 million, under UK-India joint collaboration in the area of Changing Water Cycles. These projects, jointly funded by UK's [Natural Environment Research Council](#) (NERC) and India's [Ministry of Earth Sciences](#) (MoES), range from understanding the dynamics of groundwater systems, improved irrigation water management, rainfall patterns and how they affect ecosystems.

## Developing Talent Initiative in Chemical Sciences



*Minister of State for Universities and Science, David Willetts, MP at the National Chemical Laboratories, Pune during his visit to India.*

SIN India played a role in the launch of the [Royal Society of Chemistry's](#) Developing Talent Initiative in India during 2011. The initiative included capacity building of the industry and academia, scholarships for students and promoting research collaborations. SIN India and RSC organised a consultation workshop along with the [Chemical Research Society of India](#), [National Chemical Laboratory](#), and Indian Institute of Education and Research. SIN also part funded a reception connected to the workshop in Kolkata. The workshop led to a report which highlighted a number of issues which impact chemical sciences. SIN India facilitated the launch of the report by Professor David Clary, Chief Scientific Advisor to the FCO, in September 2011 in New Delhi, Kolkata and Pune.

*"We have successfully worked with SIN India on several projects such as encouraging innovation and developing talent. This has resulted in a long term project for us developing talent in the area of chemical sciences, which we hope will drive growth in India and the UK well into the future."*

**Rajesh Parishwad, Representative of Royal Society of Chemistry in India**

## Japan

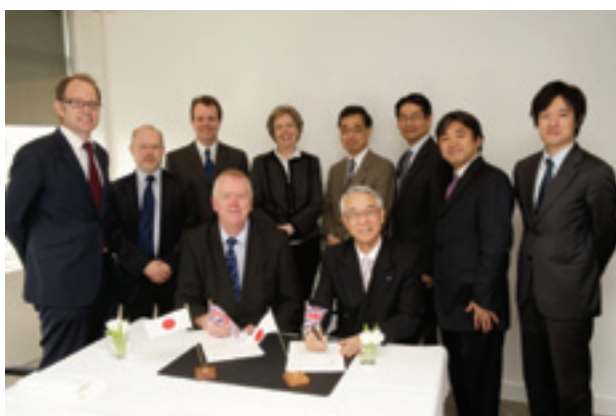
### Promoting Japanese participation in European research programmes

*"Following the recently signed EU-Japan S&T agreement, there is great potential for organisations in Europe to work with Japanese partners in R&D. The J-BILAT team has been very pleased to receive the support of the UK's Science & Innovation team for our work in raising awareness in Japan of cooperation opportunities under FP7."*



**Fabrizio Mura, Deputy General Manager, EU-Japan Centre for Industrial Collaboration**

SIN Japan has worked with the EU Delegation and the J-BILAT project which runs a series of information workshops to promote participation in EU programmes. The aim has been to raise awareness among Japanese institutions of opportunities to take part in EU funded research projects, co-hosting workshops in Tokyo and Osaka and providing expert speakers for events. As a result of SIN activity many Japanese agencies have expanded the different subject areas that can be accepted in the joint calls with the EU. In 2012 there were calls on rare earths, high speed aircraft and the future of the internet, expected to total in excess of €10 million of EU and Japanese funding.



*Japan Science Technology Agency and Medical Research Council, MoU Signing, March 2012*

## UK–Japan Neuroscience Collaboration

A priority area for SIN Japan is neuroscience, particularly brain machine interface (BMI), multimodal imaging, basic brain science and mental illness. The international neuroscience symposium co-organised with Tohoku University in 2011 resulted in a MoU signed by UCL and Tohoku University, aiming to promote further collaborative research and researcher/student exchange. Three years of small projects focusing on multimodal imaging resulted in a workshop held at the Royal Society, Chicheley Hall in February 2012. Strong links now exist between UK clinicians and Japanese imaging equipment manufacturers to drive incremental innovation. SIN Japan neuroscience efforts culminated in the signing of a MoU on 21 March 2012 between the UK Medical Research Council (MRC) and the Japan Science and Technology Agency (JST). This commitment to jointly invest at least £250,000 on neuroscience, in particular for neurodegenerative disorders and mental health will support both countries priorities in healthy ageing.

## Republic of Korea

### Science, Technology and Innovation Partnership (STIP) Programme



As part of a wider visit to the Republic of Korea, the Secretary of State for Business Innovation and Skills, Dr Vince Cable, MP signed a renewal of the Science Technology Innovation Partnership agreement in May 2011. SIN Korea led on the negotiation of the new agreement. This renewal extended the life of the UK–Korean relationship in industrial R&D cooperation. During the meeting prior to the signing ceremony, the two ministers discussed the strengthening of UK–Korea R&D collaboration, and looked towards future opportunities in renewable energy joint research.



*Secretary of State for Business, Innovation and Skills, Dr Vince Cable, MP, and Dr Joon-Kyung Choi, Minister of Knowledge Economy signed the renewal of the UK–Korea STIP Agreement in Seoul on 30 May 2011*

### Joint Alzheimer's Programme

The first workshop of the Korea-UK Collaborative Alzheimer's Disease (KUCAD) Consortium took place in November 2011. Following the 2010 UK–Korea Joint Committee on Science and Technology and its £500,000 collaboration agreements signed to look at the causes and treatment of Alzheimer's Disease. SIN Korea's efforts in lobbying Korean Ministry of Health and Wellbeing and arranging a UK mission played an integral role in the selection of this programme to receive Korean national funding support. The first KUCAD Consortium meeting focused on the exchange of research status in each country and the determination of common research interests for future joint research.

## Joint Nuclear Security project

British delegates from King's College London, the Dalton Institute at the University of Manchester, the International Institute for Strategic Studies and Chatham House joined an international workshop at Seoul National University on 22 March 2012. SIN Korea and Seoul National University (SNU) jointly hosted the academic nuclear energy workshop in the margins of the 2012 Seoul Nuclear Security Summit. This event succeeded in raising the profile of the UK's expertise in nuclear technologies (particularly in decommissioning) and in nuclear security regulation, policy and training. The workshop resulted in the generation of a project between UK and Korean nuclear security and safety experts supported by the FCO's Prosperity Fund.



## Singapore

### Partnership in Tropical Medicine, Hygiene and Public Health

SIN Singapore was instrumental in the [London School of Hygiene and Tropical Medicine \(LSHTM\)](#) developing a partnership with the [National University of Singapore's Saw Swee Hock School of Public Health \(SSHSPH\)](#). This was formalised through a MoU signed during a visit to Singapore by the Secretary of State for Business, Innovation and Skills, Dr Vince Cable, MP. The partnership will build on staff and student exchange programmes and joint academic and scientific collaboration to enable greater co-operation in infectious disease control, health systems research and chronic disease management.



*Secretary of State for Business, Innovation and Skills, Dr Vince Cable, MP, witnessing signing of MoU*

### Developing a cereal straw biorefinery using rice

SIN Singapore facilitated a £50,000 funding agreement between the Biotechnology and Biological Sciences Research Council (BBSRC) and the Vietnam Academy of Agricultural Sciences (VAAS) to develop sustainable biofuels and biorefineries based on lignocellulosic plant biomass. Vietnam currently burns over 50 million tonnes of waste rice husks and straw, creating gas emissions and contributing to global warming,

human health problems and decreased crop productivity. Diverting a substantive portion of this to produce biofuels and renewable chemicals would have double benefits in terms of reducing emissions from biomass burning and displacing petroleum consumption.

## Taiwan

### Collaboration on Organic Optoelectronic and Photonic Materials

In June 2011, working in conjunction with the [Royal Society of Chemistry](#), local universities and the science funding agency in Taiwan, SIN Taiwan organised a workshop to initiate international collaboration and consolidation of industrial applications in the field of organic optoelectronic and photonic materials between the UK and Taiwan. The workshop and ongoing collaboration covers the research and development of electronics components such as Organic Light Emitting Diodes, Organic Field Effect Transistors, photovoltaic devices, and LC-based optical switches, which have been leading themes of intensive research in the past 10-15 years. These electronic components have proven applications towards flat panel displays, green energy technologies and flexible/foldable optoelectronic devices. As a result of this SIN led project, the UK is now seen as a leading country in Europe to build a platform to share R&D results, and to enable greater information exchange.



## Australasia

### Australia – office established in Oct 2011

Since the re-establishment of a SIN representative in Australia, much of the activity for 2011–2012 has focused on network-building with the major science and science policy stakeholders in government, research and academia. In support of the UK's prosperity agenda, SIN Australia also works with the local UK Trade and Investment team to share contacts and opportunities with local companies dealing with new technologies.



### Square Kilometre Array Telescope

Australia has been awarded the SKA in partnership with New Zealand and South Africa. The Australian SKA will be an extension of existing technology and infrastructure developed by CSIRO, and offers significant scientific and commercial opportunities for the UK during and after the SKA's construction over the next decade. Such opportunities will be explored in collaboration between the SIN officers in each partner country. SIN has established links with the Australian government team responsible for regulating the project funding.





*Queen Elizabeth Prize Launch, Deputy Prime Minister, Nick Clegg  
Copyright: Nicole Roberts British Embassy*

## Opportunities in Biotechnology and Climate Change Research

The University of Melbourne's Parkville Life Sciences Precinct is Australia's premier, world class biomedical research hub. The University is also establishing a similar hub focusing on climate change and urban sustainability research. Both precincts are searching for large industry partners, and SIN has been working to connect the University with UK firms.

## Queen Elizabeth Prize for Engineering

SIN Australia, SIN France and SIN Germany all organised events to promote the £1m Queen Elizabeth Prize for Engineering. SIN attracted sponsorship and participation of major companies such as BP, Rolls Royce and BAE and the events were attended by businesses, military, researchers and learned societies. The events provided excellent platforms for UK businesses such as Rolls Royce and Siemens UK to demonstrate the vital role engineering plays in their businesses and to the economy more widely. The events also demonstrated the crucial role that prizes such as the Queen Elizabeth Prize have in highlighting the contribution engineering can make to benefiting humanity and in encouraging young people to take up studies and careers in engineering.

## New Zealand

### New business potential from University Collaborations

Some 20 UK experts visited New Zealand as part of one of the five missions organised by SIN New Zealand and the High Commission and funded from GPF funds during the year. Manchester, Newcastle, Durham and London's City universities as well as Glasgow based Opto-Swim have forged close links with NZ researchers in areas of environmental cleanup, aquaculture, and sensors for a variety of greenhouse gases. As these research linkages mature each has the potential for new business based on jointly-developed technology and in potentially very large markets.

In particular, Abingdon's Green Biologics has linked with four NZ organisations on biofuels and has tested some NZ samples. Glasgow based Opto-Swim has developed links with four NZ organisations on seafood production technologies. Southampton University reports links with five NZ organisations on marine energy. Newcastle University has worked with NZ's Cawthron Institute on anaerobic digestion. London's City University continues close cooperation with an NZ group on sensor development. Durham University reports NZ collaboration on nano-coatings as a substrate for algal growth.



## Europe

### Benelux

#### Water solutions for non-European countries

The Dutch and British are working together to pursue their international objectives for water following a Sustainable Water Technology event organised in 2011 by SIN Benelux together with British Water, Cranfield University and The Netherlands Water Partnership. As a result British Water and the Netherlands Water Partnership will jointly organise three missions to South Africa, Mexico and Vietnam to jointly promote international trade and innovation objectives for UK and Benelux. The missions are financed under the EU Innovation Partnership INNOWater, which aims to facilitate market access of innovative technologies in sustainable water and waste water.



#### First UK symposium on Solar Fuels and Artificial Photosynthesis

SIN Benelux and SIN Germany organised a global two-day event on 'Solar Fuels and Artificial Photosynthesis: Global Initiatives and opportunities' in London. The event focused on the emerging idea of artificially reproducing photosynthesis as a potential source of sustainable fuel. This global event was hosted by the Royal Society of Chemistry and Imperial University and helped position the UK as a global leader in the field.

### Czech Republic

#### Solar Fuels Conference in Prague

In May 2011, SIN Prague supported the UK–US–Czech world-class Science Conference on Solar Fuels held in Prague. Over 50 researchers discussed specialised topics of photochemical solar energy harvesting. A follow up event is planned by SIN Benelux for 2012 and new joint project proposals in this important low carbon energy research topic are expected.



### France

#### Council for Science and Technology meeting in Paris

Sir John Beddington, UK Chief Scientific Adviser, and the Council for Science and Technology (CST) made a two-day visit to Paris to meet the French equivalent advisory body, the *Haut Conseil de la Science et de la Technologie* (HCST). SIN France initiated this meeting, at which the two bodies agreed to share future work programmes and to provide joint peer reviews on each other's reports, with a view to developing joint working groups to tackle challenges and issues faced by both countries such as access to patient data records and links between different levels of education.



## Germany

### Resources that don't cost the Earth



*Foreign Secretary William Hague, British Ambassador Simon McDonald and Kenan Poleo, Head of SIN Europe and Regional Manager Central and East Europe (from left)*

The UK, Germany and other European Countries are almost exclusively dependent on the import of strategically important materials and rare earth elements for their technology sectors. SIN Europe together with the Royal Society of Chemistry and three Knowledge Transfer Networks (KTNs) organised a workshop on international collaboration and the exchange of best practice in responding to resource scarcity and strategically important materials for industry. The workshop

looked at national resource strategies, sector-based approaches, resource efficiency, design aspects and consumer-focused approaches from Germany, Sweden, Italy and the Netherlands. The findings of the workshop were included in Defra's Resource Security Action Plan. The French Embassy in London arranged a follow up to share their expertise and areas for collaboration. An EU Funding Strategic Partnership between UK and German participants has been established and the Royal Society of Chemistry and the FCO have published a written [report](#) presenting key case studies and research priorities from industry and academia on the topic. This report was formally launched by the Foreign Secretary, William Hague during his visit to Berlin in October 2012.

*"By working side-by-side with colleagues in business, industry and government, we are finding solutions to global challenges."*

**Professor Jim McDonald, Principal of the University of Strathclyde.**

### Fraunhofer Centre for Applied Photonics at the University of Strathclyde

The Fraunhofer Centre for Applied Photonics is a strategic collaboration between the University of Strathclyde and Fraunhofer, Europe's largest contract research organisation. This multi million project is expected to create some 80 jobs in the next five years. It will provide laser research and associated technologies for a variety of sectors, including security, healthcare, energy and transport. SIN helped generate this outcome over a period of several years – by matching suitable partners; informing UK policy making; and explaining the UK context to the German partners. Strathclyde will also be the headquarters of Fraunhofer UK Research Ltd, the umbrella organisation for further Fraunhofer UK activities.



## Israel

### BIRAX Regenerative Medicine funding increase

SIN Israel, together with the British Council, is generating a 5-year, £10 million fund for the BIRAX (Britain Israel Research and Academic Exchange) Regenerative Medicine Initiative, which focuses entirely on promoting collaboration between Britain and Israel. Both countries are leaders in regenerative medicine but are not one another's partner of choice. The hope is that together the UK and Israeli researchers will find cures for some of the world's most devastating diseases. In October 2011, during his visit to Israel, the Minister of State for Universities and Science, David Willetts, MP and Israel's Minister for Science Professor Daniel Hershkowitz announced that the Medical Research Council and the Israeli Ministry of Science would provide matching funds of up to £50,000 each for a fellowship exchange scheme as part of this programme. On 22-23 November 2011, SIN Israel together with the British Council held the first [UK/Israel Regenerative Medicine Conference](#) at Ben Gurion University in Beersheva. This was a success with over 250 scientists participating, including 60 UK participants from 20 different universities. Following the successful first year, it was agreed that both governments will increase their matched funding for the BIRAX Initiative by an additional £200,000 for the 5 year period.



