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Towards Social Accounts: Rethinking How We Understand and Use Social Information

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Key messages

- There is growing interest in incorporating social, cultural and equity components in Ocean Accounts.
- To do this, we need to ensure that we are delivering “Social Accounts”, going beyond the use of “Social data” and “Social Statistics”.
- Social Accounts provide a structured system that connects individual statistics into a coherent whole, showing relationships between different social dimensions and how they relate to economic and environmental aspects of ocean resources.
- While Social Statistics provide specific measurements, Social Accounts create an integrated picture of society's relationship with ocean ecosystems.
- Here we provide a structured process for countries wishing to development and implement a Pilot Social Accounts for the ocean.

Introduction

Sustainable ocean governance requires robust social data to better account for the complex relationship between humans and the ocean, including dependency on ocean resources, social vulnerability and resilience to ocean pressures and the distribution of benefits across communities, groups, sectors and organizations. To date, most social data exists in the form of social statistics, compiled in databases held by government and other sectors. This information is scattered across many different databases, sectors, institutions and specialist expert communities (Global Ocean Accounts Partnership, 2021, 2024). Social statistics provide quantitative measures of societal conditions, behaviours, and trends through collection and analysis of data about populations. While valuable, we need to move beyond these traditional approaches towards comprehensive Social Accounting systems that integrate social, cultural, and equity data, alongside economic and environmental data. The Ocean Accounting (OA) framework offers a richer contextual understanding of populations and communities and enable spatial and temporal comparisons. This approach enables more effective policy development, resource allocation, and targeted interventions by revealing patterns and relationships that might otherwise remain hidden in conventional databases of ocean statistics. This briefing paper aims to describe the differences between Social Statistics and Social Accounts, and the need and added value of Social Accounts for the ocean.

What is social data?

Social data is the raw information that is collected about individuals, groups, or social phenomena in the context of the human-ocean relationship. The data can be qualitative or quantitative and can be collected by various stakeholders (e.g. government, international organizations, research organizations and non-governmental organizations). Such data has been used for decades to: (i) document social contexts of coastal communities to inform planning and management, (ii) characterize and evaluate the effectiveness of marine and fisheries governance and management, (iii) identify dimensions, factors, and interventions that influence people’s ocean-related behaviour and actions and (iv) assess the influence of environmental impacts, management, conservation, and development activities on human well-being (Bennett, 2019; McKinley, 2020; McKinley et al., 2022).

Social data can be used to derive Social Statistics, which are numbers, summaries of patterns and probabilities (University of Manchester, 2025). In the context of the ocean, Social Statistics are individual data points, indices or collections of metrics that describe social characteristics and behaviours aspects related to the ocean. For example, employment figures in ocean sectors (fishing,

shipping, tourism), income derived from ocean-related activities, demographic information about coastal communities, health indicators related to ocean resources (e.g., nutrition from seafood) and educational attainment in ocean-dependent regions.

Table 1 provides an overview of the types of datasets and examples of Social Statistics. The effective use of social information about the oceans often requires secondary datasets to be standardized, weighted, or combined with complementary sources.

Table 1: *Illustration of the different datasets that hold social statistics with examples from each sector.*

Sector	Types of datasets	Examples
Governmental Organizations	▪ Census ▪ Household Income and Expenditure Surveys (HIES) ▪ Labour Force Surveys (LFS) ▪ Tourism and recreation surveys ▪ Agriculture and Fisheries Census or Surveys ▪ Engagement with the natural environment surveys ▪ Blue economy data	▪ Human Development Index (HDI) ▪ Family Budget Survey (Mozambique) ▪ National Domestic Tourism Survey (Belize) ▪ Vanuatu National Agriculture Census (Vanuatu) ▪ National Culture Survey (Costa Rica) ▪ Multiple Indicator Cluster Survey (Fiji) ▪ People and Nature survey (UK) ▪ Economics: National Ocean Watch (NOAA)
International Organizations	▪ Global fish capture and aquaculture data ▪ Ocean Economy data ▪ Public perceptions of the marine environment surveys	▪ FishStatJ (FAO) ▪ FAOSTAT (FAO) ▪ OECD ▪ EUROStat Blue Economy ▪ Special Eurobarometer survey on “Attitudes of Europeans Towards the Ocean” (EU Commission)
Research Organizations	▪ Global Fisheries data ▪ Social surveys of coastal communities. ▪ Social surveys ▪ Public perceptions of marine issues and how they affect human health and wellbeing	▪ SeaAroundUs (University of British Columbia) ▪ Seas, Oceans and Public Health in Europe survey (European Centre for Environment and Human Health)
Non-Governmental Organizations	▪ Vessel tracking data ▪ Human wellbeing data	▪ Global Fishing Watch ▪ World Ocean Assessment (UNEP) ▪ Ocean Health Index

What are Social Accounts?

