

OA and Multilateral Development Finance

Helps finance ministry officials and project developers use Ocean Accounts data to build stronger business cases for multilateral development finance.

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OUTCOME

After reading this Circular, finance ministry officials and project developers will be able to use Ocean Accounts to build stronger business cases for multilateral development finance: which accounts and indicators an MDB or vertical fund needs at each stage of the project cycle, and how to present them so they meet appraisal and safeguard requirements.

Readers will learn how account outputs map onto MDB project appraisal, what role each of exchange values and welfare values plays in the cost-benefit analysis an MDB expects (Section 3.2), how account metrics verify compliance with environmental and social safeguard policies (Section 3.3), and how the accounts feed sustainable finance classification and nature-related disclosure requirements (Section 3.4). Section 3.5 gives a five-step procedure across the identification, preparation, appraisal, implementation and evaluation phases; Section 3.6 works a blue bond impact report; Section 3.7 sets out four case applications.

Key decision contexts supported by this guidance include: MDB project appraisal using ocean accounting baselines, blue bond verification and impact reporting, Small Island Developing States (SIDS) ocean finance tracking for SDG 14.7 implementation, and Green Climate Fund and Global Environment Facility results frameworks that require quantified natural capital metrics. The structured information from Ocean Accounts provides the common baseline across these financing contexts. Ocean dependencies, environmental outcomes, and financial risks related to nature loss can then be measured on consistent terms.

Three adjacent topics are treated elsewhere and cross-referred rather than repeated: investment readiness and the evidence a proposal must carry, in [TG-0.8 Implementation Readiness Assessment](#) Section 3.8; disclosure-framework mapping for TNFD, IFRS and CBD Target 15, in [TG-1.11 OA and the Private Sector](#) Section 3.3; and counterfactual design for post-investment monitoring, in [TG-1.3 OA and Marine Spatial Management](#) Section 3.4.3.

CONTENTS

1. Outcome 3

2. Requirements 3

3. Guidance Material 4

 3.1 Ocean accounts and multilateral development finance 4

 3.2 Natural capital in project appraisal 6

 3.3 Aligning with MDB environmental and social safeguards 7

 3.4 Monitoring, reporting and disclosure frameworks 9

 3.5 Application procedures for development finance institutions 10

 3.6 Worked example: Blue bond impact report using ocean accounting data 12

 3.7 Case applications 14

4. Acknowledgements 15

5. References 15

ABOUT THIS CIRCULAR

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DRAFT

1. Outcome

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2. Requirements

¶1 **Essential prerequisites:**

- ¶2 **TG-0.1 General Introduction to Ocean Accounts** – for the foundational understanding of Ocean Accounts structure, including the distinction between stocks and flows, the relationship to the System of National Accounts (SNA) and System of Environmental-Economic Accounting (SEEA), and the multiple-capitals framework for wellbeing and sustainability
- ¶3 **TG-0.2 Overview of Relevant Statistical Standards** – for background on the relationship between SNA and SEEA frameworks that underpins the multilateral finance application

¶4 **Helpful background:**

- ¶5 **TG-1.8 OA and Project-Level Finance** – detailed guidance on applying Ocean Accounts at the individual project scale, including project-specific cost-benefit analysis and results monitoring
- ¶6 **TG-2.4 Environmental (including Ecosystem) Goods and Services** Section 3.10 – valuation methods for ocean ecosystem services and assets, including discount rate selection and welfare value estimation
- ¶7 **TG-2.6 Ocean-related Investment** – methodological guidance on compiling ocean-related investment indicators, including gross fixed capital formation and sustainable finance instruments

¶8 Readers approaching Section 1 for the first time should begin with **TG-1.0 Ocean Accounting and the Blue/Ocean Economy**, the framing circular for the section, which sets out the ocean

economy terminology used throughout, what an ocean account can and cannot certify about a blue economy claim, and the map from a policy question to the circular that answers it. It is recommended reading, not a prerequisite.

¶9 ⓘ Framework Position

¶10 This Circular addresses how ocean accounts inform multilateral ocean finance by tracking monetary flows to ocean assets, economic contributions to coastal community conditions, and ecosystem service values that underpin investment decisions. In the Ocean Accounts Framework (TG-0.1 Figure 0.1.2):

Edge	Direction	Description
E3	FG1 ↔ SG1	Monetary flows between assets and economic sectors
E5	FG1 → SG2	Economic contributions to social conditions
E9	SG3 → FG1	Ecosystem services to economy

3. Guidance Material

3.1 Ocean accounts and multilateral development finance

¶11 Multilateral development banks (MDBs) collectively provide hundreds of billions of dollars in development financing annually, with increasing attention to climate adaptation, biodiversity conservation, and sustainable blue economy development¹. The principal MDBs include the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, European Bank for Reconstruction and Development, and Asian Infrastructure Investment Bank. Vertical climate and biodiversity funds, including the Green Climate Fund (GCF) and Global Environment Facility (GEF), provide additional financing channels with specific environmental mandates. The distinction between MDBs and vertical funds matters in practice because their appraisal processes differ: MDBs typically apply economic rate-of-return tests and safeguard compliance frameworks, whereas vertical funds such as the GCF and GEF employ investment criteria centred on paradigm-shift potential, climate rationale, or global environmental benefits. Practitioners should tailor their use of ocean accounting data to the specific requirements of the financing institution being approached.