## Italy

*"... some very firm ideas for collaborations evolved.  
Please accept my sincere thanks for all of your help and enthusiasm  
and for making the Workshop possible".*

**Professor Tim Brocklehurst, Head of the IFR Food and Health Network  
and Head of the IFR International Office, Institute of Food Research,  
Norwich Research Park**



### Diet, Microbiota and Gut Health International Workshop, Italy

This workshop included participants from the UK's Institute of Food Research, the University of Bologna, and New Zealand. It identified opportunities for collaborative working, explored funding opportunities through KBBE and Health, as well as possible cooperation opportunities in the context of Horizon 2020. The workshop led to the setting up of a forum for gut health scientists to identify collaborative works.

## Poland

### Opportunities across the Central European and the Baltic Region for the UK Space Research and Development Community

The UK Baltics and Central European Space Collaboration Steering Group (UKBCESSCG) was established by SIN and the UK Space Agency in 2011, aiming to bring together industry, academia and government from eight countries for the benefit of the UK space R&D community. SIN identified key partners from across the region and encouraged them to participate – ranging from National Space Agencies through to a successful R&D provider and noted academics in the field. The Network first met in the British Embassy Warsaw with the aim of jointly developing and supplying products for a global market and exploring collaborative research projects through European funding. It is now a self sustaining Network, with the Czech Ministry hosting the most recent meeting, chaired by the UK Space Agency. One recent outcome was a UK SME securing a six figure engineering and components contract from one of the participating countries.



## Russia

### UK–Russia Year of Space 2011–12

This was launched by the Minister of State for Universities and Science, David Willetts, MP & Heads of Russian & UK Space Agencies on 22 February 2011 to highlight the UK as a world leader in small satellite technology with strengths in downstream and upstream space technologies. SIN Space Science Café lectures led to commercial outcomes such as £6.5 million on Twin Sat to predict earthquake eruptions, and £4.5 million of immersive theatre at Moscow Planetarium by UK SME Global Immersion. Research outcomes also included joint projects on space medicine and crew psychology for a manned mission to Mars (University College London and the Institute of Biomedical Problems), Fluids in microgravity research at the international Space Station (ISS) (Kingston University and Moscow Aviation Institute) and optical research for telescopes (Glyndwr University and Lytkarino Optical Glass Factory).



*“UK Space Agency is extremely appreciative of the work that SIN Russia undertook during the UK/Russia year of space in 2011/12. In particular advice and assistance provided in the run-up to the Year of Space was invaluable when putting programmes together. UKSA has enjoyed a productive and harmonious working relationship with SIN Russia which I am sure will continue as we work towards finalising an inter-governmental space agreement between the UK and Russia in 2013. SIN Russia working relationship with Roscosmos will be key in this respect.”*

**Dr David Williams Chief Executive, UK Space Agency (UKSA) Aug 2012.**



## Spain

### Regenerative Medicine collaboration

SIN Madrid, in collaboration with Cels Group and Janus Developments, organised the “UK–Spain Symposium on Translational Regenerative Medicine” at the British Embassy in Madrid in February 2012. A group of key stakeholders and leaders in regenerative therapy, tools and technology from Spain and the UK met to identify the different strengths of both countries and to work towards effectively linking them to develop a new transnational medicine platform. Following this a demonstrator project for cell therapy of diabetic peripheral arterial disease is being explored, there is also interest in developing a post-doctoral exchange programme, and work on an Advanced Therapies database to record activities in this field is close to completion.



## Switzerland

### UK NanoMed collaboration with Switzerland forges commercial relationships

The [NanoKTN](#) and SIN Switzerland tailored a visits programme for a selected number of R&D UK companies, focusing on the three world class S&I clusters in Switzerland – Lausanne, Basel and Zurich area, each with significant activity in Nanotech and Nanomedicine research. The key objective was to forge profitable commercial business relationships which would provide UK participants with a range of benefits, including, access to business opportunities and new technologies. The mission opened access to potential investors and provided exposure to showcase and promote their new technologies.



### Frontier Experiments in Quantum Matter workshop leads to PhD studentships

SIN Switzerland supported an event organised by the Paul Scherrer Institute (PSI), the largest research centre for natural and engineering sciences within Switzerland, and University College London (UCL) in Zermatt in March 2012. The event covered condensed matter physics, research on emergent phenomena and development of new instrumentation for experiments at facilities for neutron, x-ray or electron scattering such as SwissFEL in Switzerland or ISIS in the UK. As a result the UK UCL and the Swiss Federal Institutes of Technology (EPFL) have signed a contract worth £80,000 for a joint PhD studentship which commenced in October 2012.

UCL and Oxford University academics have also received a 3-year EPSRC grant worth £900,000. In September, they started working with the EPFL and PSI as key Project Partners on the Emergence of novel electronic states in 5d transition metal oxides.

## European Tour of UK Nuclear Fission Research Facilities leads to collaboration

*“As a global network, the S&I Network has helped British Nuclear Energy academic researchers access new communities and establish a strong reputation for UK academic research in almost all continents [...] Such engagements will bring real benefits to the UK and increase our capacity to be innovative and support the government’s new nuclear programmes. These activities have already resulted in an increase in student applications made to UK universities’ nuclear courses.”*

**Robin Grimes, Director of the Centre for Nuclear Engineering at Imperial College, and EPSRC Nuclear Champion**

In October 2011, SIN Switzerland led a four-day Tour of the UK’s Nuclear R&D facilities. The event provided a European delegation of research leaders and EU project coordinators with an overview of the UK civil nuclear sector. It highlighted a number of significant developments that have taken place in order to rebuild the UK’s nuclear capability, underpin its national expansion programme and strengthen its position in the global nuclear market. The European delegation made recommendations which were delivered to UK Government Chief Scientific Adviser, Sir John Beddington and taken into account as the UK finalises its nuclear R7D roadmap.

## Turkey

### Vince Cable launched the UK–Turkey Knowledge Partnership



Jointly with UKTI and the British Council, SIN Turkey supported the visit of Secretary of State for Business, Dr Vince Cable, to Turkey in September 2011 by leading coordination of the UK–Turkey Knowledge Partnership launch. The agreement aims to increase collaboration between the UK and Turkey on HE, research and innovation. The launch took place at Sabancı University’s brand new Nanotechnology Research and Application Centre (SUNUM) and was attended by academics and industrialists. SIN will be working with the Turkish Science and Research Council (TUBITAK) and UK partners such as Rolls Royce in 2013 to explore further collaboration between UK and Turkey in advanced manufacturing and energy technologies.



### Science diplomacy: Celebrating German–Turkish–UK Science and Research Collaboration

In March 2012, SIN jointly organised a science diplomacy event titled the Triangle of Knowledge, highlighting that there had been over 140 science and research collaborations



between the UK, Turkey and Germany. Hosted by the British Embassy in Berlin, the event was organised in partnership with the Alexander von Humboldt Foundation, the British Council and the Turkish Embassy in Berlin. A video of messages from the speakers and organisers can be found [here](#).

## North America

### Canada

#### Canada/UK Joint Declaration

On September 22, 2011, Prime Minister, David Cameron and Canadian Prime Minister, Stephen Harper jointly endorsed the [Canada/UK Joint Declaration \(JD\) – A stronger partnership for the 21<sup>st</sup> century](#). This document contained three science and innovation related deliverables which SIN was involved in negotiating.



- > Agree joint innovation statement leveraging existing resources to facilitate late-stage research collaborations, stimulate commercialisation partnerships, and foster an entrepreneurial community between the two countries in order to drive economic growth and address global challenges.
- > Continue to foster collaborations exploiting the global leadership of Canada and the UK in health research, including regenerative medicine and cell therapy. This will facilitate the translation of advanced knowledge into life-changing therapies that will benefit patients, healthcare institutions and industries.
- > Encourage the development of technology systems necessary for commercial-scale electricity production from marine energy. SIN Canada will lead on Canada and UK's plan to move forward from pilot wave and tidal energy devices to exploring actual power generation stations connected to respective electricity grids.



#### SIN Canada and SIN France – Aerospace

SIN Montreal and SIN Paris co-hosted the first Cannape (CANadian Networking Aerospace Project for Europe) workshop at the British Embassy in Paris during June 2011. This aimed to facilitate Canadian participation in European research projects. The final workshop in Montreal revealed that 22% of the European interest in Canadian R&D was shown by UK experts, demonstrating the valuable role of SIN in enabling this collaboration.

*UK Prime Minister, David Cameron and Canadian Prime Minister, Stephen Harper.*

Link to SIN Canada [blog](#) posting about JD

## United States

### Obama-Cameron agreement on Science, Innovation and Higher Education

SIN US played a central role in developing the themes set out in the Obama-Cameron Science, Innovation and Higher Education statement, agreed in May 2011 during President Obama's visit to the UK, and renewed during the Prime Minister's visit to the US in March 2012. These included:



- > A Space Weather agreement that will deliver improved forecasting, mitigating damage to electric power infrastructure and disruptions to GPS-enabled capabilities.
- > A Global Food Security agreement that will support collaborative research on nitrogen fixation and utilization in plants and microbes, reducing fertilizer run-off and agricultural carbon footprint, more nutritious food and improved food supplies.
- > Improving access to health and life sciences by holding two meetings in 2012 bringing together policy makers, entrepreneurs, clinicians, and life scientists to encourage greater use of open data principles for health, to improve clinical care and speed creation of intelligent health systems to empower patients and providers.

The Statement places Science and Innovation at the heart of the bi-lateral relationship; provides the drive to build on existing collaborations; and focus for new areas for exploration and partnership between the two global leaders in science.

### Cancer Research

Through the support of SIN US, [Cancer Research UK \(CRUK\)](#) and the [National Institutes of Health \(NIH\) National Cancer Institute \(NCI\)](#) formed an international collaboration in rare and lethal cancer research. Since the partnership was formalised last year, 11 joint clinical trials have been initiated in five major cancer areas: salivary gland cancer, small bowel adenocarcinoma, gynaecological sarcoma, ocular melanoma (melanoma of the eye) and penile cancer. SIN US assisted the funding of this project from its inception and supported the travel of five CRUK researchers to the American Society for Clinical Oncology Meeting in Chicago in spring 2012 to develop relationships with key pharmaceutical companies able to assist the trials with procurement and transportation of novel drugs. A MoU is in place and has already been signed by three of the four parties.

Success in this radical new initiative could significantly reduce the time taken to get new treatment to sufferers of rare cancers in the UK and further afield and reduce the costs of bringing these new treatments to market as clinical trials data would be shared.

Capitalising on the Texas \$3 billion Cancer Research Fund and expertise in the State, SIN US hosted a workshop to identify opportunities and challenges in the changing landscape for cancer drug discovery, in partnership with [Houston's MD Anderson Cancer Centre \(MDACC\)](#), Cancer Research UK (CRUK), [The Wellcome Trust's Sangar Centre](#), Imperial College, and the Universities of Oxford and Cambridge. This has resulted in five US companies looking to develop a presence in the UK and six further potential Texas-UK business deals.

## UK Energy Storage Expertise leads to collaborations

SIN US initiated a range of links between the UK and US energy storage research communities and laid the groundwork for sustained interaction. In 2011-12, SIN US brought together key UK and US experts at workshops (two in the UK, one in the US) to map research projects, compare facilities, and discuss opportunities for collaboration. A dedicated session on UK research showcased UK expertise. US experts gained insights into UK capabilities during visits to four UK universities. This continued engagement led to the identification and development of ten potential collaboration projects and four planned return visits. It has also opened up dialogue between UKTI and new US contacts with potential for investment in the UK; identified trade opportunities for UK organisations; and established new researcher-industry relationships with four US companies.

## Stem cell coalition of excellence

SIN US brokered a significant partnership between the [UK Stem Cell Bank](#) (the largest in the world) and the [Massachusetts Human Stem Cell Bank and Registry](#), creating a critical mass of expertise and influence, and preserving the UK's reputation as a leader in the field of responsible use of cell based technologies. Sustained interaction between the Directors of both institutions has led to a strong partnership focused on standards, training, and commercial opportunities. As a result, the two stem cell banks jointly hosted a landmark conference in February attended by banks from 17 nations, and resulting in publication of the findings.

*"SIN US's role in sponsoring Pr. Dazzi's travels to USA has been instrumental in getting this initiative going and I see [SIN US] playing a substantive role in chaperoning this initiative and vouchsafing the process to Imperial Staff when required"*

**Jacques Galipeau, MD FRCP(C), Professor of Hematology and Medical Oncology and Pediatrics at Emory University**

SIN US also supported a major collaboration between Emory University and Imperial College in mesenchymal stem cell therapies for cancer treatment, leveraging co-funding from Emory for a follow-on event in December 2012. The collaboration between the two universities focuses on the research and development of mesenchymal – or bone marrow stromal – stem cells and their clinical use in the treatment of catastrophic ailments with unmet medical needs, including Crohn's disease and other chronic or long-term inflammatory disorders of the gastrointestinal system. Work is underway to establish a MoU between Emory, the Halle Institute and its Centres, and Imperial College to further collaborative research into Crohn's Disease.

## Further funding in vaccine development

SIN US has helped foster a strong collaboration between the University of Liverpool, the [Liverpool School of Tropical Medicine \(LSTM\)](#) and the [US Centers for Disease Control \(CDC\)](#). Through this support, Liverpool and CDC have secured joint grants including:

- > A joint National Institute for Health Research grant worth \$280,000 for research into pneumococcal vaccines; Wellcome Trust funding for joint work in Malawi focusing on pneumococcal meningitis and pre-clinical and clinical testing of new pneumococcal vaccines.



- > CDC involvement in vaccine development with LSTM's successful Gates Foundation Grand Challenge project, Experimental Human Carriage, worth around £995,000.

*"[SIN US] has been instrumental in growing the momentum and helping the coordination of these visits. This has also led to other engagement within the UK; .... My lab at CDC is now working with Professor Gordon and colleagues in Malawi (using Wellcome funding) on pneumococcal meningitis and pre-clinical and clinical testing of new pneumococcal vaccines which we hope will lead to further development and funding. These and other activities wouldn't have been so successful without the direct involvement of the SIN team over the years"*

**Dr. Edwin W. Ades, Associate Director for Laboratory Science, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Center for Disease Control and Prevention**

## Weather and Climate Change collaborations improve evidence base

SIN US facilitated and supported a range of collaborations across the field of weather and climate, and worked to strengthen the [UK Meteorological Office's](#) relationship with [National Oceanic and Atmospheric Administration \(NOAA\)](#) in a number of important areas, including shared environmental data, data analysis, and data management, archive and retrieval. SIN US have also facilitated collaborations between the Met Office/Hadley Centre and NOAA's National Climate Data Centre (NCDC) in Asheville, North Carolina. As a result of these collaborations, five joint research papers have been produced, and the UK Met Office provided input to the 2012 NOAA State of Climate Report. This has led to improved evidence-based data on climate change, which has helped inform climate policy on mitigation and adaptation in the UK and the US, with a potentially global audience.

## South America

### Brazil

#### Cambridge University and University of the State of São Paulo

*"The UK is Brazil's second largest partner in scientific research. Engagement with Brazil is a key strategic priority for the University of Cambridge for the coming decades".*



**Cambridge Enterprise website:**

<http://www.enterprise.cam.ac.uk/news/2012/3/event-highlights-strong-links-brazil/>

The relationship between Cambridge University and University of State of São Paulo (Unicamp) was established with a project led by SIN Brazil on the best practices of exchange of Intellectual property. The initiative enabled UK technology to gain a solid foothold in Brazil through a strong partnership between Cambridge Enterprise and INOVA, Unicamp's innovation office. SIN Brazil organised and funded a "Focus on Brazil" seminar at Cambridge to explore increasing Bioscience and Energy

collaboration. For the Brazilians, this was a tremendous collaboration with a world class university and leverages the UK as a partner of choice for the best Brazilian Universities. The project is still ongoing and foresees further staff exchanges between institutions developing a long lasting relationship with potential to benefit from commercial opportunities. These opportunities are expected to include access to key Brazilian public funding agencies and industrial partnerships through collaboration in technology transfer, as well as the two universities identifying and addressing the nature of demand for cutting-edge technology in the Brazilian industrial landscape.

