

Advancing the Integrating Logic of SNA 2025

A unified stock-flow architecture for environmental, economic and social accounts

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Presented by Marianne Feoli

SNA 2025 broadened the mandate.

The integrating logic is ready to cross three boundaries.

ECONOMY

SNA 2025 — wellbeing & sustainability chapters, thematic and extended accounts. **Social capital: recognised, not yet an asset class** inside the architecture.

ENVIRONMENT

SEEA CF · SEEA EA (2024) — environmental assets, ecosystems, services; CF revision under way. Coherent, spatial, adopted.

SOCIETY

No adopted anchor. Human, social and institutional capital; activity outside the production boundary — recognised as necessary, **not yet formalised**.

Three adjacent systems, shared structure and accounting principles

if connected, dependencies can be traced —

how governance shapes condition, who benefits from services, whether growth draws down natural or social capital.

Where standards exist, countries deliver

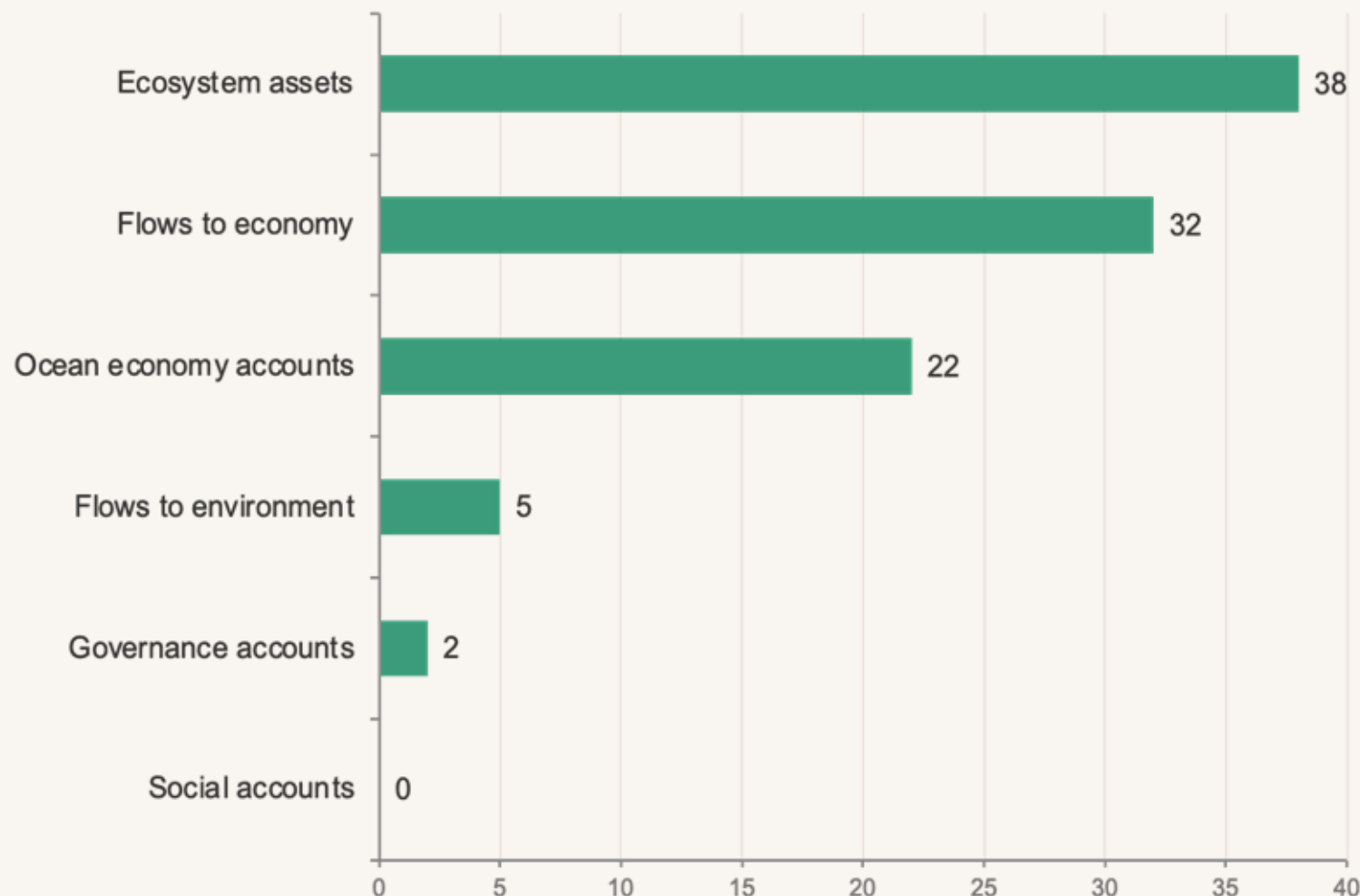
68 ocean accounting initiatives

50 countries **7** regional

2012 – Jan 2025, classified against six framework components.

Alarcon-Blazquez et al. 2026, under review.

Compilation concentrates where standards exist. **Social accounts: none. Governance accounts: two.**



Who gains — and who bears the cost — when an ecosystem changes?

Connect the boundary, and supply-use tables can be split by beneficiary group.

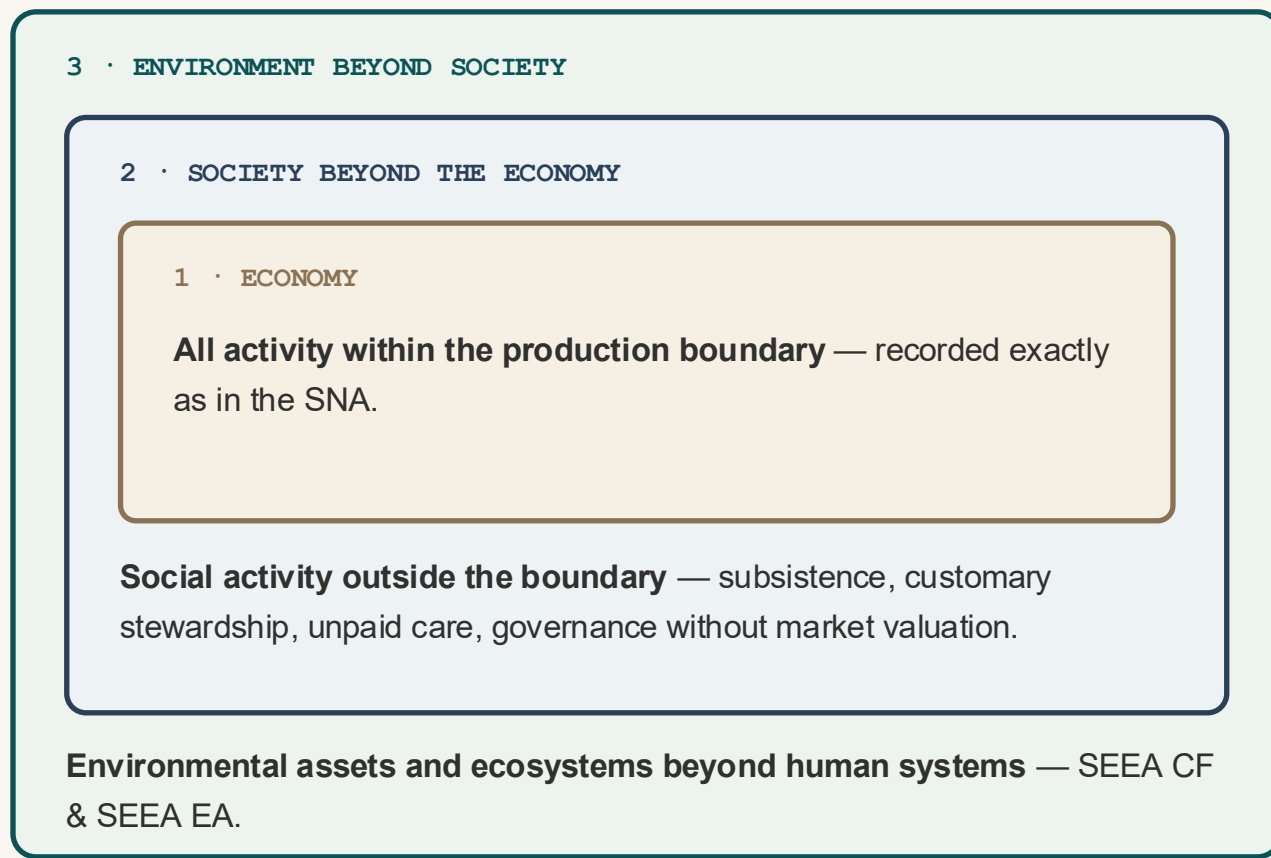
What is driving ecosystem condition?

