



Enabling Markets for Marine Natural Capital: Facility for Investment Ready Nature in Scotland (FIRNS)

A report by the Scottish Association for Marine Science on:

1. A stakeholder workshop exploring how to create conscientious markets out of marine natural capital (pages 2-8).
2. A community event exploring how the general public on the West Coast of Scotland feels marine restoration activities should be funded (pages 9-10).

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1. Stakeholder workshop: Creating Conscientious Markets out of Marine Natural Capital

Summary

The FIRNS workshop, "Creating Conscientious Markets out of Marine Natural Capital," brought together 16 participants from diverse organizations to discuss the development of markets around Marine Natural Capital (MNC) in a community-focused approach. The workshop featured presentations on the perceptions of coastal stakeholders and the public regarding MNC markets, highlighting preliminary findings from questionnaires and interviews. Concerns about greenwashing, commodification of nature, and the trade-offs in marine ecosystem management were evident.

In scenario-based activities, participants deliberated over community-based oyster restoration projects and the implications of expanding such projects with external investments for biodiversity and carbon credits. Responses underscored the need for risk management, legal and financial transparency, and ethical environmental practices. The discussions pointed to the necessity of community involvement, project viability, good governance, and understanding of market dynamics.

Key skills identified for successful projects included technical, business, and scientific expertise, project management, communication, and local workforce development. The consensus acknowledged the promise of MNC markets but emphasized the imperative for clarity in standards, governance, and benefit-sharing. The workshop underscored the criticality of community engagement, capacity building, and rigorous oversight to foster sustainable MNC markets, particularly in Scotland.

Introduction

The FIRNS workshop titled "Creating Conscientious Markets out of Marine Natural Capital" focused on exploring the potential and challenges of developing markets around Marine Natural Capital (MNC) with a community-centric approach. The workshop included a series of presentations, activities, and discussions that aimed to outline a development roadmap for future markets.

The workshop had 16 participants from nine organisations including:

- SeaWilding
- Argyll Coast and Countryside Trust
- Highlands Rewilding
- Community Association of Lochs and Sounds (COALAS)
- Highlands and Islands Enterprise
- Crown Estate Scotland
- NatureScot
- The Highlands and Islands Environment Forum
- The Scottish Association for Marine Science (SAMS)

The workshop had two main sections, firstly presentation on preliminary results from the project and then a semi-structured discussion on the development of Marine Natural Capital (MNC) markets related to community oyster restoration projects (Table 1). The presentations of preliminary results were titled:

- The perceptions of coastal stakeholders and public on the implementation of marine natural capital markets in Scotland: results from a questionnaire survey
- Findings from semi-structured interviews about perceptions of marine natural capital markets
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Table 1 Structure and timetable of the workshop held at SAMS

10:00-10:15	Teas, coffees and introduction
10:15 – 11:00	FIRNS aims and results so far <ul style="list-style-type: none">• Taco van Heusden• Simone Martino• Sam Poskitt
11:00 – 11:15	Questions and free-flowing conversation
11:15 – 11:30	Break
11:30 – 12:00	Workshop activity 1
12:00 – 12:30	Workshop activity 2
12:30 – 13:00	Workshop wrap-up
13:00	Lunch provided

Key Findings and Discussions following the presentations

1. Legal Framework and Market Structure:

Taco van Heusden highlighted the lesser-developed legal structure for MNC compared to terrestrial natural capital markets. Three critical areas were discussed:

- The applicability of credit systems like carbon or nutrient credits to MNC and alternative structures such as shareholding and project companies for long-term sustainability.
- Oversight mechanisms to ensure project integrity and inclusion of community, regulatory, and scientific perspectives.
- Considerations around remuneration and community benefits, emphasizing the need for local employment opportunities through projects like ocean restoration.

2. Community and Stakeholder Perceptions:

- Simone Martino presented findings from a questionnaire distributed among 16 organizations and the general public. While there was some support for introducing MNC to markets, concerns such as greenwashing, corruption, and the commodification of nature were prevalent.
- Sam Poskitt discussed interviews with marine environment stakeholders, revealing concerns about the trade-offs between different interests, the complexity of marine ecosystems, and the potential risks and benefits of MNC markets.

Questions and Comments: Participants raised several pertinent questions regarding the specific choice of native oysters for case studies, the role of government investment in oyster restoration, and broader concerns about market frameworks and environmental impacts. The need for more significant investment in understanding and developing MNC markets was acknowledged.