¶12 The 2025 System of National Accounts (SNA) introduces new guidance on sustainability measurement that directly supports the use of accounting frameworks in development finance contexts. Chapter 35 of the 2025 SNA explains that accounting-based approaches that bring together information in a structured way and cover multiple capitals “provide an excellent structure for the required baseline information” for assessments of sustainability, capacity, resilience and risk². The SNA further notes that “the use of a common baseline across different assessments can enhance the usefulness of assessments for decision makers since the differences across assessments can be more readily compared”³.

¶13 For development finance purposes, Ocean Accounts can provide this common baseline by organising data on:

- ¶14 The stocks and condition of marine and coastal natural capital assets
- ¶15 The flows of ecosystem services from ocean environments
- ¶16 The economic contribution of ocean-related sectors to national production
- ¶17 The dependencies of coastal communities and ocean industries on ecosystem services
- ¶18 The physical and monetary dimensions of environmental pressures and responses

¶19 This structured information addresses core elements of MDB project appraisal: the economic rationale for investment, the baseline against which results will be measured, the environmental and social context in which projects operate, and the sustainability of anticipated benefits over time.

¶10 The 2025 SNA also introduces guidance on accounting for areas beyond national jurisdiction (ABNJ), noting that where there is interest in organising data about natural capital outside the scope of the national accounts, “the accounting definitions and treatments of the integrated framework of the SNA and the SEEA can be applied”⁴. The ABNJ guidance is particularly relevant for ocean financing that spans exclusive economic zones and high seas areas.

Downward connections to accounts, indicators and data

¶11 Ocean Accounts support four operational functions for multilateral development finance across the project cycle.

¶12 **Baseline establishment for project appraisal.** In the Ocean Accounts Framework (TG-0.1), the valuation of ecosystem services flowing to the economy corresponds to Edge E9 (ecosystem services to economy), which underpins the natural capital rationale for development finance investment. Ecosystem extent accounts (**TG-3.1 Assets**) establish pre-project stocks of marine habitats such as coral reefs, mangroves, and seagrass meadows. Ecosystem condition accounts record baseline health metrics: coral cover percentages, mangrove regeneration rates, and water quality indicators that define the starting point for impact assessment. Physical flow accounts (**TG-3.2 Flows from Environment to Economy**) quantify provisioning services such as fish catch and regulating services such as coastal protection, measured in physical units (tonnes of fish, linear kilometres of shoreline protected). These baselines are essential for MDB appraisal methodologies, which require quantified evidence of the natural capital at risk or the ecosystem services that investments will protect or enhance.

¶13 **Results measurement for monitoring frameworks.** Once a project is under way, flow accounts provide the monitoring data required by MDB results frameworks and vertical fund reporting requirements. Ocean economy thematic accounts (**TG-2.5 Structure and Function of the Ocean Economy**) track economic outcomes such as employment in sustainable fisheries or tourism revenues from marine protected areas. Investment indicators (**TG-2.6 Ocean-related Investment**) measure capital formation in ocean sectors, including gross fixed capital formation (GFCF) in vessels, port infrastructure, and aquaculture facilities. These indicators track whether development finance is catalysing additional private investment. Asset accounts document changes in natural capital stocks, and those changes indicate whether financed interventions are achieving their intended conservation or restoration outcomes. The time-series structure of Ocean Accounts enables before-and-after comparison essential for impact evaluation.

¶14 **Risk assessment for financial structuring.** Asset accounts quantify the natural capital stocks on which proposed investments depend, informing risk assessment. Coastal infrastructure investments, for example, depend on the coastal protection services provided by mangroves and reefs. Where extent and condition accounts record declining trends in these ecosystems, the physical risk to project viability rises. Ocean economy accounts identify sectoral dependencies on ecosystem services. Tourism depends on water quality and biodiversity, aquaculture on water quality and waste assimilation, and fisheries on spawning habitat and nursery grounds. Quantifying these dependencies enables MDBs to assess nature-related risks to project cash flows, as anticipated by the emerging frameworks for nature-related financial disclosure (TNFD, IFRS S1) discussed in Section 3.4 below. Dependency measures show where a project is exposed, not how large a financial loss would be: translating exposure into effects on cash flows needs further analysis of how far a service could decline and whether the project could replace it⁵.

¶15 **Indicator reporting for policy targets.** Beyond project-specific results, Ocean Accounts provide the source data for compiling indicators relevant to multilateral financing targets. SDG 14.7.1 (sustainable fisheries as proportion of GDP) can be derived from ocean economy thematic accounts by identifying the value added of sustainably managed fisheries relative to total GDP. SDG 14.5 (marine protected area coverage) can be reported from spatial extent accounts. GCF and GEF proposals require indicators on ecosystem condition, livelihoods, and climate adaptation benefits.

