Scottish Water Consultation Response

Environment, Natural Resources and Agriculture Research Strategy 2027-32

October 2025

Overview

General Comments
Scottish Water welcomes the detail that is provided in the ENRA research strategy for 2027-2032. The use of Mission focus with key challenges is a good way to ensure that interdisciplinary research is required and to ensure there is an outcome focus. We also welcome the focus on research that leads to impact as this is essential to ensure that the research activity is prioritised correctly. The introduction of the proposed impact framework will support this outcome focus. Scottish Water welcomes the recognition that research is needed to enhance the readiness of innovation to reduce barriers to uptake. There is currently a disconnect from research to innovation to commercialisation and this needs to be strengthened to speed up the development and deployment of new solutions. We would like to see stronger linkages to the enterprise and funding communities to ensure that there is sufficient support for technology and solution development. Scottish Water welcomes the mission focused approach to defining the research strategy. This is something that Scottish Water has adopted to ensure focused and targeted research internally, which in turn leads to greater impact for the research budget expended. The “theory of change” set out in the strategy linking project activities to impact and planning for impact at the research commissioning stage should drive greater focus and value from the programme. Scottish Water would prefer to see the impact and reliance on the water environment more strongly called out in the Missions and Challenges. Water is a cross-cutting theme throughout the missions, but it is only captured implicitly. We would prefer to see water challenges around quantity and quality more strongly represented.

Detailed Response

Specific Comments

• Scottish Water welcomes specific focus on areas that support and benefit our activities
  ○ Research into landscape-scale interventions that reduce treatment costs
  ○ Innovations like Green Sheds to reduce agricultural runoff into water sources
  ○ Better forecasting tools for water availability and demand at a cross-sectoral level
  ○ Collaboration on Living Labs to trial nature-based solutions
 	
• Scottish Water considers circular economy principles in its operation as a key measure to increase resilience, increase resource efficiency and reduce costs to customers. Whilst Circular Economy is identified as a key policy driver, the focus

seems to be only on increasing recycling. Reuse of materials is a key need but does not appear to be covered in the ENRA strategy. More focus should be given to creating the necessary routes for reuse of materials across industrial sectors and how this can be better enabled. In addition, water use needs to be more actively considered across this area, as the water requirements of greening the economy appear to be missing.

1.	**The research strategy outlines a new outcome focused approach with five core Missions and a set of corresponding Challenges. Do you think this is the right approach to take?**

Scottish Water agrees with the mission focus for the research programme. This along with the proposed theory of change should ensure that any research commissioned has a clear route to implementation and impact. However, the linear assignment of stakeholders to the specific missions could result in missed opportunities given that they link to all missions.

There are not enough Challenges for each Mission. For example, Circular Economy only has 1 around reducing waste. Looking at the ARIs they go beyond that challenge. More challenges will drive wider engagement across sectors.

The Areas of Research Interest that bring out the specific focus beneath the Missions is welcome. This provides clearer steer to researchers on where their focus needs to be and reduces the interpretation of the missions.

2.	**Do you think the research strategy will enable us to get the best research and scientific evidence from the best providers?**

The research strategy sets out clearly what is required in terms of the evidence. However, the strategy itself will not guarantee the best research and evidence from the best providers as this will be dependent on who delivers the strategy. This will need to be determined through a relevant procurement exercise.

Limiting the delivery to 3-year projects from main research providers potentially excludes research and evidence from other providers in academia and other research bodies. Opening this up to shorter projects with a wider pool of partners may increase the quality and agility of the research.

3.	**Do you support the proposals on delivering our investment, including the five key funding mechanisms and governance approach?**

It is important to utilise the available expertise in the main research partners where this is relevant as this builds long term capacity to support policy development. However, limiting the delivery to 3-year projects from main research providers potentially excludes research and evidence from other providers in academia and other research bodies. Opening this up to shorter projects with a wider pool of partners may increase the quality and agility of the research

Having a responsive research fund (as set out in the consultation) is a positive way to provide the flexibility and agility to respond to short-term needs and leverage additional funding from UKRI calls, pulling on capacity from across the academic sector.

Continuation of Centres of Expertise (CoEs) has a place in responding to priority policy areas. This builds capacity in the centres and provides a trusted provider to support policy needs. It may be more beneficial going forward to drive the work with the CoEs from the research strategy, rather than the bottom-up approach used to date which has been driven by regulators and stakeholders such as SEPA, DWQR and Consumer Scotland. This could drive greater alignment in research output to policy rather than delivering activities driven by policy.

The provision of impact investment is a welcome addition to the strategy delivery. Impact from research is often left to end users to realise without much support or guidance in how to achieve this. Providing investment to deliver facilitated knowledge exchange, develop living labs to demonstrate impact and encourage innovation pathways.