Workshop Activities and Scenarios

Participants engaged in scenario-based activities to discuss the operationalization of MNC markets in community-based projects. Key questions involved investment continuity, ethical considerations, community benefits, and project feasibility. Discussions emphasized the need for clear metrics, due diligence, and ensuring benefits directly reach the communities involved.

Scenario 1

The workshop participants were split into groups of four and asked to consider the following Scenario.

- There is an existing community-based oyster restoration project.

- An investor wants to fund an expansion of the project in exchange for voluntary biodiversity and carbon credits.
- A nascent market for Marine Natural Capital exists, with a set of standards set by a private accreditation organisation.

And to answer the following question: '***What does the community need to know to make a decision on the investment?***'

A more detailed summary of the responses to the scenario can be seen in Appendix1, but a synthesis of the responses collected identified a number of key themes.

Risk Management and Due Diligence:

- Stakeholders are concerned about the risks associated with the investor potentially going bankrupt and the long-term viability of the project
- The capacity of the community and the project to absorb the investment and the consequences of potential project failure are highlighted.

Financial Transparency and Distribution:

- There is a clear need for understanding the financial benefits, including how the funds will be allocated and shared among the community members.
- Queries about the financial structure and the fairness of the investment's distribution within the community are evident.

Legal Framework and Ownership:

- Questions about legal ownership, rights, and the legislative framework surrounding the project indicate concerns about legal clarity and implications.

Ethical and Environmental Integrity:

- Ethical considerations regarding the investor and the project, including the potential for greenwashing and the ethical credentials of the investor, are of importance.
- There is a desire to ensure the environmental benefits of the project, confirming its ecological suitability and the integration of the project within the complexity of the marine environment.

Community Engagement and Definition:

- A definition of who constitutes the 'community' is sought, as well as the mechanisms for community consultation and the alignment with the community's needs and wishes.

Project Feasibility and Standards:

- The feasibility of the project expansion, including supply chain and seed supply, as well as the standards required for accreditation are queried.

- There is an interest in the long-term timeline of the project, the conditions of the contract, and the criteria for the set of standards to be met.

Market Dynamics and Capacity Building:

- Understanding the market dynamics for Marine Natural Capital, including buyers, sellers, and the rules of the market, is considered necessary.
- Capacity building, particularly regarding education about Marine Natural Capital markets and the community's capacity to meet the expectations of the project, is emphasized.

Accountability and Governance:

- Questions around the governance of the project, who will be responsible for monitoring, and the accountability mechanisms suggest a concern for proper management and oversight.

From these themes, it's apparent that the workshop participants are focused on ensuring the project is not only financially beneficial and environmentally sound but also ethically managed, legally transparent, and aligned with the long-term goals and definitions of the community. They seek to avoid any negative repercussions that might arise from the investment while ensuring that the community is prepared and informed enough to undertake this opportunity.

Scenario 2

In the same groups as scenario 1 the participants were asked to consider the following scenario

- A maturing market for Marine Natural Capital exists, with multiple sets of standards set by private accreditation organisations existing, underpinned by a national framework
- An investor has approached a coastal community council stating they want to create habitat restoration projects to create voluntary carbon and biodiversity credits
- The community council is interested in the idea

And to answer the following questions; ***'What would the characteristics of a successful project be for the community?'*** and ***'What skills will be needed within the community to deliver the successful project?'***

The following common themes were drawn out from the responses (fuller responses can be found in appendices xx)

Common Themes for a Successful Project:

Community Involvement and Benefits:

- Inclusive planning within the community action plan.
- Job creation and socio-economic benefits.
- Equitable distribution of financial benefits.

- Opportunities for training and employing locals.
- The project must resonate with the community's needs and preferences.

Project Viability and Sustainability:

- Feasibility in terms of environmental suitability.
- Long-term support and avoiding short-term, externally imposed solutions.
- Viable, well-defined, and low-risk projects, preferably on a small scale to integrate smoothly into the community.

Good Governance and Management:

- Clear governance structures.
- Transparent and effective management of funds.
- A well-thought-out local development plan.
- Mechanisms for ongoing resource availability.

Environmental and Scientific Considerations:

- Building upon existing environmental activities and data.
- Ensuring projects do not conflict with existing marine uses and users
- Emphasis on habitat restoration potential.

Community Education and Engagement:

- Understanding the market and having a say in its workings.
- Education and awareness-raising about the project's environmental and economic aspects.

Skills Required Within the Community:

Technical and Scientific Expertise:

- Scientific, environmental, and legal knowledge.
- Marine biology and habitat restoration expertise.
- Scientific and husbandry skills for ecological projects.

