

Project	Focus and audience	Status	Planned/Ongoing Activities
<p>Science Matters</p>	<p>This project is working to promote some of the fantastic science stories arising from across SEFARI and the interesting teams of people involved, in an accessible and engaging format. This will involve conducting audio interviews with scientists and relevant stakeholders to help tell the stories of why 'Science Matters' to many aspects of people's lives. The project will enable people to engage with the people conducting the research and hear first-hand about what it is like to be a practicing scientist, thus presenting the human stories behind the research and also encouraging young people to consider science as a relevant worthwhile and diverse career.</p> <p>Audience: General public, Pupils and Teachers.</p>	<p>In progress</p>	<p>Project team members have previously been involved in the highly successful 'Livestock Keepers' project which helped to vividly bring farmers' stories to life in a similar manner and the project has proved very popular with a range of audiences.</p> <p>The team are currently editing a range of researcher interviews (from across SEFARI) to create a selection of podcasts. They will be accompanied by a blog which has already been prepared and is ready to be published once audio editing is complete.</p>
<p>Water Words: a Water Wise society addressing the Climate Crisis through education</p>	<p>Society has a central role to play in this challenge, where there is a need to engage with the next generation and increase understanding, for future water security. Although we have an abundant water resource in Scotland our per-capita national use of water exceeds that of other countries. Water saving can generate both societal and financial benefits. There is therefore a pressing need to build up our awareness of the water cycle, how we use water, and how water efficiency can play a vital role on meeting our global challenges. Outputs will highlight where water impacts on people's lives and fit with the higher geography curriculum.</p> <p>Audience: General public, Pupils and Teachers.</p>	<p>In progress</p>	<p>A series of cartoon posters and website resource material is being designed with professional cartoonists, along with SAGT (Scottish Association of Geography Teachers) and geography teaching professionals at Dollar Academy and Stirling University. Such collaboration will link to the needs within the Higher Geography curriculum. Additionally, engagement with school teachers will allow better understanding of teacher's needs, relating content to the curriculum, and highlighting available resources which will be published openly for all to access.</p>

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<p>SEFARI Farm Tour – A Virtual Showcase of the SEFARI Farms</p>	<p>COVID-19 has highlighted the value of online knowledge exchange tools. This project aims to create a virtual interactive farm platform on Google Earth that focuses on the range of activities being undertaken at the SEFARI institutes' research farms. The SEFARI farms are uniquely placed throughout Scotland, covering the widely diverse farming systems that typify our Scottish landscapes. Cutting edge research is being undertaken on these farms, which can be shared, and is tailored to overcome the challenges faced by farmers in specific geographical regions and different farming systems; challenges such as food security, economic and social sustainability, climate change, biodiversity loss.</p> <p>Audience: Public, farmers, teachers, students.</p>	<p>In progress</p>	<p>The SEFARI Farm Tour provides an exciting opportunity to welcome everyone to enjoy Scotland's rural environment. The platform established in this project will be used to share and communicate the wealth of knowledge these farms generate - providing data, information, advice to farmers and interactive learning material for educators. It will also allow further developments and new information to be added, as and when it becomes available over time. The tour is being developed by a multidisciplinary team from across SEFARI.</p>
<p>Benefits of novel crop introduction to Scotland</p>	<p>Scottish agriculture, climate and the economy are changing, as are our views and opinions on the food we consume. The importance of healthier food choices is becoming increasingly better understood and recognised, largely due to the intensification of illnesses such as diabetes, cancer, dementia and childhood obesity becoming a global epidemic in the past decade. This project aims to increase awareness and transfer knowledge on novel crops for Scotland. The COVID-19 crisis has accentuated the need to engage in new ways beyond face-to-face interactions, podcasts are popular and could help.</p> <p>Audience: Public, teachers, students.</p>	<p>In progress</p>	<p>Knowledge will be communicated through the creation of several podcasts encouraging people to have healthier diets through education on the benefits of novel crops. The project will initially focus on three berry crops, namely, blueberry, cherry and honeyberry - which are well known for containing high levels of bioactive compounds. As part of the project the team have received podcast training, are sharing their gained expertise and have purchased communal equipment for wider SEFARI use.</p>

