

PML

Plymouth Marine
Laboratory

Research excellence supporting a sustainable ocean

Stakeholder perspectives and requirements for providing long-term access to marine social and economic data

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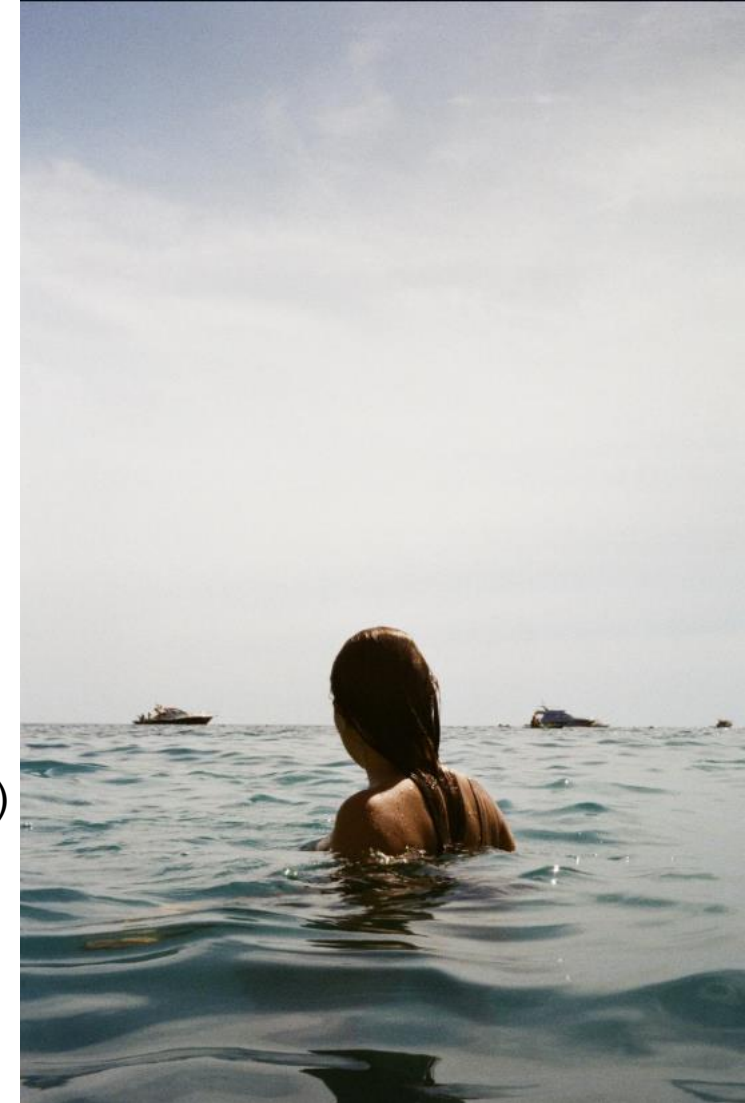
Marine Economic Data

- **Fisheries revenue and landings value**
- **Aquaculture production and income**
- **Shipping and port activity** (cargo volumes, vessel movements)
- **Offshore energy production** (oil, gas, renewables)
- **Tourism and recreation income** (coastal tourism, marine leisure)
- **Marine-related Gross Value Added (GVA)**
- **Trade and export statistics** for marine products
- **Investment in marine infrastructure** (ports, energy facilities)
- **Costs of marine conservation and management measures**
- **Economic valuation of ecosystem services** (e.g., carbon sequestration, coastal protection)



Marine Social Data

- **Demographics of coastal communities** (population size, age distribution)
- **Employment statistics** in marine-related sectors (fisheries, shipping, tourism)
- **Community well-being indicators** (health, income levels, social resilience)
- **Cultural heritage and traditions** linked to marine activities
- **Recreational use of marine areas** (boating, diving, beach visits)
- **Education and skills** related to marine industries
- **Stakeholder engagement and perceptions** (public attitudes toward marine policies)
- **Access and equity** (who benefits from marine resources and services)



The growth of marine social and economic data in the UK

Early 2000s: Marine monitoring almost exclusively environmental.

Charting Progress 1 (2005): Delivered the first integrated assessment of UK seas, but social and economic data was still peripheral.

Charting Progress 2 (2010): Included a dedicated socio-economic chapter and highlighted significant gaps in structured data management, and called for better integration to support ecosystem-based management and marine spatial planning.

A review of social and economic data (2012), carried out by EMU Ltd, the MBA & PML, provided several recommendations.

