

RAE Research Strategy Consultation 2016-2021
RESAS
Scottish Government
1-C (South)
Victoria Quay
Edinburgh
EH6 6QQ

22 April 2014

RAEResearchStrategyConsultation@scotland.gsi.gov.uk

Dear Sir

Rural Affairs and the Environment (RAE) Consultation on the Research Strategy for 2016-2021

Thank you for offering the Scottish Environment Protection Agency (SEPA) an opportunity to comment on the development of the Rural Affairs and the Environment Research Strategy for 2016-2021. SEPA has been closely involved with the previous strategies and has good links with many of the Main Research Providers. Please find a completed response form attached.

The consultation proposes an evolution from the previous strategy. SEPA welcomes the greater emphasis on understanding whole systems behaviour and the consequent use of multi-disciplinary research in the strategy and would like to see it given greater prominence, possibly as an enabling principle within the strategy.

The proposed three themes seem highly relevant and we support their key role in directing the research strategy. SEPA is also aware of the increasing importance of the emerging research into sustainable resource use and the urban environment. Under previous strategies, these have not been areas of significant research and we see them as key future issues. Sustainable resource use could potentially be set up as an additional theme within the strategy. Such an approach could support policy objectives around climate change, low carbon and circular economies. The majority of Scots live in the urban environment and there is a need to understand the interaction between this environment and our wellbeing, for instance building greater resilience to, and understanding of, the consequences of climate change, including air quality, green infrastructure and flood risk management. We suggest that this understanding should be better emphasised as a research need.

Cont/d...



Chairman
David Sigsworth

Chief Executive
James Curran

Corporate Office

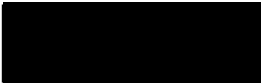
Erskine Court, Castle Business Park,
Stirling, FK9 4TR
tel 01786 457700 fax 01786 446885
www.sepa.org.uk

SEPA has been particularly engaged with the development of ClimateXChange and the Centre for Expertise on Water (CREW). We have found the creation of these centres a really useful innovation.

SEPA recognises the challenges that effective knowledge exchange presents, particularly in finding time and opportunities to truly engage and share knowledge. We believe that this responsibility sits equally with researchers, policy makers and scientists, and we would welcome the opportunity to participate in the development of that shared role. . We also note that there is a potential opportunity to use some of the developments planned under Scotland's Environment Web to use web based tools to help progress knowledge exchange..

SEPA is very keen to work with RESAS as the strategy and subsequent tender is developed, our primary contacts are Paula Charleson, Head of Environmental Strategy, (paula.charleson@sepa.org.uk, 01786 452433) and Peter Singleton, Emerging Issues Unit Manager (peter.singleton@sepa.org.uk, 01786 452428).

Yours faithfully



David Pirie
Executive Director

CONSULTATION QUESTIONS

Question 1: Do the 2011-2016 strategic priorities remain robust and relevant for the period 2016-2021?

Yes the strategic priorities remain highly relevant in relation to the overall aim of a successful, flourishing country achieving sustainable economic growth and, if adhered to, underpin how this research strategy represents a good investment.

Question 2: Do these 'enabling principles' set the right context or should additional principles be adopted?

SEPA agrees with the proposed enabling principles of exchanging knowledge, inspiring innovation and maintaining scientific capacity. We suggest that the greater emphasis on understanding whole systems behaviour (systems thinking) might also be included as an overall enabling principle. It might be useful to include an explanatory text box on whole systems behaviour or "systems thinking"

Question 3: Are the high level outcomes sufficiently clear, if not, what changes would you propose?

We have some suggestions for additional outcomes (underlined):

- **Health & Wellbeing** - about ensuring we have healthy and vibrant communities that are built around community led innovation, good local environmental quality and secure supply chains. The **outcomes** sought include:
 - Resilient communities;
 - Safe food and secure food supply chains;
 - Healthy and sustainable diets;
 - Encouraging the uptake of key low carbon and other behaviours contributing to broader societal wellbeing;
 - Diverse and resilient energy supply chains.
 - Good air quality for people and the environment (including urban air quality)
- **Productive and Viable Land Use** - supporting the diversity and resilience of rural industries, food and other primary production, helping Scottish businesses innovate, using the best available tools and knowledge, generating and adapting new options and solutions for Scottish agriculture. The **outcomes** sought include:
 - An innovative and competitive rural economy;
 - A profitable and sustainable food and drink industry;

- Productive, profitable and sustainable agriculture built on;
 - High health and welfare livestock; and
 - Appropriate land use;
- Integrated pest and disease management
- Sustainable resource use - this could be considered as a separate theme since SEPA believes this will be the next significant environmental challenge
 - development of a circular economy
 - transition to a low carbon resource efficient economy
 - development of low carbon and resource efficient technologies and systems.
- **Ecosystem Services** - using our natural capital within a framework that helps ensure the integrity, health and functionality of environment are maintained in order to deliver key ecosystem services and the high-level outcomes. The high level **outcomes** include:
 - Optimising climate change mitigation and adaptation;
 - Food security and sustainable intensification;
 - Development of low carbon and efficient waste management systems (possibly covered under Sustainable resource use above);
 - Improving ecosystem services in the urban environment;
 - The integrated management of water and land resources including;
 - Sustainable flood risk management and coastal erosion risks;
 - Achieving ecological status objectives for the water environment;
 - Sustainable soil use and management;
 - Multiple uses of land contributing to a diverse and sustainable economy.