### **Science without Borders Programme (SwB)**

In July 2011 the Brazilian government launched the £1 billion *Science without Borders* Programme (SwB), which plans to provide scholarships of around £15,000 to 75,000 Brazilian students to study at renowned universities abroad. The total number of students and researchers benefiting from the programme has already reached more than 100,000 as both state-owned and private Brazilian enterprises have committed to supporting a further 26,000 scholarships. SIN Brazil has supported the engagement of UK universities in the SwB via Universities UK (UUK). The UK has committed to receiving 10,000 students for one year undergraduate and PhD sandwich courses over the next four years, which will attract an estimated £170 million of business to the UK.

# 3 International Innovation Collaboration



## Asia

### China

#### Bioscience Innovation

*'In so many ways, the support we have received from the SIN teams in China for our programme has been outstanding – this was another important example.'*

**Paul Thorning, Director, Institute of Pharmaceutical Innovation,  
University of Bradford**



Under a Science Bridge project SIN China has assisted the University of Bradford develop alongside Guangzhou Bio-island the UK/China Health Tech Open Innovation Programme. This involved identifying key contacts, securing meetings and municipal government commitment to the partnership. The municipal government has now invested £8 million. This investment has supported UK research jobs and growth, as well as yielding potential licensing income from research outputs and access to Chinese markets. An initial workshop in November 2011 considered new ways of diagnosing cancer as well as new chips to test respiratory virus, which resulted in 27 health related opportunities and seven technology development projects. There is potentially significant revenue for both UK and China SMEs in the next five years and this represents a major opportunity to achieve a new vision in healthcare technology development, bringing together the very best of Chinese and British scientific and commercial capability.



*Alastair Morgan HM BCG Guangzhou and participants  
at the opening ceremony, November 2011*

#### £4.25 million Chinese investment for UK innovation

SIN China secured £4.25 million in Chinese investment into UK based innovation through a ICUK-led technology partnering project run through 2010-12. The funds will be spent on developing collaboration to take forward UK innovations for the Chinese market. These include £1 million Chinese investment into UK heat-sensing coatings to prevent baby burns from hot food, £1 million into water quality technologies and £1 million into new hybrid batteries. A further investment will develop new training methods for autistic children using cloud-based 3D technology. The potential

returns are significant; one project on cyber security estimates an initial Chinese investment of £625,000 will generate shared income of £5-7 million over 5 years. This fills an important space for UK SMEs, local governments, technology transfer organisations and emerging industry. Joint funding support has been secured from municipal governments in Beijing, Shanghai and Wuxi and events have covered the biomedicine, low carbon buildings, next generation internet, and agri-technology sectors.

*'UK and China are now in a better position to align our innovation systems to identify and share innovation opportunities'.*

**Yang Yuecheng, deputy director general of Torch High Technology Industry Development Center**

## Linking Chinese innovation to the UK

SIN China managed a visit to the UK by China's [Torch Centre](#) which over-see the knowledge transfer system in China. The Torch Centre is a key innovation body and the SIN China project was an important first step in developing a systematic relationship. SIN China have harnessed this relationship to enable UK organisations to find partners for technology co-development and exploitation, working with the UK's Technology Strategy Board.

## India

### National Innovation Council Roundtable



*UK-India Science & Innovation Council at Church House, London was led by UK Minister for Universities and Science, David Willetts and Indian Minister of Science and Technology Vilasrao Deshmukh on 18 April 2012.*

Networks were formed when SIN India organised a high level delegation from the UK to attend India's National Innovation Council's roundtable in November 2011. SIN India shaped the agenda of this event and the delegation included Minister of State for Universities and Science, David Willetts, MP, the Director of International Policy at UK Intellectual Property Office, the Chief Executive of [Technology Strategy Board](#), the Chief Executive of [NESTA](#) and the Director of the UK Innovation Research Centre. This work led to the decision to include innovation as a strand to the Indo-UK Science and Innovation Council, held in London in April 2012, at which TSB committed to exploring



a number of innovation collaborations with India, including joint industrial R&D programmes and an international version of the Knowledge Transfer Partnership scheme. Furthermore, NESTA's attendance at the roundtable greatly assisted in securing interviews with senior innovation policy makers for their [Frugal Future: Lessons from India's Innovation System](#) report, published in July 2012.



## Animal vaccine project – industry teams up with researchers

SIN India played an integral role in introducing and facilitating meetings with UK project partners and Indian collaborators enabling them to sign up to a Wellcome Trust £1 million project. The project involves development of a new *Haemorrhagic septicaemia* (HS) vaccine to help control a disease which is estimated to be responsible for approximately half of all cattle and buffalo deaths in India. The vaccine is anticipated to have a huge impact. Dr Richard Mole from [Inocul8](#) has indicated that this vaccine is “*anticipated to be more cross-protective, easier to administer and to give much longer duration of immunity, factors that will have a huge impact on the effective control and prevention of this disease.*”



*Signing the £1 million Wellcome Trust project in May 2011, members of the Moredun Research Institute and the Indian Veterinary Research Institute.*

## Japan

### Smart Grids MOU

Since 2011 the S&I team in Japan has supported a number of workshops themed on smart grids and energy distribution systems. An introductory workshop was held in Osaka in February 2011, followed by visits to Japan by experts from the UK's Energy Research Centre and Energy Technologies Institute. Japanese industrialists and academics were invited to join events in the UK and other countries as part of a project run jointly with S&I teams in China, Republic of Korea and Taiwan to raise interest in the UK's energy research sector. Results began to flow from early 2012, with a Memorandum of Understanding signed between Smart Grids GB and the Japan Smart Community Alliance; and UKTI brokering Hitachi's participation as a programme associate in the Energy Technologies Institute's £100 million Smart Systems and Heat programme.



Yutaka Saito, Senior Vice President and Executive Officer at Hitachi said:

*‘We are excited to be working with the ETI in Smart Systems – focused on demand management and reduction. Demonstration results from this project can be deployed to other areas in consideration with demand side management and demand response in the world, especially for the high demand for heat.’*

## Singapore

### SME and academic collaboration leads to new business deal and further collaborations

*“International collaboration is important to deliver world class science and helps encourage innovation to benefit everyone. Scientific partnerships between Singapore and Europe are already helping the fight against cancer and infectious diseases and should ultimately save thousands of lives each year”.*

**Prof Sir David Lane, Chief Scientist A\*STAR**

SIN Singapore and UKTI worked together with Chemistry Innovation Knowledge Transfer Network to design and deliver a visit by UK academics and small businesses to stimulate collaboration and encourage the formation of networks between the UK and Singapore, particularly in the area of Process Control and Optimisation Technologies. Twenty-four new collaborative opportunities (including UK–Singapore and UK–UK) were identified during the mission. One SME delegate has already established a new business contract with a company in Singapore, the largest in their company’s history and several delegates have since returned to Singapore to follow up on collaborative links established during the mission.



## Europe

### Benelux

#### Connecting Digital Start-ups in Amsterdam

SIN Benelux partnered with the Creative Industries Knowledge Transfer Network and UKTI Netherlands and Dutch partners WAAG and PICNIC to host the UK–NL Connecting Digital Start-Ups event in Amsterdam. The event introduced young UK digital tech start-ups to the Dutch media market place and finance landscape. It provided opportunities to share experiences and form partnerships with successful Dutch digital start-ups. Shortly after the event a UK start-up secured a €35,000 contract in the Netherlands. The Dutch Financial Times featured an article on the event and the British and Dutch start-up scenes.



### Czech Republic

#### Removing Barriers to Successful Innovation

SIN Prague organised an innovation [event](#) which focused on the UK’s best practice in technology transfer and business innovation for jobs and growth. Four UK expert speakers explained how they overcame barriers and became successful in commercialisation of university research and development. Four successful spin-off companies demonstrated that technology transfer can be done in Central Europe as well as in the UK.



## Finland

### Helsinki Sustainable Buildings 2011

In October 2011 SIN Finland organised a UK–Finland partnering event for 50 UK participants from the Helsinki Sustainable Buildings 2011 event with Finnish green buildings contacts. Issues such as the sustainable buildings effort behind the Olympic park were discussed. Queens University Belfast, and the universities of Cambridge, Sheffield, Kingston, Reading, UWIC, VTT, Aalto and consultants from both Finland and the UK attended. As a result the Technology Strategy Board and the Finnish innovation agency TEKES, are discussing potential ways to work together more closely.



## Israel

### UK–Israel Green Structure cluster

SIN Israel, together with the Environmental Sustainability KTN and UKTI organized a mission of 13 delegates from the UK Renewable Energy sector to visit Israel and to participate in the Eilat Eilat Renewable Energy 4<sup>th</sup> annual conference. This resulted in a joint UK–Israel application being submitted to Eurostars (Eureka) to develop the future of Thermal Accumulators. An agreement to set up an Israeli branch of a British innovative SME is well underway.



## Italy

### Creative Innovation: Sustainable Fashion



*"I'm glad to hear that the conference was well received; I have had lots of emails and requests too, so it's great that the conference generated so much interest."*

**Allanna McAspurn, Chief Executive Officer, Made-By**

On 14 March 2012, SIN Italy in collaboration with the [Camera Nazionale della Moda Italiana](#), hosted a seminar to discuss drivers of change in the fashion industry towards sustainability. More than 150 journalists, stylists, designers and key representatives from the industrial and academic world – such as Puma, Gucci, ISKO, University of Brighton, Chelsea College of Art and Design, London College of Fashion – met to discuss the most recent issues that are leading this change



*Alessandra-Ferrari, SIN Italy, and Mario Boselli, President of the Chamber of Fashion*

and exchanged views on new scenarios for the future. Presentations ranged from industry to academia, from profit to non-profit organisations and covered both local and global experiences and approaches to ethical and social responsibility. As a result, some of the participants (Euromonitor, Made-By and the University Arts of London) are currently exploring ways to enhance their collaboration with the Camera Nazionale della Moda and other Italian partners while Avanzi is looking into the possibility of taking forward some collaborative projects with UK partners.

[Speaker's presentations](#)

### **"Industry of Imagination, a British effect"**

A short film, produced in collaboration with UKTI and written and directed by the SIN Italy team was shown in October 2011 at the Rome Film Festival. It highlighted the excellence of British industry in the field of Visual and Special FX and showed how, over the past few years, London has become the centre for creative talents. It also featured creative and digital start ups in Tech City, in the heart of East London and featured an insightful overview of future trends and opportunities. The DVD is now an official UKTI promotional tool to showcase the excellence of UK digital industry around the world.

Trailer: [www.youtube.com/watch?v=1qiVadbtgFU](http://www.youtube.com/watch?v=1qiVadbtgFU)

*"... The panel, the audience and the press made for an incredibly successful event and the documentary, a truly remarkable job, was warmly received by the audience as a whole".*

**Christopher Prentice, HM Ambassador, Rome**

## **Portugal**

### **Novel Field Based Diagnostics**

SIN Europe together with SIN US organised an international workshop which brought together more than 60 US and European experts from industry, universities, research institutes and government agencies to share their expertise in diagnostic technologies and explore opportunities for international collaborations. The workshop led to investments in a spin-out of the UK Government's Food and Environment Research Agency FERA and the creation of a joint venture.



## **Sweden**

### **Increased collaboration with Nordic countries on wireless electronics**

SIN Sweden ran a workshop in 2011 for small UK companies, UK researchers and large companies from Denmark, Finland and Sweden to boost collaboration under the ICT strand of FP7. Within Europe, Nordic countries are recognised for their expertise in this area. Both the R&D leads for BT and Ericsson attended and agreed that there was more scope for collaboration. The European Commission



(DG Information Society) attended to discuss how researchers, regulators and policy makers could do more to exchange information with them on formulating policy for spectrum auction and bandwidth regulation, necessary to fuel continuing growth in the digital and creative industries. The UK ICT Knowledge Transfer Network was a key partner.

## Prince Charles assists the UK biomass industry in Sweden

As part of the Diamond Jubilee celebrations, SIN Sweden ran a biomass investors meeting attended by HRH Prince Charles. Several existing and potential Swedish investors to the UK and hi tech SMEs pioneering biofuels for companies like Virgin Atlantic attended.

## North America

### Canada

#### Startup Nations event leads to international consortium

In March 2012, [SIN Canada](#) (Ottawa) and [SIN US](#) (Washington) partnered with the Canadian High Commission in London, [the Kauffman Foundation](#), [Startup Canada](#) and [Startup Britain](#) to host the first ever Startup Nations event, alongside the [Global Entrepreneurship Congress in Liverpool](#). This event, aimed at sharing best practice and the creation of an international consortium of Startup Nations, who could work together supporting entrepreneurship in a globalised economy. Startup Canada will be hosting the follow-up Summit, scheduled for November 2012.



[#StartupNations](#) Blog



*Startup Nations GEC 2012: On March 11 and 12, 2012 in Liverpool, UK, Startup Nation groups around the world met outside of this year's Global Entrepreneurship Congress. (Credit: K Photographic)*

## United States

### Opening doors to Industry

SIN US collaborated with UKTI to identify opportunities across all fields to give researchers access to industry collaborations. For example, they have facilitated a strong relationship between Kings College London (KCL) and the University of California San Francisco (UCSF) which continues to deliver results. Through this link, KCL researchers have gained access to top Bay Area biotechnology companies, and this has directly resulted in Genentech developing scientific collaboration with KCL researchers to investigate the biological properties of intestinal lymphocytes that express a protein targeted by a Genentech drug. Additionally, through providing beneficial introductions, SIN US helped to facilitate a mission of UK digital start-up companies to the US, with a second mission planned for 2012/13.



