UNDERSTANDING NATURAL OF MATURAL CAPITAL ACCOUNTING

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CONSERVATION





OUTLINE

- Introduction to Natural Capital Accounting (NCA)
- SEEA Ecosystem Accounts (SEEA EA)
- Group on Earth Observation (GEO)
- Earth Observation for Ecosystem Accounting (EO4EA) Initiative
- Envisioning a pathway for sustainability





CONSERVATION INTERNATIONAL

PARTNERING WITH GOVERNMENTS

People need nature to thrive

A PLEA FOR NATURAL CAPITAL ACCOUNTING



"Unfortunately, we are at the "counting boxcars and breadlines" stage of seeing these (natural economy) changes. Our knowledge of natural systems is impressionistic, not systematic. The lack of well-documented, comparable, time-series data on environmental conditions hinders strategic efforts to address our fundamental environmental problems."

> *James Boyd* Resources for the Future (RFF)



ACCOUNTING

A SYSTEMATIC PROCESS FOR TRACKING NATURAL ASSETS, THE SERVICES PROVIDED BY THEM, AND THEIR RELATIONSHIP TO THE ECONOMY



NAIUKAL CAPITAL • Aeasures the value of ecosystems (stocks) and the services they provide (flows)

- Integrates this information into accounting systems that governments already use in their decision-making
- Provides a more complete view of a country's assets, and of natural values, at appropriate spatial and temporal scales

Accounting embraces complexity but ultimately simplifies it into a clear message Boyd, 2009







WHAT ARE ECOSYSTEM SERVICES?





Climate regulation

Fisheries

Flood regulation

Coastal protection

WHY AN ACCOUNTING FRAMEWORK? Assessments/Valuation or Accounts **Statistics**

- Designed to answer a specific question or problem
- Difficult to figure out if all information is included
- Not always easy to see the whole







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Sectoral Data

Integrated information

- Designed as structured information
- Help the understanding of the interactions between environment and the economy,
- Facilitate coordination across various governmental agencies
- Present environmental and economic information together in a consistent and coherent way: comparability, credibility and replicability

Modified from UNSD, World Bank











UNSD: MAKING NATURE COUNT

THE SYSTEM OF ENVIRONMENTAL ECONOMIC ACCOUNTING (SEEA)

- The SEEA is the statistical framework to measure the environment and its interactions with economy
- Part of the statistical system developed by the international statistical agencies (UNSD, IMF, World Bank, OECD, European Commission)
- Two complementary approaches aligned with SNA:
 - SEEA Central Framework
 - SEEA Ecosystem Accounts
 - (ratified in March 2021)

SEEA: ONE ENVIRONMENT - TWO PERSPECTIVES

System of **Environmental-Economic** Accounting 2012 **Central Framework**

CENTRAL FRAMEWORK (CF)

Assets

Timber

Water

Fish

System of **Environmental-Economic** Accounting 2012 **Experimental Ecosystem Accounting**

ECOSYSTEM ACCOUNTING (EA)

Services

e.g. flood control e.g. water purification e.g. recreation

Source: UNSDD

ECOSYSTEM ACCOUNTING FRAMEWORK

SEEA EA CONCEPTUAL STRUCTURE

SEEA EA: INTEGRATING SPATIAL AND Ecosystems are different and function differently depending on where they are

SEEA EA manages spatial information as layers, relies on tools to integrate spatial information and generate tables based on common properties (e.g., land cover and land cover change

Adapted from UNSD

THE GROUP ON EARTH. OBSERVATION (GEO): EARTH OBSERVATION FOR ECOSYSTEM ACCOUNTING

WHAT ARE EARTH OBSERVATIONS?

Earth observations are data and information collected about our planet, whether relating to the atmosphere, oceans or land.

This includes satellite imagery, space-based or remotely-sensed data, as well as ground-based or in situ data - sensors in, on or around the Earth.

GEO IN NUMBERS

PARTICIPATING ORGANIZATIONS

WORK PROGRAMME ACTIVITIES

GE

EARTH OBSERVATION FOR ECOSYSTEM ACCOUNTING (EO4EA)

- use of Earth Observations for natural capital accounting (NCA) UN-SEEA, and specifically the Ecosystem Accounts (EA).
- and tools that will allow earth observation technology to more
- intergovernmental organizations, and NGOs

• The purpose of the EO4EA Initiative is to further the development and consistent with the set of standards and guidelines put forth by the

• Our mission is to document, pioneer, develop, and test the methods effectively enable the widespread adoption of ecosystem accounting.

Our membership include national governments, academic institutions,

I HE ROLE OF EARTH OBSERVATION FOR EA

- Earth observation provides reliable, consistent, and spatial explicit information collected over large areas
- Developing methods and tools based on EO data allow for scalability and comparability

• There is a need for account-ready data products, derived from earth observation, that can be readily applied by national statistic offices (NSOs) and within an accounting framework

THE ROLE OF GEO

- GEO has a long history of transforming EO data into actionable information to support greater societal benefits
- As producers and curators of earth observation data, GEO Knowledge Hubs can provide the platform and expertise to generate information that is relevant and readily usable by national statistic offices for ecosystem accounting
- Numerous GEO Flagships and Initiatives are already developing data and products that are applicable to ecosystem accounting; GEO can help synthesize this information to support the development of accounts

ENVISIONTING A PATHWAY EOR SUSTAINABILITY

ADOPTION OF SEEA GLOBALLY

Over 40 countries have started to develop ecosystem accounting With the ratification of the Ecosystem Accounts additional countries are joining!

NCA SUPPORTING GREEN RECOVERY

back resilient and sustainable societies

she sees NCA as a primary guide for governments.

• In the aftermath of the pandemic and economic recession, many governments see NCA as critical component for building

• At the 5th NCA Policy Forum, Egypt's Mister of Environment, Dr. Yasmine Fouad, said that Egypt see green recovery as both an urgent need and a multi-faceted challenge – for with

ACCOUNTING FOR BIODIVERSITY

- WCC 2020, motion 070)

• Biodiversity is the foundation of healthy and resilient ecosystems and underpins human wellbeing and economic production

• At the IUCN World Conservation Congress in Marseille, France, the SEEA was identified as the framework to describe and account for biodiversity. There was a call for member nations and partners to support the implementation of the SEEA to support biodiversity (IUCN

• There is increasing recognition that SEEA EA can provided a unifying framework for international agreements, including the Sustainable Development Goals (SDG) and Global Biodiversity Framework (GBF)

CONCLUSIONS

- The ratification of the SEEA EA provides an opportunity for countries to include nature in the balance sheet
- With support from organizations like GEO, we have the technology and tools to implement ecosystem accounts at scale
- The only way that we will be able to achieve the ambitious global targets that we have set for climate, biodiversity, and human well being is by incorporating nature into our policies and decisions
- People need nature to thrive