Ocean Accounts provide the standardised measurement framework for compiling these indicators in a manner consistent with international statistical standards. For guidance on deriving these indicators, see **TG-2.10 MEA Indicators**.

The data pipeline to capital

¶1 Ocean Accounts serve four distinct functions in creating a data pipeline from structured environmental-economic information to investable capital. Understanding these functions helps practitioners design accounting programmes that directly support finance mobilisation, rather than treating accounts as stand-alone statistical products.

¶2 **Function 1: Baseline valuation.** Before any ocean-related investment can be appraised, investors require a credible estimate of the natural capital stock at risk or under management. Ocean Accounts provide this through ecosystem extent accounts (measuring the area and spatial configuration of marine and coastal ecosystems), ecosystem condition accounts (documenting the quality of those ecosystems against reference benchmarks), and monetary asset accounts (estimating the net present value of expected ecosystem service flows). Compiled according to SEEA EA standards, these three account types produce the baseline valuation that anchors investment decisions. Without such baselines, project proponents must rely on ad hoc studies that lack comparability and are difficult for institutional investors to benchmark across jurisdictions.

¶3 **Function 2: Risk assessment.** Financial institutions now recognise nature-related risks as material to portfolio performance. Here, Ocean Accounts document trends in ecosystem condition over time, identify dependencies between economic activities and ecosystem services through supply and use tables, and quantify the economic exposure of sectors to ecosystem degradation⁶. When supply and use accounts record the tourism sector's use of reef-based recreation services, the sector's exposure is quantified. Declining coral reef condition, recorded in the condition accounts, signals the hazard; whether it becomes realised loss also depends on the sector's vulnerability, which the accounts do not measure. This function aligns directly with the TNFD risk assessment approach (see Section 3.4 below) and provides the structured data that underlies TNFD's LEAP assessment process.

¶4 **Function 3: Standardised impact indicators.** Investors require impact metrics that are comparable across projects, jurisdictions, and time periods. Because Ocean Accounts follow internationally agreed classifications and measurement boundaries, they yield indicators that meet this requirement. Ecosystem extent change (hectares of mangrove restored), condition improvement (water quality index relative to baseline), and service flow enhancement (tonnes of carbon sequestered per year) are all derivable from standard account tables. The templates aligning these account-derived indicators with TNFD, IFRS S1/S2 and CBD Target 15 are in **TG-1.11** Section 3.3.4.

¶5 **Function 4: Post-investment monitoring.** After capital has been deployed, ongoing monitoring determines whether environmental outcomes are being achieved and whether financial instrument covenants are being met. Ocean Accounts provide the monitoring infrastructure through time-series compilation of the same accounts used for baseline valuation. Because accounts use consistent classifications and spatial boundaries over time, they enable rigorous before-after comparison without the methodological discontinuities of ad hoc monitoring approaches. Counterfactual design for post-investment monitoring is in **TG-1.3** Section 3.4.3.

¶6 For these functions applied to project-level instruments, see **TG-1.8 OA and Project-Level Finance**.

3.2 Natural capital in project appraisal

¶1 The appraisal of development projects traditionally relies on cost-benefit analysis (CBA) to assess whether expected benefits exceed expected costs over the project lifetime. The SEEA Ecosystem Accounting (SEEA EA) framework, adopted as an international statistical standard in 2021, provides guidance on how ecosystem service values can be systematically incorporated into

such analyses⁷. Detailed guidance on valuation methods is provided in **TG-1.9 Safe Usage of Monetary Valuation**.

¶12 The SEEA EA distinguishes between exchange values used in accounting (reflecting market prices or equivalent transaction values) and welfare values used in traditional cost-benefit analysis (reflecting total willingness to pay including consumer surplus). These two value concepts serve different purposes in development finance, and practitioners should be clear about which they are using and why. Both have roles:

1. ¶13 **Exchange values** from ecosystem accounts provide a conservative, transaction-based measure that is directly comparable with other economic statistics including GDP and national wealth accounts. These values are appropriate for national accounting purposes, for assessing the macroeconomic significance of ecosystem contributions, and for ensuring consistency with broader national accounts data submitted to MDBs.
2. ¶14 **Welfare values** from complementary assessments provide a fuller measure of total economic value that captures benefits to users beyond what they actually pay. MDB economic analysis guidance (including the World Bank's guidance on economic analysis of investment operations) typically requires welfare values for cost-benefit analysis because they reflect the full social benefits and costs relevant to public investment decisions.

¶15 In practice, practitioners preparing MDB project submissions should use welfare values as the primary basis for project-level cost-benefit analysis, consistent with standard MDB appraisal methodology, whilst referencing exchange values from the ecosystem accounts to establish the baseline asset stocks and service flows from which welfare-based assessments are conducted. The SEEA EA notes that "data from the ecosystem accounts can provide inputs to [externality] assessments through its recording of changes in ecosystem condition and changes in ecosystem services flows that arise as a result of a particular activity"⁸. This complementary use of both value concepts ensures that project documentation is grounded in the accounting framework while meeting MDB appraisal requirements.