Governance — management, regulation, enforcement — is recorded in no account.

Is measured growth financed by drawing down other capitals?

Connect the balance sheets, and the accounts can signal it.

Nest the three domains through the SNA 2025 production boundary



One boundary concept defines all three layers. So the system is closed: every stock and flow sits in exactly one layer; interactions are explicit cross-layer flows.

Nothing counted twice. Nothing falls between systems.

Consistent with the accounting principles SNA 2025 and the SEEA already share — the logic completed, not replaced.

The same double-entry grammar, everywhere

LAYER	STOCKS	FLOWS	ANCHOR
Economy	Produced & financial assets	Production · income · consumption · capital & financial flows	SNA 2025
Society beyond the economy	Human capital · social capital · institutional (governance) capital	Subsistence & customary activity · unpaid care · governance processes · knowledge & cultural transfers	Extension — this framework
Environment beyond society	Individual assets · ecosystem assets: extent & condition	Ecosystem services · natural inputs · residuals received · internal processes	SEEA CF · SEEA EA

Dependencies become explicit — and compilable

ENV → ECON · SOC

Final ecosystem services

ECON · SOC → ENV

Residuals — waste, emissions, pollution — and resource extraction

ECON → SOC

Employment · income · transfers to communities

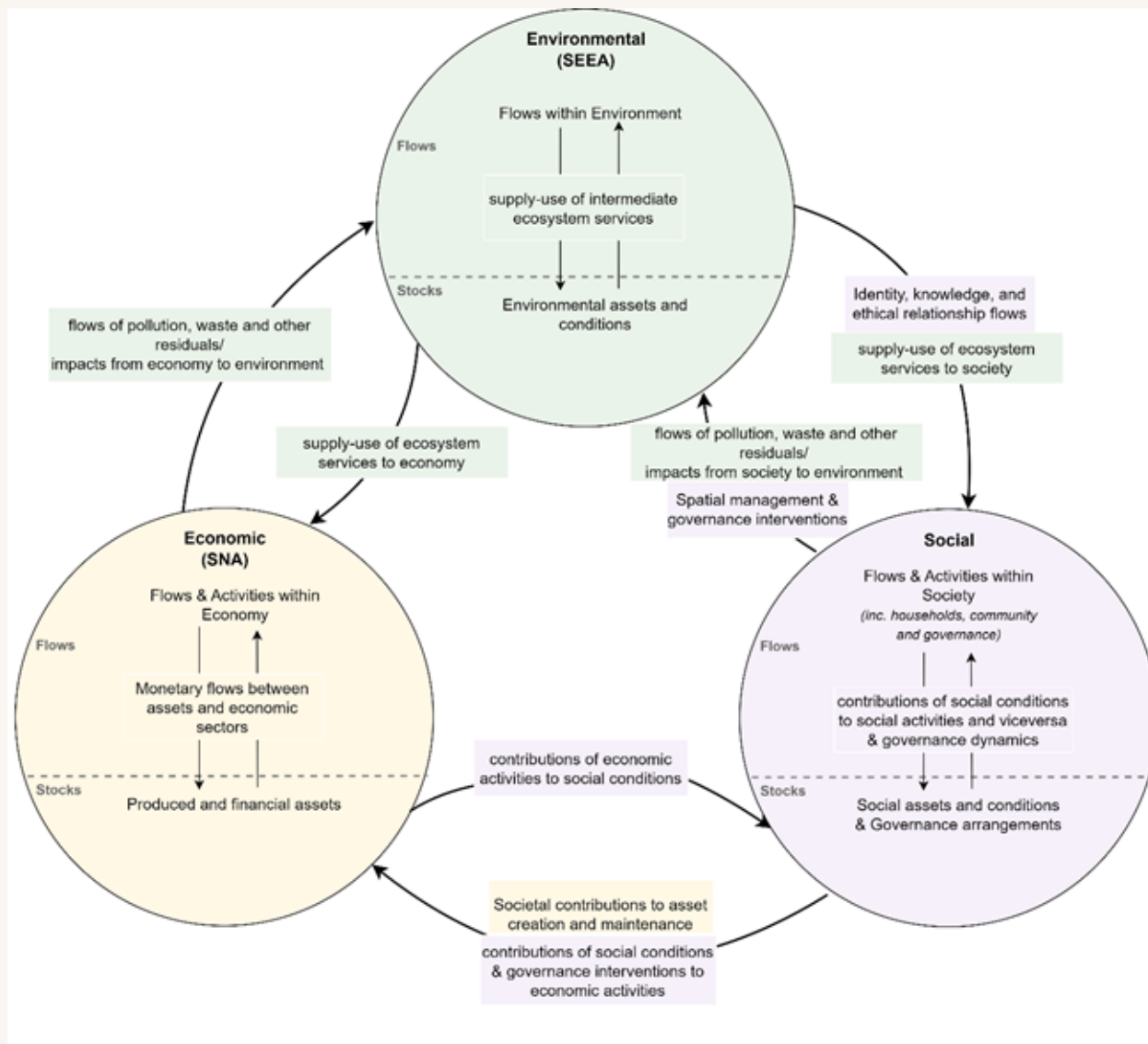
SOC → ECON · ENV

Contributions to asset creation & maintenance · knowledge & cultural flows

THE CONSEQUENTIAL EXTENSION

Governance is recorded as a flow from a measurable stock of institutional capital.

A principal driver of ecosystem condition — and of who benefits — becomes visible inside the accounting system, rather than remaining unexplained context.



The Ocean Accounts Framework = Integrated Systems Accounting

Developed with countries through the revised **GOAP Technical Guidance**; implementation supported across 30+ countries.

Extend flows from standards: **governance interventions, societal contributions to asset maintenance, and identity, knowledge & ethical relationship flows.**

Alarcon-Blazquez et al. 2026, under review

Supply-use, disaggregated by beneficiary group

SUPPLY — ECOSYSTEM ASSET (BSU)	SERVICE	USE: ECONOMY	USE: SOCIETY BEYOND ECONOMY	DISTRIBUTIONAL SPLIT
