A COORDINATED AGENDA FOR MARINE, ENVIRONMENT AND RURAL AFFAIRS SCIENCE (CAMERAS) (2011-2016)

University of Aberdeen Rowett Institute of Nutrition and Health
Greenburn Road
Bucksburn
Aberdeen
AB21 9SB

Consultation Questions

Question 1: Do you agree that the two broad categories of 'Local Responses to Global Change' and 'Optimising the Potential of Scotland's Natural Assets' are helpful in providing an overlying structure to the Co-ordinated Agenda?	Yes, These are extremely broad themes that reflect the challenges every country has to confront over the next few years – namely how to proactively and reactively respond to a dynamic and changing world and at the same time protect the nation's self interests. As overarching policy issues they are appropriate, although they imply the potential to cover many things outwith the RERAD agenda.
Question 2: Are the descriptions of these set out in Section 3 (and Annex 3) comprehensive?	No, The descriptions are high level and thus as a consequence are rather indefinite. It is difficult to argue against them. It is only possible to answer whether they are comprehensive when the details of what is intended are made clearer. One high level issue that seems missing is food security.
Question 3: Do these cover the major policy challenges where science can contribute as you see them?	No, Same answer as to question 2. However in the area of diet, food and health, the linkages between policies relating to food (eg Food and Drink Policy) and health (eg Obesity, Health inequalities, ageing) are not clearly identified or explored.
Question 4: Are they likely to remain broadly relevant over the longer time horizon (well beyond the 2016 focus of this Coordinated Agenda)?	Yes, Yes – see answer to question 1.
Question 5: Do you agree with the description of support for the	Yes,

National Capability Theme set out in Section 3 (and Annex 3)?	
Question 6: What facilities, resources and data do you think are important for Scotland to maintain?	With the strong emphasis on food and health as part of the Scottish Food and Drink Policy, and also the description of opportunities for science under 'Optimising the potential of Scotland's Natural Assets', the capability to undertake controlled human nutrition studies is a prerequisite for such work. Arguably the Rowett Institute for Nutrition and Health at the University of Aberdeen, has the best facilities for such work in the UK. With the investment in new facilities, in part with funding support from RERAD, this is a National Capability that must continue to be supported in the future, as there is no point in conducting food-related research oriented towards improved human health without it. RINH also provides unique national and UK capability in areas such as anaerobic microbiology that are relevant to human health, animal nutrition and the environment.
Question 7: Are there other resources that Scotland needs to acquire to support future policy development?	Yes, Policy implementation in the food and health area requires that the food industry is able to engage. The proposal by Scottish Enterprise for a Scottish Food and Health Innovation Centre that provides an interface between research and the food producing industries is timely.
Question 8: Have we correctly identified the key policy issues and the associated scientific opportunities in Section 3?	No, A major issue is the relationship between diet and health. If we get this right, this will have major economic benefits to Scotland, by improving the health and well being of the people of Scotland and the health-promoting qualities of Scottish food products intended for the export market. This is the subject of numerous policy documents, ranging from Scottish Food and Drink Policy to policies on Obesity. The CAMERAS document

	highlights the importance of addressing food production, food choice and health. However this is a complex policy area that transcends agri-food policy and requires true cross-directorate (ie RERAD and Health) consideration. Without this approach then both the policy issues and associated scientific opportunities will be compromised. This need to transcend traditional boundaries to be able to tackle major policy issues relating food (diet) and health is not made clear in the document.
Question 9: Are there additional issues that should be included?	Yes, Changing demographics is mentioned, but the real impact is on the increasingly aged populace of Scotland. Keeping an older generation healthy is going to be increasingly important. Once again food must be a key component in this strategy.
Question 10: What do you think will be the most important influences on Scotland's future in the Marine, Environment, Rural Affairs and related areas?	a.Economic sustainability of Scotland's agri-food industry in the face of global competition and climate change. b.Food security as a result of factors affecting both local and global food production and trade. c.Competing demands for land currently used for food production d.The need to control pollutants of agricultural and urban origin
Question 11: Why do you think these are important?	We all require food and we put at risk our ability to produce food at our peril. The Second World War provided a strong lesson in the need for national food security. Given the potential impact on agriculture of trade and commodity prices, climate issues and political stability of food producing nations, it is important that we maintain a thriving agri-food industry in Scotland and the rest of the UK.
Question 12: Are there other scientific opportunities which should be highlighted?	Yes, Research into how to produce food which is healthy is vital to the indigenous food industry in Scotland.

