



A Scientist in the Foreign Office?

Robin Grimes

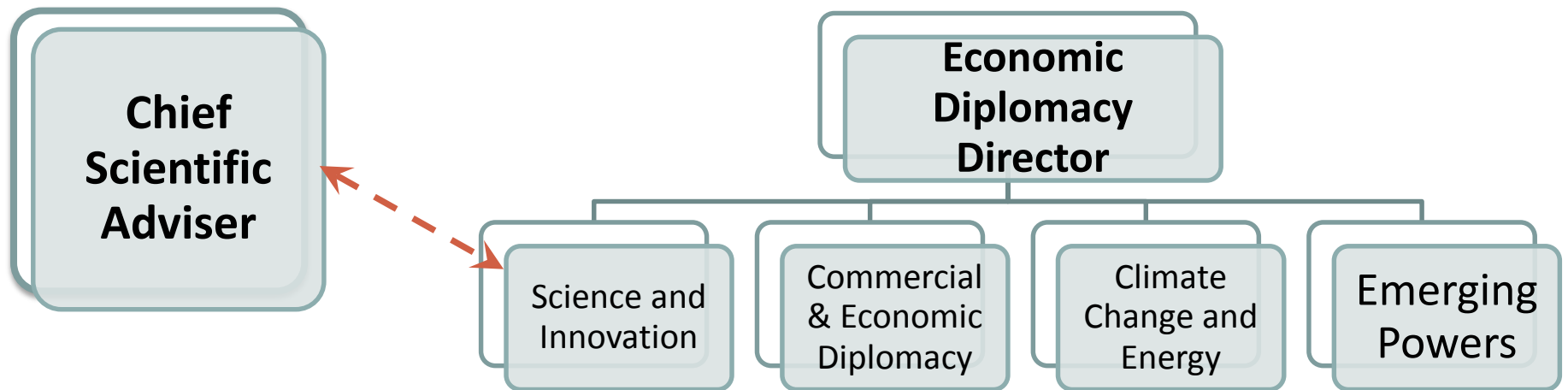
**MoD Nuclear Chief Scientific Adviser
& Imperial College London**



Within the FCO, the Chief Scientific Adviser & Economic Diplomacy Directorate are the S&I focal points



- The CSA can be called upon to look across the full range of FCO policy.
- Ensures that FCO policy is informed by the best available science & has access to appropriate science networks.
- Provides advice to the Foreign Secretary and Ministers.



The Policy-Science Nexus

Three categories associated with: policy makers, policy implementers and the public. One enabling cross cutting theme: understanding the effectiveness of activities.

- **Science and Policy Makers**

- Standing groups, Enquiries
- Activities of Science Councils
- Arm length groups, Academies

- **Science Across Government**

- Governmental science advisors and groups
- Government Laboratories (e.g. JRCs)
- Innovation organisations (e.g. Fraunhofer),