Question 4: Are the three broad themes identified an appropriate way of structuring our work? If not, what alternatives should be considered?

SEPA's view is that there is no "perfect" way of structuring this type of work but the three themes are very useful and will inform research needs . The key is to ensure the links between themes are made at every opportunity, bearing in mind the overall requirement for understanding whole systems behaviour. For instance, the themes of ecosystem services and health and wellbeing have strong links, especially in urban environments. It is important for the RESAS strategy to connect more with the urban/cities agenda and

with health and social science research.

SEPA understands that this strategy does not cover forestry or marine research, but the strategy could benefit by making reference to the multiple benefits arising by connecting these research topics and other key areas of environmental research to ensure good value, sound science and effective policy.

Question 5: How can the SG maximise the benefits of on-going investment in the MRPs to build and benefit from connectivity with the wider science base?

The MRPs, as beneficiaries and implementers of the RESAS strategy, are the key interface between publically funded science, policy makers and the wider science community. SEPA believes that the communication of RESAS funded research, as opportunities and outcomes, should be improved. It is also important that Scotland makes full use of potential European funding.

The relevant staff in MRPs often have good working relationships with many of the UK experts on relevant specialisms but this access to scientific knowledge is not necessarily available to the wider community (e.g SEPA). An option might be to hold conferences linked to key priorities in the strategy to facilitate that engagement and enable structured debate around the issues Scotland has prioritised for research.

It is important that MRPs are encouraged and given access to expertise and programmes (incl. funding) from the UK research councils. This is crucial to ensure that the new research undertaken builds on the best and most suitable evidence already developed, without good external links this will not happen.

SEPA is keen that the RESAS Strategy should include urban environmental issues and engage with relevant health and social science research (e.g. NERC, MRC, ESRC). For example, building greater resilience to the consequences of climate change in our urban and sub-urban environments (air quality, green infrastructure, flood risk management).

Question 6: What are your views of the performance and operation of the CoEs to date, are there any additional areas that would benefit from such support?

SEPA has strong links with the Centres of Expertise on Water and Climate Change and therefore our comments are based on our interaction with these Centres. The two centres of expertise operate quite differently, with different remits from the main MRPs. Our interaction with them has evolved as the Centres have developed and we find them both extremely valuable and useful. We would strongly support their continuation. In particular, CREW has unlocked a long-standing problem for SEPA by giving us quick access to the scientific expertise within MRPs to assist with more immediate issues.

The success of the existing centres of expertise begs the question on those areas of science not specifically covered by them. It might be argued that there should be a centre of expertise for each of the proposed strategic high level themes but we would disagree with this since the themes are high level, cross-cutting and encourage interdisciplinarity while the centres should maintain a critical mass of scientific specialist knowledge whilst seeking collaboration with the wider science base. Nevertheless, it would be useful for policy implementation to be able to access similar expertise related to other areas of science..

Question 7: Do you agree with the SG's proposal to end support for SPs and to explore alternative mechanisms to strengthen engagement between its investment in research and the business sectors it aims to support?

We are unable to express an informed view on this as SEPA has had little, if any, engagement with Strategic Partnerships.

Question 8: Do you have any proposals for how the research portfolio can better link to the business community to deliver the desired outcome?

The EU Horizon 2020 strategic programme is very strong on making links to the business community so there is a clear opportunity here to access EU funding and engage with businesses in Scotland.

SEPA has been working with the Enterprise Agencies and Scottish Government over Eco Innovation. SEPA is also engaged with the Scottish Government Circular Economy Programme that was established to gain a better understanding of how a more circular economy could operate in Scotland. The Steering Group for the Programme comprises members from SG, Scottish Enterprise, SEPA, Zero Waste Scotland & HIE. These groups could provide a useful links to the business community. Connection could also be made with Innovation Centres Scotland <http://www.innovationcentre.org/>

The RESAS research portfolio should also consider what support it can provide to the Scottish Forum on Natural Capital which links businesses, NGOS and the public sector in management of Scotland's underpinning natural assets in order to support sustainable economic growth.

Question 9: Is the purpose and value of underpinning capacity sufficiently clear, if not how can it be improved?

