



BADAN PUSAT STATISTIK



SENSUS
EKONOMI
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Advancing Indonesia's Sustainable Ocean Governance through Ocean Accounts

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Ria Arinda

Senior Statistician

Directorate of Production Accounts



REKAM



Executive Summary

Turning ocean data into evidence-based governance

1

Why it matters

Indonesia's ocean governance faces resource-use pressure, ecosystem degradation, and fragmented data — creating a need for integrated evidence.

2

What OfD does

The Indonesia–Norway partnership builds Ecosystem Services Accounts, Ocean Satellite Accounts, and a supporting statistical information system.

3

What's delivered

Ecosystem accounts for 10 marine protected areas, plus experimental Ocean Satellite Accounts linked to national economic classifications.

4

Why it's used

Evidence for marine resource valuation, spatial planning, non-tax revenue policy, and science- and economy-based marine management.

Introduction

- Marine and coastal ecosystems support livelihoods, food security, trade, transport, tourism, and climate resilience.
- Indonesian waters connect major ports and lie along some of the world's busiest shipping routes.
- Marine resources face rising pressure from economic use, pollution, habitat degradation, and competing spatial demands.
- Sustainable ocean governance is needed to keep decisions inclusive, evidence-based, and environmentally sound.

Background

Legal & policy foundation

- RPJMN 2025–2029 & RPJPN 2025–2045
 - Strategic goals for an inclusive, sustainable, advanced economy (Bappenas, 2024, 2025)
- Law No. 32/2009 on Environmental Protection
 - Legal basis for environmental planning, rational resource use, conservation, and control
- Ocean Accounts Task Force (since 2020)
 - KKP, BPS, BIG, Kemenkeu, and Bappenas collaborate to compile Indonesian Ocean Accounts

Persistent challenges

- Widespread plastic pollution
- Illegal, unreported, and unregulated fishing (IUUF)
- Insufficiently effective governance of marine spatial use
- Gaps in spatial data and incomplete environmental-asset information
- Absence of comprehensive environmental-economic assessments
- Economic loss estimates that understate real ecological damage

Scope: The Ocean for Development (OfD) Program



A bilateral Indonesia–Norway partnership, ongoing since 2022, built on three components

COMPONENT 1

Ecosystem Services Accounts

- Pilot ocean asset & flow accounts for marine protected areas (MPAs)
- Valuation methodologies for marine ecosystems
- Capacity-building through training & workshops
- Integration with Blue Economy, MSP, and MPA policy

COMPONENT 2

Ocean Satellite Accounts

- Ocean-related activities in industry classifications
- Ocean-related products in product classifications
- Extended Supply & Use Table (SUT) for ocean economy
- Ocean economy indicators