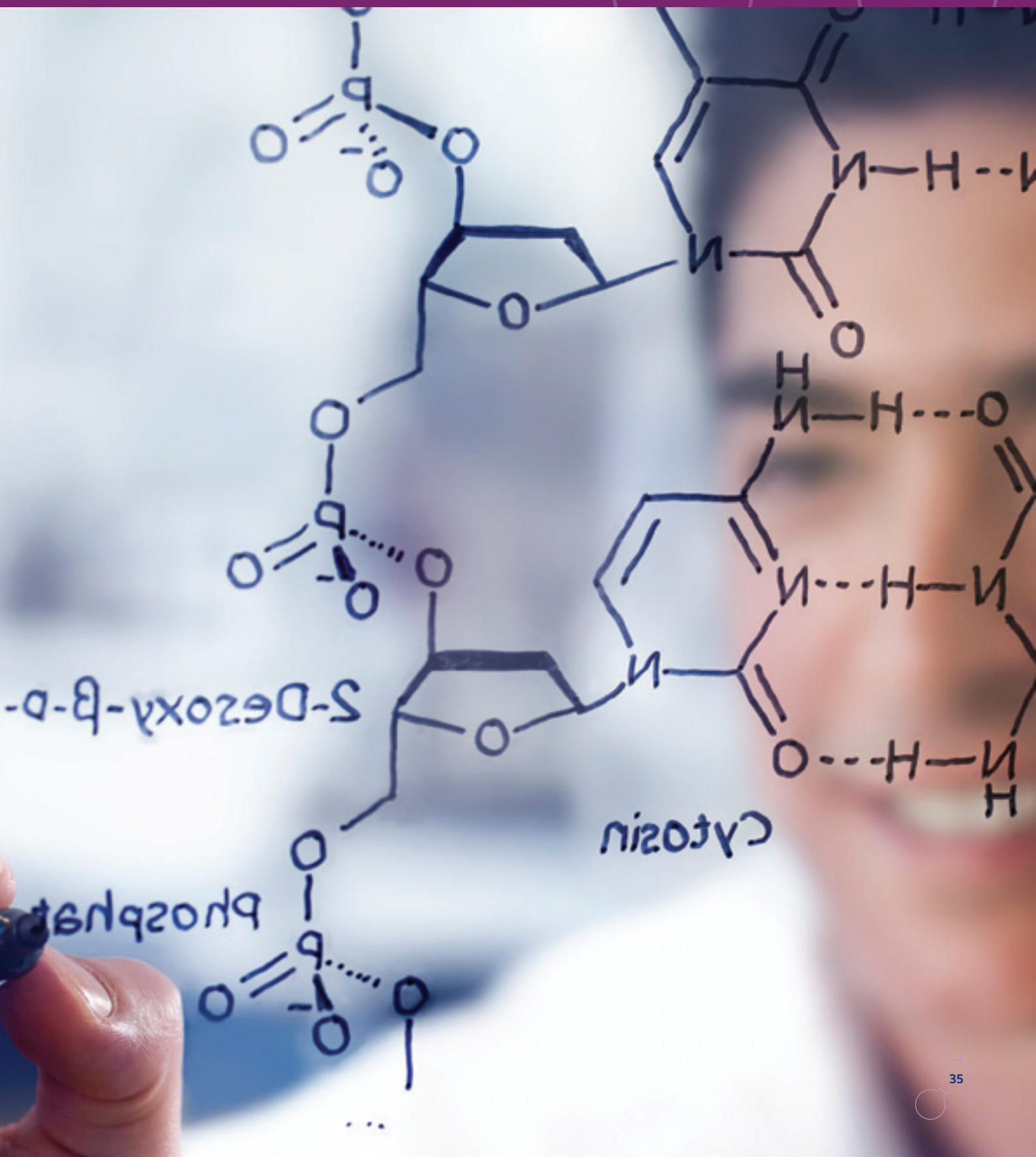
### Supporting the Digital Economy

SIN US supported collaboration between the UK and the US on the digital economy, funding a project from January to March 2012 to connect US centres of excellence to RCUK's cross-council research programme on digital technology. SIN US supported a panel session at the South by Southwest (SXSW) Interactive Conference, exploring "Can Printed Electronics Save the Music Industry". Through relationships forged at this event, Dundee University went on to host the News Fellowship Hack Jam which explored the themes of journalism and open data, and launched Knight Mozilla news fellowships in the UK. SIN support was pivotal to making this happen, with the panel lead stating that:

*"it's difficult to overstate the usefulness of the trip. Even dropping the fact that we were at the conference into a conversation with a prospective partner instantly changes the nature of the relationship with us".*



# 4 Influencing UK and International Policy



## Asia

### China

#### UK and Chinese Ministers set research priorities

SIN China welcomed Minister for Universities and Science, David Willetts, MP, to Beijing in June 2011 to co-host the 6<sup>th</sup> Meeting of Sino-UK Joint Commission on Science and Innovation Cooperation. Mr. Willetts and Chinese Minister of Science and Technology, Wan Gang agreed immediate priorities for growing cooperation in the areas of renewable energy, health and food security and safety. They also agreed to support research co-operation in a range of priority areas, including frontier science disciplines, environment, applied sciences, space science and innovation and policy engagement. Since the Minister's visit the cumulative total of all partnerships established and taken forward with SIN China help has reached £160 million.



*Minister of State for Universities and Science, David Willetts, MP visiting Beijing University of Chemical Technology during the Sino-UK Joint Commission*

#### SIN China Science Policy Series reaches into the Chinese government

SIN China ran a science policy seminar series engaging influential academics and experts from a range of UK Learned Societies, Universities and technology transfer organisations including the [Royal Society](#), [Sussex University Policy Research Unit](#) and [Praxis Unico](#). Events were organised to promote the UK as a science partner of choice, support the use of science in China's policy making, and solve global challenges through improved science-policy-public interfaces. The series attracted widespread positive media attention and participation by eminent representatives from Chinese Universities, academies, central and municipal government. £100,000 of Chinese funding was secured to develop policy to apply lessons from the UK's research funding model to China. This will be taken forward by the Chinese Academy of Sciences Institute of Policy Management, which advises the Chinese State Council, the top level of government.

## UK Expertise to Decarbonise Waste Management in Urban China

Encouraged by the Chinese government's recent investment in low carbon and waste management, SIN China successfully secured £120,000 from the FCO Strategic Programme Fund to provide a replicable model of low carbon waste management in urban China, based on successful experiences in the UK and elsewhere. The project is helping the City of Changzhou in Eastern China shift to low carbon waste management practices by December 2013. Through such measures as improving recycling systems, pay-per-throw schemes, and kitchen waste treatment could reduce urban China's carbon emissions by up to 2.5%. China's National Development and Reform Commission – an influential governmental agency – described the project as valuable and recommended its results be publicised across China.

## China brings £2 million to Edinburgh economy

SIN China supported the UK Biophysical Society to secure Edinburgh as the location for the 2017 triennial Biophysics Congress. Biophysics bridges the space between biology and physics, and has brought medical imaging technology, kidney dialysis and radiotherapy. Securing the Congress for Edinburgh has not only given the UK a spotlight to showcase UK strengths to the world in this important field of science, but the anticipated 2,000 participants are set to provide an estimated £2 million boost to the local economy.

## India

### Stem Cells

SIN India along with UKTI is creating effective channels for collaboration between both the countries in the field of Stem Cells and Regenerative Medicine. Awareness of the UK's strengths in the stem cell research and regulations is growing, helping Indian regulators to adopt best practices and policy guidelines from the UK.



In February 2012, SIN India funded the visit of Dr Christene O'Toole, Head of Research and Regulation, [Human Fertilization and Embryology Authority](#) (HFEA), and Dr Michael Whittaker, Head of Innovation of the School of Medical Sciences at the [University of Newcastle](#), to a round table on Stem Cells and Regenerative Medicine held in Bangalore. The roundtable was able to bring out the challenges faced in this sector, provide insights into the Indian and UK regulatory frame work, and potential areas for research and business collaboration between UK and India. SIN India is also exploring opportunities to facilitate a visit to the UK of Indian regulators or key members from the [Indian Apex Committee](#) on Stem Cells, to interact with UK regulators and attend a workshop in the UK in December 2012.

## Japan

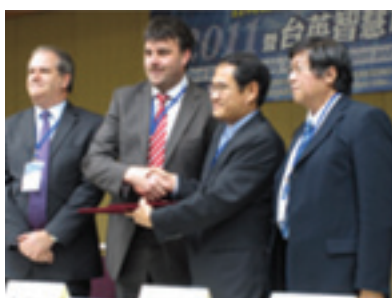
### The Scientific Advisory Structure of the UK – a Model for Japan

Since the March 2011 Great East Japan Earthquake, SIN Japan organised three visits by GCSA Sir John Beddington to promote Public Communication of Risk and the UK's Chief Scientific Advisor structure. This outreach has resonated well within the Japanese Government and society, and SIN JAPAN has actively engaged with the Ministry of Education, Culture, Sports, Science and Technology (MEXT) to explain the UK structure. As a result, Japan's 2012 annual Whitepaper on Science and Technology extensively introduces the UK GCSA and scientific advisory structure. SIN JAPAN will continue to work with the Japanese authorities to realise a GCSA system that would aim to enhance peer-to-peer cooperation on science policy & advice between the UK and Japan.



## Taiwan

### Taiwan Smart Grid Industry MoU with SmartGrid GB



On 14 November, 2011 representatives from [SmartGrid GB](#) visited Taiwan for the signing of a MoU with [Taiwan Smart Grid Industry Association](#) (TSGIA). The event was the culmination of an ongoing collaborative project initiated by SIN, and aims to create further bonds between Taiwan and the UK to promote a society of low carbon, energy security and reduced fuel poverty. TSGIA acts as an organisation that coordinates these technologically innovative organisations with Taiwan's domestic power industry and government agencies. It also plays a leading role at the forefront of Taiwan's Smart Grid industry, and a partnership with SmartGrid GB will establish a pool of ideas and innovations for Smart Grids and related technologies beneficial to both countries.



## Europe

### Benelux

#### Engaging with Belgian Science and Innovation

Minister for Universities and Science, David Willetts, MP hosted a round-table discussion organised by SIN Netherlands and SIN France on '*Innovation for growth: the role of universities, research and industry in supporting competitiveness*'. The event involved a wide range of participants including high-level representatives of major Belgian and UK investors in R&D (UCB, GSK, Shell, BP, MDx Health), Belgian funding bodies (IWT, Belspo) and leading Belgian Universities and Research Institutes



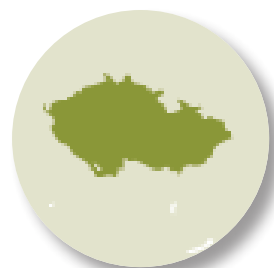
(Leuven, Brussels, Antwerp, Ghent, IBBT) as well as Kent University. The roundtable proved a valuable opportunity to promote the Government's strategy on supporting university-based research in the UK through protecting the national science budget. On innovation, Mr. Willetts outlined the Government's investments in the Catapult Centres and the new Life Sciences Strategy.

## Czech Republic

### UK R&D supported by Czech Republic

*"This contract is excellent news for the Science and Technology Facilities Council and demonstrates the confidence placed in the UK's world-leading research facilities like the Central Laser Facility. It has the potential to drive improvements in laser science which in turn would benefit researchers and industry across Europe"*

**Minister for Universities and Science, David Willetts, MP**



*UK Prime Minister David Cameron and Czech PM Necas visited the Czech Academy of Science's campus in Ládví, the site of two advanced physics research projects representing close UK–Czech co-operation.*

Extreme Light Infrastructure (ELI) is a major project being carried out in the Czech Republic, Hungary and Romania to create a world class laser capability. On 23 June 2011, UK Prime Minister David Cameron agreed with Czech PM Necas that they would continue to jointly promote growth and greater competitiveness within the European Union. SIN organised the visit of the two Prime Ministers to the Czech Academy of Science's campus in Ládví, the site of two advanced physics research projects representing close UK–Czech co-operation. The site provides major business opportunities worth over £200 million for UK companies. Following the visit a meeting organised by SIN was held in the UK between ELI and UK partners and in October 2011, SIN supported a one day ELI inward mission to Prague, led by UKTI. This presented eight UK companies interested in ELI public tenders. The first commercial contract worth £2.2 million was awarded to the UK Centre for Advanced Laser Technology and Applications (CALTA) by Czechs in June 2012. The UK is seen as a partner of choice in building innovation collaborations in the Czech Republic.

### DNA Testing Policy Conference in Prague

On 11 October 2011, with SIN support the Czech Parliament hosted a UK–Czech Conference on DNA Testing Policy. Seven UK forensic and medical DNA experts presented the UK's best practice. The conference directly resulted in Czech legislation stopping anonymous DNA medical testing; this aligns with UK policy and means the UK will be able to collaborate further in this area.



## Finland

### Otaniemi Innovation Cluster

Home to Nokia world headquarters and other Finnish giants, Otaniemi also hosts Finland's most prominent innovation university – Aalto, and VTT, the Technical Research Centre of Finland. These institutions provide a constant flow of R&D and scientists. Aalto and Nokia influence has also spurred a very lively start-up scene in Otaniemi. UK Ministers Greg Clark, MP and Lord Green have both visited Otaniemi recently. Greg Clark's visit has initiated closer ties with Aalto University and Lord Green held discussions with Nokia on Digital Single Market and Nokia's new headquarters in London Paddington. SIN Finland will continue to monitor Nokia, the biggest R&D investor in Finland (up to 50% of all funding). SIN Europe is organising an international conference 'Designing a People-centred Future' in Aalto Design Factory in autumn 2012. The topic of the event is user-centred design and how it can make companies and countries more competitive in the era of digital innovations.



*RT Hon Greg Clark, MP visiting a metro tunnel construction site during his visit. Otaniemi is located just next to Helsinki borders and will be connected to the capital by a new metro line by 2015.*

## France

### Insect pollinators: linking research and policy

SIN France organised an international workshop to analyse the latest scientific evidence concerning insect pollinator loss. Experts from ten different countries focused on the themes of pesticide use, pollinator health, pollinator diversity and the economics of pollination to identify the current state of knowledge and determine the key messages that policy-makers need to assist them in their work. As well as complementing the multi-stakeholder national Insect Pollinator Initiative, outputs from the workshop have informed the DEFRA Chief Scientific Advisor's enquiry into pesticide use, and will continue to inform policy discussions and regulatory decision-making at a national level around Europe, as well as within the European Commission.





## Spain

### Governments consider regulatory and social aspects of smart grids and applications

*“SIN has dramatically enhanced the effectiveness of our international activities through their insight and local support generating meetings with technical leaders and highly successful events. Our deepening links with smart energy technology developers in both Europe and Asia would not have started without their help.”*

**Professor John Loughhead FEng FCGI OBE, UKERC Executive Director**

A workshop was held at the Royal Society in London, on 13-14 December 2011, bringing together an audience of 50 senior European policy, industry, regulatory and social science smart grid experts from Italy, France, Germany, Denmark, Sweden and the Netherlands, as well as a strong and high-level UK turnout. The workshop was organised by SIN Spain and SIN France with help from other posts across Europe and in collaboration with the UK Energy Research Centre (UKERC) and the UK Energy Generation and Supply KTN. The workshop helped to develop a broader perspective on the driving forces behind the expansion of smart grids in Europe. The discussions contributed to raise awareness of current policy and regulatory issues and initiatives and also considered the potential social impacts of smart grids. **BLOG** by the FCO’s Chief Scientific Adviser, David Clary.



## North America

### Canada

### Carbon Governance collaboration influences white papers

SIN Canada (Vancouver) in conjunction with SIN US (San Francisco) supported the Carbon Governance Project Workshop Series (see reports [here](#)), between the University of British Columbia, the University of Oxford and the University of California Berkeley. The project was aimed at comparing best practices and lessons learned across three of the most progressive jurisdictions globally in implementing low carbon friendly policies. The workshops targeted an audience mix comprising industry, government and academia. This resulted in input to white papers on carbon management, several academic publications and the final conference in Vancouver which will bring together key case studies from the first three workshops with presenters providing easily accessible video talks to convey their ideas online.





*'Energy and Climate Change 2012-2050: Business Transformation in Uncertain Policy Landscapes' workshop in Oxford, UK*

## United States

### Relationship between DEFRA and US policy makers

SIN US facilitated a strategic dialogue between DEFRA and the US Natural Capital Project – a partnership between the Woods Institute for the Environment (Stanford University), the University of Minnesota Institute on the Environment, the Nature Conservancy, and WWF. This relationship has helped inform DEFRA policy thinking on ecosystem services valuation and directly resulted in publication of an article on DEFRA'S 'National Ecosystem Assessment' (NEA) in 'Science', a well respected international periodical publication. DEFRA will draw on this relationship over the next two years to inform the next phase of the UK's NEA.



