Chief Scientific Advisers

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Introduction

Over recent years a number of governmental bodies within the UK and EU have appointed Chief Scientific Advisers to provide policy-makers with advice on the scientific evidence base for Policy.

The Chief Scientific Adviser for Wales (CSA for Wales) fulfils such a role for the Welsh Government and acts as Head of Profession for science and technology staff within the Welsh Government[1].

Across the UK Government each individual department has appointed a Chief Scientific Advisor (CSA). CSAs provide ministerial advice on the evidence base for policy decisions and, amongst other science-related roles, seek to ensure that departmental decisions are based on the best science advice available.

Comparative information on the roles and remits of these different advisory roles across the UK and in the EU is set out in this note.

[1] The Welsh Government, ***Chief Scientific Adviser***, (website) [accessed 6 June 2014]

The science advisory process: Wales

The CSA for Wales[2] reviews the scientific advice provided to the Welsh Government and is tasked by the Government with ensuring that Science, Technology, Engineering and Mathematics (STEM) subjects feature prominently in government policy. The CSA for Wales also acts as Head of Profession for science and technology staff inside the Welsh Government.

The CSA for Wales chairs the Science Advisory Council for Wales (SACW) which comprises a group of experts from the Welsh STEM community[3]. Members of the SACW are unpaid and report directly to the CSA for Wales, having no statutory or financial responsibilities[4]. The Science agenda in Wales and the responsibilities of the CSA for Wales is outlined in the Welsh Government's Science for Wales document[5].

The Welsh Government state that the responsibilities of the CSA for Wales are to[6]:

– promote the STEM subjects;

– lead the scientific effort within the Welsh Government;

– review scientific advice provided to the Welsh Government;

– engage with the wider scientific community;

– bring together businesses, the Welsh Government and universities for their mutual benefit and to expand the Welsh economy; and

[2] Presently Professor Julie Williams
[3] Welsh Government, ***Chief Scientific Adviser for Wales***, (website) [accessed 9 June 2014]
[4] Welsh Government, ***Science Advisory Council for Wales***, (website) [accessed 9 June 2014]
[5] Welsh Government, ***Science for Wales: A strategic agenda for science and innovation in Wales***, 2012 [accessed 9 June 2014]
[6] Welsh Government, ***Chief Scientific Adviser for Wales***, (website) [accessed 9 June 2014]

– act as Head of Profession for science and technology staff in Wales and particularly in the Welsh Government.

The science advisory process: UK Government

The UK government system for science and engineering advice comprises a network of departmental CSAs and the Government Chief Scientific Adviser (GCSA). The devolved administrations are supported by their own CSAs. Departmental CSAs and the GCSA do not have a formal relationship with the devolved administrations, although they may provide advice through communication with the administrations' representing members[7].

The Government Chief Scientific Adviser

The GCSA[8] is primarily responsible for providing scientific advice to the Prime Minister and Cabinet Ministers and to advise government on specific aspects of policy relating to STEM issues[9]. This will often require the GCSA to consult with the CSAs and other experts in the relevant fields. The GCSA reports to the Cabinet Secretary but according to the UK Government will typically also have a close working relationship with the Science Minister and will engage with other Ministers depending on the issue at hand[10].

The GCSA is a civil servant and acts as head of the Government Office for Science (GO-Science) - a semi-autonomous office in the Business Innovation and Skills department (BIS)[11]. GO-Science collates information from across departments so as to provide the GCSA with up-to-date science information. GO-Science's overarching aim is to ensure that major government policy decisions are informed by the best quality science and engineering advice available[12].

Go-Science publishes the details of meetings of the BIS permanent secretary and GCSA with external organisations.

Departmental Chief Scientific Advisers

GO-Science states that the role of the departmental CSAs is independent of government and exists to challenge government to ensure that it makes full use of robust, relevant and high quality science and engineering evidence[13]. CSAs are selected on the basis of their authority and standing within their field and can be selected from academia, industry, the third sector or from within government.

The specific role of CSAs varies from one department to another; however, some of their responsibilities include[14]:

– the provision of advice to the Secretary of State, Ministers and policy makers in their respective department or devolved administration;

– to challenge the evidence base for departmental policies;

– provide oversight of departmental operations to ensure that policy makers consider relevant science and engineering evidence;

– responsibility for departmental science and engineering quality and capability; and

– adopt the Role of Head of Profession role for departmental science and engineering staff.

[7] House of Lords, ***The role and functions of departmental Chief Scientific Advisers***, 14 February 2014 [accessed 6 June 2014]
[8] Presently Professor Sir Mark Wallport
[9] Government Office for Science, ***CSAs and their officials - an introduction***, December 2011 [accessed 6 June 2014]
[10] *ibid*
[11] House of Lords, ***The role and functions of departmental Chief Scientific Advisers***, 14 February 2014 [accessed 6 June 2014]
[12] *ibid*
[13] Government Office for Science, ***CSAs and their officials - an introduction***, December 2011 [accessed 6 June 2014]
[14] *ibid*

Chief Scientific Advisers Committee (CSAC)

One of the main mechanisms by which CSAs deliver advice to the UK government is through the Chief Scientific Advisers Committee (CSAC). This is a cross-departmental committee with membership comprising the departmental CSAs, the CSAs from the devolved administrations, the BIS Director General of Science and Research, the Head of the Government Economic Service, and the Head of HM Treasury's spending team responsible for science[15]. The committee is chaired by the Government Chief Scientific Advisor (GCSA). The CSAC provides a network for discussion that is used to provide collective advice to the GCSA who can then relay this information to the UK Government[16].