	Production of healthier foods, and defining healthier diets, is at the forefront of the strategies of almost all food manufacturers today. Support for research in this area has the potential to contribute to economic growth through both the development of the Scottish Food and Drink sector and enhancing inward investment in this area.
Question 13: What existing areas of Scottish based scientific expertise should be maintained to contribute evidence to key policy issues?	Scotland has a strong life science base within its Universities, and within its Institutes it has additional strength and depth in areas such as nutrition, food production and zoonotic disease. The Rowett Institute of Nutrition and Health, now an Institute within the College of Life Sciences and Medicine of the University of Aberdeen, provides a world class centre where the links between food and health can be established to support existing and future policy issues relating diet and health. Aligned with research on crops and animals in Institute such as SCRI, the Moredun and SAC, the work of the Rowett Institute is not only key to linking food production within Scotland to health, but also for understanding food security issues. Over the last few years the emphasis within RERAD on research on food has been downplayed in favour of research focused on environmental issues. Notwithstanding the undoubted importance of environmental issues, food production and security and its relationship to human health must remain the primary reason for research related to the agri-food sector.
Question 14: How clear is the relationship between the scientific areas and the key policy issues?	In the agri-food area the policies related to food production are quite clear. The Scottish Food and Drink Policy, The UK Government's Food Matter's Towards a Strategy for the 21st Century, the Scottish

	Government's Healthy Eating, Active Living; the HM Government Healthy weight, Healthy Lives: a cross-government strategy for England as well as the Scottish Government' Equally Well, Health Inequalities all identify the links between food and health as key parts of the policies. In addition to these policy documents there are prominent reports such as the Foresight Report on Obesity (2008) and the World Cancer Research Fund Report on Nutrition and Cancer (2008), which similarly point to diet as a means to optimise health. On this basis CAMERAS must give strong attention to the diet and health issue.
Question 15: In which areas of science can we continue to make use of expertise supported elsewhere e.g. at the UK, EU and international levels?	All
Question 16: In the time frame for CAMERAS (2011-2016) what new emerging areas of science are likely to mature and become available for more general use or application?	There will be many opportunities arising from research relating to diet and health to translate research findings for the benefits of policy development and improved food healthier products. Indeed some of these opportunities are starting to be explored in the obesity area already.
Question 17: Do we have the expertise available to be able to use these new opportunities?	Yes, As the MRC identified in its recent Strategic Review of Nutrition and Energy Balance; 'The UK has a shortage of well-trained innovative nutrition researchers and there is a major need for training of, in particular, clinically-qualified researchers and basic and clinical scientists between post-doctoral and first substantive academic post. Strong leadership is required, and a recognisable centre of excellence that is competitive on the world stage and acts as a magnet for the training of the next generation of integrative nutrition researchers'. The Rowett

	Institute of Nutrition and Health at the University of Aberdeen is a vital part of building this capacity.
Question 18: In which areas does Scotland need to be self reliant?	Scotland like any developed country needs an active research base in order that it can take advantage of advances in research, whether self generated or not.
Question 19: Knowledge Exchange is essential for scientific activity to achieve impact. Do you agree that KE should be an explicit and integral aspect of the delivery of this Coordinated Agenda?	Yes, It is generally accepted that Knowledge Exchange is an important aspect of modern day research. Indeed every researcher would like their research to make an impact. However it is important that an appropriate balance is struck between striving for impact and not stifling creative research. We must also be careful that image must not replace substance
Question 20: How can we continue to improve the integration of evidence from a diverse range of sources into forms that are accessible to end users?	This seems best approached as part of the Programme activity. An integration committee, which pulls together the different strands of activity into an integrated understanding seems a practical approach. Chaired by an Institute Director or equivalent with selected scientific representatives/experts from the programme together with policy representation would provide a good forum for both scientific integration and knowledge exchange.
Question 21: How can we reconcile the requirement for science to be responsive and flexible to short term demands while at the same time ensuring that longer term strategic research continues to progress our knowledge and understanding?	This is extremely difficult. The career structure and progression for most researchers relies on demonstrating a sustained and ‘traditional’ path. Deviation from this can be costly in terms of promotion and other forms of recognition. Furthermore, real expertise and progress in complex areas of science has to be developed over many years. A better understanding of the nature of the short-term demands would help leaders of research organisations plan and accommodate such

	requirements.
Question 22: How can we ensure that the 2 way flow of knowledge from science to policy and from policy to the academic community is optimised?	This is a problem of time, communication and understanding. Policy makers are busy people, who generally are relatively not easily identified by the average scientist. Equally researchers are busy people, and the paths of the two rarely cross. If they do, policy makers will talk to policy makers and researchers talk to researchers. While some scientists and policy makers do interact, it is relatively uncommon. Thus it is probably better to develop specific and dedicated 'communicator' posts to provide the interface between the scientists and policy makers.
Question 23: Are there alternative structures/systems or new approaches/organisations that could enhance these flows?	Yes, See 22 above
Question 24: Are there science delivery models which could provide examples of good practice for Scotland to follow?	Yes, See 22 above
Question 25: We would also welcome any other general comments you may have on any of the issues raised in this document.	The CAMERAS document is a valuable pointer for the development of science policy in Scotland. It is important that the role of RERAD needs to be considered within the overarching aims of the Scottish Government, which is emphasised at the beginning of the consultation document. The rural community has a role to play in Scotland, and is an integral part of the Scottish rural environment. As such, the output of the rural environment, healthy food and hence a healthy population, needs to be taken explicitly on board. However given how food, diet and health are part of a continuum, the relationship and alignment of the food policy with health policies is not made sufficiently clear. The CAMERAS document should seek to bring the

	artificial barriers that tend to exist between and food and health and bring the policy considerations into proper alignment.