### Driving collaboration through Ministerial visits

SIN US facilitated a visit of the Minister for Universities and Science, David Willetts, MP in December 2011 to Washington DC, San Francisco and Los Angeles. The Minister explored opportunities for collaboration in synthetic biology during a meeting at the National Academies. Following these discussions and the Six Party Symposium on Synthetic Biology which took place in Washington DC in June 2012, SIN US is supporting a project on synthetic biology. This includes a collaborative workshop between the National Academies of Science and the Royal Society, aiming to investigate the issues of ownership of Intellectual Property rights surrounding synthetic biology breakthroughs.

### UK review of Intellectual Property

SIN US facilitated a visit which directly informed the government-commissioned, independent review of the UK's Intellectual Property (IP) framework and its role in supporting growth and innovation. Working in collaboration with UKTI, SIN facilitated discussions between the Chair of the Review, Professor Ian Hargreaves, and a range of local academic and business IP experts. Evidence gathered during this visit fed directly into the final report for Government which was published in May 2011, and the recommendations of which have all been accepted by Government and are now being implemented.

# 5 SIN team contacts

## Africa

### Nigeria (opened in Nov 2012)

GDP (Purchasing power parity) (US\$ billion) 414 (2011)

Previous year growth in GDP (%) 7.4 (2011)

No data for gross domestic expenditure on R&D<sup>1</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

#### David Woolf – Science & Innovation Officer



British High Commission  
Chancery Building  
No. 19 Torrens Close  
Maitama, Abuja, Nigeria  
+234 (0)9 462 2205  
[david.woolf@fco.gov.uk](mailto:david.woolf@fco.gov.uk)

Before Nigeria David worked at the European Commission in Brussels on intellectual property, innovation and knowledge transfer. He previously worked at the UK Intellectual Property Office, dealing with international patent policy and the UK's relationship with the World Intellectual Property Organisation in Geneva. David has a degree in engineering and postgraduate diplomas in law and intellectual property.

<sup>1</sup> CIA World Factbook <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html>

## South Africa (opened March 2012)

GDP (US\$ billion) 504.93 (2009)

Real GDP Growth (%) -1.68 (2009)

Gross domestic expenditure on R&D (% of GDP) 0.93 (2008)<sup>2</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Tim Moody – Science & Innovation Officer, South and southern Africa



British High Commission

255 Hill Street

Pretoria 0002

South Africa

+27 12 421 7573

[Tim.Moody@fco.gov.uk](mailto:Tim.Moody@fco.gov.uk)

Tim set up the SIN presence in South Africa in February 2012, after four years working on foreign policy issues at the British Embassy in Poland. Previously Tim worked on southern African policy issues at the Foreign And Commonwealth Office in London. He has a degree in economics.

### Dr Christa Loubser – Science & Innovation Officer, South Africa



British Consulate General

PO Box 500

Cape Town 8000

South Africa

+27 21 405 2421

[christa.loubser@fco.gov.uk](mailto:christa.loubser@fco.gov.uk)

Christa is a scientist and has worked as a researcher at various universities and institutes in South Africa, the UK and Germany. She has also worked in the private sector. She has a PhD in Materials Chemistry and a MBA.

2 OECD (2011) OECD Factbook 2011-2012 *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Asia

### China

GDP (US\$ billion) 10085.708 (2010)

Real GDP Growth (%) 10.3 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.7 (2009)<sup>3</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Beijing

#### Sam Myers – Counsellor (Science & Innovation)



British Embassy

11 Guang Hua Lu

Jian Guo Men Wai

Beijing 100600, P.R. China

[sam.myers@fco.gov.uk](mailto:sam.myers@fco.gov.uk)

Sam has a Masters of Biochemistry from the University of Bath. In 1999 he worked at the Mount Sinai School of Medicine in New York where his team's findings on protein structure and function were published in *Science*. In 2000 he was a researcher at a biotech company in San Francisco. Sam joined the Department for Business, Innovation and Skills (BIS) in 2001 as a Science and Engineering Fast Stream graduate recruit, working first to grow the UK biotech industry and then on EU science policy and funding. He subsequently became the Private Secretary to the Employment Relations & Competition Minister. In 2004 he was responsible for biotechnology policy at BIS, before moving to Singapore in July 2007 to head up the Science and Innovation team in Southeast Asia.

#### Will Hellon – First Secretary (Science & Innovation)



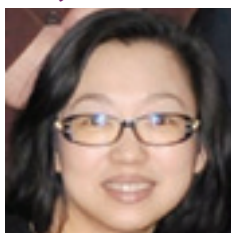
0086 10 5192 4338

[will.hellon@fco.gov.uk](mailto:will.hellon@fco.gov.uk)

Will's work includes supporting UK technology partnering, space science and food research. Before he joined the team he worked in the International Science team in BIS and prior to that in Defra on such varied roles as science evaluation and procurement, agri-environment scheme management and salmon and freshwater fisheries policy.

3 OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

### **Katy Fu – Senior Science & Innovation Officer**



0086 10 5192 4425

[katy.fu@fco.gov.uk](mailto:katy.fu@fco.gov.uk)

Katy's main responsibilities are coordinating science and innovation projects, liaising with partner organisations, press/media work and research for the Science Counsellor and Science First Secretary. She previously worked for the New Zealand Immigration Service and as Culture Exchange Coordinator in Japan.

### **Mary Li – Senior Science Policy Advisor**

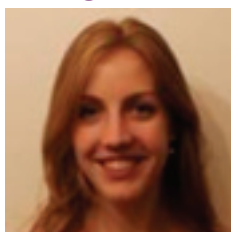


0086 10 5192 4387

[mary.li@fco.gov.uk](mailto:mary.li@fco.gov.uk)

Mary's current work involves research and reporting on science and innovation policies. She is also involved in the Joint Commission and Innovation Dialogue preparation. She had previously worked as a university lecturer, a radio producer with BBC World Service, then with Radio Beijing.

### **Morag Brown – Senior Innovation Policy Advisor**



0086 10 5192 4000

[morag.brown@fco.gov.uk](mailto:morag.brown@fco.gov.uk)

Morag joins the S&I Network in Beijing in January 2013. Her role will involve research and reporting on innovation policy, project work on innovation partnerships and developing the team's strategic communications plan. She previously worked in the Embassy's Visa Section and in the Communications Section as Regional Olympics Attache for Asia Pacific.



## Shanghai

### Tim Standbrook – Consul Science and Innovation



British Consulate-General  
Suite 301, Shanghai Centre  
1376 Nan Jing Xi Lu  
Shanghai 200040, P.R. China  
0086 21 32792041  
[Tim.standbrook2@fco.gov.uk](mailto:Tim.standbrook2@fco.gov.uk)

Tim was previously in China with the Science and Innovation Network together with UK Trade & Investment. He also spent a period in China in the private sector. Tim has worked with the FCO in Korea, Pakistan and China. He is responsible for all programmes, projects and high level visits in Shanghai and the across the Chongqing and Guangzhou teams. Tim leads within SIN China on nano-technology and material sciences.

### Bronte Zhang – Senior Science & Innovation Officer



0086 21 32792077  
[bronte.zhang@fco.gov.uk](mailto:bronte.zhang@fco.gov.uk)

Bronte assists UK stakeholders to develop science and innovation related activities and collaborations within the East China region. Throughout her career, she has devised and led numerous science projects of all scales covering wide-ranging subjects from nano-technologies to biomedicine, from environmental sciences to aviation engineering. Bronte holds a B.A degree in economics.

### Lily Zhu – Science and Innovation Officer



0086 21 32792043  
[lily.zhu@fco.gov.uk](mailto:lily.zhu@fco.gov.uk)

Lily is strongly involved in Science and Innovation events and VIP visits in East China. She also helps to deliver large projects that develop and deliver goals in innovation, particularly within biomedicine, renewable energy, climate change and nano-technology. Her academic major is public administration, and research direction of her postgraduate study is public policy analysis.

## Chongqing

### Lina Xie – Science and Innovation Officer



British Consulate-General  
Suite 2801, Metropolitan Tower  
68 Zourong Road  
Yu Zhong District  
Chongqing 400010, P.R. China  
0086 23 6369 1583  
[lina.xie@fco.gov.uk](mailto:lina.xie@fco.gov.uk)

Lina is responsible for the delivery of UK's science agenda in Southwest China and the exploration of science collaboration opportunities for the UK. Lina got her Masters degree in HR in the UK and previously worked in the management section in the British Consulate-General Chongqing.

## Guangzhou

### Ming Liu – Senior Science & Innovation Officer



British Consulate-General  
7th Floor Guangdong International Hotel  
339 Huanshi Dong Lu  
Guangzhou 510098, P.R. China  
0086 20 8314 3032  
[ming.liu2@fco.gov.uk](mailto:ming.liu2@fco.gov.uk)

Ming previously worked within a Chinese Academy of Sciences institute. She works extensively with energy and climate change community in China to co-ordinate joint collaboration activities.

### Shirley Huang – Science & Innovation Officer



0086 20 8314 3085  
[Shirley.huang@fco.gov.uk](mailto:Shirley.huang@fco.gov.uk)

Before joining the team in July 2011, Shirley was an English teacher for 4 years before she went to Australia for her master's degree. She also acquired a NATTI III accredited certificate as a professional translator during her study in Australia.

## India

GDP (US\$ billions) 4060.39(2010)

Real GDP Growth (%) 10.37 (2010)

No data for Gross domestic expenditure on R&D<sup>4</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## New Delhi

### Mark Sinclair – First Secretary – Head SIN India



British High Commission  
Shantipath, Chanakyapuri  
New Delhi 110 021  
+91 11 2419 2200  
[mark.sinclair@fco.gov.uk](mailto:mark.sinclair@fco.gov.uk)

Mark is responsible for strategy and direction of the India network, focusing on the government to government aspects of the Indo-UK science relationship. He has had an extensive career in science and technology across a number of UK Government departments, having worked in research, programme management, science policy, and as private secretary to the Defence Chief Scientific Adviser. Prior to arriving in India Mark led the S&I Network in Europe West, based in Paris, and before that the S&I Network in Boston, USA. Mark has a degree in engineering and a MBA.

### Swati Saxena – Senior Science & Innovation Adviser



+91 11 2419 2577  
[swati.saxena@fco.gov.uk](mailto:swati.saxena@fco.gov.uk)

Swati provides support to UK stakeholders in establishing R&D linkages with India, particularly in research related to food production. She brings strong expertise in agricultural research. In a previous industrial role, Swati was part of the core group that enabled commercialisation of India's first genetically modified crop. She has an academic background in genetics.

### Dr Rita Sharma – Senior Science & Innovation Adviser



+91 11 2419 2479  
[rita.sharma@fco.gov.uk](mailto:rita.sharma@fco.gov.uk)

Rita leads on Environmental Sciences; her work ranges from brokering research collaborations between the UK and Indian researchers to assisting in utilisation of best available science to influence effective policy making. Rita has a Bachelor's in Botany, a Masters in Anthropology and PhD in Cell Biology.

4 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

### **Leena Arora Kukreja – Science & Innovation Adviser**



+91 11 2419 2527

[leena.arora@fco.gov.uk](mailto:leena.arora@fco.gov.uk)

Prior to taking up this role, Leena worked with the Dabur Research Foundation. Leena now works with partners across government like UK Trade & Investment and Research Councils UK Office in India to develop the network's portfolio of innovation-focused activities. She has an academic background in Biotechnology and has also studied Business Administration and Marketing.

### **Catherine Brain – Science & Innovation Advisor**



+91 11 2419 2527

[catherine.brain@fco.gov.uk](mailto:catherine.brain@fco.gov.uk)

Catherine previously worked as an Intellectual Property Solicitor in London. She is now working with partners such as UK Trade & Investment and Research Councils UK Office in India on innovation-focused issues, including identifying opportunities for UK–India collaboration and reviewing India's Innovation capacity. She has a degree in Natural Sciences from Cambridge University and a diploma in Intellectual Property from Oxford University.

### **Lucie George – Science & Innovation Advisor**



+91 11 2419 2257

[lucie.george@fco.gov.uk](mailto:lucie.george@fco.gov.uk)

Lucie is focusing on communications and examining the impact of the Science and Innovation Network in India. Previously she was based in London working for the Zoological Society of London (ZSL), an international conservation charity, as a science communicator. Lucie has a BSc in Zoology from the University of Bristol and is currently studying for a MSc in Science and Society.

## Bangalore

### Dr Tom Wells – Deputy Head of Science & Innovation Network India



British Deputy High Commission

Prestige Takt

23 Kasturba Road Cross

Bangalore 560 001

+91 80 2210 0200

[tom.wells@fco.gov.uk](mailto:tom.wells@fco.gov.uk)

Previously Tom worked for the Department for Business, Innovation and Skills in London as a Policy Advisor in the Science and Society Team. Tom has a MChem from the University of York, specialising in clean technology and natural resources. Following this, he worked for Uniqema (now Croda Intl.) developing renewable ingredients for personal care products, some of which were patented with Tom listed as an inventor. Later, he gained his PhD from Imperial College London, researching new ways of making biodegradable plastics.

### Sunil Kumar – Senior Science & Innovation Adviser



+91 80 2210 0200

[sunil.kumar@fco.gov.uk](mailto:sunil.kumar@fco.gov.uk)

Sunil leads on Bioengineering, medical sciences, biopharma and space. He started his career working on ant diversity and behaviour at the Indian Institute of Science. He also worked as a journalist at Deccan Herald, writing on science and environment. Prior to joining the Science and Innovation Network, Sunil worked with UK Trade and Investment as a lead officer for the aerospace sector. Sunil has authored two books and more than 200 popular articles. He has a MSc in Environmental Science.

### Shashi Kalyan – Science & Innovation Office Administrator



+91 80 2210 0200

[shashi.kalyan@fco.gov.uk](mailto:shashi.kalyan@fco.gov.uk)

Shashi handles administration & finance for the science and innovation team in India. Shashi has a BSc in Physics, Chemistry and Mathematics, and a Diploma in Business Management. Prior to joining the Science and Innovation Network, she worked at PepsiCo as an Executive Secretary.



## Mumbai

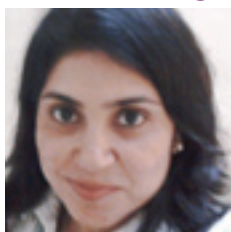
### Kinchit Bihani – Senior Science & Innovation Adviser



British Deputy High Commission  
Naman Chambers, C-32, G-Block  
Bandra Kurla Complex, Bandra (East)  
Mumbai 400 051  
+91 11 2419 2166  
[kinchit.bihani@fco.gov.uk](mailto:kinchit.bihani@fco.gov.uk)

Kinchit focuses on science policy analysis, civil nuclear, ICT and engineering. His past work experience includes varied sectors such as engineering, E-commerce, global governance and climate change. Kinchit holds a BEng from Thapar University, India and a MPhil in Technology Policy from the University of Cambridge, where he was a Commonwealth and Shell Scholar.

### Dr Sunita Singh – Science & Innovation Adviser



British Deputy High Commission  
Naman Chambers, C-32, G-Block  
Bandra Kurla Complex, Bandra (East)  
Mumbai 400 051  
+91 22 6650 2205  
[sunita.singh@fco.gov.uk](mailto:sunita.singh@fco.gov.uk)

Sunita focuses on life sciences, Biotechnology, healthcare, diseases, food and nutrition. Prior to joining the Network she was Associate Director at Centum U. She has also worked as the Head of a Microbiology Department and has taught Medical Microbiology and Immunology as part of Life and Health Sciences programmes. Sunita has authored 2 books, and has a PhD and a MSc in Microbiology.

### Sheryl Anchan – Science & Innovation Adviser



+91 22 6650 2205  
[sheryl.anchan@fco.gov.uk](mailto:sheryl.anchan@fco.gov.uk)

Sheryl works very closely with the senior adviser to support the network's initiatives on the life sciences. She also plays an important role in the marketing strategy for S&I in India, which includes raising the profile of UK science and of the network's activities through a range of media including the website and the monthly Science and Innovation India newsletter.