Social Accounting is the process of capturing, analysing, and reporting of data related to the social, cultural and equity dimensions of the human-ocean relationship (Holloway et al., 2024; Shellock & James, 2024). This social, cultural and equity data is integrated with spatial mapping, which doesn't just tell you what is happening, but also where it is happening. Social Accounting provides a structured system that connects individual statistics into a coherent whole, showing relationships between different social dimensions and how they relate to economic and environmental aspects of ocean resources. Social Accounting creates accounting tables that provide the linkages between social data and environmental and economic data. The accounting tables are termed "Social Accounts". While social data provide specific measurements, Social Accounts create an integrated picture of society's relationship with ocean ecosystems from social data. Social Accounts are developed through the following stages: data identification or data collection, data harmonization, data transformation and account compilation.

The main differences between Social Accounts and social data (including Social Statistics) are outlined below:

1. Social Accounts integrate statistics into international, standardised frameworks

Social Accounts are comprehensive frameworks that systematically organize these statistics into a coherent accounting structure. Social Accounts integrate social statistics into the Ocean Accounts framework, providing a standardized format that enhances consistency, comparability, and coherence across social, environmental, and economic domains. This integration creates a formal accounting framework compatible with international statistical standards, particularly the System of National Accounts (SNA) and System of Environmental-Economic Accounting (SEEA).

By applying accounting principles, Social Accounts ensure completeness and internal consistency in data reporting and analysis. They employ standardized classifications, definitions, and measurement approaches that enable meaningful spatial and temporal comparisons. This standardization facilitates the production of indicators that effectively track progress toward various policy objectives.

2. Social Accounts link social data to economic and environmental information

The OA framework allows us to link and understand the dependency on nature of our economic and social systems, enabling appropriate planning to increase resilience and adapt to threats. Economic and Environmental Accounts meet international standards, through organising and accounting social data within similar accounting frameworks (i.e. Social Accounts) which comply with intentional systems then you can identify the linkages between the three domains. The OA framework distinguishes between stocks (measured in terms of their status, extent and/or condition) and flows (measurements of supply, use or activity) concerning the economy, society beyond the scope of the economy and the environment beyond the scope of society. The framework provides structures to incorporate social data and considerations related to the ocean and link this to ecosystems and the ocean economy through the following entry points:

- **Social assets and conditions**: The OA framework provides structures to incorporate social dimensions affecting and affected by ocean environments and economies. For example, measures of wellbeing, social vulnerability and resilience in coastal communities and nutritional and cultural dependence.

- **Contributions of social conditions to social activities and economic activities, and vice versa:** The OA framework facilitates capturing the bidirectional relationship between social conditions and various activities in both social and economic domains. Social capital—including

community networks, cultural institutions, educational levels, and traditional knowledge—can enable and shape ocean-related activities from community-based conservation to commercial fisheries. The framework enables documentation of these complex feedback, acknowledging how social structures both enable economic production and are themselves produced through human activities. By allowing for tracking of these relationships, the Framework can help identify leverage points for enhancing social resilience and equitable development in ocean-dependent communities.

Hence, Social Accounts support integrated analysis of trade-offs and synergies across different environmental, economic and social goals, allowing for more comprehensive policy planning and evaluation.

3. Social Accounts spatially map social data to ecosystems

The OA framework employs a spatially explicit approach with Basic Spatial Units (BSUs) as the foundation. These units may be differentiated into terrestrial, coastal, and marine BSUs, establishing connections between terrestrial activities that impact the ocean, coastal transition zones, and marine environments. Social Accounts provides the opportunity for data to be mapped to BSUs, which is required for national and local decision-making.

4. Social Accounts capture a broad range of dimensions and relationships related to the human-ocean relationship

Social Accounts encompass a comprehensive range of dimensions reflecting the human-ocean relationship. Social Accounts focuses on a set of 14 integrated accounting dimensions and the relationships between them (Figure 1; Shellock et al., in review). These dimensions, draw on best practice from Marine Social Science and associated fields, but are precisely targeted to understand how ecosystems are linked to changes in relationships and dependencies with society and the economy and ultimately on community wellbeing. This is because dependencies have consequences for poverty, as ocean services directly impact: (i) livelihood support, (ii) food security and nutrition, (iii) cultural and social identity and (iv) social protection (Shellock & James, 2024). The breadth of Social Accounts allows for a more holistic understanding of how communities interact with and depend upon ocean resources, revealing complex interdependencies that social data and conventional statistics often fail to capture. Social Accounts draw on social data from diverse sources and are standardized for use in accounting tables.