Mangrove forest · cluster X	Wild fish provisioning	Commercial fishing (ISIC 03)	Subsistence fishing households	gender · income · community
Same asset	Coastal protection	Property & infrastructure	Communities in protected zone	settlement · vulnerability
Coral reef · cluster Y	Recreation	Tourism industries	Local & cultural users	resident / non-resident

Supply follows SEEA EA. The extension: use split across the boundary — industries on one side, subsistence and customary users on the other — with distributional detail where equity questions demand it. Shared spatial units (BSUs) are what make this compilable.

One balance sheet, three kinds of wealth

ASSET CLASS (LAYER)	OPEN	+ / -	CLOSE	CROSS-LAYER DRIVERS RECORDED
Produced & financial	✓	✓	✓	Dependence on ecosystem services; exposure to asset decline
Ecosystem assets — extent · condition	✓	✓	✓	Residuals received · extraction · governance interventions
Human & social capital	✓	✓	✓	Employment & income · service benefits · exposure to change
Institutional (governance) capital	✓	✓	✓	Interventions supplied · compliance & revenue flows

Each row keeps its own standard's asset-account form. The integration is the **common boundary, period and spatial basis** — so an improving economic balance sheet can be read against the environmental and social positions it may be drawing on.

Put governance beside condition — without touching SEEA EA

SEEA EA CONDITION ACCOUNT

Biotic and abiotic characteristics of the ecosystem asset, per BSU, per period.

+ linked, same spatial units

GOVERNANCE ACCOUNT — THE ADDITION

Spatial management designations · regulatory instruments in force · enforcement & compliance · decision-making arrangements — as institutional-capital stocks and governance-activity flows.

The information needed to interpret condition change and **assess management effectiveness** — recurrently requested by countries for marine spatial planning and resource management.

The ocean was the test-bed. The architecture is domain-neutral.

The ocean as test: heavy non-market dependence, tightest ecosystem–economy coupling, fragmented mandates.

Applies everywhere: boundary axis · nested layers · cross-layer flows · shared spatial units — land, freshwater, any SEEA domain.

Gracias · Thank you

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