## Japan

GDP (US\$ billions) 4301.85 (2010)

Real GDP Growth (%) 3.94 (2010)

Gross domestic expenditure on R&D (% of GDP) 3.33 (2009)<sup>5</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Tokyo

### Kevin Knappett – Head of Section



British Embassy Tokyo

No 1 Ichiban cho

Chiyoda-ku

Tokyo 102-8381, Japan

+81 (0)3 5211 1322

[science.tokyo@fco.gov.uk](mailto:science.tokyo@fco.gov.uk)

Kevin is a chartered engineer and holds a MBA in International Business. He began his career at the Office of Communications (OFCOM), progressing to senior radio specialist and then joined the Department for Business to lead two large-scale university-business knowledge transfer government programmes. Previous experience in industry includes R&D departments at Nokia (Finland), Nortel and Qinetiq.

### Yumiko Myoken – Senior Science Officer, Life Sciences and the Environment



+81 (0)3 5211 1328

[science.tokyo@fco.gov.uk](mailto:science.tokyo@fco.gov.uk)

Yumiko is currently working on the life sciences. Her main responsibilities are managing Global Partnership Fund (GPF) projects, writing technology trend reports, conducting policy analysis and exploring new themes for future collaboration. After her doctoral research at UK university, Yumi joined the Ministry of Foreign Affairs in Japan and stayed at Boston for two years to conduct a survey on US science and technology policy. Before joining the S&I Network, she worked at the Japan Science and Technology Agency as a research fellow focused on R&D strategies for innovation.

5 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

### **Seiichi Asano – Senior Science Officer, Energy and Advanced Technology**



Office +81 3 5211 3287

Mobile +81 80 5676 3203

Seiichi is currently in charge of Energy and Advanced Technology. He holds a degree in Mechanical Engineering and has recently completed a MBA. He started his career in one of Japan's leading trading houses and later went on to start up an ICT subsidiary company of a major steel manufacturer in Silicon Valley. Seiichi has also served as an Executive Officer and Country Manager for a Swedish ICT firm in Tokyo

### **Seiko Oya – Project Officer, Energy and Advanced Technology**



+81 (0)3 5211 1324

[science.tokyo@fco.gov.uk](mailto:science.tokyo@fco.gov.uk)

Seiko is working mainly on Transport, Space, and Materials. Her main roles are organizing GPF projects, co-ordinating VIP programmes and conducting preliminary research for future projects. Prior to joining the Embassy, she worked in the UK as a technical liaison for Applied Materials, a US-based semiconductor manufacturing machine company.

### **Sachiko Yoshida – Project Officer, Life Sciences and the Environment**



+81 (0)3 5211 1325

[science.tokyo@fco.gov.uk](mailto:science.tokyo@fco.gov.uk)

Sachiko joined the S&I Tokyo team after spending a few years as S&I officer at the Consulate in Osaka. Her major responsibilities include organising life sciences projects, coordinating VIP programmes, and contributing to research and report writing. Prior to joining the Science and Innovation Network, she worked for the City of Kobe where she was responsible for foreign investment and trade promotion. She has a Masters in social anthropology.

**Yuki Chamberlain – Project Officer, Energy and Advanced Technology**

[Yuki.chamberlain@fco.gov.uk](mailto:Yuki.chamberlain@fco.gov.uk)

Yuki studied Public Policy at University College London and worked with the Delegation of the European Union to Japan with the Science and Technology Section. His area of focus is Energy and Advanced Technologies. He liaises with the EU Delegation in Tokyo to organise collaborative activity to promote the UK as the European Partner of Choice for FP7 and upcoming Horizon 2020 projects.

**Osaka****Ed Thomson – Consul, Science and Innovation**

British Consulate-General  
Epson Osaka Building 19F  
3-5-1 Bakuro-machi, Chuo-ku, Osaka 541-0059, Japan  
+81 (0)6 6120 5621  
[science.osaka@fco.gov.uk](mailto:science.osaka@fco.gov.uk)

Ed studied international relations and strategic studies before joining the Scottish Government. He worked on education policy before moving to their office in Brussels to cover research, education and social issues. He then moved on loan to the FCO to join the S&I team in Osaka in September 2009 where he is mainly responsible for relationships with institutions in the western half of Japan.

**Ed Sumoto – Science & Innovation Officer**

+81 (0)6 6120 5623  
[Science.osaka@fco.gov.uk](mailto:Science.osaka@fco.gov.uk)

Ed studied Science, Technology and Foreign Affairs at Georgetown University. Before coming to S&I in 2009 he worked for a research group on biochar, small hydropower and clean development in China, and community-based disaster management strategies for the UN in various Asian countries.

**Shinako Inaida – Science & Innovation Officer**

+81 (0)6 6120 5623

[Science.osaka@fco.gov.uk](mailto:Science.osaka@fco.gov.uk)

Shinako was in the Science and Technology section of the Flanders government in Tokyo working on various R&D collaborations with Japanese academics and companies. Her experience included researching international science and innovation policies while working for the Japanese Government Cabinet Office. She has been a researcher epidemiology for infectious diseases since 2006 and conducted research projects in the national research institute for health.

**Malaysia**

GDP (purchasing power parity) (\$ billion) 609.8 (2011)

Previous year growth in GDP (%) 0.1 (2011)<sup>6</sup>

No data for gross domestic expenditure on R&amp;D

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

**Lee Ching Heong – Science & Innovation Officer**

British High Commission

185 Jalan Ampang

50450 Kuala Lumpur, Malaysia

[ChingHeong.Lee@fco.gov.uk](mailto:ChingHeong.Lee@fco.gov.uk)

+60 (3)2170 2371

Ching trained in Medical Laboratory Sciences and her earlier career was spent in a range of clinical, research and laboratory management roles. Her 6-months sojourn at the Cancer Institute of New Jersey in 1998 as a visiting researcher produced 2 publications in the field of DNA repair.

6 CIA World Factbook <https://www.cia.gov/library/publications/the-world-factbook/geos/my.html>

## Singapore

GDP (purchasing power parity) (\$ billion) 318.9 (2011)

Previous year growth in GDP (%) 4.9 (2011)<sup>7</sup>

No data for gross domestic expenditure on R&D

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### **Matt Crossman – Regional Director Southeast Asia**



British High Commission  
100 Tanglin Road  
Singapore 247919  
(65) 6424 4343  
[matt.crossman@fco.gov.uk](mailto:matt.crossman@fco.gov.uk)

Matt was previously responsible for policy development and the implementation of the UK Flood and Water Management Act. He is a chartered civil engineer and has worked in engineering and applied research in UK and Southeast Asia.

### **Eleanor Kleinman – Strategic Collaboration Advisor**



(65) 6424 4252  
[eleanor.kleinman@fco.gov.uk](mailto:eleanor.kleinman@fco.gov.uk)

Eleanor started working with the SIN network in May 2012 on a six month placement under BIS's Overseas Attachment Training Scheme (OATS). For the past five years she has worked for the Government Operational Research Service (GORS) in the UK. Eleanor holds a BSc in Mathematics and Spanish, and a MSc in Operational Research from the University of Southampton.

### **Christopher Tan – Senior Science & Innovation Officer**

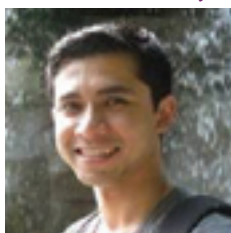


(65) 6424 4387  
[christopher.tan@fco.gov.uk](mailto:christopher.tan@fco.gov.uk)

Christopher obtained his degree in Chemical Engineering from the University of Manchester Institute of Science & Technology and subsequently obtained his MBA from Nottingham University and Master in Health Service Management from Flinders University. Prior to that he was working in the private sector and was based in China, Hong Kong and Malaysia.

7 CIA World Factbook <https://www.cia.gov/library/publications/the-world-factbook/geos/sn.html>



**Mark Anthony – Science & Innovation Officer**

(65) 6424 4322

[mark.anthony@fco.gov.uk](mailto:mark.anthony@fco.gov.uk)

Mark spent 5 years working in the Middle-East in the airline industry. He has a Diploma in Mechatronics Engineering and a Degree in Business Administration.

**Republic of Korea**

GDP (US\$ billions) 1417.55 (2010)

Real GDP Growth (%) 6.16 (2010)

Gross domestic expenditure on R&D (% of GDP) 3.36 (2009)<sup>8</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

**Gareth Davies – Head of Science and Innovation**

British Embassy Seoul

Sejong-daero 19-gil 24. Jung-gu

Seoul 100-120

Republic of Korea

+82 (0)2 3210 5628

[Gareth.Davies2@fco.gov.uk](mailto:Gareth.Davies2@fco.gov.uk)

Gareth is responsible for the management of relationships between the UK and Korean ministries and national R&D agencies participating in the UK–Korea Joint Committee on Science and Technology. He covers the automotive, aerospace and engineering sectors. Gareth joined the embassy from the Korea Institute for Advancement of Technology (KIAT), one of Korea's primary R&D funding agencies, where he was responsible for European cooperation activities within the EU Seventh Framework Programme and the EUREKA Network.

**Hyeyoung Kim – Science and Innovation Manager, British Embassy Seoul**

+ 82 (0)2 3210 5594

[hyeyoung.kim@fco.gov.uk](mailto:hyeyoung.kim@fco.gov.uk)

Hyeyoung previously worked for Templeton Asset Management Ltd and the Australian Embassy in Seoul. Hyeyoung assists in the management of ministerial relationships and is responsible for the life sciences, medical, biotechnology and nanotechnology sectors. She holds a MBA degree and studied in international business.

<sup>8</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

**Eunjeoung (EJ) Kim – Science and Innovation Officer, British Embassy Seoul**

+82 (0)2 3210 5636

[Eunjeoung.Kim@fco.gov.uk](mailto:Eunjeoung.Kim@fco.gov.uk)

EJ is a graduate of Korea University and previously worked at Seoul National University. EJ is responsible for the environmental and energy sectors (including nuclear energy safety and security), as well as cyber security. She also handles general administration for the team.

**Taiwan**

GDP (purchasing power parity) (\$ billion) 887.3 (2011)

Previous year growth in GDP (%) 4 (2011)

No data for gross domestic expenditure on R&D

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

**Sam Leng – Senior Science & Innovation Officer**

British Trade and Cultural Office

26th Floor, President International Tower

9-11 Song Gao Road

Taipei 11073, Taiwan

+886 2 8758 2046

[sam.leng@fco.gov.uk](mailto:sam.leng@fco.gov.uk)

Sam has a background in information systems, having had a long career working for various blue-chips in the UK and Europe before relocating back to Taiwan in 2006.

**Ginell Hsu – Science & Innovation Officer**

+886 2 8758 2046

[Ginnell.hsu@fco.gov.uk](mailto:Ginnell.hsu@fco.gov.uk)

Ginell completed a bachelor degree in International Business at Shih Chien University, Taiwan. Ginell has an active interest in the Life Sciences, and continues to work on matching UK strengths and expertise in this sector to Taiwan's emerging opportunities.

## Australasia

### Australia

GDP (US\$ billion) 915.7 (2010)

Real GDP Growth (%) 2.57 (2010)

Gross domestic expenditure on R&D (% of GDP) 2.21 (2010)<sup>9</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

#### Dr. Svetozar Kovacevic



British Consulate-General  
Level 17  
90 Collins Street  
Melbourne 3000, Australia  
[svetozar.kovacevic@fco.gov.uk](mailto:svetozar.kovacevic@fco.gov.uk)  
Tel. +61 3 9652 1654

Svetozar joined SIN in September 2011 to re-establish the network's presence in Australia, and is based in Melbourne. Svetozar has ten years of experience as a research scientist and holds a PhD in Molecular Microbiology, specialising in the pathogenesis of tuberculosis. Prior to joining SIN, he worked for Pfizer Animal Health developing veterinary vaccines. Svetozar also worked as a postdoctoral scientist at Monash University, overseeing malaria vaccine projects in collaboration with CSL Ltd. and the Bill and Melinda Gates Foundation.

### New Zealand

GDP (US\$ billions ) 130.66 (2010)

Real GDP Growth (%) 2.5 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.17 (2007)<sup>10</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

#### Steve Thompson – Science & Innovation Promoter



British High Commission  
44 Hill Street  
Wellington, 6011  
New Zealand  
+644 924 2833  
[steve.thompson@fco.gov.uk](mailto:steve.thompson@fco.gov.uk)

Steve Thompson joined the Science and Innovation Network in 2007, following a career in research during which he headed New Zealand's science funding agency and its Royal Society. His role is focused on building commercially-orientated UK–NZ R&D collaborations, with some 25 collaborations over five years, and over 100 cases of assistance to UK organisations.

<sup>9</sup> OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

<sup>10</sup> OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Europe

### Benelux

GDP (US\$ billions ) 705.6 (2010)

Real GDP Growth (%) 1.77 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.82 (2009)<sup>11</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

#### Liesbeth Bouwhuis – Science & Innovation Officer



British Embassy  
Lange Voorhout 10  
2514 ED The Hague  
The Netherlands  
+31 (0)70 4270 311  
[liesbeth.bouwhuis@fco.gov.uk](mailto:liesbeth.bouwhuis@fco.gov.uk)

Liesbeth obtained a MSc in Chemical Engineering at Twente University in the Netherlands and for her thesis worked with Shell on LNG terminal site selection, and CO2 capture technologies for CCS in China. She also obtained a MA (Hons) in Philosophy of Science, Technology and Society. Before joining SIN Liesbeth worked in research focusing on ethic evaluation of emerging science and technology. Within SIN, Liesbeth leads projects on a variety of topics, ranging from designing out landfill and creative industries to sustainable water technology and solar fuels & artificial photosynthesis.

#### Audra Ryan – Intern Science & Innovation Officer



E. [audra.ryan@fco.gov.uk](mailto:audra.ryan@fco.gov.uk)  
T. +31 (0)70 4270 235

Audra's role is to support the Thematic Group covering the Water, Environment, Built Environment and Development sectors, along with other day-to-day enquiries and tasks. These areas have been Audra's career focus for the past eight years includes a MSc in Environmental Water Management, and work experience with the UK's Environment Agency followed by three and half years within the waste and recycling industry.

<sup>11</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Czech Republic

GDP (US\$ billions) 266.11 (2010)

Real GDP Growth (%) 2.35 (2010)<sup>12</sup>

Gross domestic expenditure on R&D (% of GDP) 1.86 (2011)<sup>13</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Prague

#### Dr Otakar Fojt – Senior Science & Innovation Adviser



British Embassy Prague, Thunovská 14

118 01 Prague 1

+420 257 402 315

[otakar.fojt@fco.gov.uk](mailto:otakar.fojt@fco.gov.uk)

Otakar previously worked as a specialist on international projects at Brno University of Technology and as Managing Director of a small technological company, Sincotron. Before that he worked as a postdoctoral research fellow at the University of York, and as a postgraduate researcher at the University of Oxford. He was awarded a Chevening Scholarship in 1996 and a PhD in Biomedical Engineering in 1997.

## Denmark

GDP (US\$ billions) 219.31 (2010)

Real GDP Growth (%) 2.09 (2010)

Gross domestic expenditure on R&D (% of GDP) 3.02 (2009)<sup>14</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

#### Mogens Olsen – Science & Innovation Officer



British Embassy

Kastelsvej 36-40

DK-2100 Copenhagen Ø

Denmark

+45 3544 5269

[mogens.olsen@fco.gov.uk](mailto:mogens.olsen@fco.gov.uk)

Mogens graduated with a MSc in electronic engineering from the Technical University of Denmark. He had 17 years business experience with Philips Denmark, Philips Australia, RE Technology and Peek Traffic. He subsequently worked two years as investment manager with Danish Development Finance Corporation, responsible for investments in IT, software and electronics. Following this Mogens completed a 5-year assignment as Technology Attaché at the Royal Danish Consulate General in Los Angeles.

