Strategic Research Programme

How is your organisation engaged in the development of the strategic research programme?

The Scottish Wildlife Trust (the ‘Trust’) has engaged with the development and implementation of the strategic research programme (SRP) through RESAS engagement events, directly with the Main Research Providers (MRPs), CAMERAS\(^1\) partners and the Centres of Expertise. The Trust, where capacity permits, inputs to workshops designed to gauge end-user needs and to knowledge exchange events that help translate the science into practice. The Trust also engages directly where our wildlife reserves or Living Landscape initiatives present issues that can be informed by the science undertaken through the strategic research programme, or where we can offer these wildlife reserves or initiatives as potential case studies.

We are aware that the Strategic Advisory Board (SAB) has an important role to play in monitoring the effectiveness of the current strategic research programme and shaping its future. The SAB membership is relatively invisible to stakeholders. We are not clear how they gather and consider views from stakeholders on both the research priorities and the model for delivering science, knowledge and evidence in Scotland.

Is the approach to funding effective in supporting sustained research in priority areas?

The SRP has been effective in some key areas; especially in relation to agricultural systems, water resource management and climate responses. Arguably, due to the difficulty in attracting match funding, the SRP has been less effective in supporting the sustained research required in relation to biodiversity, ecosystem health, natural capital assessments and informing decisions on environmental limits or tipping points for our ecosystems. It is important to ensure that the scientific capability within the MRPs in relation environmental change and ecosystem health and service benefits is adequately supported.

How does your engagement contribute to the delivery of the National Outcomes and the Scottish Government’s Purpose?

The Trust believes the Scottish Government’s ambition to: *create a more successful country, with opportunities for all of Scotland to flourish* is inextricably linked to a healthy natural environment. The Trust has been at the forefront of new concepts, such as natural capital and ecosystem health, which are now embedded in the Scottish Government’s Economic Strategy, and implemented through the Scottish Government’s Land Use Strategy and Marine Planning framework. Examples of the direct contribution include:

\(^1\) Co-ordinated Agenda for Marine, Environment and Rural Affairs Science
• NO1 – *We live in a Scotland that is the most attractive place for doing business in Europe* – The Trust was one of the founding partners of the Scottish Forum on Natural Capital which has a vision to ensure that all parts of society recognise our reliance on natural capital and the impact we have on it. One of the key strands of the framework deployed by the Forum in delivering its vision is knowledge and innovation – shaping natural capital research, drawing on and disseminating best practice from the rest of the world and facilitating innovation across a variety of sectors to create new approaches to protecting and enhancing natural capital.

• NO7 - *We live our lives safe from crime, disorder and danger* – wildlife crime damages Scotland’s environment, the communities who rely on wildlife for employment and tourism and Scotland’s reputation in an international context. The Trust is a member of the Partnership Against Wildlife Crime which supports research into detecting, recording and preventing wildlife crime.

• NO10- *We live in well-designed, sustainable places where we are able to access the amenities and services we need*– through our Living Landscape Initiatives in Cumbernauld and Edinburgh we are using science, evidence and knowledge to improve the quality of these local environments, restore and enhance connectivity in the landscape, improve biodiversity and improve access for, and engagement with, people. The Trust has developed a natural capital planning standard that is designed to help developers and planners identify the most appropriate green and blue infrastructure into new developments. The standard could also be used to inform the retro-fitting of existing grey-infrastructure.

• NO11. *We have strong, resilient and supportive communities where people take responsibility for their own actions* - through our Coigach-Assynt Living Landscape (CALL) we are working with a diverse range of interests – public, private, community, research and third sector - to deliver one of the largest landscape scale restoration projects in Europe. CALL is improving the quality and connectivity of habitats, increasing the connections between people and the land through education and skills development, and supporting initiatives that help reduce environmental impacts.