The governance of this phase will be key and may require a different mix of skills than that required to manage the wider research programme.

4.	**Do you have any other comments or suggestions on any part of the Strategy?**

Scottish Water welcomes the intent to deliver and expand innovation pathways and remove barriers to uptake of innovation. Building links to the enterprise and development agencies is to be commended. However, it is unclear how the innovation pathways will be financed, and it unclear whether the enterprise agencies will be provided with the mandate and associated funding to support earlier stage implementation than the current focus.

5.	**Do you think the proposed Impact Framework is an appropriate way of defining, monitoring and evaluating the impact of research funded through this programme?**

The idea of an Impact Framework is good.

However, impact can be hard to quantify. At the outset, measures will need to be identified to evaluate and communicate it effectively. The introduction of impact officers is a welcome addition, and their focus should be backward looking as well as forward looking to show impact from the current programme. Impact of research into policy and action does not always follow the same cycle as the investment and it is important to monitor this over multiple cycles.

6.	**The government evidence needs are being captured as Areas of Research Interests within the Strategy. Do you think this is the right approach to take?**

The Government's needs are set out in the mission outcomes and the challenges, and these are then articulated as Areas of Research Interest (ARIs). As an approach it is helpful to provide ARIs, but this require flexibility as other questions arise from research or understanding of the challenges develops. Without knowing how these ARIs were developed it is difficult to comment on whether these will drive optimum research outcomes

7.	**Do you agree that the key ARI questions are captured within the strategy?**

From a preliminary review the ARIs captured (c200) appear reasonable. However as stated previously without visibility of the approach to develop and prioritise ARIs

it is difficult to comment whether these are the key questions. The questions developed will partly depend on the interpretation of the missions and outcomes by stakeholders which could vary over time. It would be useful to have flexibility to adapt the ARIs as the programme develops.

One of the ARIs is "Developing an approach within Scottish policy to prioritizing chemicals that pose a risk to environmental quality and human health". This is positive and we would consider that some of these chemicals may be identified as a result of WFD classification.

Linked to this there should be an ARI around "Developing an approach to a reduction in the use of antibiotics in agriculture to reduce antibiotic microbial resistance". Antibiotics are often dosed to healthy animals to prevent infection leading to an increase in antibiotics in the food chain.

Scottish Water would also suggest an ARI related to the protection of raw water sources for drinking water (WFD article 4). We are already seeing climate change impacts on raw water quality leading to more challenging treatment requirements. Greater understanding of the future trends and mitigation to slow the changes would support longer term affordability and sustainability of treatment.

8.	**Which actions relating to data, data analysis, and modelling should the ENRA research programme prioritise?**

Leveraging data from as many diverse sources as possible. There is already some great work ongoing through the FORTH ERA programme at Stirling University, pooling data sets from multiple sources to build a digital observatory approach. This type of programme should be leveraged.

It is important to ensure that data and modelling developed as part of the ENRA programme follows standard protocols to ensure that it can be utilised across multiple areas. Making the data and models accessible beyond the ENRA programme would also enable other research groups to build on the ENRA work and maximise potential benefits.

9.	**What barriers exist to delivering effective data analysis and modelling in the current ENRA Research Programme?**

Challenges to effective data analysis include standardisation of data from different sources in a way it can be combined and mined for modelling. The experience in the FORTH ERA programme is that data protocols are inconsistent and large amounts of work are required to align data sets. Additionally certain data sets e.g. waste management and agricultural data, tends to be deemed commercially sensitive which makes mapping of challenges and opportunities difficult.

10.	**Which principles relating to the delivery of analysis and modelling are most important (e.g., collaboration, innovation, impact)?**

Impact and ease of implementation.

11.	**Is the Living Labs approach for co-production appropriate, and how could it be enhanced or adapted?**

Scottish Water recognises that transformative action is needed to make our natural landscapes resilient to climate change, ensuring they can continue to provide the natural capital on which we rely. Scottish Water cannot transform catchments alone – many sectors (industry, agriculture, water and forestry) impact on water bodies and rely on the benefits arising from a healthy ecosystem. It is critical that all parties identify, contribute to and co-ordinate delivery of effective actions that will support future service. As such, Scottish Water is supportive of the co-production approach proposed for Living Labs. Imperative is the speed at which a Living Lab can be set up and flexed to suit emerging requirements, without being slowed by unnecessary administration.	
12.	**Is the Innovation approach well designed? How can it be improved?**
The innovation approach set out in the strategy is a welcome addition to delivering impact. The utilisation of living labs to demonstrate approaches at scale should enable faster adoption. It is not clear how these are to be funded and there is the risk that this will reduce the overall research funding. It would be beneficial to include the enterprise community in the thinking of how to maximise benefit and scale outputs to commercial level.	

END OF DOCUMENT