¶16 When preparing project documentation for MDB financing, practitioners should:

1. ¶17 Use ecosystem accounts to establish baseline values for marine and coastal ecosystem assets in the project area
2. ¶18 Use ecosystem service flow accounts to quantify the current value of services provided to beneficiaries
3. ¶19 Apply net present value (NPV) approaches using appropriate discount rates to estimate changes in asset values under project scenarios
4. ¶110 Present welfare values as the primary input to cost-benefit analysis, supplemented by exchange values from the accounts to demonstrate consistency with the national statistical framework

¶11 In the Ocean Accounts Framework (TG-0.1), these monetary flows between economic sectors and ocean assets correspond to Edge E3 (monetary flows between assets and economic sectors), which captures the financial transactions that development finance institutions seek to quantify and appraise. The SEEA Central Framework provides detailed guidance on NPV approaches to asset valuation, noting that the net present value "is the value of an asset determined by estimating the stream of income expected to be earned in the future and then discounting the future income back to the present accounting period"⁹. This approach is directly applicable to valuing changes in ecosystem asset values under alternative project scenarios. For ecosystem assets, the choice of discount rate significantly affects valuations. The SEEA notes that "there is also support for the use of social discount rates in the valuation of environmental assets" given their "broad and long-term value to society as a whole"¹⁰.

3.3 Aligning with MDB environmental and social safeguards

¶1 Multilateral development banks operate under environmental and social safeguard policies that establish requirements for project assessment, stakeholder engagement, and impact mitigation. Ocean Accounts provide data that can demonstrate compliance with and strengthen performance under these safeguards.

¶2 The principal MDB safeguard frameworks include the World Bank Environmental and Social Framework (ESF), the Asian Development Bank Safeguard Policy Statement (SPS 2009), the African Development Bank Integrated Safeguards System (ISS), and the Inter-American Development Bank Environmental and Social Policy Framework. The ESF comprises ten Environmental and Social Standards (ESSs) covering assessment and management of environmental and social risks. Whilst these frameworks differ in detail and procedural requirements, they share common substantive requirements summarised in Table 3.3.0 below.

¶3 **Table 3.3.0: Common substantive requirements across MDB safeguard frameworks**

Requirement	Description
Environmental assessment	Systematic evaluation of potential environmental impacts and identification of mitigation measures.
Biodiversity conservation	Protection of natural habitats, critical ecosystems, and species of conservation concern.
Climate resilience	Consideration of climate change impacts and adaptation requirements.
Sustainable use of natural resources	Ensuring that resource extraction does not exceed sustainable yields.
Indigenous peoples and local communities	Recognition of rights and meaningful consultation.

¶4 Ocean Accounts organised under the SEEA framework directly address several of these requirements. Ecosystem extent accounts record the areas of different marine and coastal ecosystem types and supply the baseline data for habitat protection targets. Ecosystem condition accounts track the state of ecosystems against reference benchmarks, which supports assessment of project impacts on ecosystem health. Asset accounts for fisheries and other biological resources record extraction relative to sustainable yields, the evidence required to demonstrate compliance with sustainable use requirements¹¹.

MDB safeguard-account alignment

¶1 Table 1 summarises how specific MDB safeguard policy requirements can be verified using metrics from ocean account components.

¶2 **Table 1: MDB Safeguard-Account Alignment**

MDB Safeguard Policy	Relevant Account	Account Metric	Verification Method	Downward Connection
Environmental assessment	Condition accounts	Condition index change	Pre/post comparison	TG-2.1
Biodiversity conservation	Extent accounts	Habitat area change	Spatial analysis	TG-3.1 Section 3.1
Pollution prevention	Residual flow accounts	Emission quantities	Physical flow data	TG-3.4
Sustainable resource use	Asset accounts	Extraction vs regeneration	Stock-flow reconciliation	TG-3.1 Section 3.3

¶3 In each case, the ocean account provides a standardised, repeatable measurement that can serve as the baseline for safeguard assessment and the monitoring indicator for safeguard compliance during project implementation. Condition accounts record changes against reference benchmarks, so environmental assessment requirements rest on quantitative data. Extent accounts docu-

ment habitat area by ecosystem type, which is the direct evidence for biodiversity conservation obligations. Residual flow accounts track pollutant discharges in physical units. Those figures carry the pollution prevention reporting, whilst asset accounts track extraction relative to regeneration for biological resources and so demonstrate sustainable use.

¶4 The 2025 SNA identifies that “a related area of work is the assessment of enterprises’ exposure to environmental risks, including climate risks and risks emerging from declines in nature and biodiversity. This work extends from assessing the physical risks to quantifying the financial risks to corporations, including through their supply chains”¹². Ocean Accounts provide the baseline information needed to conduct such assessments in the context of development projects.