12 OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

13 Czech Statistical Office ([www.czso.cz](http://www.czso.cz))

14 OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Finland

GDP (US\$ billions) 196.63 (2010)

Real GDP Growth (%) 3.12 (2010)

Gross domestic expenditure on R&D (% of GDP) 3.84 (2010)<sup>15</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Anni Leppanen – Science & Innovation Officer



British Embassy  
Itäinen Puistotie 17  
00140 Helsinki  
Finland

Anni studied at School of Oriental and African Studies (SOAS), University of London, where she specialised in innovation systems and East Asia. She was based in Beijing, China, in 2008-2009 for a research project and speaks Mandarin Chinese. She has previously worked at UK India Business Council and National Institute of Health and Welfare

## France

GDP (US\$ billions) 2194.12 (2010)

Real GDP Growth (%) 1.48 (2010)

Gross domestic expenditure on R&D (% of GDP) 2.21 (2009)<sup>16</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Matt Houlihan – Regional Manager (Europe West)



British Embassy  
35 Rue Faubourg St. Honoré  
75008 Paris, France  
+33 (0)1 44 51 31 39  
[matt.houlihan@fco.gov.uk](mailto:matt.houlihan@fco.gov.uk)

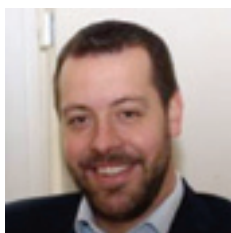
Matt graduated from the London School of Economics with a BSc and MSc. Before joining the Network, Matthew worked in the UK's Permanent Representation in Brussels, representing the UK on research and innovation issues. He has also worked in the European Commission, the Cabinet Office and the Home Office.

15 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

16 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en



### **Dr Fabien Deswarte – Senior Science & Innovation Adviser**



+33 (0)1 44 51 33 31

[fabien.deswarte@fco.gov.uk](mailto:fabien.deswarte@fco.gov.uk)

Fabien obtained his PhD from the University of York in 2006 and graduated from the National Chemical Engineering School of Toulouse in 2002. Before joining the S&I network, Fabien worked for 3 years for the Green Chemistry Centre of Excellence in York where, as part of his role, he coordinated a large biorefinery project (SUSTOIL) funded by the European Commission through the Framework Programme 7.

### **Alison MacEwen – Science & Innovation Adviser**



+33 (0)1 44 51 32 13

[alison.macewen@fco.gov.uk](mailto:alison.macewen@fco.gov.uk)

Alison has an Honours degree in Modern Languages and spent two years teaching English in Japan. She then worked for a number of years in the Education and Training Group of the British Council in the UK, managing a European Commission funded student teacher exchange programme and getting to grips with European Union HE issues. Since joining the SIN team in France, with a shared remit for Belgium, Alison has worked on a variety of themes such as neurodegeneration, cybersecurity and biodiversity.

## Germany

GDP (US\$ billions) 3071.28 (2010)

Real GDP Growth (%) 3.63 (2010)

Gross domestic expenditure on R&D (% of GDP) 2.78 (2009)<sup>17</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Berlin

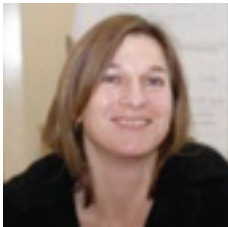
### Kenan Poleo – Head of SIN Europe and Regional Manager Central and East Europe



British Embassy  
Wilhelmstrasse 70  
10117 Berlin  
Germany  
+49 30 204 57 212  
[kenan.poleo@fco.gov.uk](mailto:kenan.poleo@fco.gov.uk)

Kenan joined the Civil Service in 2001, heading up teams working on chemical industries, industrial emissions, counter terrorism, civil contingencies and energy policy. He was seconded to Slovenia in 2007-08 as a UK National Expert on Energy. He was Deputy Director for EU Energy and Climate Change Legislation at DECC before taking up this post.

### Ursula Roos – Senior Science & Innovation Adviser

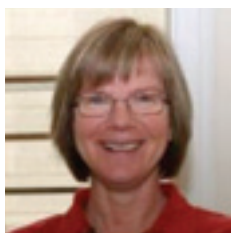


+49 30 20457 339  
[ursula.roos@fco.gov.uk](mailto:ursula.roos@fco.gov.uk)

Ursula holds a MSc in Translating and Interpreting and a Postgraduate Diploma in Economics. She recently completed a MBA with the Open University. Ursula has extensive experience and a track record in project development, including securing partnerships and external funding. She is an expert in Germany's science and innovation landscape and policies. Her focus is on life sciences, key emerging technologies and advanced manufacturing.

<sup>17</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

### **Heike Hammelehle – Science & innovation Assistant**



+49 30 20457 212

[heike.hammelehle@fco.gov.uk](mailto:heike.hammelehle@fco.gov.uk)

Heike is responsible for project management. Previously she worked as an assistant for international companies in Germany, Switzerland and Colombia.

### **Jeremy Schlickenrieder – Science and Innovation Attaché**



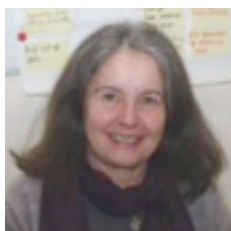
+49 (0) 30 20457 339

[Jeremy.Schlickenrieder@fco.gsi.gov.uk](mailto:Jeremy.Schlickenrieder@fco.gsi.gov.uk)

Jeremy has a MSc in Environmental Technology from Imperial College London. After completing his studies, he worked at the Food and Agriculture Organization of the UN (FAO), the European Commission and the Universidad Politecnica de Madrid. Before becoming a temporary S&I Officer, he worked in UK Trade & Investment at the British Embassy in Madrid.

## **Munich**

### **Muzinée Kistenfeger – Science & Innovation Officer**



British Consulate-General

Möhlstr.5

81675 München

Germany

+49 89 211 09 112

[muzinee.kistenfeger@fco.gov.uk](mailto:muzinee.kistenfeger@fco.gov.uk)

Muzinée is a graduate of Munich University. She has over 10 years' experience in foreign language journalism including science and education issues. She is the team's expert for Southern German science and research and responsible for contacts with such prestigious research institutions in the area as the Max Planck Society of the Fraunhofer Society.

## Israel

GDP (US\$ billions) 217.34 (2010)

Real GDP Growth (%) 4.6 (2010)

Gross domestic expenditure on R&D (% of GDP) 4.25 (2010)<sup>18</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Dr Adee Matan – Science & Innovation Attaché



British Embassy  
192 Hayarkon st.  
Tel Aviv 64305  
[adee.matan@fco.gov.uk](mailto:adee.matan@fco.gov.uk)

Adee is responsible for promoting scientific and research connections between the UK and Israel. Adee received her PhD from the department of Brain and Cognitive Sciences at MIT. She also has a BSc in Computer Science and studied Linguistics for her MA. She has worked in product management and R&D for companies in the fields of machine translation, workforce management and e-commerce.

### Abigail Tetelman – Science & Innovation Assistant



972 3 725 1268  
[abigail.tetelman@fco.gov.uk](mailto:abigail.tetelman@fco.gov.uk)

Abigail is the right arm (although left handed!) of the Science Attaché; Abigail is the driving force behind all of the SIN Tel Aviv activities and achievements.

<sup>18</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Italy

GDP (US\$ billions) 1908.57 (2010)

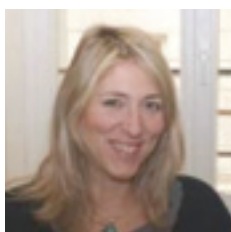
Real GDP Growth (%) 1.3 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.27 (2009)<sup>19</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Milan

### Dr Alessandra Ferraris – Science & Innovation Officer



British Consulate General

Via San Paolo 7

20121 Milano

0039 02 72300213

[alessandra.ferraris@fco.gov.uk](mailto:alessandra.ferraris@fco.gov.uk)

Prior to joining the Network, Alessandra had 6 years research experience as R&D project manager in a major Italian pharmaceutical company. Before developing an interest and expertise in creative industries and innovation, she co-authored several patents in the field of drug delivery systems.

## Rome

### Dr Laura Nuccilli – Scientific Affairs Officer



British Embassy

Via XX Settembre 80 a

00187 Roma

0039 06 42202284

[laura.nuccilli@fco.gov.uk](mailto:laura.nuccilli@fco.gov.uk)

Laura has a degree in Political Science and a Masters in Mass Communication (Leicester University, Chevening Scholar). Prior to joining the Network, she worked in the Italian Parliament as a Parliamentary Assistant with the Green Group dealing with issues such as Sustainable Development, Biotechnology and GMOs.

<sup>19</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Poland

GDP (US\$ billions ) 754.1 (2010)

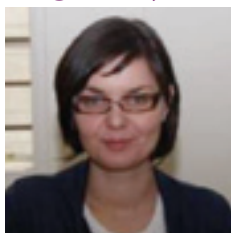
Real GDP Growth (%) 3.82 (2010)

Gross domestic expenditure on R&D (% of GDP) 0.68 (2009)<sup>20</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Warsaw

### Magda Gajownik – Science & Innovation Officer



British Embassy

ul. Kawalerii 12

00 – 468 Warsaw

Poland

[magda.gajownik@fco.gov.uk](mailto:magda.gajownik@fco.gov.uk)

+48 22 311 02 87

Magda previously worked at the Food Safety Authority of Ireland. Her main project was writing the healthy eating guidelines for the Irish population. She also had two years experience in the pharmaceutical industry in the Quality Assurance department. Magda gained her MSc. in Food Safety at Wageningen University in the Netherlands. During her final year she did a 6 month internship at Unilever R&D in the Netherlands, working on new detection methods of microorganisms in food. She gained her BSc. in Human Nutrition and Consumer Science at the Agricultural University of Warsaw.

<sup>20</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en



## Russia

GDP (US\$ billions) 2812.38 (2010)

Real GDP Growth (%) 4.03 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.24 (2009)<sup>21</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Moscow

### Dr Julia Knights – First Secretary (Science & Innovation)



British Embassy  
Smolenskaya Naberezhnaya 10  
Moscow 121099  
+7 495 956 7473  
[julia.knights@fco.gov.uk](mailto:julia.knights@fco.gov.uk)

Julia set up the SIN section in Russia after three years heading up the East China Science and Innovation section in Shanghai. Previously Julia worked for Defra in London as a Senior Policy Advisor for biofuels and in Paris with the Cabinet Office at the French Ministry of Agriculture researching France's bioenergy policies. Julia has also worked as a journalist in science and agriculture. Julia holds a BSc in soil science, a MSc in crop protection and a PhD in biogeochemistry and has published her research in several international peer reviewed science journals.

### Dr Marina Sokolova – Senior Innovation Adviser



+7 495 956 7340  
[marina.sokolova@fco.gov.uk](mailto:marina.sokolova@fco.gov.uk)

Marina leads on the logistics for our programmes and projects including the Space Science Café lecture series and Expert Innovation Roundtable series across Russia. Previously Marina was a Climate Security Advisor at the British Embassy, and worked as head of science & technology at the British Council in Moscow. Marina has held positions in the International Foresight Center of Moscow's Higher School of Economics, and visiting Professorships at the University of Zurich, and the University of Wales, Bangor. Marina holds a BSc in biology and a PhD in genetics.

<sup>21</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

**Ekaterina Selezneva Project officer for Space, Climate & Life sciences**

+7 495 956 7340

[ekaterina.selezneva@fco.gov.uk](mailto:ekaterina.selezneva@fco.gov.uk)

Katia was an English language teacher and a translator in several foreign organisations including the Moscow office of the United Nations High Commissioner for Refugees, and also as an assistant to the editor-in-chief for a lighting design magazine. Katia holds a MSc in linguistics and translation majoring in English.

**Spain**

GDP (US\$ billions ) 1477.84 (2010)

Real GDP Growth (%) -0.14 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.38 (2009)<sup>22</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

**Madrid****Sara Cebrián – Science and Innovation Attaché**

British Embassy

Torre Espacio

Paseo de la Castellana 259D

28046 Madrid, Spain

+34 91 714 6357

[Sara.cebrian@fco.gov.uk](mailto:Sara.cebrian@fco.gov.uk)

Sara Cebrián has a M.Sc in Agricultural Engineering from the Polytechnic University of Madrid. Before joining the UK Science and Innovation Network she worked as a R&D programme manager at the Molecular Biology Centre Severo Ochoa in Madrid and as a strategy consultant at a biotech consulting company.

<sup>22</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Sweden

GDP (US\$ billions) 365.86 (2010)

Real GDP Growth (%) 5.69 (2010)

Gross domestic expenditure on R&D (% of GDP) 3.62 (2009)<sup>23</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Stockholm

### **Susan Stradling-Day – Regional Science & Innovation Manger (Europe North) (from October 2012)**



British Embassy Stockholm

Skarpögatan 6-8

115 93 Stockholm

Sweden

+46 (0)8 671 3117

[susan.stradling-day@fco.gov.uk](mailto:susan.stradling-day@fco.gov.uk)

Previously Susan worked for the MoD in Germany for twelve years in various roles such as Customs and Immigration, Intelligence & Security and Vetting. She previously worked at the Home Office, Immigration Service. She has a first degree in German and Swedish, a Masters Degree in European Studies and a Postgraduate in Legal and Forensic Psychology.

### **Hazel Gibson – Regional Science & Innovation Manager (Europe North) (until October 2012)**



British Embassy Stockholm

Skarpögatan 6-8

115 93 Sweden

+46 (0) 8671 3117

Mobile: +46 (0) 708758846

[Hazel.gibson@fco.gov.uk](mailto:Hazel.gibson@fco.gov.uk)

Hazel previously worked in the Office of the Chief Scientific Adviser (Scotland), and energy policy roles. There she gained an appreciation of the value of science, its application to global problems, and international collaboration. She worked in marketing prior to this, and has degrees in Modern European Languages, and Public Relations.

23 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Switzerland

GDP (US\$ billions ) 361.89 (2010)

Real GDP Growth (%) 2.55 (2010)

Gross domestic expenditure on R&D (% of GDP) 3 (2008)<sup>24</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Gaby Bloem – Senior Science & Innovation Adviser



British Embassy  
Thunstrasse 50, 3000 Berne  
Switzerland  
+41 (0)31 359 7752  
[gaby.bloem@fco.gov.uk](mailto:gaby.bloem@fco.gov.uk)

Gaby has a background in social science and previously worked in the Economic and Environment Department of the Dutch Embassy. She has a broad knowledge of the Swiss scientific, economic, environmental and agricultural landscape.

### Elisabeth Wallace – Science & Innovation Assistant



+41 (0)31 359 7754  
[elisabeth.wallace@fco.gov.uk](mailto:elisabeth.wallace@fco.gov.uk)

Elisabeth is a French national and previously worked at the British Embassy in Paris as Online Communications Manager. She worked as a designer in the web and communication industry before that. She has a BA in English Literature and Civilisation, a BA in Publishing completed with a PostGrad in Corporate Communication and Public Affairs. Elisabeth focuses on clean technologies and energy efficient systems and materials.