Charting Progress 2 The state of UK seas



Marine and Coastal Access Act (2009)

1) Marine Management Organisation (MMO)

Established to implement marine planning and licensing under the Act.
Integrates environmental, economic, and social evidence to deliver sustainable marine management.

2) Marine Policy Statement (2011)

High-level objectives for the marine environment.
Aims to balance economic growth, social benefits, and environmental protection.

3) Marine Plans

Guides decision-making for all activities in UK marine areas
Supported by sustainability appraisals, which assess the combined social, economic, and environmental impacts of proposed policies.

4) Ecosystem-Based Approach

Requires decisions to consider cumulative impacts of human activities on ecosystems while addressing socio-economic objectives.
This approach ensures that development (e.g., offshore wind, shipping) does not compromise long-term environmental health or community well-being.

Changes to legislation: Marine and Coastal Access Act 2009 is up to date with all changes known to be in force on or before 06 October 2025. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes



Marine and Coastal Access Act 2009

2009 CHAPTER 23

An Act to make provision in relation to marine functions and activities; to make provision about migratory and freshwater fish; to make provision for and in connection with the establishment of an English coastal walking route and of rights of access to land near the English coast; to enable the making of Assembly Measures in relation to Welsh coastal routes for recreational journeys and rights of access to land near the Welsh coast; to make further provision in relation to Natural England and the Countryside Council for Wales; to make provision in relation to works which are detrimental to navigation; to amend the Harbours Act 1964; and for connected purposes. [12th November 2009]

BE IT ENACTED by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

Modifications etc. (not altering text)

C1 Act applied in part (E.W.S.) (15.12.2014) by The London Underground (Northern Line Extension) Order 2014 (S.I. 2014/3102), art. 4(12) (with Sch. 8 para. 45)

PART 1

THE MARINE MANAGEMENT ORGANISATION

CHAPTER 1

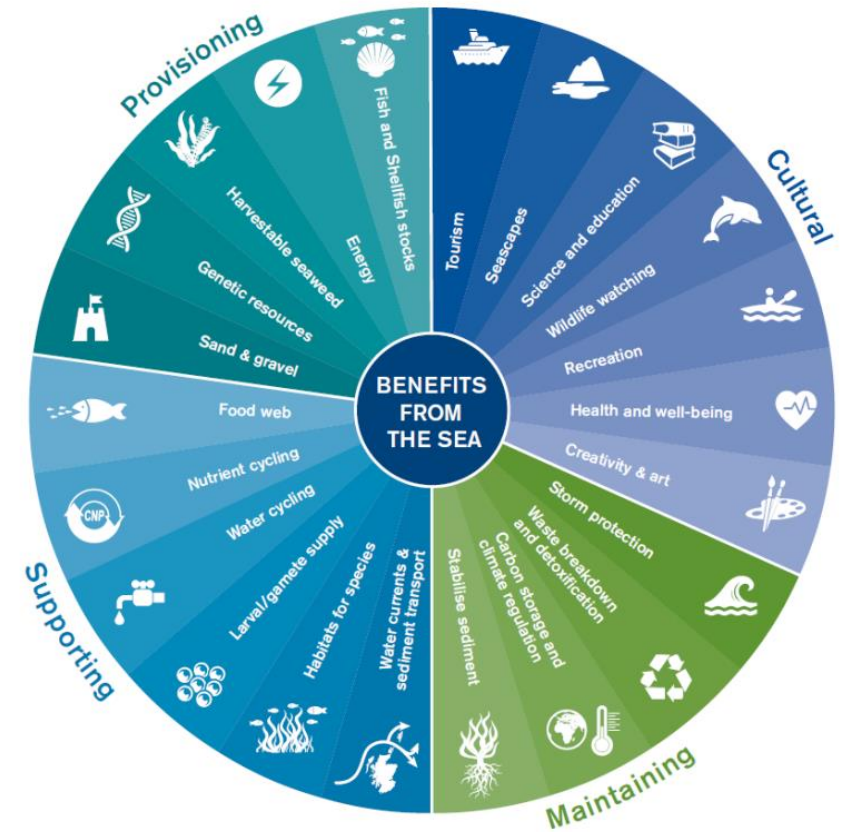
ESTABLISHMENT

1 The Marine Management Organisation

(1) There is to be a body known as the Marine Management Organisation ("the MMO").