• NO12 - *We value and enjoy our built and natural environment and protect it and enhance it for future generations* – the Trust hosts the IUCN Peatland Programme which successfully advocated for more attention to be given to the importance of peatlands in the response to climate change, work to improve understanding of current market failures for investment in peatlands and best practice methods for restoring peatlands. We have, and continue to, implement actions to restore peatlands on a number of our wildlife reserves and gather evidence on the effectiveness of different approaches to inform future management action. The Trust also takes a strategic, evidence led approach to tackling threats to our wildlife reserves including from deer, for example, from grazing impacts and invasive non-native species and deploys nature-based solutions, allowing natural processes address challenges.
What is the anticipated impact of the UK exit from the EU on the capacity of your organisation to deliver the programme

The Trust is not directly involved in delivering the strategic research programme but we benefit from the science, evidence and knowledge that flows from the long term investment and the scientific capability within the main research providers. We are concerned that the exit from the EU will have a significant impact on the amount of match funding that can be levered in from EU collaborative research. Early indications are that uncertainties around Brexit may already be having an impact on the main research providers ability to attract and retain some of the highest quality scientists and also to secure new collaborative research projects. Scotland also benefits from engaging in international programmes and advisory networks and this is likely to become more challenging in the future.

Centres of Expertise

Is your organisation involved in a centre of expertise?

If so can you set out this involvement and the timeframe and funding attached?

The Trust is not directly involved in the Centres of Expertise but does benefit from the research being undertaken by these Centres. The Trust participates in exercises to shape the research questions being addressed by the Centres of Expertise and engages with knowledge exchange events arranged by the Centres.

For those involved in a centre of expertise what are the benefits and challenges associated with this approach?

No comment – not directly involved.

Are there any particularly pressing gaps in the issues that are currently covered by centres of expertise?

The Centres of Expertise which have been established on Animal Health, Water Resources and ClimateXChange have been effective in pooling resources and expertise across the MRPs and Universities to respond to more immediate policy questions. These centres have been more effective at knowledge exchange due to this focus.

The absence of a Plant health Centre of Expertise is a significant gap given the rise in the number of pests and diseases affecting our agricultural, forestry and environmental interests. The impact of these pests and diseases (e.g. Phytophthora ramorum, Chalara ‘ash die back’) is significant both in economic and landscape scale. There is also a gap in the Centres of Expertise setup in relation to biodiversity and ecosystem health. Such a Centre of Expertise could help address some of the challenges identified in the Scottish Biodiversity Strategy and the RouteMap 2020 and help inform priorities for beyond 2020.
Does the output of the work contribute to the National Performance Framework?

The work of the Centres of Expertise does contribute to the outcomes in the National Performance Framework especially in terms of:

- **NO1** – *We live in a Scotland that is the most attractive place for doing business in Europe* – Increasing resilience within the agricultural sector; especially in relation to animal health.

- **NO11.** We have strong, resilient and supportive communities where people take responsibility for their own actions - projects have delivered evidence that has underpinned major policy documents on both climate mitigation and adaptation and informed the Report on Proposals and Policies (RPP2 +3) and Climate Change Adaptation Programme (SCCAP).

- **NO12** - *We value and enjoy our built and natural environment and protect it and enhance it for future generations* - Improving water resource management, reducing pollution and flood risk (e.g. flood forecasting).

**Innovation Funding**

Does your organisation receive innovation funding? If so how has this supported collaborative working and what have the outcomes been?

The Trust does not receive innovation funding directly. We can see opportunities for the main research providers to benefit from this funding to help support work on a diverse range of issues from natural capital assessments to wildlife crime forensics.

**Underpinning Capacity**

What activities are supported by funding to underpin capacity? What costs are attached to this and what are the expected outcomes?

The underpinning capacity funding stream supports a number of important national collections not least the National Soil Inventory of Scotland and Soils database. This includes an important peat soil resource which has helped inform assessments of Scotland’s carbon stocks and changes due to land use and to the Climate Change Report on Policies and Proposals (RPP1 to 3).