COMPONENT 3

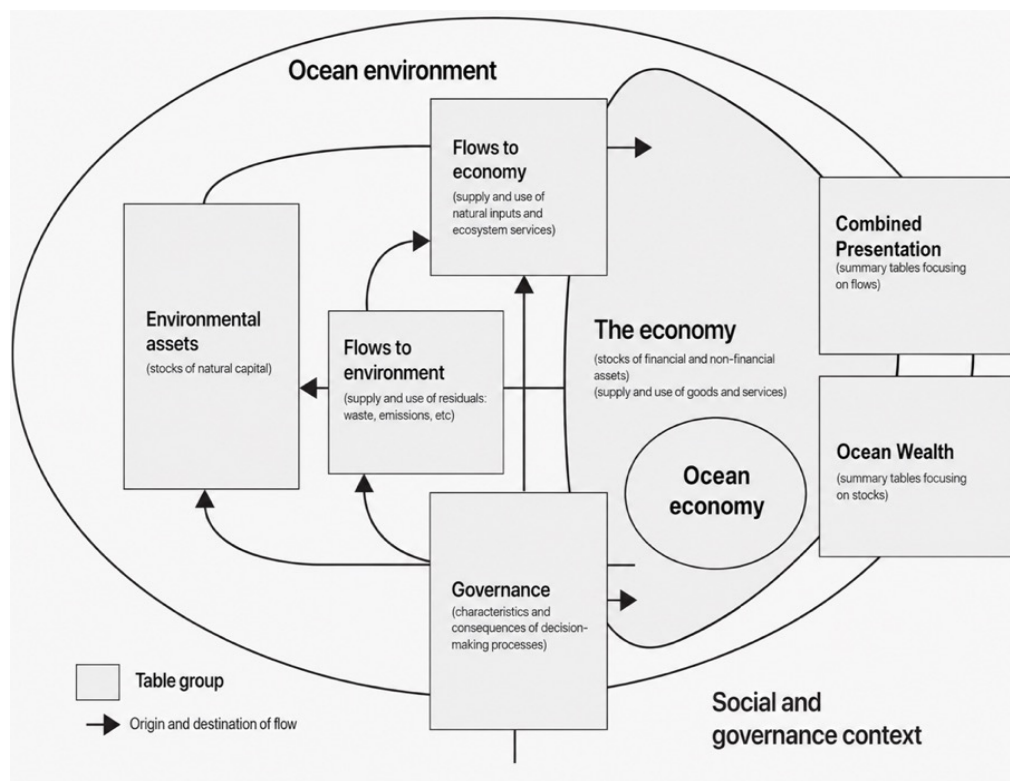
Statistical Information System

- Ocean Accounts data management system
- Standardized data and metadata
- Ocean Accounts dashboard for visualization

The Ocean Accounts Framework



Aligned with the SNA and SEEA international statistical standards (GOAP, 2025)



Seven modules

Ocean assets — physical & monetary status of marine/coastal assets

Flows to economy — inputs from nature to economic activity

Flows to environment — waste, emissions, ecosystem impacts

Ocean economy — contribution to the national economy

Governance — institutions, decisions, and policies

Combined presentation — cross-module indicators

National wealth — summary of a nation's ocean wealth stock

OfD prioritizes 4 modules: Ocean Assets, Flows to Economy, Flows to Environment, and Governance.

Methodology



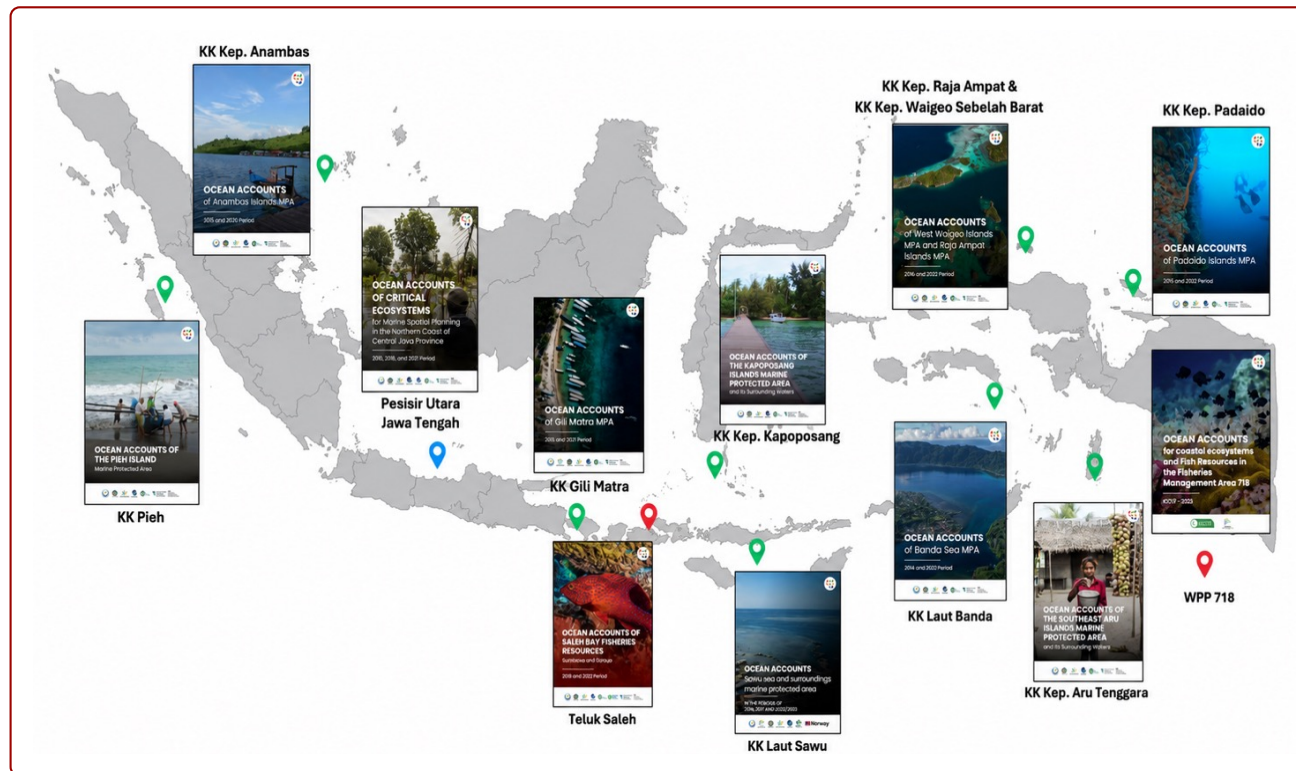
Each module is coordinated by a designated agency, based on field surveys, secondary data, and literature review

