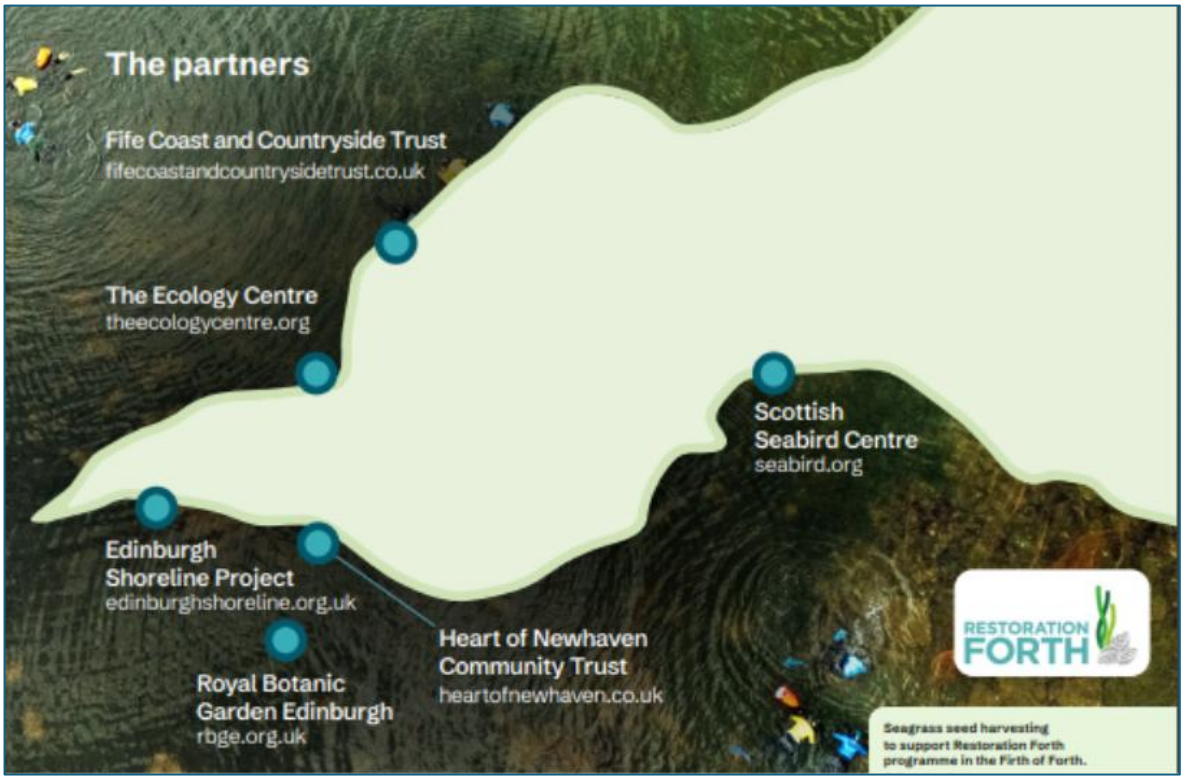
Restoration Forth Evaluation Report

January 2022 – March 2025

Edinburgh Shoreline, Fife Coast and Countryside Trust, Heart of Newhaven, Heriot Watt University, Marine Conservation Society, Project Seagrass, Royal Botanic Gardens Edinburgh, The Ecology Centre, The Scottish Seabird Centre, WWF Scotland



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List of Acronyms and Abbreviations

CCN	Coastal Communities Network
ELREC	Edinburgh and Lothians Regional Equality Council
FCCT	Fife Coast and Countryside Trust
HWU	Heriot-Watt University
MCS	Marine Conservation Society
M&E	Monitoring and Evaluation
RBGE	Royal Botanic Gardens Edinburgh
RF	Restoration Forth
SMEEF	Scottish Marine Environmental Enhancement Fund
WWF	World Wide Fund for Nature

Executive Summary

Restoration Forth is a three-year marine restoration initiative focused on restoring seagrass habitats and European flat oyster populations in the Firth of Forth. Managed by WWF Scotland and led by a Steering Group made up of a diverse partnership of NGOs, academic institutions, and community groups, the project aimed to demonstrate the feasibility of community-led restoration in a heavily degraded, post-industrial marine environment. Funded by multiple sources to a total value of around £2.5 million the project concluded its initial phase in March 2025, with some activities continuing to the end of March 2026. The project's core strategies included:

1. Community engagement and awareness raising
2. Capacity building for local restoration knowledge and skills
3. Active restoration of seagrass and oysters
4. Policy advocacy to address regulatory barriers

This evaluation covered 3 years of implementation (April 2022 – March 2025). It took a mixed methods approach including desktop review, key informant interviews, and individual and group interviews with project participants and volunteers. The objectives of the evaluation were:

1. To provide an independent assessment of the overall project with a particular focus on the impact and outcomes achieved.
2. To validate the results of the work, establish whether the programme successfully delivered partners' shared objectives, with special interest in understanding the likely long-term impact of efforts.
4. To take a deeper look at the programme's Community Engagement work.
5. To outline key areas of learning from the successes and challenges, to provide recommendations to strengthen possible future work.