Defra's marine Natural Capital and Ecosystem Assessment (mNCEA)

- Has further highlighted the growing need for marine social and economic data to be accessible alongside environmental data.
- Marine natural capital assets (e.g. species, habitats, natural processes and functions), underpin the provision of vital goods and services that support the economy and human well-being.
- This work has been funded by Defra as part of the mNCEA Programme and led by MEDIN. This report aims to understand wider perspectives of key stakeholders within the marine social and economic arena on requirements for providing long-term access to marine social and economic data.



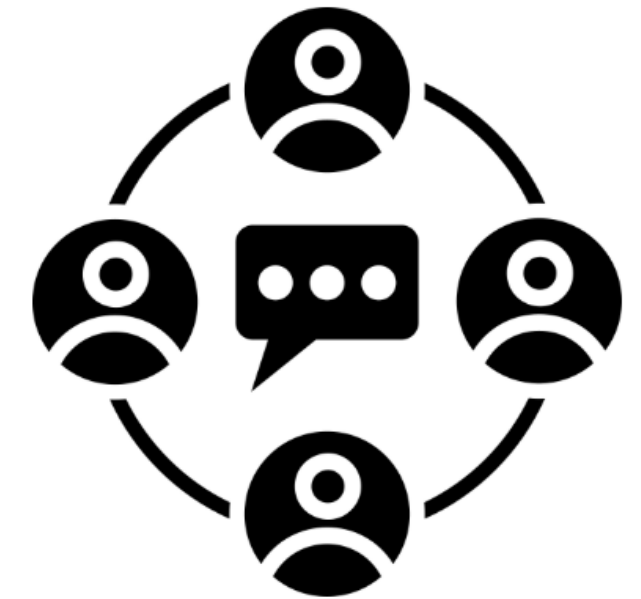
Stakeholder consultation

Interview questions based around four key themes:

- 1) Improving data access and discovery,
- 2) Improving data storage and archival,
- 3) Improving data sharing and communication,
- 4) Strategic action to improve access to marine social and economic data.

Mapped stakeholders mapped invited to interview. Sector representation included: Government (2), ALB (5), Academia (7), Industry (1), Consultancy (1), Other (1).

Interviews analysed through content analysis (NVIVO)



Key takeaways- support for a centralised directory

- Over half of participants (8 of 17) highlighted difficulties in searching for marine social and economic data.
- There was strong support (16 of 17) for the development of a centralised directory of social and economic data sources.
 - Would decrease workload in terms of search times.
 - Would ensure that they were using the best available data, if the portal was well-resourced.
 - Data would have to be well-described and organised into themes to ensure searchability.
 - Many social and economic data users are not experts in the field, and the user interface would have to be designed with such end users in mind.

'I would like to see social data alongside environmental data'

'We're aware that it needs to be collected and integrated into centralised databases where people can find it openly.'

'One of the challenges that we've come up against time and time again over the last 10 years is thinking about how MEDIN can better integrate social, cultural and economic data'

Key takeaways- support for metadata standards

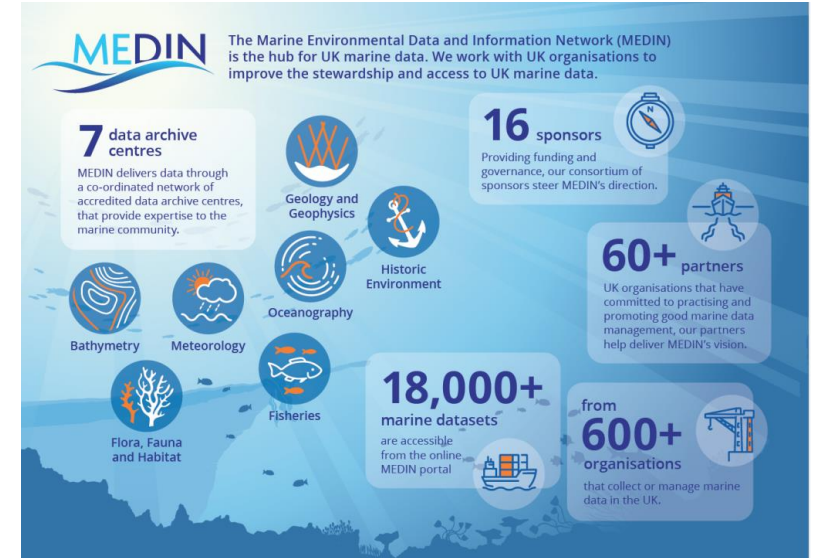
- There was strong support (15 of 17) for the development of marine social and economic metadata guidelines.
 - Would ensure the data were FAIR (Findable, Accessible, Interoperable and Reusable).
 - Should utilise/ modify current marine and social and economic data standards and guidelines where possible.
 - Several (5 of 17) highlighted that social and economic data comes with added complexities (data security, ethics, GDPR and licensing) and that clear guidance was needed on how to manage data and share either metadata or raw data in line with these requirements.

