



Natural Capital Accounting and Valuation of Ecosystem Services

Why Natural Capital Accounting?

Biodiverse, healthy ecosystems supply essential services that humans depend upon in their daily lives, such as clean air and water, productive soils, pollination, carbon sequestration and flood control to name just a few. But the economic contributions provided by our natural capital have too often been taken for granted when making important economic decisions. The resulting overexploitation, habitat destruction and pollution of our natural world has created profound damage to our biosphere.

Tragically, it is often the poorest and most vulnerable populations that are most directly dependent on the benefits of biodiversity and healthy ecosystems for their daily needs.

We can no longer afford to ignore our dependence on a thriving environment rich in life. We must change our calculations so that nature and its benefits appear on the ledger.

Natural capital accounting (NCA) provides the essential information needed for this change through physical and monetary measures of the stocks and flows of natural capital and the extent to which ecosystems support economic activity and provide essential services to society.

Brazil, China, India, Mexico and South Africa are developing Natural Capital Accounts to mainstream biodiversity and ecosystems in policy making.

The project

The “Natural Capital Accounting and Valuation of Ecosystem Services” project is jointly implemented by the United Nations Statistics Division (UNSD) and the United Nations Environment Programme (UN Environment) in collaboration with the Secretariat of the Convention on Biological Diversity. The project is funded by the European Union through its Partnership Instrument.

The goal of this pathbreaking project is to advance the theory and practice of ecosystem accounting, producing tangible, on-the-ground improvements and generating valuable experiences to inform the development of accounts across the globe. Five countries – Brazil, China, India, Mexico and South Africa – are strategic partners in the creation of pilot ecosystem accounts, applying the System of Environmental-Economic Accounting Experimental Ecosystem Accounting (SEEA EEA) framework.

types of accounts

Ecosystem Accounts

The SEEA EEA is an integrated statistical framework for organizing biophysical data, measuring ecosystem services, tracking changes in ecosystem assets and linking this information to economic and other human activity. One of the distinguishing features of the SEEA EEA is that it is spatially explicit, with the accounts being derived from underlying maps. An intergovernmental process is underway to revise the SEEA EEA with the ambition to elevate it to an international statistical standard. This process is scheduled to be completed by 2021. The SEEA EEA consists of various types of ecosystem accounts.

Ecosystem extent accounts: These accounts serve as a common starting point for ecosystem accounting. They organize information on the extent of different ecosystem types (e.g. forests, wetlands, agricultural areas, marine areas) within a country in terms of spatial area.

Ecosystem condition accounts: These accounts measure the overall quality of an ecosystem asset and capture, in a set of key indicators, the state or functioning of the ecosystem in relation to both its naturalness and its potential to supply ecosystem services.

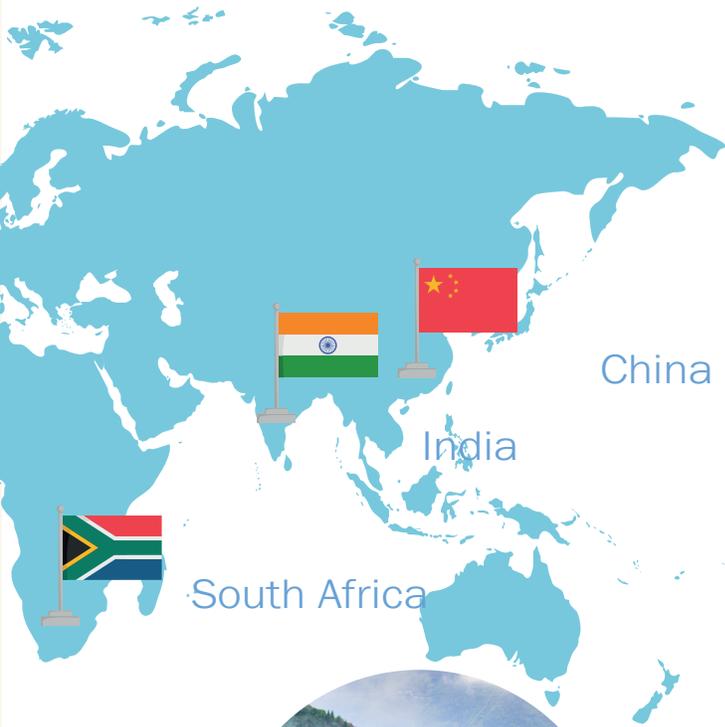
Ecosystem services accounts: This set of ecosystem accounts measures the supply of ecosystem services as well as their corresponding use and beneficiaries, classified by economic sectors used in the national accounts.

