

**Consultation on Science in Support of Marine, Environment, Rural Affairs and Related Policies of the Scottish Government**

**A Coordinated Agenda for Marine, Environment and Rural Affairs Science (CAMERAS) (2011-2016)**

**Response prepared by Dr Christine Knight on behalf of the ESRC Genomics Forum, March 2009**

The Genomics Policy and Research Forum is a novel ESRC-funded initiative dedicated to the development of links between social scientists and scientists working in the contemporary life sciences, and the connection of research in this area to policymakers, business, the media and civil society. The Genomics Forum is based at the University of Edinburgh and is part of the ESRC Genomics Network (EGN), a major ESRC investment spanning five of the UK's leading universities examining the development and use of the science and technologies of genomics.

**Summary of key points**

- The areas of Scottish based expertise that must be maintained to contribute evidence to key policy areas include relevant social science expertise, and the facilities and resources to support Scottish social science research must also be maintained (Questions 6 and 13).
- The Genomics Forum wholeheartedly agrees that knowledge exchange should be an explicit and integral aspect of the delivery of this Coordinated Agenda (Question 19).
- In the field of genomics and the life sciences, the Forum has responded to the challenges of delivering integrated evidence from a diverse range of sources to end users, and optimising the two-way flow of knowledge from science to policy and vice versa, by organising topic-specific multidisciplinary events in which scientists, social scientists and policymakers can discuss research and policy (Questions 20 and 22).
- The Genomics Forum as an organisation, and the activities we organise, provide innovative examples of good practice in two-way knowledge transfer on which new knowledge exchange mechanisms in Scotland might be based (Questions 23 and 24).

## **General comments**

The Genomics Forum very much welcomes the consistent attention paid in the consultation paper to the importance of integrating research and expertise from the natural and social sciences in the policy areas covered by this consultation. The consultation document asks:

- What facilities, resources and data do you think are important for Scotland to maintain? (Question 6)
- What existing areas of Scottish based scientific expertise should be maintained to contribute evidence to key policy issues? (Question 13)

We note that the consultation paper takes ‘science’ to include the physical and natural sciences, statistics, social science and economics (page 5 note 1). Hence in response to the above questions the Forum would simply stress that the areas of Scottish based expertise that must be maintained to contribute evidence to key policy areas include relevant social science expertise (Question 13), and the facilities and resources to support Scottish social science research must also be maintained (Question 6).

## **Delivery**

As noted above, the Genomics Forum’s mission is to develop links between social scientists, scientists, policymakers and industry in the areas of genomics and the contemporary life sciences. We have considerable expertise and experience in facilitating knowledge exchange and dialogue across a wide range of policy areas relevant to this consultation. The Forum wholeheartedly agrees that knowledge exchange should be an explicit and integral aspect of the delivery of this Coordinated Agenda (Question 19). The consultation paper goes on to ask:

- How can we continue to improve the integration of evidence from a diverse range of sources into forms that are accessible to end users? (Question 20)
- How can we ensure that the 2 way flow of knowledge from science to policy and from policy to the academic community is optimised? (Question 22)

The Forum has responded to both these challenges in the field of genomics and the life sciences by providing a neutral but critical space in which scientists, social scientists and policymakers can discuss research and policy. We facilitate both prospective activities (identification of policy challenges and research gaps, and discussion of planned research) and retrospective ones (reporting of research findings and policy impacts). Three examples of multidisciplinary workshops which the Genomics Forum has organised in areas relevant to this consultation are outlined below.

- ‘Genomics for Biodiversity, Conservation and Land Use,’ Natural History Museum, London, November 2006. This workshop examined the potential and limitations (technical, social and regulatory) of current genomic technologies for plant biodiversity conservation, with a view to informing and influencing UK policy. Speakers included Pete Hollingsworth (Royal Botanic Garden Edinburgh), Sandra Knapp (Natural History Museum), Georgina Mace (Imperial College London), Claire Waterton and Brian Wynne (Centre for Economic and Social Aspects of Genomics). The workshop brought together participants from a wide range of stakeholder groups, including Defra, the Joint Nature Conservation Committee (JNCC), Scottish Crop Research Institute (SCRI), Royal Horticultural Society and National Institute of Agricultural Botany (NIAB), as well as researchers from UK and German universities.
- ‘Bioenergy and the Bioeconomy,’ National Institute for Agricultural Botany, Cambridge, March 2007. This workshop mapped and explored changing stakeholder relationships, infrastructure and research needs emerging in relation to bioenergy development in the UK and abroad. Speakers included Mike Colechin (E.ON UK), Steve Critchley (Stewart Thermal Ltd), Adrian Ely (University of Sussex), Markku Lehtonen (University of Sussex), Stephan Slingerland (Clingendael International Energy Programme, Netherlands), Gail Taylor (University of Southampton) and Tony Weighell (JNCC). Participants also included representatives from the BBSRC, Royal Agricultural Society, National Farmers’ Union and Environment Agency, as well as researchers from the ESRC Genomics Network.
- ‘Plant Breeding and Intellectual Property,’ Genomics Forum, Edinburgh, June 2008. This workshop considered whether the current European Intellectual Property Protection regime for plants stimulates or impedes investment and innovation, and asked: what changes in the regime might promote innovation in plant breeding consistent with long-term socioeconomic and environmental goals? Speakers at this workshop included Mike Adcock (University of Durham), Bernard Le Buanec (International Seed Federation), Steve Hughes (ESRC Centre for Genomics and Society) and Wayne Powell (NIAB). Participants attended from Defra, the Scottish Agricultural College (SAC) and a wide range of UK universities.

Meetings such as these bring together evidence and expertise from diverse sources and stakeholders and deliver them to end users in a flexible workshop format that allows ample opportunity for discussion and dialogue (Question 20). The multidisciplinary format of these events also facilitates knowledge exchange from science (including social science) to policy and vice versa (Question 22). In addition to such meetings, the Genomics Forum runs a wide range of innovative programmes and activities which contribute to both these objectives. These include multidisciplinary networks (for example, the Scottish Healthcare Genetics Public Engagement Network), public consultations (such as the Citizens’ Inquiry into the Forensic Use of Genetic Information) and festival events (for instance, as part of the Edinburgh International Science Festival, Book Festival and Festival of Politics).

Finally, the consultation document asks:

- How can we ensure that the 2 way flow of knowledge from science to policy and from policy to the academic community is optimised? (Question 23)
- Are there science delivery models which could provide examples of good practice for Scotland to follow? (Question 24)

As detailed above, the Genomics Forum as an organisation, and the activities we organise, provide innovative examples of good practice in two-way knowledge transfer. The Forum's experience indicates that knowledge transfer is greatly facilitated by the establishment of intermediary organisations such as the Forum itself, with explicit responsibility for building networks and promoting exchange between scientists, social scientists, policymakers and other stakeholders in key areas of science-based policy. Suitably adapted, a similar institution might prove invaluable in helping to facilitate a coordinated agenda for marine, environment and rural affairs science in Scotland.

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