'I think we have an opportunity with social data to do it differently and better just because it's younger and there's not as much data available.'

Key takeaways- support for a Data Archive Centre (DAC)

All but one participant (16 of 17) showed support for a marine social and economic-themed DAC to hold data that is not held elsewhere, but views on the location of this DAC were mixed.

Storing social and economic data is not well understood and determining how to proceed is a significant priority for the future.



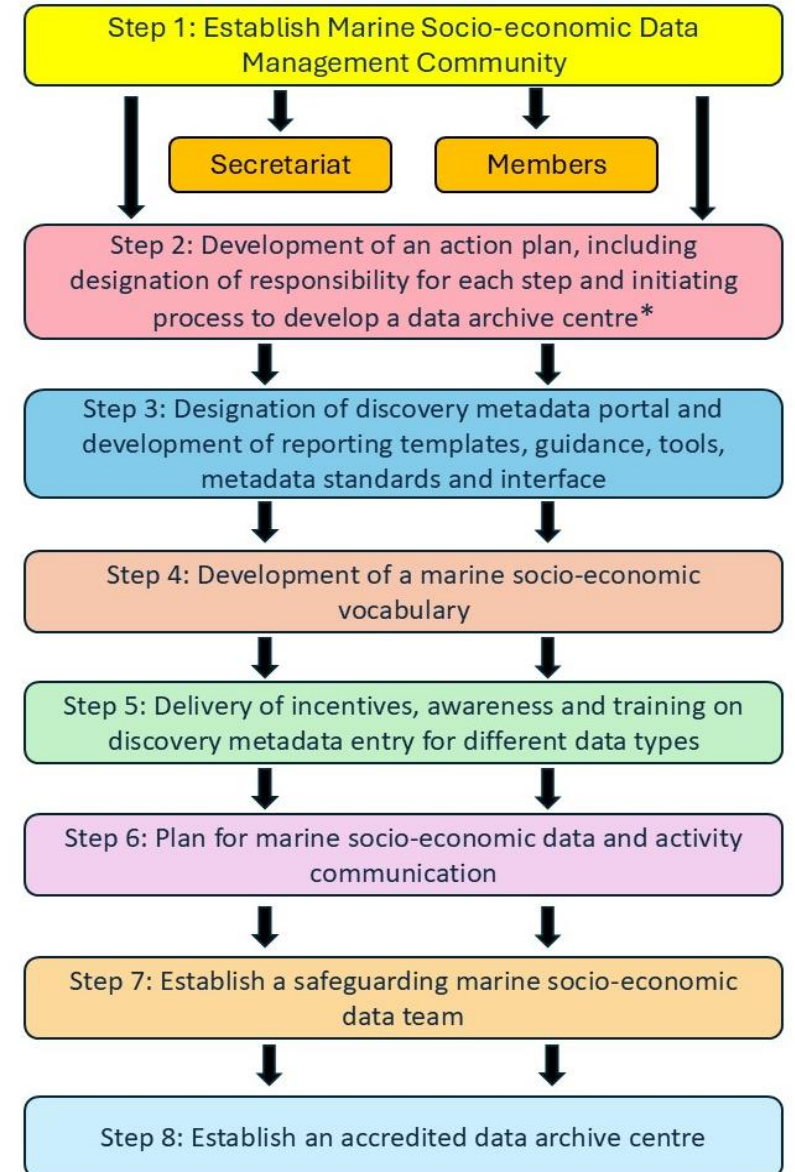
‘I think social data needs to be the focus of the DAC at the moment, almost as a self-entity. If you start with social and economic data together, the economic data will be the government’s focus. And I just think that’s a bit narrow.’

Proposed roadmap for improving marine social and economic data management in the UK

- Long-term resourcing of a Marine Social and Economic Community
 - Secretariat made up of a wide range of stakeholders including MEDIN, the UK Data Service, academia, government and technical experts.
 - Responsible for the development of an action plan.

- Centralised data portal housed within MEDIN
 - Metadata federated in from a range of sources.

- The UK Data Service likely best placed to house a marine social and economic DAC
 - Most experienced in the curation of social and economic data
 - Already has the standards and guidelines to ensure adherence to legislation and licensing of social and economic data.



Thank you