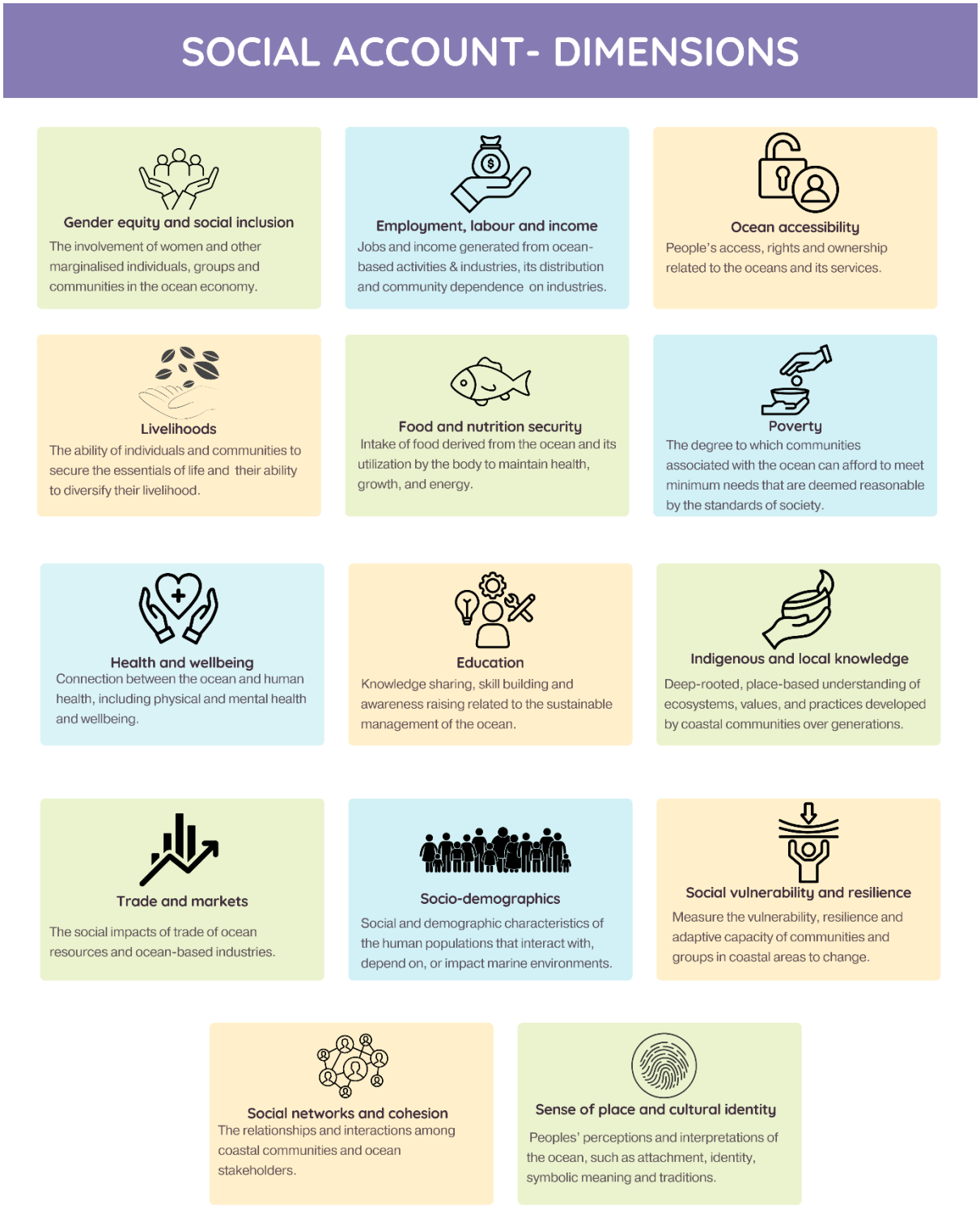

Figure 1: *Proposed dimensions of Social Accounts (Shellock et al. in review)*

5. Social Accounts help to determine relationships, allow modelling and tracking of impacts through the relationships

Social Accounts can be used to help understand relationships and allow modelling and tracking of social impacts. They can help to understand the complex relationship between the various dimensions and indicators (gender, employment and income, education and nutrition) and the impacts derived due to these relationships. This is undertaken through the OA framework which uses Supply–Use tables (SUTs) and Input-output tables (IOT) of economic sectors and provide information on sectors' contribution to national macroeconomic accounts. These tables help to: (i) connect the social, environmental and economic domains of the ocean and (ii) understand the relationships between different social factors in the social domain and allow modelling and tracking of impacts through the relationships. These tables are the central accounting mechanisms for determining and understanding relationships. These align with standards produced by the SNA (Loureiro et al., 2023) and can be in physical or monetary units. Similar tables will need to be modified to accommodate the social domain of the OA framework.

