Summary

The Sustainable Development Goals (SDGs) aim to eradicate poverty and place all countries on a sustainable development path by 2030. This requires better and more integrated information on how the economy, environment and society interact. Natural capital accounting can help deliver the SDGs by making explicit the links between the economy and the environment, enabling sustainable policy decisions and actions, and monitoring progress.

Background

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Natural capital accounting and the Sustainable Development Goals

Implementing the Sustainable Development Goals (SDGs) requires an understanding of the interdependencies and trade-offs between the economy and environment. Natural capital accounting (NCA) can aid the design of integrated policies and the monitoring of the SDGs. The System of Environmental and Economic Accounts (SEEA), an international statistical standard, provides a methodology for compiling physical and monetary accounts for a range of resources, including minerals, water, energy and timber, and linking these to information in the economy, in particular to GDP and policies for the distribution of benefits to different parts of society. The SEEA is enhanced through Experimental Ecosystem Accounts, which describe how to account for ecosystem assets and services both in monetary and physical terms — for example, the storm protection function of mangrove forests.

- NCA and the SDGs have a shared purpose and philosophy, both advocating integrated policies to achieve sustainable development.

- Implementing the SDGs requires a solid framework of indicators and statistical data to inform policymaking, monitor progress and ensure accountability. Natural capital accounting, which expands the scope of traditional reporting, can meet this need.

- The SEEA is a flexible tool that can be used to address priority issues in each country, addressing a range of policy questions that cut across the SDGs.

- Basing the SDG indicator framework on statistical standards such as the SEEA helps ensure internationally comparable, high quality indicators that can be integrated into mainstream information systems.

The Sustainable Development Goals

The Sustainable Development Goals (SDGs) came into force at the start of 2016. They build on the Millennium Development Goals (MDGs) and articulate a new global development agenda to eradicate poverty and shift the world onto a sustainable development path by 2030. The SDGs are comprehensive, including goals on poverty reduction, education, health, the environment, inequalities, and peaceful and inclusive societies. Integrated development is at the heart of the 2030 development agenda. The 17 SDGs and their 169 targets are designed as a web of inter-relationships and dependencies, where progress towards one goal can enhance progress in others.[1] They reflect a shift in global policy from a predominantly economic focus to one that holistically addresses the economic, social and environmental dimensions of sustainable development.

While only one of the MDGs was explicitly environmental (MDG7), the SDGs put the environment on a par with economic and social concerns. The environment cuts across all the SDGs and is directly reflected in seven goals. Implementing the SDGs requires an understanding of the interdependencies between the economy and environment, including the impact the economy has on the long-term health of natural systems.

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES		THE GLOBAL GOALS For Sustainable Development		12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE AND JUSTICE STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS

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NCA as a framework for the SDGs

Natural capital accounting (NCA) and the SDGs are highly compatible, with a shared purpose and philosophy. While the SDGs provide a policy framework, NCA provides the necessary data to move towards sustainable development. Both recognize that integrated policies, based on a better understanding of the multi-sectoral interactions and trade-offs between the different dimensions of sustainability (economic, environment and social) and the distribution of benefits within society, are crucial.

For policymakers to be able to make decisions which take into account the impacts of policies on different sectors, they require integrated information on the environment and its relationship with the economy and society. Such a joined-up approach to development calls for an improved information system. The System of Environmental and Economic Accounts (SEEA), can be a step towards fulfilling this need, providing an internationally recognized and consistent framework (including definitions, classifications, accounting concepts and methods) for accounting for natural capital. The SEEA measures the many facets of the environment and economy in a coherent and integrated way. It looks not only at the use of the environment but how that use benefits or disadvantages different parts of society.

The High Level Panel of Eminent Persons on the Post-2015 Development Agenda called for a 'data revolution' to provide better, faster, more accessible and more disaggregated data.[2] The aim is for national statistical systems to produce integrated statistics based on a common statistical framework and process. The SEEA represents an important step in this process.

The SEEA presents a historic opportunity to transform the national and global statistical systems through the adoption of common statistical frameworks, along with a standards-based modernisation of statistical production processes. The upshot of this transformation will be improved data quality, coordination, integration and alignment of various monitoring and reporting.[3]

NCA supporting delivery of the SDGs

NCA can support delivery of the SDGs by ensuring that natural resources are included in planning and implementation at the national, sectoral and business levels.

The role of NCA in delivering the SDGs is recognized in the SDG targets. SDG target 15.9 calls for ecosystem and biodiversity values to be integrated into national and local planning, development process, poverty reduction strategies and accounts.

While the SDGs provide a policy framework, natural capital accounting provides the necessary data to move towards sustainable development.

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For example, land accounts can help countries assess the value of competing land uses and identify the best ways to promote sustainable land use (SDG15). A fisheries account could inform the conservation and sustainable use of the oceans and marine resources (SDG14) by assessing the value of stocks over time, alternative management practices and employment opportunities.

Accounts detailing the costs and subsidies required for environmental protection can highlight sources for sustainable conservation financing.

SDG6 and water accounts

The SDG on water (SDG6) includes six targets addressing specific components of water policy such as access to safe water, efficient water allocation and water quality (Table 1). National water statistics are typically collected by different ministries and agencies (eg mining, energy, industry and environment).

