

System of
Environmental
Economic
Accounting

SEEA and Post-2020 GBF Monitoring Framework

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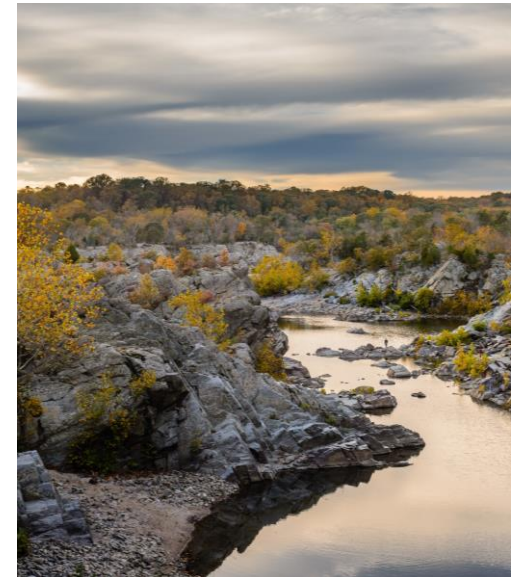
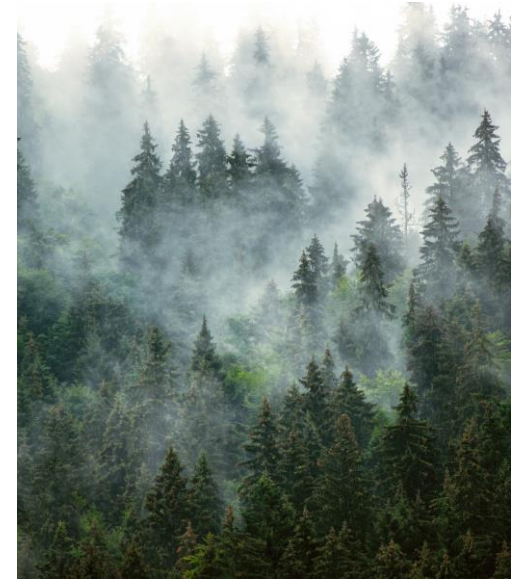
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United Nations

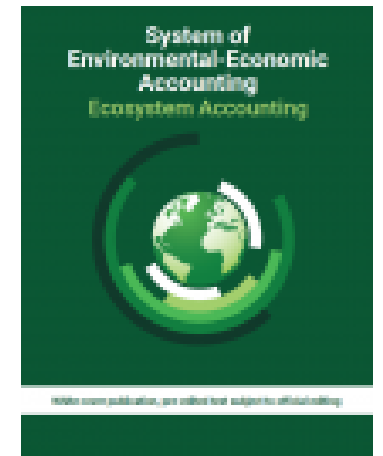
The Need

- Our economy and well-being crucially depends on nature
- But headline indicators like GDP do not capture these vital contributions.
- As a result, decision makers don't have access to key information necessary to effectively pursue and track sustainable development.
- The System of Environmental Economic Accounts (SEEA) fills that gap.
- SEEA integrates information on the economy and the environment showing their interrelationship complementing the System of National Accounts



Standardization of measurement of the environment

- SEEA Central Framework adopted as statistical standard through an intergovernmental process (ECOSOC / United Nations Statistical Commission) in 2013
- SEEA Ecosystem Accounting discussed in March 2021
 - > chapters 1-7 describing the accounting framework and the physical accounts adopted as an international statistical standard
 - > chapters 8-11 recognized as describing internationally recognized statistical principles and recommendations for the valuation of ecosystem services and assets in a context that is coherent with the concepts of System of National Accounts
- SEEA status of implementation 2020:
 - > 89 countries implementing the SEEA Central Framework
 - > 34 countries compiling SEEA Ecosystem Accounts
 - > 27 countries planning to start implementation of the SEEA



Decision from UNSC 2021

The United Nations Statistical Commission at its 52nd session in March 2021

- *Welcomed the progress of the Committee in mainstreaming the use of the SEEA in policy, including climate change, circular economy, sustainable finance, and biodiversity policy, and particularly encouraged the Committee to engage in the monitoring framework of the post-2020 global biodiversity agenda and participate in the proposed expert group under the auspices of the Secretariat of the Convention on Biological Diversity to provide the connection between the biodiversity and official statistical communities; (decision 8g)*

SEEA and the post-2020 Global Biodiversity Framework

- ❑ The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) at its meeting in May 2021 *“Recognizes the value of aligning national monitoring with the **United Nations System of Environmental-Economic Accounting** statistical standard in order to mainstream biodiversity in national statistical systems and to strengthen national information and monitoring systems and reporting”*
- ❑ Additionally, the meeting included in the draft recommendation for the Conference of the Parties a decision on establishing an ad hoc technical expert group to advise on the further operationalization of the monitoring framework for the post-2020 global biodiversity framework .
- ❑ SEEA is now being proposed as the methodological basis for several headline indicators in the provisional monitoring framework of the post-2020 global biodiversity framework (CBD/WG2020/3/3/Add.1 - 11 July 2021)