The underpinning capacity work stream could be used to support long-term monitoring of the health of Scotland’s ecosystems, including the development of a broader, more representative range of ecosystem health indicators than is currently provided for through Scotland’s Environment Web Ecosystem Health Indicators. Such long term monitoring platforms are essential to gaining a better understanding of how Scotland’s biodiversity and ecosystems are changing, to inform future policy and management interventions and to assess the effectiveness of these.

**How secure is this funding stream?**

We understand that the underpinning capacity funding may have been subject to a disproportionate reduction in funding across the research landscape. Given some of
the additional needs, as highlighted above, we believe that funding to this element of
the programme should be protected and enhanced.

Scottish Environment, Food and Agriculture Research Institute

How do you work with SEFARI?

SEFARI is a relatively new construct that is designed to enhance knowledge
exchange and impact from the collaborative, transdisciplinary research undertaken
by the main research providers through a single gateway. More attention to
knowledge exchange, and support for improving the translation of science into policy
and practice is welcomed. SEFARI should create a single-shop window into the
collaborative research undertaken by the main research providers improving its
relevance and accessibility to end users.

What additional benefit does it bring to your organisation and does it bring any
challenges, if so what?

It is too early to say whether SEFARI will deliver the desired benefits for policy,
practice and the public.

Contract Funding

The funds available through the contract research budget have declined
significantly. How has this impacted your organisation?

The Contract Research Fund was re-framed in recent times to enable CAMERAS
partners to develop research questions and the scope broadened to include marine
and climate change needs (e.g. TIMES modelling). The change in breadth of topics
and the reduction in the level of funding has had an impact on the number of shorter
term policy related questions that can be addressed e.g. as identified through
CAMERAS thematic action plans or topical issues e.g. sustainable deer
management. The decline in funding may also have skewed the balance within the
strategic research programme, shifting requirements from the important long term,
transdisciplinary research to an increased demand to address shorter-term policy
questions.

Additional issues

What do you consider to be the key challenges for your organisation, the
research community and research funding in Scotland over the next 10 years?

The Trust bases its policies on the best available science, evidence and knowledge
with much of this being drawn from EU-funded research collaborations. Research on
the health of ecosystems, climate adaptation and mitigation, best practice
management and demonstration projects, which contribute to the implementation of
the EU Habitats and Birds Directive and the Marine Strategy Framework Directive,
inform wider landscape and seascape projects and conservation strategies that are
required at a transnational scale. The science, evidence and knowledge base that
we draw upon is at risk of being eroded further by more reductions in the level of
funding allocated through the strategic research programme. The challenges for the
research community include:
- Continued decline in Scottish Government investment in strategic research, innovation and capacity building.

- Deterioration in the science infrastructure required to underpin the strategic programme and attract inward investment from a wider range of funding sources.

- Increased risk to funding that can be levered from European research programmes and knowledge exchange from participation in cross-country collaborations

- Difficulty in attracting and retaining international scientists as a result of the uncertainties around BREXIT.

Specifically, what is the estimated impact of withdrawal from Europe on your organisation, the research community and funding available to rural, food and environment research in Scotland?

No specific comments to add.

What steps do the Scottish Government and research organisations need to take to address those challenges?

- Continued long term commitment to investment in the science led by the main research providers that helps underpin public goods, services and benefits that are dependent on Scotland’s natural assets and capital.

- Investment by Scottish Government in capital infrastructure to ensure that Scotland’s agricultural, environmental and rural science base remains competitive and can attract inward funding from other funders and industry.

- Increased effort to co-produce the science drawing in particular on the relationship between the main research providers and CAMERAS bodies, but also the wider sectoral interests. We believe that some of the policy teams within Scottish Government do not have the capacity or experience to develop the questions that need to be answered. The wider range of partners within the CAMERAS entity can assist with this process.

- Continued focus on translating science into policy and practice and to engage end users in this process from the outset to ensure that the knowledge exchange process is well designed and has real impact.