¶5 For climate resilience, Ocean Accounts can document:

- ¶6 The current extent and condition of coastal ecosystems that provide natural protection (mangroves, coral reefs, seagrass meadows)
- ¶7 The value of coastal protection services under current conditions
- ¶8 The exposure of coastal infrastructure and populations to climate-related hazards
- ¶9 Projected changes in ecosystem service provision under climate scenarios

¶10 SDG 14 (Life Below Water) target 14.2 calls for sustainable management and protection of marine and coastal ecosystems. Target 14.7 calls on SIDS and LDCs to increase economic benefits from the sustainable use of marine resources. Ocean Accounts can directly monitor both targets. For guidance on compiling SDG 14 indicators from Ocean Accounts, see **TG-2.10 MEA Indicators**. In the Ocean Accounts Framework (TG-0.1), socio-economic benefits flowing from financed ocean activities to coastal communities correspond to Edge E5 (economic contributions to social conditions).

3.4 Monitoring, reporting and disclosure frameworks

¶1 Requirements for sustainability monitoring, results reporting, and nature-related financial disclosure now shape the development finance landscape. Ocean Accounts can support compliance with these frameworks by providing structured, comparable data over time.

¶2 **Sustainable finance classification:** The 2025 SNA introduces guidance on measuring sustainable finance, including green bonds and sustainability-linked financial instruments. The 2025 SNA distinguishes ESG finance (encompassing environmental, social, and governance objectives) from green finance (limited to environmental improvement). It defines green finance as “finance for activities or projects that sustain or improve the condition of the environment”¹³. Ocean Accounts provide the baseline and monitoring data needed to verify that financed activities achieve environmental improvements, and that verification addresses ‘greenwashing’ concerns in sustainable finance markets. The SNA notes that “to support assessments of the effectiveness of sustainable finance, it is relevant to present data on the levels of investment in ESG and green activities ... alongside data about the outcomes arising from that activity”¹⁴. Detailed guidance on compiling ocean investment indicators, including sustainable finance instruments, is provided in **TG-2.6 Ocean-related Investment**.

¶3 **Nature-related financial disclosure:** The Taskforce on Nature-related Financial Disclosures (TNFD) provides a framework for companies and financial institutions to report on nature-related dependencies, impacts, risks and opportunities¹⁵. The TNFD recommendations are structured around four pillars (governance, strategy, risk management, and metrics and targets) that parallel the climate-related disclosures established under the Task Force on Climate-related Financial Disclosures (TCFD) and now incorporated into IFRS Sustainability Disclosure Standards¹⁶.

¶4 TNFD-aligned reporting is currently voluntary for most MDB borrowers, and no MDB has yet mandated full TNFD-aligned disclosure as a condition of financing. Several MDBs are nonetheless integrating nature considerations into their operational requirements. The International Finance Corporation (IFC), for instance, has incorporated biodiversity and ecosystem service considera-

tions into its Performance Standards. Regulatory developments in the European Union, the United Kingdom, and other jurisdictions are driving a broader trend towards mandatory nature-related disclosure, so voluntary adoption now will facilitate compliance as requirements evolve. Practitioners are advised to treat TNFD-aligned reporting as an emerging expectation that strengthens financing proposals, even where it is not yet formally required.

¶5 Ocean Accounts can support TNFD-aligned reporting by providing:

- ¶6 Data on dependencies on ocean ecosystem services (regulating services such as coastal protection, provisioning services such as fisheries)
- ¶7 Data on impacts on ocean ecosystems (pollution, habitat conversion, resource extraction)
- ¶8 Baseline condition metrics against which nature-related risks can be assessed
- ¶9 Physical and monetary indicators for target-setting and performance monitoring

¶10 **IFRS sustainability disclosure:** The International Sustainability Standards Board (ISSB) has established IFRS S1 (General Requirements for Disclosure of Sustainability-related Financial Information) and IFRS S2 (Climate-related Disclosures) as global baseline standards for sustainability reporting¹⁷. IFRS S1 establishes that sustainability-related information is useful to primary users because “an entity’s ability to generate cash flows over the short, medium and long term is inextricably linked to the interactions between the entity and its stakeholders, society, the economy and the natural environment throughout the entity’s value chain”¹⁸. For development projects, alignment with these disclosure frameworks enhances credibility with international investors and demonstrates that borrowing countries are building the data infrastructure needed for participation in global sustainable finance markets.

3.5 Application procedures for development finance institutions

¶1 This section provides a step-by-step procedure for development finance institutions and borrowing country agencies to use Ocean Accounts in preparing and appraising financing proposals. The procedure is structured around the typical MDB project cycle: identification, preparation, appraisal, approval, implementation, and evaluation.

Step 1: Identification phase—scoping the role of ocean natural capital

¶1 During the project identification phase, practitioners should determine whether ocean natural capital is material to the proposed investment. Key questions include:

- ¶2 Does the project area include marine or coastal ecosystems recorded in national extent accounts?
- ¶3 Do project activities depend on ocean ecosystem services (water supply, coastal protection, fisheries habitat)?
- ¶4 Will project activities generate pressures on ocean environments (pollution, habitat conversion, resource extraction)?
- ¶5 Are baseline data from Ocean Accounts available for the project location?