Headline indicators where SEEA serves as the methodological basis

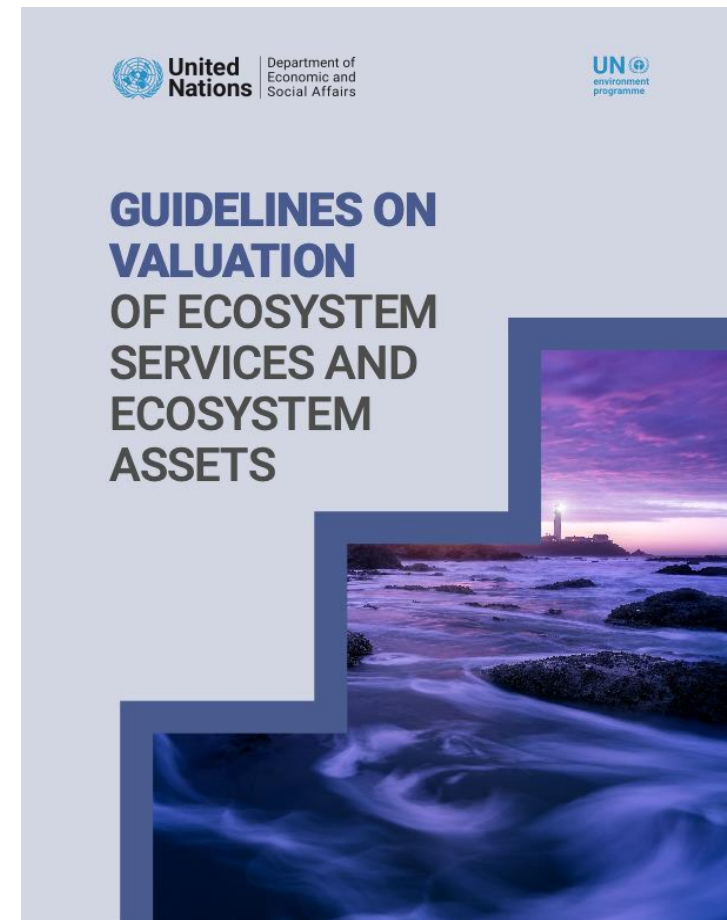
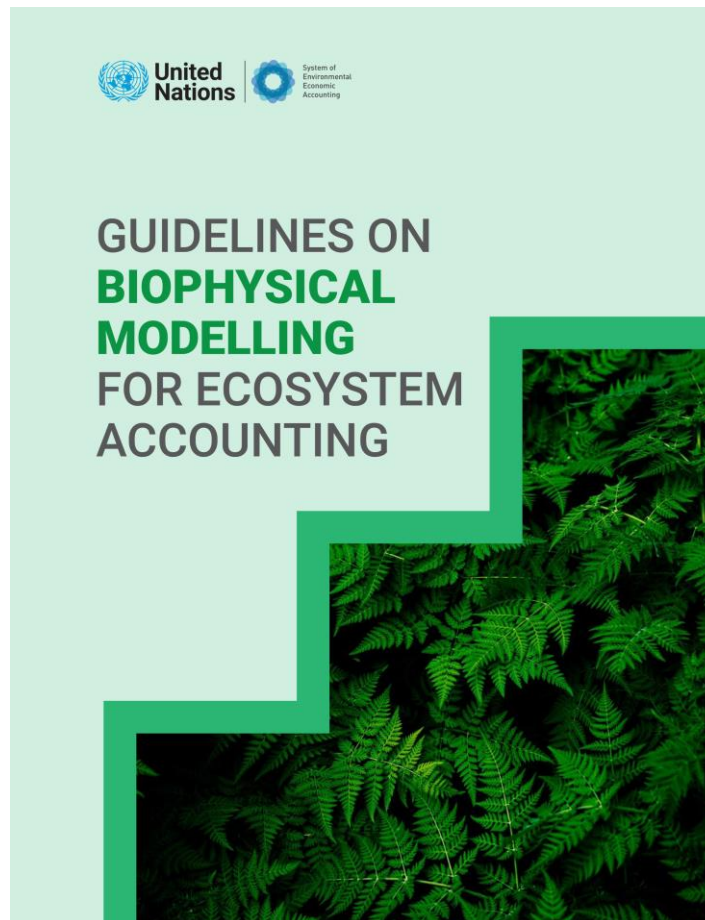
☐ SEEA-based headline indicators