Monetary asset accounts: These accounts record the monetary value of opening and closing stocks of all ecosystem assets within an ecosystem accounting area and additions and reductions to those stocks by degradation or restoration.

Thematic accounts: This set of standalone accounts for specific topics, which include land, carbon, water and biodiversity, provide important contextual information and are relevant for specific policies and analyses.



the project countries



Brazil is piloting ecosystem accounts in the Rio Grande river basin to assess the impacts of the changing agricultural frontier on hydrological and soil related ecosystem services. At the national level, forest and biodiversity accounts are being piloted. The project will develop a roadmap for natural capital accounting, building on a policy mapping and data sources assessment.

China is piloting ecosystem extent, condition and services accounts in Guangxi and Guizhou provinces, in the context of constructing an ecological civilization using the SEEA EEA methodology. The accounts will be used to underpin regional eco-compensation standards in China.

India is assessing a number of ecosystem services at the national level. In addition, it is experimenting with extent and condition accounts for selected ecosystems, looking at developing a water quality index, as well as testing soil accounts. There are plans to test a comprehensive set of ecosystem accounts at the sub-national level.

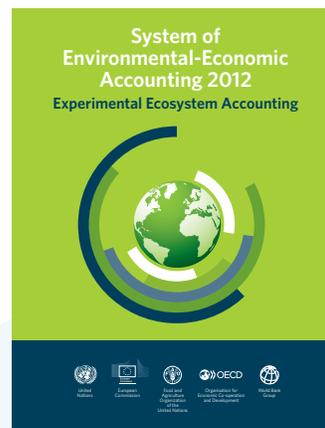
Mexico has compiled comprehensive ecosystem extent accounts integrating information on land tenure and protected area status. It is modelling a range of ecosystem services at the national level, and a variety of approaches for developing condition accounts are being explored. The project aims to establish an interagency coordination mechanism for mainstreaming natural capital accounts.

South Africa is developing a range of accounts at the national level, including ecosystem extent accounts, species accounts, protected area accounts and metro accounts for urban areas. For KwaZulu-Natal province, a whole suite of ecosystems services will be modelled and valued. Mainstreaming of the accounts is taking place through development of a comprehensive National Strategy on Natural Capital Accounting.



the project workstreams

The Natural Capital Accounting and Valuation of Ecosystem Services project consists of a number of workstreams that are implemented at the national and global level.



Ecosystem Accounts

Generating information

Develop accounts at the national and subnational levels in both physical and monetary terms.

Methodology

Advancing the field

Feed into the revision process of the SEEA EEA and develop guidance documents that will contribute to national and global implementation of natural capital accounting.

Business Accounting

Linking with the private sector

Further the alignment between SEEA and corporate sustainability reporting.

Capacity Building

Strengthening the community

Enlarge the community of practitioners on natural capital accounting through e-Learnings and training workshops.

Indicators

Providing actionable insights

Create and test a set of indicators in the context of the post-2020 Biodiversity Agenda and other international initiatives.

Communication

Spreading the word

Increase awareness of natural capital accounting both in project countries and beyond.

Scenario Analysis

Envisioning the future

Influence the implementation of environmental and economic policies based on information from the developed accounts.



United Nations



System of
Environmental
Economic
Accounting



The System of Environmental-Economic Accounting (SEEA) is an international statistical standard that uses a systems approach to bring together economic and environmental information to measure the contribution of the environment to the economy and the impact of the economy on the environment. Environmental accounts are an extension to the System of National Accounts (SNA) and facilitate the development of indicators and analysis on the economy-environment nexus.

Comments and questions are welcome.

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