Principal Findings

Relevance

While the project initially was trying to replicate community-led efforts in other projects, it became clear that in this context, local communities and volunteers would not be willing to take on this role themselves without ongoing support. While that community leadership had organically grown elsewhere, this was not something that could be easily built, certainly not in the timeframe of the project. Therefore, shifting to a community-inspired model made sense in this context, but this has implications for longer term scaling and sustainability. Overall, the project design integrated data, science, awareness raising, engagement and policy advocacy, creating a comprehensive approach to marine restoration in this context.

Efficiency

Human and financial resources were generally sufficient, though a dedicated project manager was not in place from the start of the project which affected overall coordination in the first year. Staff were stretched at some key points of implementation, for example coordinating 500 volunteer hours for oyster biosecurity over 4 weeks, which meant other priorities could not be addressed during these times. Additionally, the seasonal nature of activities meant that opportunities for restoration work and community engagement events often coincided, which led to some pressure points, particularly for the Seagrass Officers.

Effectiveness

30,638 oysters had been reintroduced to the Firth of Forth, exceeding the target of 30,000, and with an evidenced 85% survival rate to date. The oyster work has particularly forged cultural connections with the marine environment.

For seagrass, 2.7 hectares of seagrass had been planted, and 880 cores transplanted into the Firth of Forth. While the target of 4ha of restored seagrass has not been met, a lot of understanding has been gained, which has helped to define a clearer research agenda in this field. The project was seen to have contributed to building momentum around seagrass restoration elsewhere with a lot of learning shared which has inspired other seagrass restoration project proposals and ambitions across Scotland more widely.

If seen as an exemplar in raising the profile of restoration and the barriers faced, the project has been successful in this respect. It has fostered an overwhelming sense of positivity and hope, and this sense of hope has played a significant role in galvanising public awareness and support for marine restoration and conservation, as well as raising the profile of barriers to success with regulators and politicians.

13,891 people have been directly engaged, while a further 766,852 people have indirectly learned from the project about the marine environment through exhibitions,

interpretation boards, fairs and events. A more strategic and targeted approach to community engagement emerged in later years.

Strong media coverage was achieved through a compelling narrative of restoring lost habitats in a degraded, urban estuary while visual and hands-on activities (e.g. oyster deployments) resonated with the public.

2,160 participants have been trained in restoration techniques. While the project has built significant awareness and inspiration, the community's ability to continue independently is limited, highlighting the need for ongoing scientific and organisational support.

The project had limited resources for advocacy, so connecting the project's advocacy work with Scottish Environment LINK campaigns has been a useful strategy. To achieve the scale needed for the Forth, and for a Wholescape more widely would require focused effort with more resources and engagement of different audiences, however it is unclear how aligned these advocacy needs are with priorities of WWF Scotland and WWF-UK.

Governance and Management Findings:

- Strong collaboration and adaptive management were key strengths.
- Governance structures evolved but were sometimes unclear or overly complex.
- Delayed staffing and siloed roles impeded coordination and integration.

Impact

The project has demonstrated collaborative restoration - bringing together a diverse array of partners, including scientists, NGOs, and community groups under a shared vision. And it has built a model to impart knowledge on the citizen science side, but it will still require long-term support as local communities won't lead this independently. Meaningful impact in terms of restoration outcomes will require staying the distance, with at least 10+ years for realisation.

Key achievements/successes:

- **Demonstrating Restoration in a Heavily Degraded, Urban Environment:** Restoration Forth showed that marine restoration is possible in highly modified, post-industrial areas like the Firth of Forth. This was seen as groundbreaking and a powerful symbol of hope and regeneration.
- **Demonstrating Community Engagement in Marine Restoration:** The project successfully mobilised a wide range of community groups and volunteers. This broad participation fostered a deeper connection between local communities and their marine environment alongside a sense of hope for the future (albeit tempered by realism).
- **Building Capacity Through Citizen Science:** Restoration Forth also made important strides in building local capacity for marine science through citizen

science initiatives. Full independence in citizen science hasn't been achieved but it has laid the groundwork for continued community involvement in citizen science initiatives, with some particularly engaged groups supporting monitoring work independently.

- **Raising Awareness and Shifting Public Perceptions:** Creative engagement (e.g. art workshops, storytelling) helped make marine restoration and conservation issues more relatable and accessible. Communications and educational resources helped to build a more informed and engaged public.
- **Strategic Influence and Learning:** The project helped to highlight changes needed to policy and regulatory frameworks. It has provided useful learning for the wider restoration field and regulators, helping them understand the complexities of restoration in Scottish waters.