- Goal A: Extent of selected natural and modified ecosystem (i.e. forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)*
- Goal B: National environmental economic accounts of ecosystem services*
- Target 9: National environmental-economic accounts of benefits from the use of wild species*
- Target 11: National environmental-economic accounts of regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people, from ecosystems*
- Target 14: Integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting*
- Target 19: Public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems

☐ The SEEA Ecosystem Accounting Indicator Working Group is tasked with the development of metadata sheets on these indicators, using the template developed through the CBD process, to support the upcoming intergovernmental meetings

Measurement

- ❑ Guidelines for the compilation of ecosystem accounts in physical and monetary terms
 - [Biophysical modelling](#)
 - > Valuation
- ❑ Provide tools to jumpstart accounts compilation, such as ARIES for SEEA Explorer.



Example – SEEA and Goal A monitoring

Ecosystem extent accounts in Brazil (2000-2018)



Proposed goal or target	Proposed indicators ⁶
Goal A. The integrity of all ecosystems is enhanced, with an increase of at least 15% in the area, connectivity and integrity of natural ecosystems, supporting healthy and resilient populations of all species, the rate of extinctions has been reduced at least tenfold, and the risk of species extinctions across all taxonomic and functional groups, is halved, and genetic diversity of wild and domesticated species is safeguarded, with at least 90% of genetic diversity within all species maintained.	A.0.1 Extent of selected natural and modified ecosystems (i.e. forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)
	A.0.2 Species Habitat Index
	A.0.3 Red list index

The ecosystem extent accounts (2000-2018), by biomes, show that Brazilian terrestrial biomes lost about 500 thousand km² of their natural areas, due to conversion into modified areas such as land used for crops and grazing.

Example – SEEA and Goal B monitoring

Proposed goal or target	Proposed indicators	Proposed disaggregation	Methodological basis
Goal B. Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting the global development agenda for the benefit of all.	B.0.1 National environmental economic accounts of ecosystem services*	By ecosystem type and type of service	UN System of Environmental Economic Accounting: https://seea.un.org/ecosystem-accounting . This indicator would be measured in physical and monetary terms and links with the concept of a Gross Ecosystem Product.

Goal B , which monitors nature's contribution to people, can be informed by indicators from physical and monetary ecosystem services flow accounts of the SEEA Ecosystem Accounting.

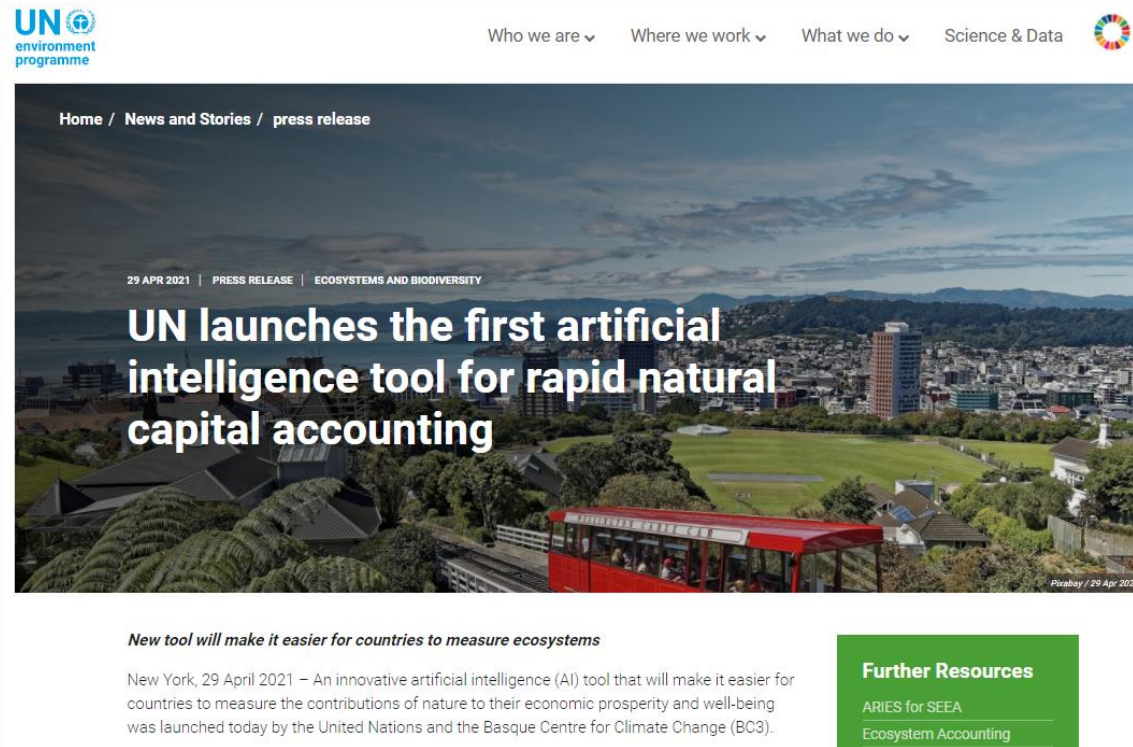
Pilot ecosystem service accounts for KwaZulu-Natal, South Africa (2011)