Scotland and Northern Ireland

Chief Scientific Adviser for Scotland

The CSA for Scotland co-chairs the Scottish Science Advisory Council (SSAC), which is the highest science advisory body in Scotland and is independent of the Scottish Government. The CSA for Scotland takes forward advice and recommendations on science strategy and policy from the SSAC to Scottish Government Ministers and officials[17].

The SSAC's membership is drawn from across the STEM subjects and is fully independent of the Scottish Government. Appointments to the SSAC are made following public advertisement and a selection process. The work programme of the SSAC is decided by its members, although the Scottish Government may ask the council to consider certain issues[18].

[15] Government Office for Science, ***CSAs and their officials - an introduction***, December 2011 [accessed 6 June 2014]
[16] *ibid*
[17] ***Scottish Science Advisory Council***, (website) [accessed 9 June 2014]
[18] *ibid*

The Northern Ireland Executive

The Northern Ireland Executive currently does not have a CSA, although an interim member currently represents Northern Ireland on the CSAC[19]. The Executive outlined in the draft Northern Ireland Innovation Strategy that the position of CSA for Northern Ireland is to be created to coordinate science development across the Executive's departments and agencies[20].

Science in Europe

Science policy in the European Union (EU) is developed and implemented by the Commission's Directorate-General for Research and Innovation. Independent science advice and technical support is provided to the Commission's Directorates-General by the Joint Research Centre (JRC), which falls under the remit of the Commissioner for Research, Science and Innovation[21].The JRC has seven different scientific institutes, each with a different specialty - e.g. energy and transport, science and sustainability.

Further scientific advice, expertise and awareness of new science developments are provided to the Commission from the independent Scientific Committees. The committees are supported by the Secretariat of the Scientific Committees and are part of the Commission's Scientific Risk Assessment Advisory Structure[22].

The President of the European Commission announced intentions to appoint the first CSA to the European Commission on 15 September 2009 and the position was subsequently appointed on 5

[19] Government Office for Science, ***Chief Scientific Advisors***, (website) [accessed 9 June 2014]
[20] Northern Ireland Executive, ***Draft Innovation Strategy for Northern Ireland 2013 – 2025***, September 2013 [accessed 9 June 2014]
[21] European Commission, ***Joint Research Service***, (website) [accessed 10 June 2014]
[22] European Commission, Public Health, ***Scientific Committees***, (website) [accessed 10 June 2014]

December 2011[23]. The role of the Commission CSA[24] is to provide scientific advice directly to the President and provide regular updates on major scientific advancements[25]. The CSA also has responsibilities that include building relationships between the Commission and high level science-advisory groups and communicating the Commission's scientific values to build public confidence in science and technology[26].

A review of the CSA role

The Welsh Government has not as of yet undertaken a review of the CSA for Wales. At the UK level, however, the House of Lords Science and Technology Committee published an inquiry[27] into the role and function of CSAs in February 2012.

The report concluded that CSAs play a crucial role in providing science and engineering advice and evidence to inform Government policy and, therefore, their role should be strengthened.

However, the report also highlighted some obstacles which CSAs might come across, which included not being able to obtain access to key decision makers and being informed of government policy too late to provide robust advice and evidence.

The Committee also provided a number of recommendations, including that all CSAs are provided a seat on departmental Boards and given a formal role in policy submission sign-offs so as to ensure that they have oversight of their department's work.

Recommendations about the role of CSAs at the EU level have also recently been made by the EU's current Chief Scientific Adviser, Professor Anne Glover. Speaking at a briefing organised by Eurochambres, the Association of European Chambers of Commerce and Industry, the Commission CSA stated that whilst she had enjoyed considerable freedom in providing the Commission President with advice she had also faced challenges in disentangling scientific evidence from the "political imperative"[28]. She said:

> What happens at the moment – whether it's in Commission, Parliament or Council – is that time and time again, if people don't like what's being proposed, what they say is that there is something wrong with the evidence. So everybody blames the evidence and nobody is honest about the fact that in many cases, understanding the evidence is the best possible platform to make the logical extension into policy.

Professor Glover also stated that to increase transparency in the evidence-gathering process a special department at the Commission could be created with the role of assessing policy proposals against the evidence. This would allow stakeholders to investigate the reasoning behind policy proposals.

[23] European Commission, Press release, ***Appointment of Chief Scientific Advisor***, 5 December 2011 [accessed 10 June 2014]
[24] Presently Professor Anne Glover
[25] European Commission, Press release, ***Appointment of Chief Scientific Advisor***, 5 December 2011 [accessed 10 June 2014]
[26] *ibid*

[28] Euractiv, ***EU twisting facts to fit political agenda, chief scientist says***, (website) [accessed 11 June 2014]

Further information

For further information on **Chief Scientific Advisers**, please contact **Nia Seaton** (**Nia.Seaton@Wales.gov.uk**), Research Service.

See also:

List of other sources or websites which relate to this subject

– **UK Government, Chief Scientific Advisers**

– **Welsh Government, Chief Scientific Adviser for Wales**

– **European Commission, Chief Scientific Adviser**

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