BIG + LKKPN	Ocean asset accounts	Ecosystem extent from multi-temporal satellite imagery, validated by field ground-truthing; condition from LKKPN monitoring data.
BPS + Kemenkeu	Flow-to-economy & flow-to-environment	Ocean Accounts socio-economic surveys of business actors and visitors in MPAs, validated through quality gates.
Kemenkeu (DG State Assets), reviewed by BPS	Monetary valuation	Applies market-based, non-market, resource-rent, and benefit-transfer methods per PMK No. 173/PMK.06/2020.
BPS	Ocean Satellite Accounts (ocean economy)	Iterative classification and Supply & Use Table (SUT) refinement — conceptually the most complex module.
KKP	Governance	Compiles policies, regulations, and institutional structures for planning, execution, and monitoring.

Results: Ten Pilot Locations Across Indonesia



Ocean Accounts published for Gili Matra, Banda, Padaido, Raja Ampat, Waigeo Barat, Anambas, Pieh, Aru, Sawu, and Kapoposang



By 2024

Ocean asset accounts complete in all 10 locations — the most advanced module.

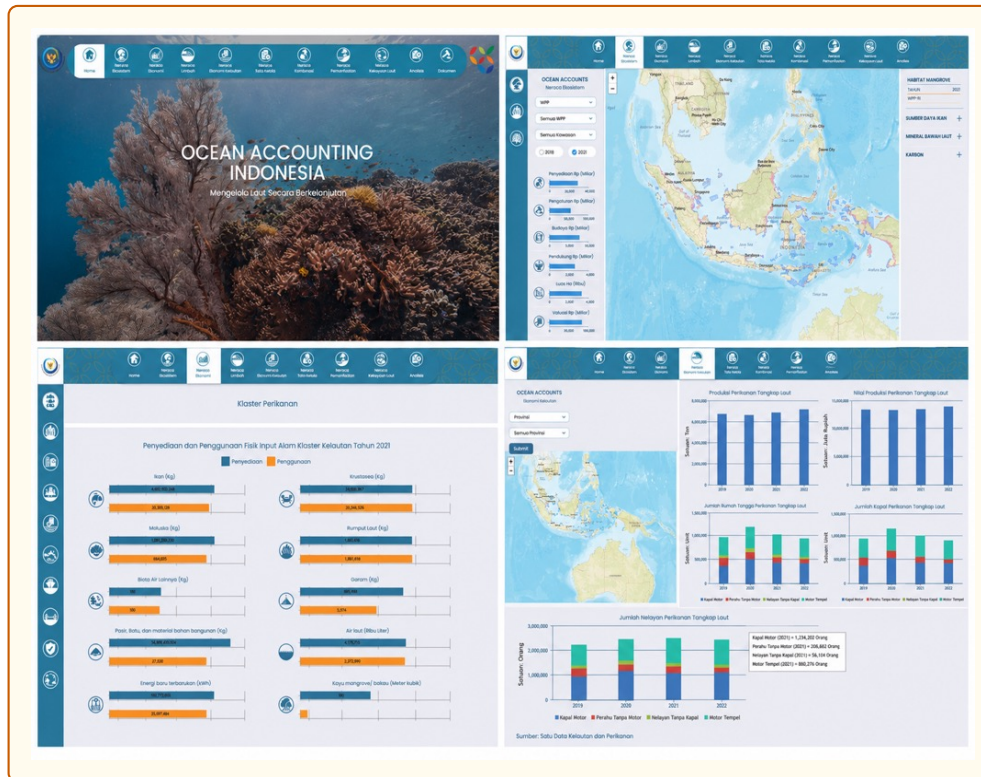
2026 expansion

Piloted for the first time outside an MPA, in Banten Bay — testing how accounts capture industrial-scale coastal activity.

The Ocean Accounts Dashboard



Launched in 2024 to visualize ocean-asset, flow-to-economy, and flow-to-environment accounts by MPA



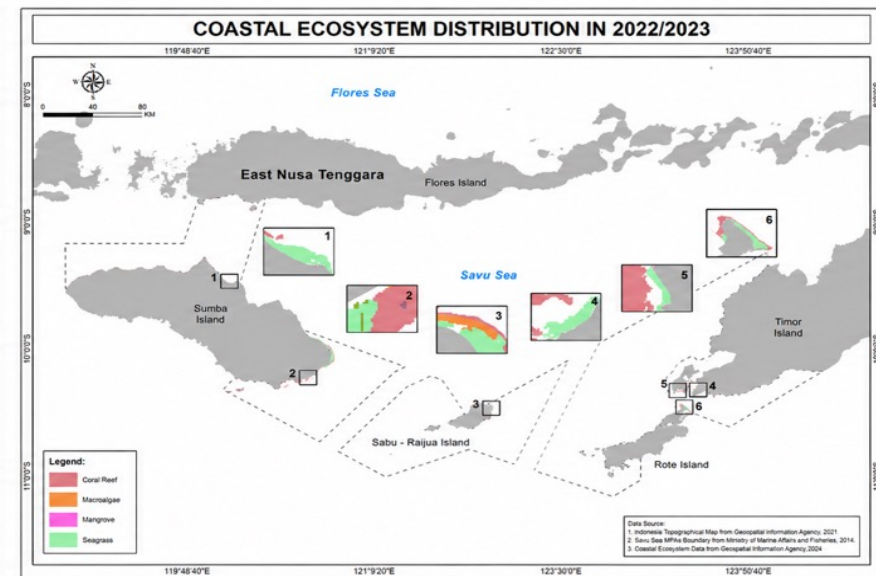
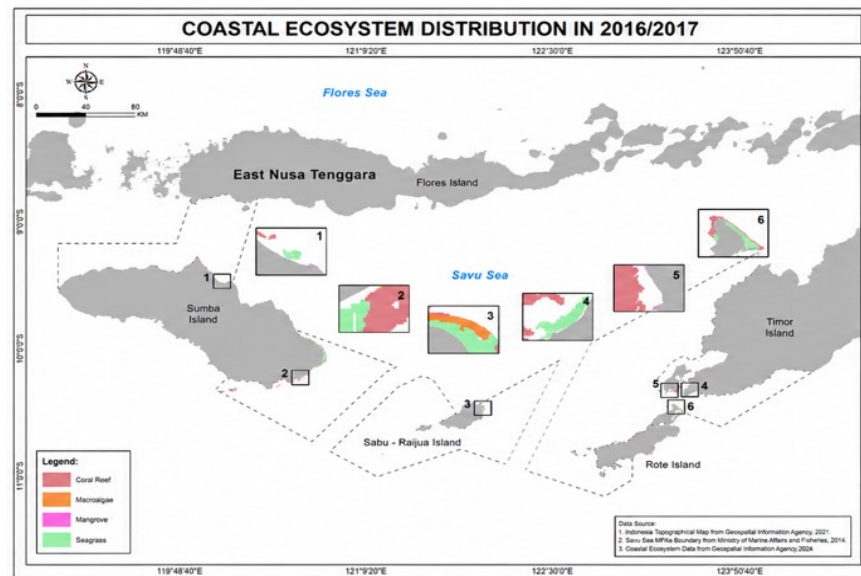
Five ways the data informs management