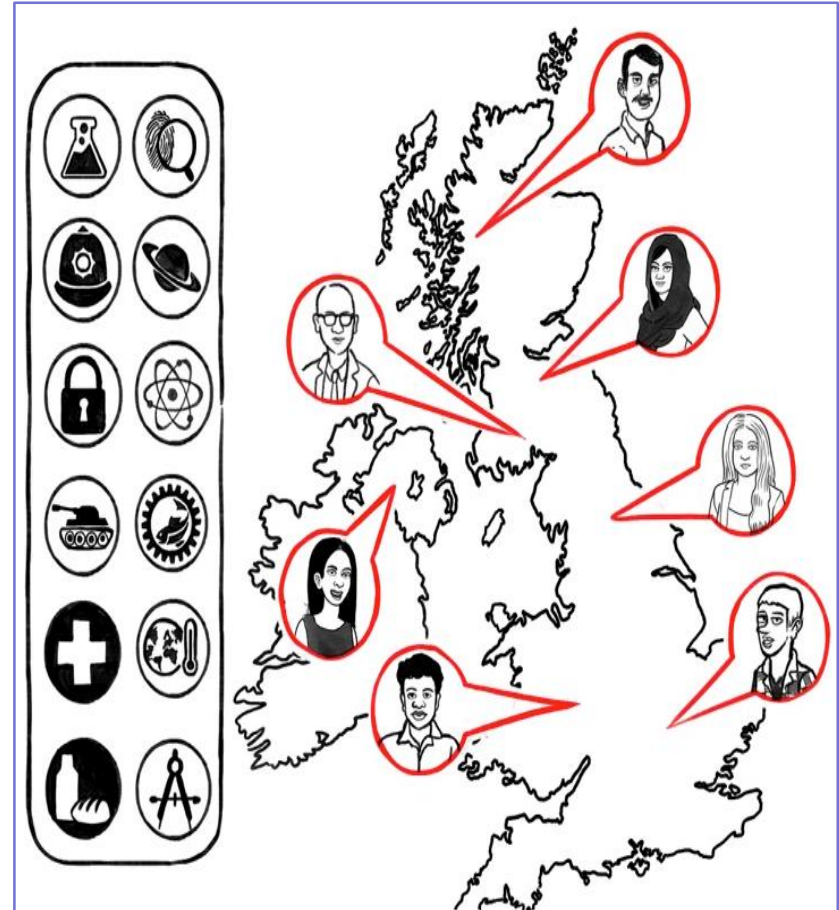
- **Science & the Public**

- Science Media, Science journalists, Universities, School science.



Who we are & what we do

- 1 of 5 Civil Service analytical professions
- Over 10,000 Civil Servants
- Diverse skills, knowledge & expertise
- Located across the UK
- Intelligent customer & supplier
- Global challenges: poverty, disease, climate change, crime & terrorism



A network of Chief Scientific Advisers



Prof Patrick
Vallance
GCSA



Prof Dame
Sally Davies
CMO



Prof Carole
Mundell
FCO



Prof Ian
Boyd
Defra



Prof
Chris Whitty
DH



Prof Joe Butler
DCMS



Prof Robin
Grimes
MoD (nuclear)



Prof Phil
Blythe
DfT



Prof
Charlotte Watts
DFID



Prof John Aston
Home Office



Dr Tim Leung
DfE



Prof Mike Short
DIT



Prof Anthony
Finkelstein
National Security



Prof John
Loughhead
BEIS



Prof Stephen
Belcher
Met
Office



Prof Andrew
Curran
HSE



Prof Peter
Freer Smith
Forestry C.



Prof Guy Poppy
Food Standards
Agency



Prof Sheila
Rowan
Scotland



Prof Peter
Halligan
Wales



Prof Bernadette
Hannigan (interim)
Northern Ireland

CSA leadership in a specific area: nuclear



- Led the UK delegation to the 58th and 60th General Conferences
- Chaired the UK-Japan Nuclear Dialogue last 5 years
- Promoted the work of the CTBTO and GICNT

- Designed the UK nuclear community international research engagement strategy
- Chair of the UK Nuclear Academic Discussion Meeting



Scientific Advisers in other Foreign Ministries

Many countries have science advisors,
only a few are based in Foreign Ministries

- USA – Vaughan Turekian
- Japan – Teruo Kishi
- New Zealand – Peter Gluckman
- Senegal - Aminata Sall Diallo
- Poland - Marek Konarzewski
- Oman - Yousuf AL-Bulushi
- Watch this space

(FMSTAN)

LDSC – London Diplomatic Science Club

Imperial College
Event – explaining to
the LDSC how new
materials are
transforming society
and describing
opportunities for
collaboration with
UK universities.



Science & Innovation Network

Around 100 SIN Officers in 39 countries and territories



- Cover all aspects of science & innovation working together on SIN strategy.
- Both UK based staff and locally engaged.
- Work with Newton Officers, DFID and UKRI (in UK, China & India).
- Facilitate inward missions of UK scientists into their countries and outward missions to the UK.