Business and Financial Acumen:

- Business management and financial oversight skills.
- Understanding and managing investment and benefits.
- Skills in assessing project feasibility and sustainability.

Project Management and Administration:

- General project management.
- Administrative support for organizational tasks.
- Governance and resource management.

Communication and Outreach:

- Effective internal and external communication.
- Outreach and facilitation to engage stakeholders.

- Conflict resolution and handling of community interests.

Local Workforce Development:

- Upskilling existing community members.
- Training opportunities related to the marine environment and project needs.
- Emphasis on practical skills for project implementation.

Conclusion and Future Directions

The workshop concluded with a consensus on the potential of MNC markets but also highlighted the need for more clarity, rigorous standards, and transparent governance structures. The importance of local capacity building, equitable benefit distribution, and environmental sustainability were stressed as essential for the success of future MNC markets.

Recommendations

- Enhance community engagement and capacity building to better understand and manage MNC projects.
- Develop clear and enforceable standards and metrics for MNC markets.
- Ensure equitable distribution of benefits and rigorous oversight to prevent potential negative impacts like greenwashing.

The FIRNS workshop provided valuable insights into the challenges and opportunities of developing conscientious markets for Marine Natural Capital, setting a foundation for continued collaborative efforts, particularly along the west coast of Scotland.

2. Community Event: How should marine restoration be funded?

Introduction

The FIRNS Community Event titled “How should marine restoration be funded?” aimed to do an initial exploration of how the general public on the West Coast of Scotland feels about Marine Natural Capital (MNC) markets, in an accessible way.

Method

The event included a short and informal questionnaire, and a visual “voting” activity, so that participants could physically show which form of funding options they preferred for oyster restoration. The choices were, charity/ philanthropy, private investment, government/ public funding and, other. This was an informal, inclusive, and semi-deliberative method, where participants were encouraged to discuss their opinions with their partners, parents, and children. Oyster themed colouring pictures and word searches (freely available from the [Native Oyster Restoration Alliance](#)), along with colouring pencils and pens were provided for younger children as entertainment during the discussions. The event was held in the Ocean Explorer Centre on the 3rd of April, between 11:00 and 13:00. The questionnaire and photographs of the voting activity can be seen in appendix 2 and 3, respectively.

Results

Suzi Billing and Adam Hughes (Scottish Association for Marine Science) engaged with 12 participants, most were from the West Coast of Scotland, with three from the North-East of England. Discussions were intergenerational, with parents, grandparents, and children getting involved. The researchers did not directly elicit perspectives from children but were inclusive in conversations where it was clear the parent/ guardian was a) also including their children and b) comfortable with allowing a discussion between everyone.

Key findings

1. **Lack of background knowledge:** None of the participants knew the positive environmental benefits of restoring oyster reefs, and all but one did not know that oyster reefs had been degraded or how they were degraded.
2. **Relationship to the sea:** All participants had a strong relationship with the sea, some coming from fishing families, others through recreation, home location, and day-to-day activities. One was interested from a professional veterinarian perspective.
3. **Paying for oyster restoration:** Initially most participants suggested the government should pay. However, most also revised this opinion, through their own spoken thought processes and/or discussion with family members, to a mix of charity/ philanthropy and government/ public funding. There were a few participants who felt that a mix of private investment regulated through

government was the best option with one clearly noting that the degradation was caused by private business, so the restoration should be paid for by private business. No participants felt that it should be solely private investment which pays, but there were a few who felt it should be solely government, this perspective was largely explained through participants opinions that the sea belongs to everyone. There was some discussion that restoration could be funded through sectioning off parts of oyster reef that could be harvested for sale, preferably to local restaurants to maintain a higher price and local supply-chain.

Discussion

This informal community event highlighted the need for expanding information-giving/ ocean literacy activities that increase the general public's knowledge of marine restoration, what it can achieve environmentally, and why it might be necessary to meet net zero and marine net gain goals. Further, there is the need to conceptualise MNC markets in a way that is accessible for the general public and seaside communities. This could facilitate improved understanding of what MNC markets might mean for these communities, and how MNC markets might be structured to create social benefits. Currently, there is not enough base-line knowledge for even semi-informed conversations, and opinions are therefore formulated used experiences of other more familiar marine or terrestrial activities, or non-comparable governance/ taxation structures.