The concept of underpinning capacity is clear, the key question relates to what capacity is required and in what areas of science. It will be interesting to see the outputs of the review of this area. Broadly, SEPA values the expertise held within the MRPs very highly and supports the continuation of

this funding. Funding is required to allow MRPs to support the “open data” initiative so that they are able to provide the data in a modern “web-consumable” manner.

Specifically, SEPA has been discussing with other CAMERAS partners the possibility of having some underpinning capacity in the futures and horizon scanning field. There is growing use within CAMERAS of these skills, and several of the research programmes have been using futures work and having some central expertise and co-ordination would be very useful and potentially cost saving. Social science expertise is also a key strength, and area where SEPA has limited expertise or capacity but is growing in importance and we encourage more community engagement and co-decision making.

Question 10: Do you have any views regarding the performance and use of the Contract Research Fund including how it could be improved?

SEPA, as a NDPB, does not have direct access to the Contract Research Fund. However, we have been involved in assisting with the specification of short-term projects using this fund via technical leads within the Scottish Government. We do believe that this funding provides a flexible and extremely useful mechanism for commissioning research outwith the expertise of MRPs but which assists policy implementation. If helpful to RAE we would be keen to further discuss how this funding might be used for policy relevant research and where SEPA's expertise might be useful to direct research commissioned through this route.

Question 11: Could the overall delivery model be further simplified in a way which still enables SG to meet its strategic priorities for the portfolio, if so how?

SEPA welcomes the simplifications suggested. There is clearly a challenge in managing and delivering such a large and varied programme and we consider this strategy to have the right approach.. We suggest that the key criteria for success will be: programme delivery, flexibility to evolve as required, and sharing of developed knowledge.

Question 12: Do you have specific suggestions as to how the RESAS research strategy can contribute to the delivery of the objectives of the CAMERAS partnership?

Our observation is that CAMERAS has previously acted as a forum where its members have been able to specify their needs for RESAS funded research but not directly with the MRPs. The creation of centres of expertise has now created a better opportunity for access to research knowledge within MRPs. However, it is clear that engagement is much better in some areas than others and that are lessons to be learnt from good practice.

We describe under our response to Q.15 the opportunities for some innovative and novel use of tools such as webinars etc to engage staff from across CAMERAS.

The recent work on CAMERAS Evidence action plans involved the MRPs and should draw out both knowledge and areas where new or further research is required.

Specifically, the strategy focuses predominantly on the rural environment and builds on the strengths of our traditional research providers. Whilst this is an essential area of work, there is a need to consider wider aspects of environmental research. There is a growing agenda around urban regeneration, future cities and urban greenspace (connecting cities, people and the environment). There is significant expertise within the MRP's that could help with this agenda and would be very helpful to CAMERAS partners working in the space. For instance, engaging and working with local communities (both urban and rural) in understanding and addressing their needs and in supporting them to create the places they want.

Question 13: Do you have any suggestions for developing the partnership with other research funders?

The Scottish Government, primarily through RESAS, has strong links with both the UK research councils and initiatives such as LWEC. At an expert level, the scientists in the MRP's also have good networks. SEPA is less aware as to the extent that the programme managers within the MRP's are engaged with similar programmes.

Question 14: Do you have any particular suggestions as to how greater engagement with the HEI sector might be achieved?

HEI researchers have occasionally remarked that RESAS funding appears to be largely earmarked for MRP staff. Greater involvement of HEI sector expertise would be encouraged by greater emphasis on ensuring that the best available expertise should be engaged on specific research projects through more open competition.

There would be merit in encouraging the occasional gathering of Environmental Research funders within Scotland, particularly including HEI funders, to consider collaborative funding of specific policy research areas. .

Question 15: Are the research outputs from the RESAS portfolio of research readily accessible or can this be further improved, if so how?

Knowledge exchange is a key issue for successful delivery of the RESAS strategy. Although there are many links between MRP scientists, policy makers and the wider science community, it is important that there is a clear official route for knowledge exchange.

The Knowledge Scotland website was established to fulfil this purpose, but from SEPA's perspective this has not been very successful. It would be worth considering whether there would be uptake from the development of briefings/evidence reports service similar to *the EU Science for Environmental Policy briefings* (see <http://ec.europa.eu/environment/integration/research/newsalert/newsalert.htm>) which address Scottish environmental-specific policy areas and topics. Collectively it would be useful if there are simple ways to access the broad body of environment related research developed in Scotland. Specifically, the Scotland's Environment Web project (www.environment.scotland.gov.uk) is currently investigating the extent to which it can provide a "portal" approach to this, but it requires the linked output to be available online..

Question 16: Is the current performance management approach fit for purpose or can it be improved, if so how?

SEPA was previously involved in programme level oversight groups (2006-2011 programme). Although time consuming these had the advantage of providing regular (6 monthly) updates and clear line of sight on the relevant work. It might be worth considering if there is a light touch way of replicating this approach.