Key challenges:

- **Ambition to be Community-Led**: Despite training, many volunteers were reluctant to take on independent citizen science or restoration tasks. This challenged initial assumptions about community-led stewardship and necessitated an adjustment to approaches. Which poses significant challenges in terms of the longer-term ambition and approach to scale up restoration over larger areas of Scotland.
- **Seagrass approaches and methods:** Seagrass restoration has had limited success in terms of actual area restored. The difficulties faced with seagrass restoration have provided valuable learning opportunities, highlighting the need for a focus on passive management and addressing broader environmental issues. Some partners raised concerns that decisions around seagrass sites and approaches were not sufficiently driven by science (or that the scientific basis for decisions was not made clear).
- **Regulatory Barriers:** While partners were anticipating slow and complicated processes to secure the necessary permits and licenses, the complexity was even more resource intensive than expected. The process of engaging with the project has led to NatureScot updating their internal guidance for writing appraisals for the Habitat Regulations appraisal process, helping staff to develop clearer assessments for future restoration projects.

Sustainability

Restoration Forth laid a foundation for long-term restoration and community engagement. Partnerships and volunteer networks are likely to continue, but technical restoration requires institutional support.

In the absence of further funding, low-cost, community-led monitoring—guided by resources like the Oyster Observer Guide and the SeagrassSpotter app —can be integrated into the routines of schools, coastal groups, and local environmental organisations. Informal knowledge-sharing networks and peer support among

volunteers can also help maintain momentum. However more technical restoration work will not be sustained without professional support.

Systemic challenges such as complex licensing processes, and lack of policy incentives to promote restoration will need ongoing policy-level attention and advocacy to address.

Key barriers to sustainability include complex licensing processes, limited volunteer capacity, scientific uncertainties, and limited financing. Addressing these challenges will require a broader partnership, strong leadership, and a strategic environmental vision that integrates marine planning with tackling land-based drivers and addressing community needs. A Wholescape approach—bringing together diverse stakeholders and aligning efforts across habitats and sectors—offers a strong path forward for Restoration Forth. A lot of goodwill and momentum has been built through Restoration Forth; so one challenge (and opportunity) will be in maintaining this while widening out to a Wholescape approach.

Recommendations

Community Engagement

1. Holding community-based events earlier in the process and engaging community groups with vested interests in coastal areas could be more effective for better community involvement.

2. Work with M&E and community engagement specialists during project design and inception to set more realistic/meaningful targets and means to measure engagement more effectively. This should including not just quantitative measures but also qualitative assessments. At the scale of the Wholescape, it will be important to identify a few key metrics and methods to assess whether interventions have had a wider beneficial impact for local communities. Though recognising this is not easy in a scape with multiple communities with many and sometimes conflicting interests, desires and needs. So, defining with communities in what ways they would like to see benefits is vital here.

3. Consider creating more blended activities that combine art, storytelling or local history with the environmental content to help build a bridge between the two.

4. Maintain engagement and funding for community hubs – keeping geographically embedded staff who can gather intelligence on what can be delivered locally, with whom, and as part of the bigger vision. They should also consolidate the ongoing involvement of the most engaged volunteers and community groups to maintain a pipeline of trained volunteers with ongoing support and clear roles e.g. relating to citizen science or advocacy.

5. Explore or advocate for the development of vocational training programmes for restoration practitioners to build local expertise and capacity.

6. Consider taking a more integrated approach to community engagement, whereby scientific leads continue to lead on those aspects, while engagement officers work as an integrated resource embedded in communities, focusing on engagement across all geographic areas (instead of having separate seagrass officers and shellfish officers). The oyster roles seemed to work well in this way, with a scientific lead, an engagement lead and logistical/coordination lead.

Policy and Advocacy

7. The value of strong case studies to influence policy should not be underestimated, and the project should ensure further insights from ongoing scientific assessments are captured and shared. Be bold in communicating reasons for unexpected outcomes where these can support advocacy opportunities, whether directly through project partners or through other networks.

8. Continued engagement with policymakers is essential, particularly to address regulatory barriers and support future scaling. Use case studies and citizen science from Restoration Forth to continue to support policy advocacy efforts.

Framing of issues around water quality may galvanise greater community support and action to push for policy change – resonant messaging should be explored and tested with communities. The Coastal Communities Network (CCN) is also already looking at this aspect, and working with them could be leveraged for wider reach. There is also the opportunity to engage communities in upstream water quality testing etc.

Project Management

9. Ensure key staff are recruited as rapidly as possible – recognising this appears to be a recurring issue for WWF and was not within direct control of the project team.

