

Food & Footprint

Case Study

Creating systems to measure and monitor natural capital on farms in the Galloway and Southern Ayrshire UNESCO Biosphere

The Galloway and Southern Ayrshire Biosphere (GSAB) Partnership is a charity working to protect and enhance over 9,700 square km of land and sea in southwest Scotland. The ecology and human-nature systems of this region have been designated by UNESCO as being important for our shared global heritage.



gsabiosphere.org.uk

The GSAB Partnership works with local communities to engage with and work in harmony with their natural surroundings through collaborative projects in conservation, education, enterprise, and climate resilience.

The client challenge

In August 2023, the GSAB Partnership was awarded a grant to develop a project to promote sustainable development within UNESCO's programmes and sites. The grant, funded by abrdn Charitable Foundation and offered jointly with UNESCO, was awarded to proposals which identified cross-cutting impacts for the UN Sustainable Development Goals and addressed the three key outcomes of research, innovation, and education. GSAB's winning proposal was to develop a methodology to measure and monitor the state of natural capital on farms within the Biosphere area.

GSAB contracted SAC Consulting's Food & Footprint team, who worked in partnership to put together the right team and develop a clear plan to deliver the most impactful project possible with the allocated funding.

Our solutions

Aiming to deliver a fully functional system to measure and monitor natural capital assets on farm holdings in the UNESCO Biosphere area, the project team reviewed, compared, and selected the best methodologies to audit natural capital and farm business operations.

Working with the GSAB Partnership, the SAC Consulting team helped determine the right tools to baseline and monitor the project's list of six key natural capital pillars:

1. Biodiversity
2. Water quantity and footprint
3. Soil health
4. Carbon sequestration
5. Greenhouse gas emissions and farming inputs
6. Landscape character and public access

An exhaustive list of the tools and methodologies relevant to the Scottish farming context was created, with consideration to other schemes, codes, and standards which underpin the natural capital space in the UK. We also reviewed academic papers, producing a literature review, and met with SRUC researchers to discuss findings and refine the data.

The team supported the client on calls with representatives from prospective tools, asking key questions to get a full picture of

their resources and capacity, and integrating notes and feedback into written reports. We even tested potential tools at an education day at SRUC Barony, asking students to try assessing natural capital in the fields surrounding the campus. We answered questions from funders during a project monitoring visit, taking every opportunity to fully support the GSAB Partnership, and participated in a workshop between local government, NatureScot, NFU Scotland, and others.

The result of this work is a complete audit methodology, a package of tools and instructive methods that can be used to baseline and monitor key aspects of natural capital on farms in the UNESCO Biosphere area, informing holistic planning and eventually whole-farm plans required for receiving agricultural subsidies.

In addition, the final report supports wider use of the findings, with definitive exploration of GSAB's six pillars of natural capital, the different metrics for measuring each, and the

reasoning behind choosing the relevant tools. Users of the toolkit benefit from two guidance documents; one for farmers and one for GSAB project officers who will work with farmers on implementing the audits. Each of these clearly explain the entire audit process, providing step-by-step instructions, and signposting to key sources of information. Whilst designed to align with new agricultural support legislation in Scotland, the toolkit seeks to push beyond conditionality to enable farmers to lead the way in taking the climate and environmental actions which will be necessary for Scottish farming into the future.

This work additionally feeds into a larger project under the Borderlands Natural Capital Initiative, 'Embedding Agricultural Resilience for a Productive Future with On-Farm Plans Integrated with Nature (OPIN)'. Over the next five years, the outputs of this work will be used to conduct pilots on twelve farms in the Biosphere area, working with farmers to baseline and invest in growing their natural capital assets.





Added value

The project team worked in close partnership with the GSAB Partnership, collaborating to address their objectives and deliver the best possible outputs for our client. The project concluded with a meeting of the 15 projects funded to date at the UNESCO Regional Bureau for Science and Culture in Venice. SAC Consulting supported the GSAB Partnership, participating in workshops and sharing best practice and lessons learned with a range of key stakeholders and new project managers.

The key themes of this work (research, innovation, and education) are core to SAC Consulting, and this project is an exemplary application of our unique blend of academic and applied industry knowledge. Our expertise in agri-environment systems, supported by globally renowned SRUC Research, allowed us to help the GSAB Partnership refine which aspects of natural capital they wanted to measure. Meanwhile our strong connections among the farming communities with whom we work enabled us to create useful and actionable information for Scottish farmers.

Our unique experience in natural capital monitoring, reporting, and verification (MRV) allowed us to efficiently collate, compare, and choose between the possible metrics available to collect data on different farm assets.

Our client says

“The networks and connections that SAC Consulting was able to bring to the project added significant value to ensuring the robustness of this new natural capital audit methodology, which we believe will deliver tangible benefits for farmers and land management decision-making.”

Sara Press

Land Use and Biodiversity Lead Officer,
Galloway & Southern Ayrshire UNESCO
Biosphere

Links

- www.gsabiosphere.org.uk/gsa-unesco-biosphere-and-sruc-complete-landmark-partnership-project-promoting-agricultural-resilience/
- [Natural Capital Audit Methodology – Galloway and Southern Ayrshire Biosphere](#)
- [Pioneering Dumfries and Galloway farming project reaches conclusion – Daily Record](#)
- www.unesco.org/en/articles/15-unesco-designated-sites-share-innovative-solutions-promoting-sustainable-development-through