¶6 If Ocean Accounts have been compiled for the country, practitioners should consult spatial extent accounts (**TG-3.1**) to determine whether the project footprint overlaps with mapped marine or coastal ecosystem assets. If no spatial accounts are available, practitioners should identify whether the country has compiled at least national-level ecosystem extent and condition data that can inform the project design.

Step 2: Preparation phase—establishing baselines and dependencies

¶1 During project preparation, Ocean Accounts provide the baseline data required for MDB appraisal documentation. Practitioners should:

1. ¶2

Extract baseline natural capital stocks: From ecosystem extent and condition accounts, extract the area and condition scores for ecosystem types within or adjacent to the project area. For example, for a coastal infrastructure project, document the extent of mangrove forests, seagrass meadows, and coral reefs within a defined buffer zone.

2. ¶3

Quantify ecosystem service flows: From physical and monetary ecosystem service flow accounts (**TG-3.2**), quantify the provisioning, regulating, and cultural services currently provided by ocean ecosystems in the project area. For example, for a fisheries management project, document the current sustainable catch potential (tonnes per year), the value of that catch (monetary units), and the number of people dependent on fishing livelihoods.

3. ¶4

Identify economic dependencies: From ocean economy thematic accounts (**TG-2.5**), identify the economic sectors active in the project area and their contribution to regional employment and GDP. This establishes the economic context for assessing project benefits.

4. ¶5

Document environmental pressures: From residual flow accounts (**TG-3.4**), document current levels of pollution, waste discharge, and resource extraction that the project aims to address or that the project will generate.

Step 3: Appraisal phase—demonstrating economic rationale and safeguard alignment

¶1 During MDB appraisal, Ocean Accounts support the economic analysis and safeguard compliance documentation:

1. ¶2

Economic analysis: Use NPV approaches to value ecosystem assets under alternative project scenarios (with-project versus without-project). For guidance on valuation methods, see **TG-1.9**. Present welfare values as the primary input to cost-benefit analysis, supplemented by exchange values from the ecosystem accounts to demonstrate consistency with national accounts. Document the discount rate used and justify its appropriateness for long-lived ecosystem assets.

2. ¶3

Safeguard compliance: Use the account-safeguard alignment in Table 1 to populate safeguard screening tools and environmental and social impact assessments. For example, to demonstrate compliance with biodiversity safeguards, cite extent account data documenting that the project area includes X hectares of critical habitat, and present the project design measures to avoid, minimise, or compensate for impacts on those habitats.

3. ¶4

Results framework: Define project results indicators using metrics from Ocean Accounts. For example, an outcome indicator might be “area of mangrove habitat restored (hectares)” measured from extent accounts, and an impact indicator might be “coastal protection services provided (linear kilometres of shoreline)” measured from ecosystem service flow accounts.

Step 4: Implementation phase—monitoring and adaptive management

¶1 During project implementation, Ocean Accounts provide the monitoring data for results frameworks and safeguard compliance:

1. ¶2

Annual monitoring: Update extent, condition, and flow accounts on an annual basis for the project area. Compare monitored values against the baseline established in Step 2 and the targets defined in the results framework.

2. ¶3

Mid-term review: At mid-term, use time-series account data to assess whether the project is on track to achieve its natural capital targets. If condition accounts record declining trends in ecosystem health despite project interventions, this triggers adaptive management actions.

3. ¶4

Safeguard monitoring: Report on safeguard indicators using account data. For example, if the safeguard framework requires reporting on water quality, use residual flow accounts to report nutrient loading (kg nitrogen per year) or biochemical oxygen demand.

Step 5: Evaluation phase—impact assessment and lessons learned

¶1 At project completion, Ocean Accounts enable rigorous impact evaluation:

1. ¶2

Before-and-after analysis: Compare pre-project baselines (from Step 2) with post-project conditions (from Step 4) to assess the magnitude of change attributable to the project. Use statistical methods to control for confounding factors where possible.

2. ¶3

Attribution analysis: Use the integrated structure of Ocean Accounts to trace impacts through the system. For example, if the project restored mangroves, document the change in mangrove extent (from extent accounts), the change in fish biomass in associated waters (from asset accounts), and the change in fisheries livelihoods (from ocean economy accounts).

3. ¶4

Cost-effectiveness assessment: Compare the cost per unit of ecosystem service provided or natural capital restored against alternative approaches. For example, calculate the cost per hectare of mangrove restored, and compare against the cost of equivalent grey infrastructure for coastal protection.

3.6 Worked example: Blue bond impact report using ocean accounting data

¶1 This example demonstrates how a national government or subnational entity can use Ocean Accounts to prepare an annual impact report for blue bond investors that satisfies both use-of-proceeds verification and key performance indicator (KPI) monitoring requirements.

¶2 **Context:** A coastal state has issued a USD 100 million blue bond to finance ocean conservation and sustainable blue economy development. Bond proceeds are allocated to three use-of-proceeds categories: marine protected area management (40 per cent), sustainable fisheries infrastructure (35 per cent), and coastal ecosystem restoration (25 per cent). The bond covenants require annual reporting on use of proceeds and performance against KPIs.