Science and innovation partnerships that promote the economic development and welfare of developing countries.

People: fellowships, mobility schemes and joint centers

Programmes: research collaborations on development topics

Translation: innovative solutions on development topics

£735m over seven years (2014-2021) + partner funding



Innovate UK



What is Science Diplomacy?



Science in diplomacy

Science informs policy objectives by providing robust evidence or access to people & networks – *science supports diplomatic competencies*

Science for diplomacy

Science as a beach-head, leading to improved political, social and economic links, builds confidence – *science builds diplomatic relations*

Diplomacy for science

Helping scientists to achieve their goals – *diplomacy supports science*

The Science of diplomacy

Understanding what and how science diplomacy works – *the discipline*

David S. Reardon, Science & Diplomacy, February 2010 “New frontiers in science diplomacy” RS Policy document 01/10



SCIENCE & DIPLOMACY

A quarterly publication from the AAAS Center for Science Diplomacy

- Mental Health Diplomacy: Building a Global Response**
Vaughan C. Turekian, Allen Moore, and Mark M. Rattnick
- The UK Response to Fukushima and Anglo-Japanese Relations**
Robin W. Gromes, Yuki Chamberlain, and Atsushi Oku
- Stability and Peace in the Arctic Ocean through Science Diplomacy**
Paul Arthur Berkman
- A Trilateral Partnership for Supporting Research and Relationships**
Kathleen Hufnagel, Kerri-Ann Jones, and Fabian Moniz
- Women as Agents of Positive Change in Biosecurity**
Kathleen Danskin and Dana Perkins
- Epidemics and Opportunities for US-Cuba Collaboration**
Margarita Jimenez
- Protecting the Sargasso Sea**
Daniel E. Shaw

WWW.SCIENCEDIPLOMACY.ORG

WHY SCIENCE IS IN THE DIPLOMATIC TOOL KIT



Professor Robin Gromes and Dr Emma Henshaw

societies, with a particular interest where there might not be other mechanisms for engagement at an official level. It is an evolving concept but it applies to the role of science, technology and innovation in informing foreign policy objectives by supporting scientific advice (science in diplomacy), facilitating international science cooperation (diplomacy for science), and using science cooperation to improve international relations (science for diplomacy).

scope of the framework programme aligns with UK's objectives to ensure UK scientists can access such funds.

Science for diplomacy is especially important when normal diplomatic relations are difficult or even impossible. The scientific community often works beyond national boundaries so it is well placed to support forms of diplomacy that do not depend on traditional alliances and can be an important source of "soft power". This was recognised in a 2014 House of Lords report which recommended that the UK Government should identify ways in which science can inform diplomacy. Scientists also provide longevity, developing and maintaining international relationships, complementing the shorter-term personal relationships of diplomats and politicians. The international relationships of scientists at IPRC know are excellent examples of this.

UK excellence in research is acknowledged overseas¹ and as such the UK is in an especially good position to use science for diplomacy. It enhances our national reputation, opens doors to influence trade and investment, and can help with power projection when used appropriately. Further benefits arise, such as when other nations use our scientific structures or standards, making them our natural trade partners, or when overseas students, who are always sought out by the best people with whom to collaborate, harbour academics who increasingly international in their science and teach programmes such as the Newton Fund² and the European Commission Framework programmes³.

Science diplomacy has been defined as "the use and application of science cooperation to build bridges and enhance relationships among

learned societies have played a particularly important role. The Royal Society is a signatory to its Commonwealth Science Conference (in November 2014), in working with the Commonwealth Secretary General to put science at the heart of the Commonwealth agenda. The Royal Academy of Engineering is currently supporting an academic industry exchange scheme with the University of Zimbabwe as one of the hubs.

Academics can work in places where diplomatic relations are fragile. The Royal Society breaks arrangements by which scientists to monitor Mount Pinatubo, responsible for one of the largest eruptions in history.

