young Japanese noblemen endured a perilous 135-day sea journey to come to Victorian-era London and study at UCL. On their return to Japan, they went on to form the core of a new Japanese government, leading the nation's transformation to one of the world's foremost technological powers.

Japan-UK Universities conference on education and research

On Thursday 1 May 2014, to mark the visit of Prime Minister Shinzo Abe to the UK, the Japanese Embassy in London held a Japan-UK Universities Conference for Collaboration in Research and Education co-hosted by UCL, supported by British Council, JSPS London, MEXT in Japan and the Science and Innovation Network. Attended by senior representatives from 14 Japanese universities and 16 UK universities, this conference was an unprecedented landmark event, with discussions on a wide range of issues surrounding research and education. It was also a valuable opportunity to deepen and develop collaboration and cooperation between universities of the two countries.

As well as various presentations and panel discussions, there was a roundtable discussion attended by Prime Minister Abe. Participants discussed measures to promote exchange of students and young researchers between Japanese and UK universities, consideration of a framework for multilateral (rather than bilateral) collaboration, and cooperation between Japanese and UK universities in facing global challenges such as ageing societies. The British Council's research and education network for knowledge economy initiatives, known as RENKEI for short (the Japanese word for collaboration), has been helping to develop and extend these links.

Attended by Ministers Ed Davey and David Willetts, the conference also provided a venue for presenting UK-Japan agreements on climate change and energy, and in particular nuclear cooperation, including the announcement of new joint fund for nuclear safety research and an agreement between TEPCO FDEC and NDA & Sellafield Ltd.

The conference was a valuable opportunity to deepen and develop collaboration and cooperation between universities of the two countries. Participants agreed the Joint Announcement at the Conference which pledges to hold regular follow-up meetings regarding both research and education in order to continue and develop these areas.

Further information: http://www.uk.emb-japan.go.jp/en/event/2014/05/uni.html

PRESIDENTIAL SCIENCE AND INNOVATION POLICIES: WHERE ARE WE NOW?

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The words "hope" and "change" were pervasive in Barack Obama's 2008 Presidential campaign, and they are part of the narrative in today's America. Although not typically a high-profile campaign issue, science enjoyed a relatively strong stature in 2008. Of the science issues that he discussed during the campaign, three have taken a place at the head of the class, and in some cases, with significant capital investments.

CLIMATE CHANGE

Climate change was the first scientific issue that the Administration addressed, with the announcement of three-high level appointments even before Obama's 2009 inauguration. These had backgrounds in climate research and signalled a shift from the Bush administration, whom many viewed as indifferent to such issues. The trio of John Holdren, Science Advisor to the President; Jane Lubchenco, Administrator of the National Oceanic and Atmospheric Administration (NOAA); and Nancy Sutley, Chair of the White House Council on Environmental Quality, gave greater visibility to climate research and policy.

In 2009, the Administration strongly supported the Congressional initiative to begin a National Climate Service (NCS) within NOAA, similar to the National Weather Service, which would provide climate data free of charge and to issue weather forecasts. Contrary to the Administration's expectation, the effort failed due to Congressional refusal to approve the budget for NCS for FY 2012.

The NCS's setback was not terminal. In 2013, the Administration set its direction of travel on climate policy with the Climate Action Plan. The CAP is a high-level policy document which contains one research-relevant section. This lays out action items for the US government that ensure the United States is prepared for the impacts of climate change. Notably, the CAP does not call directly for increased spending, but does recommend significant coordination among federal agencies in areas like resilience and green buildings.

OPEN DATA

Open data was the second scientific issue that the Obama Administration focused on with the appointment in early 2009 of Aneesh Chopra and Vivek Kundra, Chief Technology Officer and Chief Information Officer. This marked the first time either position existed on a national level. Kundra was tasked with

launching, publicising, and maintaining data.gov – an ambitious attempt to create a repository of data generated with federal funding, which the public could then use to create new applications and technologies. Within a year, over 250,000 data sets had been uploaded. Despite initial operational hiccups, the utilisation of the dataset has gained national acceptance. Recently, the government has utilised the data to run apps challenges, including the particularly successful International Space Apps Challenge, which is sponsored by NASA and has nearly 100 teams participating on six continents in the 2014 event.

As the age of big data dawns, the Administration is taking every step to ensure that the United States is not left behind. It created the National Information Technology Research and Development (NITRD) as the coordinating office for interagency big data group, in which over 20 federal agencies participate. NITRD coordinates over $4 billion in research funding.

ADVANCED MANUFACTURING

Advanced Manufacturing was the third top priority issue. Building on the momentum the Bush Administration and Congress initiated with the America COMPETES Act in 2007 and again in 2010, the President announced the Advanced Manufacturing Partnership in June 2011. In the three years since, the initiative has developed into a network of manufacturing centres coordinated by the National Institute of Standards and Technology (NIST). Congress has not funded the National Network for Manufacturing Innovation (NNMI), but consortia of businesses and universities have been rolled out, each with its own research portfolio. The most recent round includes the 60-member Lightweight and Modern Metals hub, headquartered in Michigan, and the Digital Manufacturing and Design Innovation Institute, headquartered in Chicago. Several new centres will be announced in the coming months.

The AMP's major accomplishment to date has been the coordination of several government-funded manufacturing initiatives, including the 25-agency National Nanotechnology Initiative, the National Robotics Initiative, and the Materials Genome Initiative.

TRANSLATING WORDS TO ACTIONS

Many of the Administration's science-based proposals have struggled to get off the ground, chiefly because of a lack of funding and Congressional reluctance to fund something it did not create – this has been the case with all three initiatives named here. Over the past several years, Congressional appetite for large, sweeping initiatives has lessened, especially at the Committee level, and several Congressional science champions from both parties have retired. With midterm Congressional elections in 2014 and the 2016 Presidential election looming, little time remains to create and implement broad policies in science or other issue areas. Areas like open data and advanced manufacturing will continue to deliver results for the President's priorities. We in the UK's Science and Innovation Network will continue to champion and promote UK's science and innovation agenda in Washington and across the whole of the United States.

TELLUS

Meeting of the All-Party Parliamentary Group for Earth and Environmental Sciences on Tuesday 13 May

VALUING AND REALISING OUR NATURAL CAPITAL ASSETS – TELLUS ALL ABOUT IT

Andy Howard
British Geological Survey

Co-authors from Geological Survey of Northern Ireland:

Mike Young

Marie Cowan

The 2011 White Paper *'The Natural Choice: Securing the Value of Nature'* commits us to be the first generation to leave the natural environment in a better state than it inherited. The Tellus projects – a series of multi-partner environmental survey and research projects carried out in the UK and Ireland – have delivered innovative data and research that have successfully shaped policy and stimulated new investments in mineral, energy and infrastructure resources. On 13 May, at a meeting of the All-Party Parliamentary Group for Earth and Environmental Sciences, chaired by Martin Caton MP, Andy Howard, Mike Young and Marie Cowan explained how the Tellus Projects are transcending their original goals to contribute to the measuring and realising the value of our natural capital assets, and to deliver the world-leading research needed to inform decisions and measure success in meeting the White Paper objectives.

In the early 2000s the geological surveys of Britain, Northern Ireland, the Republic of Ireland, and Finland joined forces to design a Resource and Environmental Survey for Ireland (RESI). RESI's purpose was not only to provide new data to stimulate exploration investment and licensing in minerals and energy resources but also to inform research, regulation and management of other natural capital