1. Assessing permits — maintain, modify, or cancel based on ecosystem pressure
2. Enforcing mandatory restoration in degraded areas
3. Revising fees to reflect real ecological costs
4. Updating zoning so marine spatial plans match ecosystem needs
5. Establishing new protected areas for long-term conservation

Case Study: Ocean Accounts of Savu Sea MPA



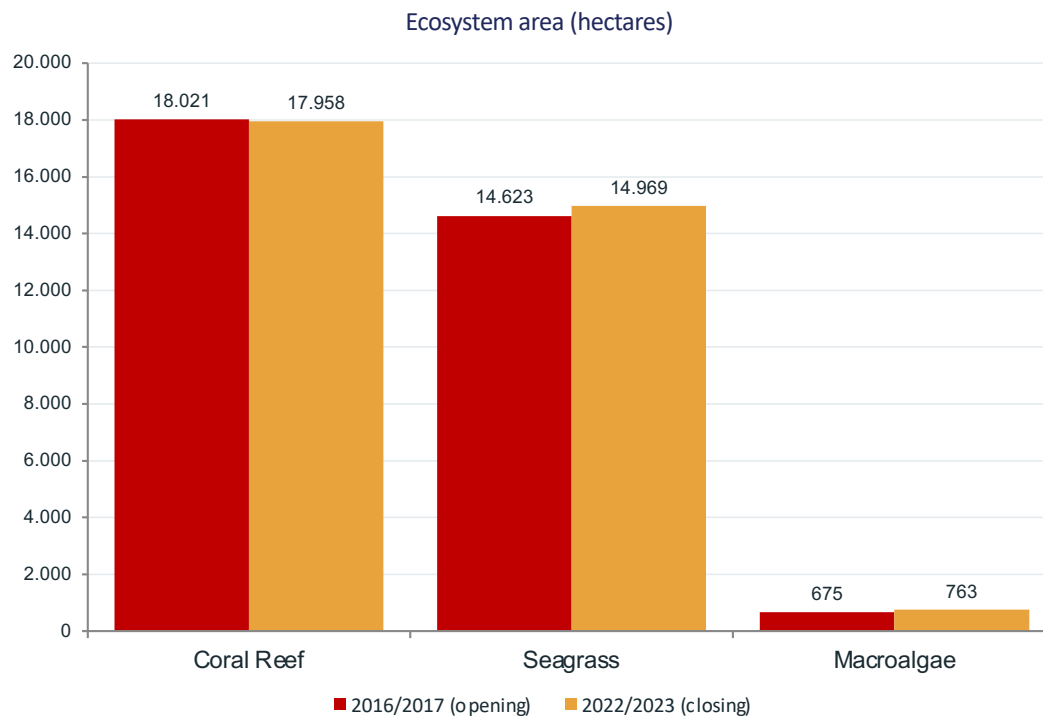
One of Indonesia's largest MPAs and part of the Coral Triangle — communities depend on fisheries, seaweed farming, salt production, and marine tourism.