The British Council has commented that science and research diplomacy is one of the most powerful tools for building trust and understanding with the local and understanding with the UK. The UK is in an especially good position to use science for diplomacy. It enhances our national reputation, opens doors to influence trade and investment, and can help with power projection when used appropriately. Further benefits arise, such as when other nations use our scientific structures or standards, making them our natural trade partners, or when overseas students, who are always sought out by the best people with whom to collaborate, harbour academics who increasingly international in their science and teach programmes such as the Newton Fund² and the European Commission Framework programmes³.

WHAT IS THE UK DOING?
There are many examples of UK institutions contributing to science for diplomacy. Our

WHAT IS SCIENCE DIPLOMACY?

In addition to the traditional foreign policy issues of security, trade and international relations, there is a host of new challenges, including food and energy security, health (SARS, anti-microbial resistance, AIDS), national disaster management and the environment (climate change). These demand require new ways of working, including science diplomacy.

Science diplomacy has been defined as "the use and application of science cooperation to build bridges and enhance relationships among

Why Science is in the Diplomatic Tool Box

Recent Publication

SCIENCE & DIPLOMACY

A quarterly publication from the AAAS Center for Science Diplomacy



P.D. Gluckman, V. Turekian, R.W. Grimes, and T. Kishi, "Science Diplomacy: A Pragmatic Perspective from the Inside," *Science & Diplomacy*, Vol. 6, No. 4 (December 2017). <http://www.sciencediplomacy.org/article/2018/pragmatic-perspective>

This copy is for non-commercial use only. More articles, perspectives, editorials, and letters can be found at www.sciencediplomacy.org. SCIENCE & DIPLOMACY is published by the Center for Science Diplomacy of the American Association for the Advancement of Science (AAAS), the world's largest general scientific society.

Science Diplomacy: A Pragmatic Perspective from the Inside

Peter D. Gluckman, Vaughan C. Turekian, Robin W. Grimes, and Teruo Kishi

Two lenses have typically defined international science cooperation: advancing knowledge and ensuring scientific capability, or advancing broader national interests. It is the latter perspective, advancing both direct and indirect national interests, that the evolving concept of science diplomacy primarily encompasses. This is also reflected in the creation by a growing number of foreign ministries of formal links to the science system by appointing science advisors or embedding science and technology (S&T) units within ministries. While there is no sharp distinction between the two spheres, they are often administered through different agencies and different funding streams, which can cause potential conflicts between—and confusion within—agencies. Indeed, better coordination could resolve such issues, while enhancing the value generated by such endeavors.

The concept of science diplomacy was given contemporary emphasis and currency by a meeting held in 2009 at Wilton House, United Kingdom, sponsored by the Royal Society, (London) and the American Association for the Advancement of Science (AAAS), publisher of *Science & Diplomacy*.¹ The most influential outcome of that meeting was the development of a taxonomy for science diplomacy that has come to be widely used:

Author information may be found at the end of the article.

Turekian V., Gluckman P. D.,
Kishi T. & Grimes R. W.

“Science Diplomacy: A
Pragmatic Perspective from
the Inside”

Science & Diplomacy, **6**,
(2017).

Why Science Diplomacy?

Science in the Process

Science Delivered with a Diplomatic Context

The Science of Diplomacy

Science in Diplomacy

Diplomacy for Science

Science for Diplomacy

International Development

Security

Prosperity

Environment

Resources

Healthy Living

Actions that:

- Advance a country's needs
- Address cross-boarder interests
- Meet global needs and challenges

Common National Concerns (Interlinked)