<sup>24</sup> OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## Turkey

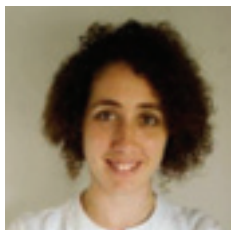
GDP (US\$ billions ) 1115.99 (2010)

Real GDP Growth (%) 8.95 (2010)

Gross domestic expenditure on R&D (% of GDP) 0.85(2007)<sup>25</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Basak Candemir – Science and Innovation Officer



British Consulate General  
Mesrutiyet Caddesi No 34  
Tepebasi Beyoglu 34435  
Istanbul  
[basak.candemir@fco.gov.uk](mailto:basak.candemir@fco.gov.uk)

Basak completed her PhD at the Science and Technology Policy Research (SPRU), University of Sussex in 2011, focusing on the role of intermediary organisations for knowledge exchange. A chemistry graduate from the Middle East Technical University in Ankara, Basak did a MA in European Studies on Science, Society and Technology at Maastricht University and University of Oslo. As well as leading the UK–Turkey Knowledge Partnership with colleagues from UKTI and British Council, she works across a number of areas as opportunities arise including advanced manufacturing, nanotechnology and energy.

25 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

## The Gulf

### Qatar (opened in November 2012)

GDP (purchasing power parity) (\$ billion) 174.9 (2011)

Previous year growth in GDP (%) 14.1 (2011)

No data for Gross domestic expenditure on R&D<sup>26</sup>

#### Doha

For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).

#### Dominic McAllister - Counsellor - Science and Innovation



British Embassy Doha,  
PO Box 3,  
Doha,  
State of Qatar  
+974 4496 2057  
[dominic.mcallister@fco.gov.uk](mailto:dominic.mcallister@fco.gov.uk)

Prior to his new post in Qatar, Dominic was Head of Science and Innovation in Korea. Prior to this he worked in London coordinating regional S&I activities for the European SIN. Dominic has been a career diplomat since 1990 and has served in Belgrade, Cairo, Riyadh, Taipei, and Caracas. Dominic trained at King's College London as a chemist and did post graduate work for ICI on polymer catalysis. He also holds a Masters degree in Chinese history and politics.

26 PCIA World Factbook <https://www.cia.gov/library/publications/the-world-factbook/geos/qa.html>



## North America

### Canada

GDP (US\$ trillion) 1.33 (2010)

Real GDP Growth (%) 3.07 (2010)

Gross domestic expenditure on R&D (% of GDP) 1.8 (2010)<sup>27</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### Ottawa

#### Dr. Nicole Arbour – Team Leader, Science and Innovation Network



British High Commission

80 Elgin Street, Ottawa, Ontario, K1P 5K7

[nicole.arbour@fco.gov.uk](mailto:nicole.arbour@fco.gov.uk)

Twitter @narbour

T +1 (613) 364-6148

M +1 (613) 552-6148

Nicole is responsible for Canada/UK engagement at the national level. Areas of particular focus include: life sciences, polar research, innovation, and entrepreneurship. Nicole holds a PhD in Biochemistry from the University of Ottawa, specializing in neuronal apoptosis. Prior to joining the Science and Innovation team at the British High Commission in Ottawa, she worked in the biotech industry, and led a team of researchers in the development of assays for pathogen identification.

#### Gill Wallace – Science and Innovation Assistant



613-364-6153

[gill.wallace2@fco.gov.uk](mailto:gill.wallace2@fco.gov.uk)

Gill's role is to support the Science and Innovation Team members based in Toronto, Vancouver, Montreal and Ottawa.

27 OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

**Alexandra Weirich – Intern**

[Alexandra.weirich@fco.gov.uk](mailto:Alexandra.weirich@fco.gov.uk)

Alexandra supports and contributes to the team's projects across Canada. Alexandra holds a B.Sc. in Biochemistry at the University of Ottawa and is currently pursuing a MSc in Biochemistry, focusing on control of cell division. Between degrees, Alexandra spent a year working as a research assistant in a medical diagnostics and organ transplantation company in Germany. She has also worked with the Canadian Federal Government, public and private sector research institutes.

**Montreal****Dr Nicolina Farella – Science and Innovation Advisor**

British Consulate-General  
1000 De La Gauchetière St. W.  
Suite 4200  
Montreal, Quebec H3B 4W5  
514-866-5863 ext 2232  
[nicolina.farella@fco.gov.uk](mailto:nicolina.farella@fco.gov.uk)

Nicolina is responsible for SIN activities in Quebec and the Atlantic provinces, and her areas of focus include life sciences, aerospace and clean technologies. She holds a PhD in Environmental Sciences, at The Université du Québec à Montréal. Before coming to the consulate Nicolina worked with Ashoka Canada and IDRC.

**Vancouver****Dr Paolo Marcazzan – Science, Innovation & Energy Officer**

British Consulate-General  
1111 Melville Street, Suite 800  
Vancouver, British Columbia  
V6E 3V6  
T +1 (604) 683-4421 ext 2212  
M +1 (604) 314-3599  
[paolo.marcazzan@fco.gov.uk](mailto:paolo.marcazzan@fco.gov.uk)

Paolo is responsible for activities in Western Canada, with a focus on British Columbia. Areas of particular focus include: energy, clean technology, and life sciences. He holds a Ph.D. in Chemistry from the University of British Columbia (UBC), and a M.Sc. in Industrial Chemistry from the Università di Bologna in Italy. Prior to joining the Science & Innovation Network, Paolo worked as a research scientist at UBC and the National Research Council of Canada in homogeneous catalysis, fuel cells, pulp and paper.

## Toronto

### Shannon Jones – Science & Innovation Associate



British Consulate-General  
777 Bay Street, Suite 2800  
Toronto, Ontario  
M5G 2G2  
E-mail [shannon.jones@fco.gov.uk](mailto:shannon.jones@fco.gov.uk)  
T +1 (416) 593-1290 ext 2237

Shannon Jones joined the Science & Innovation Network in a team support role in January 2011. She also helps the team with project management and reporting. Shannon is from a private sector background in health services and personal injury law administration.

### Dr John Preece – Science and Innovation Officer



[john.preece@fco.gov.uk](mailto:john.preece@fco.gov.uk)  
Twitter @jcpreece  
T +1 (416) 593-1290 ext 2269  
M +1 (416) 320-5115

John is responsible for Science & Innovation Network activities in Ontario and Central Canada. Areas of particular focus include: chemistry, environmental sciences, life sciences, and sustainable development. John holds a PhD in Chemical Engineering from the University of Birmingham, where he specialised in liquid fuels for high temperature fuel cells. He also holds a MSc in Chemistry from the same institution, with specialisations in organic chemistry and spectroscopy. Prior to joining the Science and Innovation Network, John lectured in Chemistry at Ewha Womans University in Republic of Korea.

## United States

GDP (US\$ billions) 14369.4(2008)

Real GDP Growth (%) 0.42 (2008)

Gross domestic expenditure on R&D (% of GDP) 2.77 (2008)<sup>28</sup>

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

## Washington

### Sarah Mooney – Head of SIN US



British Embassy  
3100 Massachusetts Ave  
NW, Washington, DC 20008  
[sarah.mooney@fco.gov.uk](mailto:sarah.mooney@fco.gov.uk)

Sarah directs strategic engagement with US government, academic, and NGO partners in all areas of S&I. Prior to coming to Washington, Sarah served as Deputy Consul-General and Head of UK Trade and Investment in Istanbul.

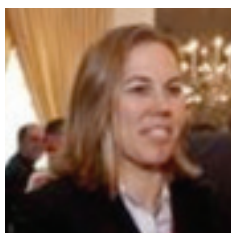
### Brad Keelor – Senior Policy Advisor



[Brad.keelor@fco.gov.uk](mailto:Brad.keelor@fco.gov.uk)

Brad covers physical science and innovation issues. He also reports on developments in US science funding. He holds a Master's degree from the School of Public Policy at George Mason University and spent several years lobbying for basic research funding.

28 OECD (2011) "OECD Factbook 2011-2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

**Kate Von Holle – Senior Policy Advisor**

202 518 7528

[kate.vonholle@fco.gov.uk](mailto:kate.vonholle@fco.gov.uk)

Kate works in the biological, climate and development science spheres. Her previous experience included heading the government affairs department at the American Geophysical Union (AGU), and working as a science fellow at the State Department. Kate received her BSc in Biology at the College of William & Mary, and her MSc in Environmental Science and Policy from the University of Illinois. Kate spent four months in San Francisco this year, covering maternity leave as acting Joint West Coast Director.

**Boston****Chris Ilsley, Head of Science and Innovation, Boston**

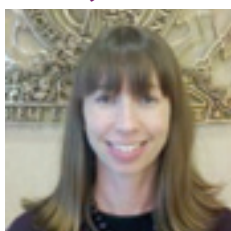
British Consulate-General

One Broadway, Cambridge, MA 02142

617 245 4549

[chris.ilsley@fco.gov.uk](mailto:chris.ilsley@fco.gov.uk)

Chris recently completed his MBA in the commercialisation of stem cell banking, spurred on by over 10 years experience in the life sciences based around Cambridge UK, working in consultancy and as biopharma sector specialist for UKTI. Chris has now transferred his keen interest in commercialising innovation and translational science to Cambridge, Boston, leading on innovation across the US Network.

**San Francisco****Kathryn Brown – West Coast Regional Director**

British Consulate-General

1 Sansome Street, Suite 850

San Francisco, CA 94104

415 617 1384

[kathryn.brown@fco.gov.uk](mailto:kathryn.brown@fco.gov.uk)

Kathryn worked in developing and delivering science, innovation and business policy for HMG. This included developing policy recommendations to improve the competitiveness of medical technology SMEs, and working with the Technology Strategy Board to develop and deliver a £50 million business support programme. Kathryn has a BSc (Hons) in Biotechnology.

**Emma Payne, Acting Joint Director, West Coast**[emma.payne@fco.gsi.gov.uk](mailto:emma.payne@fco.gsi.gov.uk)

+1 415 617 1384

Emma previously held a number of roles across Whitehall, including working for the GCSA on Civil Contingencies in GO-Science, and as Senior Private Secretary to the Minister of State for Universities and Science, David Willetts, MP. She has also undertaken postings in the Cabinet Office's Economic and Domestic Affairs Secretariat, and most recently worked on Economic Growth Policy and Industrial Strategy.

**Chris Knowland, Head of Science and Innovation**[Chris.knowland@fco.gov.uk](mailto:Chris.knowland@fco.gov.uk)

415 617 1373

Chris has worked in sustainable investment research and financial media in London, with a particular focus on renewable energy and environmental markets. He holds a MSc in Environmental Technology from Imperial College London, and a BA in Biological Sciences from the University of Oxford. In addition to his duties as Head of S&I in San Francisco, Chris acts as a coordinator for energy issues across SIN North America.

**Emily Keir Science and Innovation Officer**[Emily.keir@fco.gov.uk](mailto:Emily.keir@fco.gov.uk)

+1 415 617 1328

Emily graduated from the University of California, Los Angeles with an honours degree in Environmental Studies/Geography and Environmental Systems and Society. While working towards her degree at UCLA, she conducted primary remote sensing research and spent time abroad studying ecology, economics, and biology at Cambridge University. She started her work with the British Consulate as an intern for the Science and Innovation team in Los Angeles before becoming an officer in San Francisco.



## Los Angeles

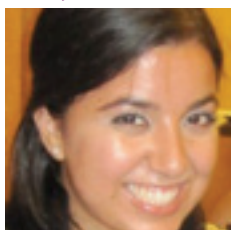
### **Nicholas Hooper – Head, Science & Innovation**



British Consulate-General  
11766 Wilshire Boulevard, Suite 1200  
Los Angeles, CA 90025  
310 996 3023  
[nicholas.hooper@fco.gov.uk](mailto:nicholas.hooper@fco.gov.uk)

Nick joined the S&I team after 3 years with UKTI's Aerospace and Advanced engineering team. He came from the aerospace industry, where he was a program manager. Nick has a Bachelor of Science in Engineering degree from the University of Pennsylvania, and a Master of Arts Degree in Mathematics from Claremont Graduate University. He is originally from Philadelphia.

### **Sally Mouakkad, Officer, Science and Innovation**



[sally.mouakkad@fco.gov.uk](mailto:sally.mouakkad@fco.gov.uk)  
FTN: (310) 481- 2910

Sally graduated with a Masters in International Affairs from Pennsylvania State University. In graduate school, Sally participated in Penn State's Humanitarian Engineering and Social Entrepreneurship (HESE) programme, developing an innovative project to empower women living under the poverty line in India through technology. While setting up the pilot in India, she was also the in-country lead on a multi-country research project investigating the influences on the youth's perception of innovation.

## Houston

### **Catherine Santamaria, Science Officer, Science & Innovation**



[catherine.santamaria@fco.gov.uk](mailto:catherine.santamaria@fco.gov.uk)

A German major at The Colorado College, Catherine moved to Tokyo to teach English at a private conversation school. After rising to the position of Regional Trainer, she left to work in a Japanese business software company. Returning to Houston in 2001, Catherine worked at the Houston World Affairs Council.

## Atlanta

### Kerry Norton, Vice Consul, Science & Innovation



British Consulate-General  
133 Peachtree Street  
Suite 3400, Atlanta  
GA 30303  
404 954 7738  
[kerry.norton@fco.gov.uk](mailto:kerry.norton@fco.gov.uk)

Kerry worked in the pharmaceutical industry, specializing in the research and development of transdermal drug delivery at a privately held clinical-stage pharmaceutical company. Kerry also has significant experience in environmental science and fuel-cell technology, and has a keen interest in alternative and renewable energies. Kerry is an analytical chemist by training and was born in Shoreham-by-Sea, England. She was educated in the United States, gaining a BSc in Biology and a MSc in Analytical Chemistry.

## South America

### Brazil

GDP (\$ trillion) 2.17 (2010)

Real GDP Growth (%) 7.49 (2010)<sup>29</sup>

No data for gross domestic expenditure on R&D

**For a profile with facts and figures including economic trends and commercial relations with the UK, [click here](#).**

### São Paulo

### Fiona Conroy – Director of Science and Innovation



British Consulate General  
Rua Ferreira de Araújo  
741 – 2º andar  
05428-002 Pinheiros, São Paulo, Brazil  
+55 (0)61 3329 2524  
[fiona.conroy@fco.gov.uk](mailto:fiona.conroy@fco.gov.uk)

Fiona aims to develop the SIN across Brazil, as the scope for high quality science and collaboration opportunities is vast, both in the academic and commercial spheres. Previously, Fiona was an Assistant Director in the Innovation Directorate in BIS, and was responsible for the production and publication of the BIS Annual Innovation Report. Fiona returned to the public sector in 2009 having previously worked in the private sector focusing on Corporate Transactions and Radioactive Risk Assessments.

<sup>29</sup> OECD (2011) "OECD Factbook 2011–2012" *OECD Factbook Statistics* (database) doi 10.1787/data-00589-en

### **Carolina Costa – Deputy Director of Science & Innovation**



[Carolina.costa@fco.gov.uk](mailto:Carolina.costa@fco.gov.uk)

Tel: +55 11 3094-2745

Carolina previously worked as Sector Manager for Life Sciences at UK Trade & Investment Brazil, and was with IBM, and foreign governments in Brazil, supporting international trade and investment. She has a degree in International Relations, post-grad in Communications and is currently finishing a Masters on Production Engineering, with a thesis about management of Brazilian and British university technology transfer offices.

### **Diego Arruda – Project Manager**



[Diego.arruda@fco.gov.uk](mailto:Diego.arruda@fco.gov.uk)

Tel: +55 11 3094-2751

Diego previously worked for the UKTI at the British Consulate in São Paulo assisting British companies in the transport sector enter the Brazilian Market. Diego has a university degree in International Relations and is finishing his second degree in Social Sciences.



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Department for Business, Innovation and Skills  
1 Victoria Street, London SW1H 0ET

Tel: 020 7215 5000

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