Resource	Biome	Freshwater ecosystems	Grassland	Indian Ocean Coastal Belt	Savanna	Forests	Estuaries	Cultivated	Urban green space	Total
Wood products (m³)		3 801	606 437	209 311	711 853	247 102	190			1 778 695
Non-wood products (tonnes)		795	40 122	8 680	28 070	3 059	29			80 755
Livestock production (LSU)		3 901	1 595 150	95 721	383 427	5 305	1 105			2 084 609
Crop production (tonnes)								43 665 740		43 665 740
Experiential value (R millions)		40.28	619.7	285.37	637.82	149.21	87.4	462.59	1875.36	4158
Carbon storage (Tg C)		15.5	496.3	155.6	157.2	31.6	0.2	340.5		1 197
Pollination (R millions)		0.06	11.09	5.03	29.73	1.77	0.00			47.69
Flow regulation (m³)		50.19	3 235.91	445.90	2 223.97	156.61	0.67			6 113
Flood attenuation (R millions)									23.50	23.50
Sediment retention (million tonnes)		1.36	38.19	5.07	21.53	8.99	0.07			75
Water quality amelioration (tonnes P)		-	3 068	381	4 348	75	4			7 876

Proposed data collection method

- Data on indicators will be collected by national authorities.
- Whenever national data is not available, data will be estimated through global data platforms and mechanisms endorsed by the UN Statistical Commission.
- Global estimated data will be sent to national authorities for validation.

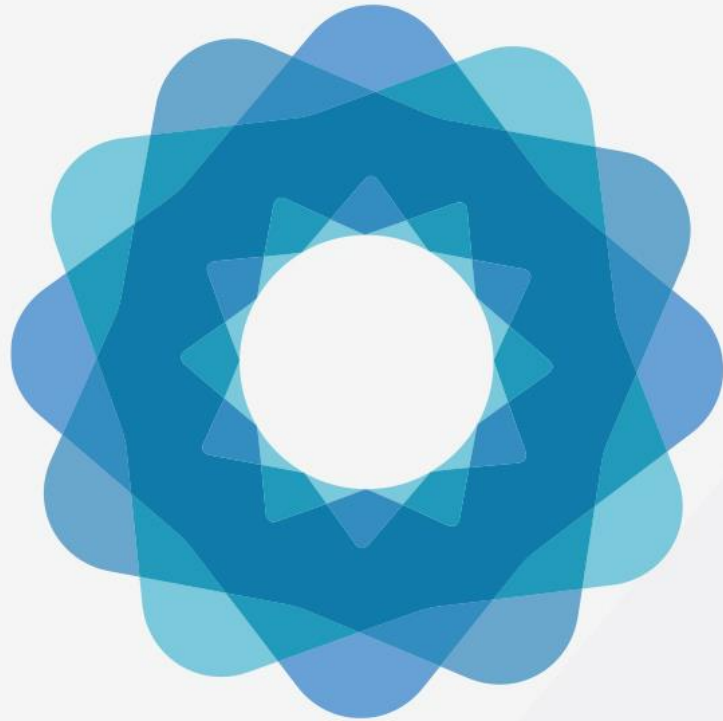
What is ARIES for SEEA?



- ❑ Global, customizable models approach enables SEEA EA compilation anywhere & improvement with local data where available
- ❑ Faster & easier to learn than other biophysical modeling approaches
- ❑ Automate production of maps & accounting tables for all accounts
- ❑ Support adoption of SEEA EA as statistical standard by providing a consistent, easy-to-use application enabling ecosystem accounting anywhere on Earth
- ❑ Infrastructure for the SEEA community to share & reuse interoperable data & models.
- ❑ More information at <https://seea.un.org/content/aries-for-seea>

Conclusion

- The recognition of the role of national statistical systems and role of SEEA as an important statistical framework in support of the monitoring framework and the indicators therein, provides a unique opportunity for the official statistical community to help shape the monitoring framework and develop nationally owned statistical information which is mainstreamed within the national statistical system.
- Effort has already been made to align the proposed headline indicators in the monitoring framework for the post-2020 global biodiversity framework with the statistical frameworks developed under the UN Statistical Commission.
- Guidelines and tools are developed to facilitate accounts compilation to improve national data systems for biodiversity monitoring



System of Environmental Economic Accounting