Savu Sea: Ecosystem Area, 2016/17 vs. 2022/23



Total MPA area stable at ~3.36 million ha; coastal ecosystem composition shifted only slightly



Average ecosystem condition

Chlorophyll-a

0.180 → 0.179 mg/m³

Sea Surface Temp.

29.34 → 28.05 °C

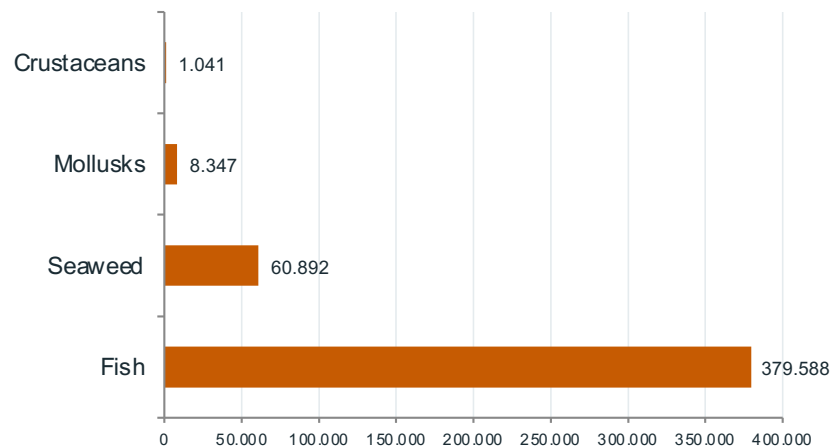
Total Suspended Solids

16.91 → 16.89 mg/L

Savu Sea: Flows to the Economy and Environment (2023)



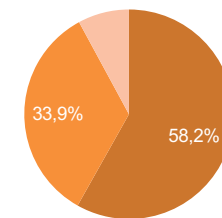
Natural inputs extracted (tons)



Nearly all 449,867 tons of extracted materials went to food consumption — marine fisheries & aquaculture is the largest user.

Solid waste — source & management

Waste generators (%)



Fishing & maritime aquaculture
Marine tourism
Other clusters

39.40%

Final disposal

38.31%

Direct to environment

22.29%

Recycled / reused

A substantial share of waste is still not managed through recovery or recycling.

Total annual ecosystem service value
(coral reef, seagrass & mangrove)

Rp 1.186 trillion / year

Ocean Accounts Driving Evidence-Based Policy



2024

National standards issued

SNI 9257 (Indonesian National Standard: Harmonization of Mapping, Databases, and Data Reporting) and SNI 9258 (the Indonesian National Standard regarding Ocean Accounts – Coastal and Small Islands Ecosystems) are published as technical references for national and regional Ocean Accounts.

2025

2025–2045 Roadmap

Three horizons: an operational national system by 2026; a decision-support tool by 2029 (aligned with RPJMN & SDGs); transformative ocean management by 2045.

2025

Recognized in the Second NDC

Ocean Accounts named as a key tool for measuring blue carbon ecosystems — mangroves and seagrasses — in climate action.

2026

Non-tax revenue policy

Feeds the Indonesian Marine Resource Value Analysis (Andalusia) and KKP Decree No. 3/2026 on the E-Factor ecosystem compensation value.

Conclusion & Way Forward



Achievements

- A joint effort of the KKP-led Ocean Accounts Task Force, strengthened by the Indonesia–Norway OfD partnership.
- Ocean Accounts developed in 10 MPAs, with expansion to 11 anticipated this year.
- Has actively shaped KKP policy, national standards, and legislation for sustainable ocean governance.

Limitations & next steps

Current gap: pilots remain concentrated in MPAs; monetary accounts are incomplete in many locations.

Next: expand Ocean Accounts beyond MPAs to all marine areas.

Next: build out monetary accounts for ecosystem assets and services.

Next: prioritize variables key to blue carbon potential of seagrass and mangroves.

TERIMA KASIH



Landing Page

Sensus Ekonomi 2026

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