

Round-Table Discussion

Science Advice in a Crisis

Held at The Royal Society on 1st November, 2011

Chair: **The Rt Hon the Lord Jenkin of Roding Hon FRSE**
Chairman, The Foundation for Science and Technology

Speakers: **Sir John Beddington CMG FRS FRSE**
Government Chief Scientific Adviser, Government Office for Science
Professor Patrick Cunningham
Chief Scientific Adviser for Ireland, Government for Ireland

The Rt Hon the Lord Jenkin of Roding Hon FRSE, President of The Foundation for Science and Technology, opened the discussion. He drew attention to the Euroscience conference to be held in Dublin next July¹, and welcomed Irish participation to the discussion.

SIR JOHN BEDDINGTON, the British Government's Chief Scientific Adviser, opened the discussion. When and how best scientists should advise governments on scientific issues at times of crisis was a perennial problem. He gave as examples the incidence of foot and mouth disease in 2001, the swine flu epidemic of 2009, the eruption of the Icelandic volcano Eyjafjallosjökull in 2010, and the earthquake followed by the tsunami and nuclear accident at Fukushima in 2011. In such cases governments needed urgent, balanced and practical scientific judgment on what should be done. There were obvious risks. In the cases he had mentioned, action on foot and mouth disease and swine flu had been fast and successful, there was a lack of appropriate action and international regulation on the effects of the volcanic eruption; and the risks - so far as British interests were concerned - over the Fukushima events were very small. We needed the right mechanisms for assessing risks and giving advice, especially to the right people, and bringing in the wider community. Here he had made progress as Government Chief Scientific Adviser, setting up subgroups for specific purposes, developing the Foresight Programme, and cooperating with such bodies as the Parliamentary Science and Technology Select Committees.

PROFESSOR PATRICK CUNNINGHAM, Chief Scientific Adviser for Ireland, strongly welcomed the development of the scientific dialogue between Britain and Ireland. Irish investment in science had

greatly increased. In both countries it had amounted to around 2% of GDP. The spend on science might not be as good as Switzerland and the Scandinavian countries, but the Irish and British system of Chief Scientific Advisers across government was a model for others. There were obvious problems in conveying scientific problems to ministers and civil servants and securing the right access. The crisis in 2008 that had arisen in Ireland over the pig industry and dioxins was a good illustration of what was necessary to identify a problem, track down its causes, and take the necessary action. In this case the Government had acted pretty swiftly, albeit at high cost, but the cost would have been less if action had been taken sooner. A major current problem was over bovine tuberculosis transmitted by badgers, and here there were strong views on all sides. Perhaps at least part of the answer lay in vaccination. Then there were wider issues: for example Irish dependence (around 90%) on external sources of energy, development of renewable sources, and controversy over a pipeline between the Republic and Northern Ireland. Still wider were such global problems as human proliferation, and how to feed increasing numbers of people. He looked forward to developing cooperation between our two countries before and at the Euroscience Conference in Dublin in 2012.

In discussion the following points were made:

- It was often difficult to assess risks and convey balanced advice. Alarmism did not help. Some scientists knew how to connect with policy makers and others didn't. Even those who did sometimes had to cope with resistance from vested interests and a sceptical media.
- Access to the right people at the right level was essential. Some of this depended on good

¹ ESOF 2012 (Euroscience Open Forum), 11-15 July, 2012 in Dublin

personal relationships. We had to make good use of such mechanisms as COBRA (in the Cabinet Office), and the Met Office (now owned by the Department of Business and Skills), and the Parliamentary Science and Technology Select Committees.

- The presentation of scientific problems in the media was a particular problem. It was sometimes hard to avoid making judgments which suggested more certainty than was justified. Scientists could be wrong as well as right. Better use should be made of universities and research generally.
- The relationship between the physical and social sciences could be tricky. Those concerned sometimes had to cope with believers and campaigners, and the whims of public opinion.

- Scientists had to do better in explaining themselves, and make better use of data analytics and intelligent technology, taking due account of history. They should also make themselves more available to others, and be ready to take initiatives, for example over energy and its storage. This meant ability to challenge policy outside the strictly scientific field: for example over transport policy, or security issues.
- Although scientists should improve their cooperation with their European counterparts, they had to recognize differences in approach and philosophy. There should be stronger focus on work within European institutions, including the European Parliament. Again the agenda should be broad and wide.

Sir Crispin Tickell GCMG KCVO