10. Smoother management of the project would have been enabled by a clear inception phase. It is recognised that it can be challenging to balance funder interests, particularly of corporate donors who often expect to see results in a short time frame. More needs to be done to manage their expectations for what is feasible in the early days of a project, and the amount of time, preparation and planning needed to effectively get projects off the ground. The development phase could have established the following more effectively:

    (a) Clearer governance and management structures.

    (b) Stakeholder and community engagement plans, including clear strategies for awareness raising and outreach, as well as more targeted strategies for direct project participants.

    (c) Communications strategy and plans, articulating roles for partners and key messages for different audiences.

    (d) Event and volunteer management guidance (including risk management, responsibilities etc). Recognising that different partners have different levels of bureaucracy (large NGOs, Academic Institutions vs community hubs), but agreed minimum standards should be set for different types of activities and once clearly agreed, partners can be empowered to make day-to day decisions.

    (e) Clear conflict resolution protocols and processes.

11. Set out clear objectives and results for partners with overarching workplans and budgets – but allow them the flexibility to manage their work within these parameters. With agreed periodic reporting back of progress, results and spend. Approval of any expenditure in advance seems like overkill, as long as these parameters have been put in place and agreed by both parties. While some donor requirements may be more rigorous than some are used to, there is a need to be as clear as possible on expectations from the start, while aiming for as much flexibility as possible within that to enable partner autonomy in delivery.

12. Plan for the seasonal nature of activities from the outset, and factor this into engagement planning and resourcing decisions (recognising spring and autumn are likely to be peak times for both facilitating engagement and for restoration activities).

13. Continue to ensure sufficient resources are kept aside to support diversity and inclusion.

14. Ensure payments to partners are made on a timely basis, again recognising these processes in WWF are not wholly within direct control of the project team.

15. The layering of management roles within the partnership structure created a hierarchical structure that may not have been necessary (for example with hubs reporting into RBGE, but also accountable to the Project Manager). For future large partnerships, review the partnership and governance structures based on learning from this project, considering the challenges of coordinating multiple organisations and community groups.

Project Governance

16. The Steering Group should focus on strategic issues such as funding, risk management, and opportunities, rather than operational updates. This group should not be chaired by the Project Manager, but by a senior member of one of the partners (or this could be done on a revolving basis among senior members of partners).

17. The inclusion of NatureScot on the Steering Group was clearly beneficial. Consider whether it would be useful to invite other government representatives (e.g. Marine Directorate) to sit on the Group. Or establish an Advisory Group of key strategic stakeholders, who could be called upon in an advisory capacity as necessary.

18. Build in regular learning reviews. Adaptive management was evident throughout the project, but it is unclear to what extent the Steering Group were involved in these decisions (where it involved strategic matters rather than operational).

Impact and Sustainability

19. WWF-UK and WWF Scotland senior leadership commitment is needed over the longer term to secure impact and sustainability for the Firth of Forth through the delivery of a Wholescape approach, recognising that restoration and conservation impact takes time to achieve.

    To achieve the impact desired in the coastal environment will require an integrated approach, focusing on multiple habitats that support each other while linking with concerted action to also address land-based (and other) activities affecting water quality. This will require a broader partnership focused around a strategic environmental and social vision, with communities and key stakeholders bought in.

    Restoration Forth has potentially laid the groundwork for the platform for this, and WWF can play a key role in convening different stakeholders around a strategic vision along with project partners, and in collectively building out a governance structure which supports these different stakeholders to come together. This will require resources and capacity to engage additional and different stakeholders around land management issues, as well as additional advocacy capacity. It will also require new partnerships with

different relationships, skills, and expertise. Lessons on partnership management from Restoration Forth should inform how these are developed.

20. In light of learning that communities will not independently drive restoration work, a clearer longer term exit strategy needs to be developed to ensure what has been achieved by the project is secured over the longer term, and to enhance likelihood of the desired long-term impact for the Firth of Forth. The project has built a platform, has built momentum in communities, and it is important not to lose this. This should be a key discussion for the Steering Group as well as delivery partners incorporating scenario planning and pathways for the different partners. Also considering how to deal with likelihood of future conflicts over restoration sites and enhanced protection of restored ecosystems.

21. Consolidate and expand successful oyster restoration models to new communities while continuing to explore ways to achieve efficiencies. The development of an oyster hatchery by Balanced Horizons provides an opportunity to develop the local supply chain and reduce biosecurity measures required. But the challenge remains financing over the long term.

22. Secure long-term funding. Always the challenge. Leverage WWF's brand, explore blended finance opportunities to secure corporate, philanthropic and where appropriate/feasible, private investment. Consider community-based funding models. Securing small, flexible funding streams could help sustain community-led monitoring and education. And continue to advocate for the Government to value these ecosystems as assets which can help them to deliver climate and biodiversity targets, and to push government to explore ways to generate income for their restoration from economic actors that benefit from their resilience.