- **Supply-Use Tables (SUTs):** show what social goods and services are produced, who produces what (supply) and who uses what (use) breaks it down by industry. The tables help to link the social and environmental domains of the OA framework together. SUTs are represented by two tables: (i) flows table (general supply and use of social goods and services) and (ii) flows to the economy/environment table (supply and use of social goods and services).

- **Input-Output Tables (IOT):** IOT are derived from SUTs and show the inter-industry flows of social goods and services. Hence, IOT help to link the social and economic domains of the OA framework. They directly represent how the socials output of one industry becomes the social input for others, with industries appearing on both rows and columns of the same table. They are used to show the interdependencies between different ocean and ocean-related sectors of the ocean economy in terms of social goods and services (Fenichel et al., 2020).

Process for implementing Pilot Social Accounts

Social data is vital for understanding societal trends, informing policy, and guiding resource allocation. The value of this information is indisputable and the increased availability of such information has supported social change. As the data and policy planning debate moves to a more complete and holistic process, the advantages of integrating social data into a Social Accounting approach are significant. By conducting a Social Account—rather than simply gathering social data—information can be organised and mapped in a way that enables the examination of human-ocean dependencies, tracking of progress toward global commitments, assessment of policy effectiveness, and identification of opportunities for developmental opportunities. Social Accounts provides accessible, spatial informative, longitudinal social information for a variety of stakeholders and is credible, salient and legitimate for evidence-informed decision-making.

In collaboration with up to 10 partner countries, GOAP and partners are leading the development and implementation of the first Pilot Social Accounts under the OA framework. Figure 2 outlines the process developed and currently being implemented by GOAP Secretariat and partners. Countries can work through this structured process with guidance and technical assistance from GOAP. We note that the process is iterative rather than linear, with built-in feedback loops to ensure relevance over time. Social Accounts may need to be revisited and updated as decision-making needs evolve, when social, environmental, or economic conditions change (e.g. socio-demographics of coastal communities and shifts in public opinions) and when new information emerges (including scientific, indigenous, traditional and local knowledge).

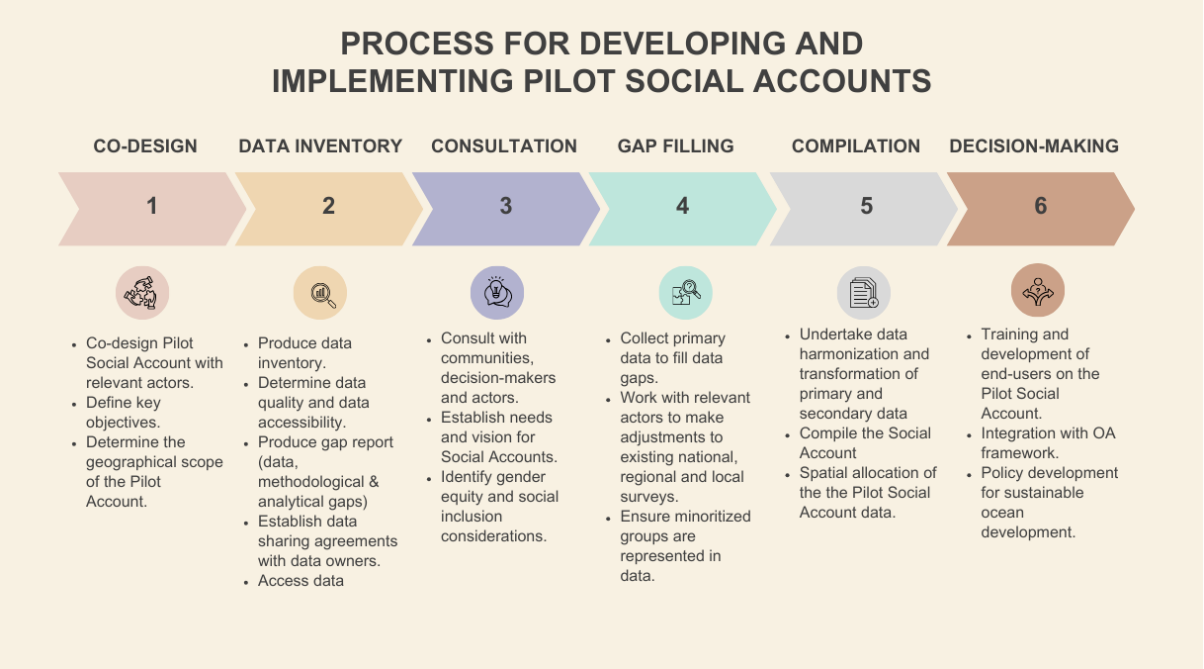

Figure 2: *GOAP process for developing and implementing Pilot Social Accounts for the ocean (builds on Shellock et al., in review).*

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