Recommendations

1. Continue to promote and distribute the story of native oysters in the UK and the role of oyster restoration in creating a healthy marine environment (as seen through several projects such as SeaWilding, DEEP, Restoration Forth), to improve the general public's core understanding of UK coastal ecology.
2. Develop accessible language around MNC markets to improve community-level decision making.

Appendix 1: Responses to workshop scenarios

Responses to Scenario 1

Risk Assessment and Contingency Planning:

- **Investor Reliability (Response 1):** What are the risks if the investor fails financially and how would the community handle such a situation?
- **Monitoring Responsibility (Response 2):** Who will be in charge of long-term monitoring, and what happens if responsibilities are neglected?
- **Compensation for Losses (Response 4):** If there are negative outcomes, how will the community be compensated?

Financial and Legal Considerations:

- **Benefits to Community (Response 3):** What specific financial benefits will the community receive from the project?
- **Funds Allocation (Response 5):** How will the funds be distributed among community members and what is the payment structure?
- **Legal Ownership and Rights (Response 5 and 6):** Who will own the rights to the project and the credits it generates?
- **Investor Background (Response 6):** What is the investor's reputation, and does it align with the community's values?

Standards and Accreditation:

- **Accreditation and Standards (Response 7 and 8):** What does the process of getting accredited entail, and are the standards voluntary or mandatory?
- **Community Definition and Preparedness (Response 9):** Who is considered part of the 'community', and are they equipped to manage the funding and adhere to market rules?

Project Feasibility and Ethics:

- **Investment Practicality and Ethics (Response 10 and 11):** Questions about the logistics of investment, supply chain concerns, and the ethical implications of the project.
- **Investor Track Record (Response 11):** Has the investor successfully implemented similar projects before, and what is their success rate?
- **Beneficial Restoration (Response 11):** Is the oyster restoration ecologically and scientifically beneficial to the area?

Project Integration and Market Dynamics:

- **Investor Transparency (Response 12):** Is there a risk of greenwashing, and does the project have the capacity to scale appropriately with the investment?
- **Market and Ethical Considerations (Response 13):** What is the market value, who will buy the credits, and will there be ethical scrutiny of off-takers?

Contractual and Reporting Obligations:

- **Agreements and Liabilities (Response 14):** Details on contractual agreements, liabilities, regulations, and the capacity required for project expansion.
- **Reporting and Monitoring (Response 14):** Expectations regarding the regular reporting and monitoring of the project's progress and impact.

Knowledge and Capacity Building:

- **Market Operation and Legal Issues (Response 15):** A need for understanding how the market operates, the legal framework, and the project's place within marine spatial planning.
- **Scientific Underpinning (Response 15):** The necessity of solid scientific grounding to justify the restoration project's viability and benefit.

Responses to Scenario 2

- **Advisory and External Expertise (Responses 1 and 2):** There is a need for advisory services, suggesting the project could benefit from specialized knowledge, potentially from a limited pool of marine experts.
- **Building on Existing Activities (Response 3):** Emphasizes leveraging current initiatives, which indicates the importance of continuity and the utilization of existing structures and resources.
- **Consultation, Planning, and Job Creation (Response 4):** Highlights the critical role of community involvement in planning, the potential for job creation, and the need to establish new bodies or mechanisms for project management and financial oversight.
- **Governance and Community Consultation (Response 6):** Stresses the need for a strong governance structure, resource allocation, and a benefit fund. It also mentions the importance of understanding community benefits and addressing potential conflicts.
- **Bottom-up Approach and Long-term Support (Response 11):** Indicates a preference for community-driven initiatives rather than externally imposed ones and emphasizes the need for sustained support.
- **Viable and Low-risk Initiatives (Response 13):** A successful project should be financially and environmentally viable, well-defined, low-risk, and should not introduce new conflicts.
- **Local Engagement and Distribution of Benefits (Responses 14 and 15):** The project must balance local engagement, not conflict with existing users, and provide equitable financial benefits to the community.
- **Feasibility and Habitat Suitability (Response 16):** Considers the ecological aspects and whether the habitat restoration is feasible and appropriate for the region.
- **Local Employment and Training (Response 18):** The project should prioritize hiring locals

Appendix 2: Informal questions for participants

Questions for participants

1. Where are you from?
2. In what ways do you use the coast and the sea?
3. How should restoration of oysters be funded?
4. Why do you feel that way?

Appendix 3: Photographs of the deliberative voting activity



Figure 1. Photographs of the deliberative voting process. Participants could place one vote per option (for a maximum total of 4), but no-one placed more than two.