¶3 **Use-of-proceeds verification using Ocean Accounts:** Ocean Accounts provide the data infrastructure to verify that bond proceeds are directed to eligible activities:

1. ¶4

Marine protected area management: Government expenditure accounts (**TG-1.1** Section 3.3) classify ocean-related public expenditure by function, including expenditure on protected area management under the Classification of the Functions of Government (COFOG) 05.4 (Protection of biodiversity and landscape). The government reports that USD 40 million of bond proceeds were disbursed to protected area management agencies, verifiable against budget execution records. Extent accounts (**TG-3.1**) document that the funded protected areas cover 1.2 million hectares of marine ecosystems, including coral reefs, seagrass meadows, and pelagic zones.

2. ¶5

Sustainable fisheries infrastructure: Investment accounts (**TG-2.6** Section 3.3) track gross fixed capital formation (GFCF) in ocean industries by asset type. The government reports that USD 35 million of bond proceeds financed capital investments in fisheries monitoring systems, cold chain infrastructure, and vessel upgrades, recorded under GFCF in machinery and equip-

ment and transport equipment. Physical supply and use tables (**TG-3.2**) document that the funded infrastructure serves fisheries extracting 45,000 tonnes of fish per year from stocks assessed as within biologically sustainable levels.

3. ¶6

Coastal ecosystem restoration: Environmental protection expenditure accounts (SEEA CF Chapter IV) track expenditure on environmental protection purposes, including ecosystem restoration under COFOG 05.4. The government reports that USD 25 million of bond proceeds financed mangrove and seagrass restoration activities. Extent accounts document that the funded restoration activities increased mangrove extent by 3,200 hectares and seagrass extent by 1,800 hectares.

¶7 **KPI monitoring using Ocean Accounts:** The blue bond covenants define four KPIs, each linked to specific ocean accounting data sources:

¶8 **KPI 1: Biodiversity conservation (target: maintain or improve coral reef health).** Condition accounts (**TG-3.1 Asset Accounts** Section 3.5.2) provide the data source. The government reports that coral cover within funded marine protected areas was 32 per cent at bond issuance (baseline year) and 35 per cent in the reporting year, measured through standardised reef monitoring surveys compiled into the condition accounts. This 3 percentage point improvement meets the KPI target, and the data are compiled annually to enable time-series monitoring of reef health.

¶9 **KPI 2: Water quality (target: reduce nutrient loading by 10 per cent).** Residual flow accounts (**TG-3.4**) track emissions to water bodies in physical units. Nitrogen loading to coastal waters in the project areas fell from 1,200 tonnes per year at baseline to 1,050 tonnes per year in the reporting year, a 12.5 per cent reduction that exceeds the KPI target. Wastewater treatment is not among the bond's three use-of-proceeds categories, so the reduction is reported as a change in the outcome indicator and is not attributed to bond-financed activity. These data are compiled quarterly and aggregated to annual figures for bondholder reporting.

¶10 ⓘ **Corrected 24 September 2026**

¶11 This KPI previously attributed the nitrogen reduction to wastewater treatment funded by bond proceeds, but wastewater treatment is not one of the bond's use-of-proceeds categories, so the attribution has been removed.

¶12 **KPI 3: Blue carbon sequestration (target: sequester 50,000 tonnes CO₂-equivalent per year).** Carbon stock accounts (SEEA CF Chapter 3) measure carbon storage in biomass and soils for coastal ecosystems. Drawing on carbon sequestration rates from **TG-6.2 Mangrove and Coastal Wetland Accounting** and **TG-6.3 Seagrass Ecosystem Accounting**, the government reports that the 3,200 hectares of restored mangroves and 1,800 hectares of restored seagrass funded by bond proceeds sequester an estimated 48,000 tonnes CO₂-equivalent per year. The estimate sits slightly below the first-year target, though sequestration rates will increase as restored ecosystems mature.

¶13 **KPI 4: Fishing employment (target: maintain or increase formal employment in sustainable fisheries).** Ocean economy thematic accounts (**TG-2.5** Table 3.2) track employment by ocean industry, including marine fishing and aquaculture. Formal employment in marine fishing rose from 32,000 persons at baseline to 33,500 persons in the reporting year, a 4.7 per cent increase attributed to improved fisheries management and infrastructure that reduced post-harvest losses and raised the economic viability of small-scale fisheries. Employment data are sourced from labour force surveys and compiled into the economic activity accounts.

¶14 **Outcome data presentation:** Table 2 presents the KPI performance data in a format suitable for inclusion in the annual blue bond impact report.