Minerals



Food production



Climate change



Conflict & Terrorism



Demographics is a driver

Ecosystems



Water resource



Health & development



Energy security & supply





Government
Office for Science

Key issues that drive Whitehall agenda



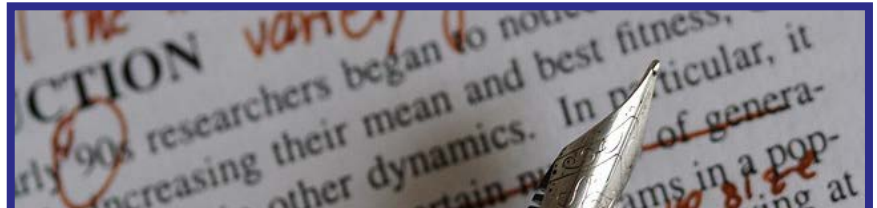
Infrastructure



Emergencies



The Economy

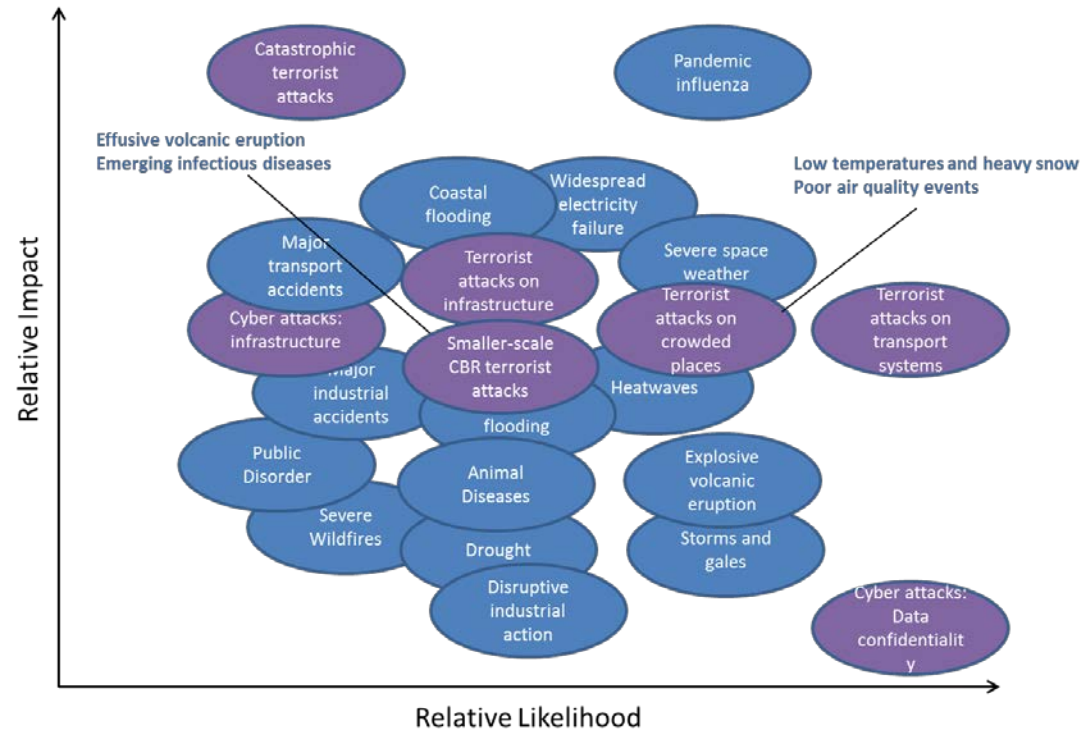
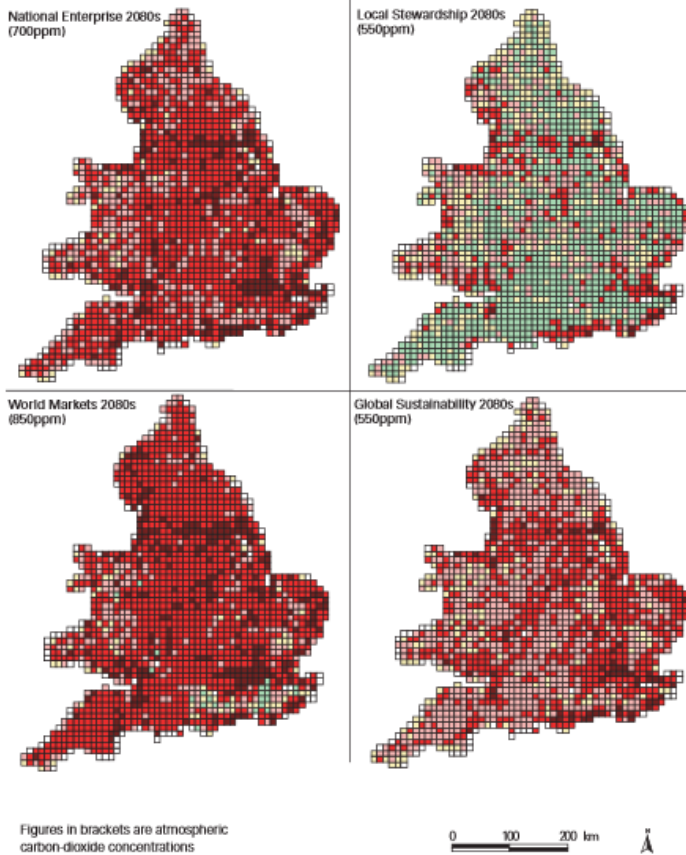