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Exploring the Twitterverse	<p>This proposal aims to increase the scientific impact of the Strategic Research Programme by teaching researchers the best-practice in engaging with Scottish stakeholders in online social networking platforms. This project uses evidence collected from previous work, in order to identify best practices of disseminating scientific knowledge through Twitter. Specifically, this project builds on results from a quantitative investigation that mapped the online social networks of over 1 million Twitter users and experts in the area of plant and soil health, to provide wider lessons.</p> <p>Audience: Researchers.</p>	Recently awarded	<p>The team will create a series of evidence-based research briefs and develop an online workshop. The series of three research briefs will provide a detailed overview of best practice. Broadly, the research briefs will follow three themes: 1) how to identify stakeholders in your area of expertise; 2) using content to build trust over time; and 3) the importance of other media (images/videos) in fast-tracking engagement. The workshop, which will be accessible across SEFARI, will provide an overview of the findings.</p>
Parasites, immersive technology and the public	<p>Gastrointestinal nematode (GIN) infections rank as one of the top three production-limiting endemic pathogens of ruminant stock. On most farms GINs occur as co-infections (multiple nematode species, fluke and/or ecto-parasite). Control of most parasites should be based on the principles of integrated pest management, which include a variety of options that can be adapted to individual farms, though these are often considered secondarily to chemotherapy. Nonetheless, each farm and farmer are essentially unique, so the adaptations required to apply diverse sources of information and advice can lead to misunderstanding, making compliance challenging.</p> <p>Audience: Farmers, researchers, policy.</p>	Recently awarded	<p>To assist stakeholders in finding reliable and currently accessible open-source information around roundworm control, the project team propose to develop an easy-to-navigate directory of useful and trusted organisations and resources. Any gaps in dissemination strategies identified will be addressed via a variety of media options e.g. infographics, 'myth-busting' leaflets, videoclips or podcasts/radio-style messaging and this will involve training to increase SEFARI capabilities in novel knowledge exchange methods e.g. 360° virtual reality filming.</p>

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<p>High-Performance Computing (HPC) for Collaborative Science (2nd Award)</p>	<p>Our science is ever becoming more data driven, with many aspects of biology requiring increasing computing power for data analysis, visualization, mathematical modelling, data simulations and computational biology, particularly evident in the COVID-19 crisis, and SEFARI is committed to Open Science (making these datasets widely available). Previous SEFARI Gateway support in 2019 (see completed ROFs) enabled the project team to initiate HPC conversations and bring data scientists together. It is important to build on successes.</p> <p>Audience: Cross-disciplinary researchers.</p>	<p>Recently awarded</p>	<p>The project team propose to hold a workshop - which will be recorded and made available online - to train users across SEFARI in collaborative best-practices for the analysis of large and complex datasets using high-performance computing. In addition, they will develop plans for making data more widely accessible and explorable, following FAIR principles and supporting the wider Open Science agenda. Advice will be shared across the portfolio.</p>
<p>Talking Heads</p>	<p>The Scottish Centres of Expertise play a vital role in interacting and delivering to Scottish Government policy needs. In Scotland, we are in the unique and proud situation of having four dedicated centres of expertise in the areas of strategic research in: Waters (CREW), Plant Health (PHC), Animal Health (EPIC) and Climate Change (ClimateXChange) working alongside the centre for knowledge exchange and impact, namely SEFARI Gateway. Collectively we inform policy, benefit society and deliver impacts across key areas such as climate change, one health, biodiversity and sustainable development goals.</p> <p>Audience: Stakeholders, policy and public.</p>	<p>Recently awarded</p>	<p>This project will comprise a series of interviews with each of the Directors (from the four centres of expertise and SEFARI Gateway) as a ‘talking heads’ type production, available for online viewing on the SEFARI web-site and shared with centres for publication also on their web platforms. Key discussion areas will be on the centres purpose/main aims, highlight an example where we have collaboratively responded to a critical issue and an example of impact in the climate change arena - to also allow use of the material for COP26 in 2021.</p>