¶15 **Table 2: Blue Bond KPI Performance (Reporting Year 1)**

KPI	Baseline	Target	Actual	Status	Account Source
Coral cover (%)	32	≥32	35	Met	Condition accounts
Nitrogen loading (tonnes/year)	1,200	≤1,080	1,050	Exceeded	Residual flow accounts
Blue carbon (tonnes CO ₂ e/year)	0	50,000	48,000	Approaching	Carbon stock accounts
Fishing employment (persons)	32,000	≥32,000	33,500	Exceeded	Economic activity accounts

¶16 Beyond the project cycle, three further uses of ocean accounts in development finance are treated elsewhere in the publication rather than repeated here:

- ¶17 **Investment readiness of nature-based solutions** – the minimum evidence a proposal needs and how a country assesses whether it has it: **TG-0.8 Implementation Readiness Assessment** Section 3.8.
- ¶18 **Impact indicator templates for TNFD, IFRS S1/S2 and CBD Target 15 – TG-1.11 OA and the Private Sector** Section 3.3, which is the single owner of disclosure-framework mapping.
- ¶19 **Post-investment monitoring and counterfactual design – TG-1.3 OA and Marine Spatial Management** Section 3.4.3 for BACI, matching and regression discontinuity designs; the reporting-cycle alignment specific to each instrument is in TG-1.8.

¶20 For sovereign natural capital in fiscal frameworks and the fiscal case for preventive investment, see **TG-1.1 OA and National Budget Processes**. For structuring blue bonds and other project-level instruments, see **TG-1.8 OA and Project-Level Finance**.

3.7 Case applications

¶1 The following illustrative examples demonstrate how Ocean Accounts can be applied in multilateral development finance contexts. These are stylised applications intended to illustrate the range of use cases. As implementation experience from GOAP partner countries accumulates, future versions of this Circular will incorporate empirical case studies.

¶2 **Application 1: Coastal resilience infrastructure financing**

¶3 A coastal state seeks financing from an MDB for integrated coastal protection that combines grey infrastructure (sea walls, drainage) with nature-based solutions (mangrove restoration, coral reef rehabilitation). Ocean Accounts support the financing proposal by:

- ¶4 Documenting current mangrove and coral reef extent through ecosystem extent accounts
- ¶5 Quantifying coastal protection services currently provided through ecosystem service flow accounts
- ¶6 Valuing ecosystem assets using NPV approaches to show the value of natural capital at stake
- ¶7 Establishing monitoring baselines for both ecosystem condition and service provision
- ¶8 Demonstrating alignment with SDG 14 targets on coastal ecosystem resilience

¶9 The ecosystem accounts enable comparison of full project benefits (including nature-based components) against a conventional grey-infrastructure-only alternative, which may demonstrate superior cost-effectiveness and co-benefits. For project-level implementation details, see **TG-1.8 OA and Project-Level Finance**.

¶10 **Application 2: Sustainable fisheries programme**

¶11 An MDB considers financing an integrated fisheries management programme including stock assessment, monitoring and surveillance, market access improvements, and community development. Ocean Accounts inform the programme design by:

- ¶12 Recording current fish stock levels through asset accounts for aquatic biological resources
- ¶13 Documenting extraction relative to maximum sustainable yield through physical supply and use tables

- ¶14 Identifying the economic contribution of fisheries through ocean economy thematic and extended accounts
- ¶15 Mapping the geographic distribution of fishing activity and coastal community dependence
- ¶16 Projecting stock recovery trajectories under improved management scenarios

¶17 The asset accounts demonstrate that current depletion exceeds sustainable levels, providing economic justification for management investment. The 2025 SNA treatment of depletion as a cost of production means that unsustainable extraction is now reflected in reduced net national income, which strengthens the fiscal case for intervention¹⁹.

¶18 **Application 3: Blue economy development**

¶19 A regional development bank supports a multi-sector blue economy programme spanning marine tourism, sustainable aquaculture, and renewable ocean energy. Ocean Accounts provide the integrated information base by:

- ¶20 Measuring the baseline contribution of each sector through ocean economy thematic and extended accounts
- ¶21 Identifying spatial conflicts and synergies among ocean uses
- ¶22 Documenting ecosystem service dependencies (tourism depends on water quality and biodiversity, and aquaculture depends on water quality and waste assimilation)
- ¶23 Establishing condition metrics for the marine ecosystems that underpin economic activities
- ¶24 Supporting spatial planning to optimise across multiple objectives

¶25 The accounts enable results-based monitoring that tracks both economic and environmental outcomes and demonstrates to financiers that blue economy growth is occurring within ecological limits.

¶26 **Application 4: Climate adaptation fund proposal**

¶27 A small island developing state (SIDS) seeks financing from the Green Climate Fund for climate adaptation investments. Ocean Accounts strengthen the proposal by:

- ¶28 Documenting the economic dependence on ocean-related activities (fisheries, tourism, maritime transport)
- ¶29 Quantifying natural capital stocks at risk from climate change impacts (coral reef bleaching, sea level rise, ocean acidification)
- ¶30 Valuing ecosystem services that provide natural adaptation benefits (coastal protection, carbon sequestration)
- ¶31 Establishing dependency and exposure indicators linking ecosystem condition to economic outcomes
- ¶32 Providing the monitoring framework for results-based payment arrangements

¶33 SDG 14 target 14.7 calls on countries to increase economic benefits from sustainable marine resources. Ocean Accounts provide the data infrastructure to measure progress against this target and to demonstrate the climate rationale for ocean investments.

4. Acknowledgements

¶1 **Authors:** [To be confirmed]

¶2 **Reviewers:** [To be confirmed]

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