Science Policy





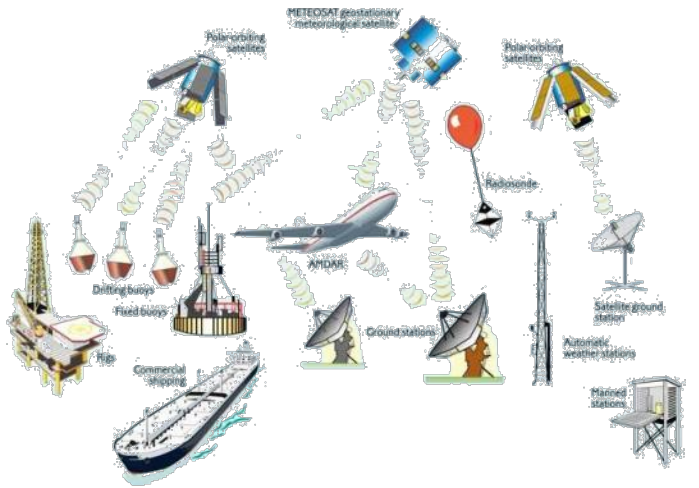
Science Advice: Mitigating Risk



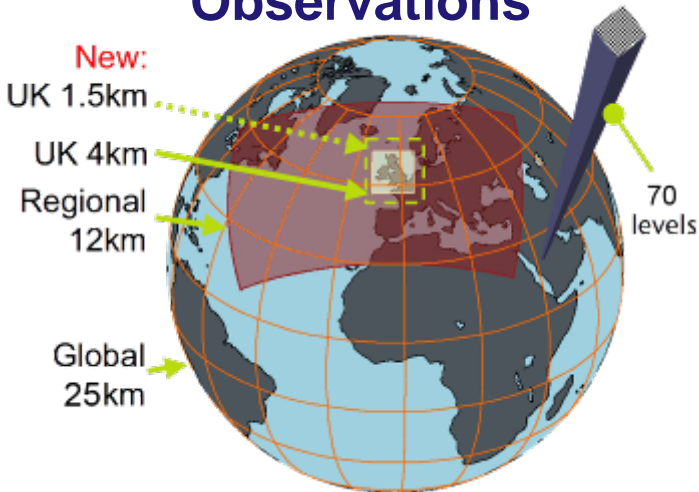
Foresight – Future of Flooding

The National Risk Register

Our ability to respond to disaster risk relies on a scientific value chain



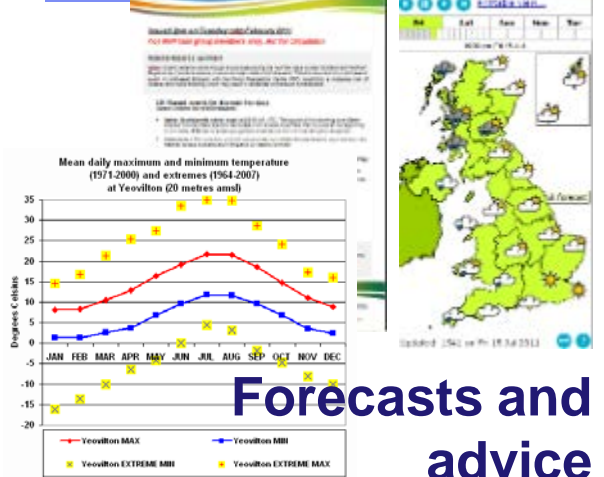
Observations



Forecast model output



Interpretation, Risk Analysis & Communication



Forecasts and advice

UK-Spain Science Diplomacy & Science Advice

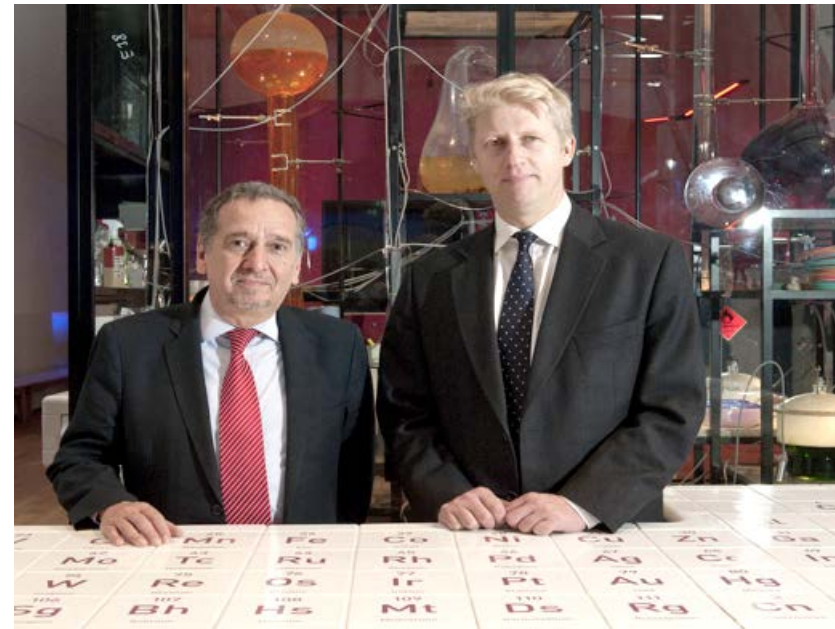


- 2013 - 2017 Policy influencing & raising awareness: senior visits (ES Minister to the UK), media, HMA and SIN engagement and relationship building on the ground.

- 2016 Spain builds a network of S&I officers.
- 2017 UK/Spain Science Policy Advice event – FCO, POST & Royal Society engagement.
- 2018 - Spain aims to build a similar structure, including POST.
- A similar science policy context will lead to more bilateral collaboration.



Science Diplomacy with Argentina:





**UK—RUSSIA
YEAR OF SCIENCE
AND EDUCATION/2017**

- Agreed between Foreign Secretary Johnson & Russian Foreign Minister Lavrov November 2016
- Officially launched on 27 January in Moscow
- Public celebration of science links including lectures & events focused on hot topics or policy challenges:
 - high-level roundtable on antimicrobial resistance
 - 100 Years of Black Holes
 - ‘Science Café’ on cell physiology
 - Geological Institutes meeting
 - Bilateral Paleontology workshop





Government
Office for Science

Giving Science Advice: The ground rules

1. Clear roles and responsibilities
2. Independence
3. Transparency and openness



Government
Office for Science

Guidance

Principles of scientific advice to government

Published 24 March 2010

<https://www.gov.uk/government/publications/scientific-advice-to-government-principles>

Championing science diplomacy



Foreign &
Commonwealth
Office

Questions?

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