Water accounts are used as a management tool in many countries to inform a range of policies. In South Africa, for example, they inform climate change policies; in Colombia they are used for water allocation across competing uses; and in the Philippines they inform water pricing. Botswana's accounts provide useful information for taking action against a number of targets under SDG6.

The SDGs and forest accounts

Forest accounts can inform a number of the SDGs, for example:

SDG targets by 2030	SEEA water accounts and link to targets
6.1. achieve universal and equitable access to safe and affordable drinking water for all	**Physical Supply and Use Tables** (PSUT) bring together data on the volume of water used and discharged back into the environment by the economy (all targets)
6.2. achieve access to adequate and equitable sanitation and hygiene for all	**Emission Accounts** describe the pressure that the economy puts on the environment in terms of pollutants discharged into water (6.3, 6.4 and 6.5)
6.3 improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemical and materials	**Asset Accounts** measure water stocks in physical terms at the beginning and end of an accounting period (6.3,6.4 and 6.6)
6.4 substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity	**Economic Accounts** provide a range of accounts on the cost of water use and supply as well as financing (all targets)
6.5 implement integrated water resources management	**Experimental Ecosystem Accounts** can provide information on water as an ecosystem asset and the related ecosystem service such as water provision, water filtration, tourism and cultural services (6.3,6.5 and 6.6)
6.6 by 2020, protect and restore water-related ecosystems	**Combined presentations** link physical information in the PSUT with emissions and monetary information on production (supply) and consumption (use) (all targets)

Table 1. SDG 6: ensure availability and sustainable management of water and sanitation for all.

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- *SDG 15.2 By 2020 promote the implementation of sustainable management of all types of forest, halt deforestation, restore degraded forest and substantially increase afforestation and reforestation globally.* Forest assets are typically under-valued in national accounts due to the fact that only timber resources are counted, omitting other important forest services such as carbon sequestration and watershed benefits. This deters investment in forest conservation and contributes to forest deterioration and loss worldwide. Accounts that incorporate other uses of the forest, such as non-timber forest products, carbon sequestration and water filtration give a more accurate assessment of the forest's worth. When compiled year after year, forest accounts can show the sustainability of a country's forest, and how the services and benefits of forests are shared in society

- *SDG 13.1 Strengthen resilience and adaptive capacity to climatic hazards and natural disaster in all countries.* Accounting for the ecosystem services provided by forests, such as water flow regulation (minimizing the impact of flooding downstream), can help build resilience to climate change

- *SG 10.1 By 2020, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.* Poor people can be highly dependent on forests for food and fuelwood. Land, forest and ecosystem accounting can be used to help identify the distributional consequences of changes to land use, forest cover and ecosystem function, helping government gauge whether economic growth is inclusive.

Adopting the SEEA for monitoring progress towards the SDGs

NCA can also support the process of monitoring and reporting progress towards achieving the SDGs. The SEEA and the System of National Accounts (SNA), as statistical frameworks based on a standard set of definitions, classifications and methodologies for integrating information, can provide high quality indicators that are consistent, policy relevant, methodologically sound and practical.

In 2014, the UN Statistical Commission recognized the SEEA as an important statistical framework for the 2030 development agenda and in 2015 requested that the SEEA was reflected in the SDG indicators. To develop a more integrated approach, having access to the underlying statistics that can link the economy and environment is a good first step. Work on the development of SEEA indicators is being led by the Inter-Agency and Expert Group on SDG Indicators.

Guatemala's forest accounts, published in 2009, make explicit the link between forest resources and economic activities, as well as the cost of losing the country's forests. The accounts reveal:

- The forest's true contribution to the economy is 2.5 per cent of GDP, not 1 per cent as currently recorded in the national accounts
- While Guatemala's GDP is increasing, the country's forest assets are declining, falling by 47 per cent between 1950 and 2010
- Households' high dependence on fuelwood — 64 per cent of the population relies on fuelwood for their main source of energy.

Data from the accounts were used to model the long-term relationship between deforestation, fuelwood and energy security, leading to a proposal for a new public/private strategy for the sustainable production and efficient use of natural resources, including fuelwood and soils.

The adoption of the SEEA as a tool to guide the development of relevant SDG indicators will help:

- Integrate and streamline the process for producing environmental-economic indicators
- Produce consistent and internationally comparable statistics through the use of an established statistical standard
- Facilitate information sharing between national statistical systems and international reporting initiatives, supporting a sustainable global SDG monitoring mechanism
- Reduce the burden on countries as each request for information is based on consistent definitions and classifications.

Challenges and way forward

The SDGs call for integrated development, which requires an approach that incorporates environmental, economic and social information and captures synergies and trade-offs. NCA could provide the conceptual framework to support this. However, realizing an integrated information system based on the SEEA is a significant challenge.

Current policy frameworks and statistics are characterized by 'silo' structures (ie links are not made between different areas). Environmental data are collected by agencies based on their specific policy needs. Diverse methodologies makes data comparison difficult. Often data are not made available to other agencies and a systematic understanding of how natural resource use and environmental degradation have an impact on different parts of society is lacking.
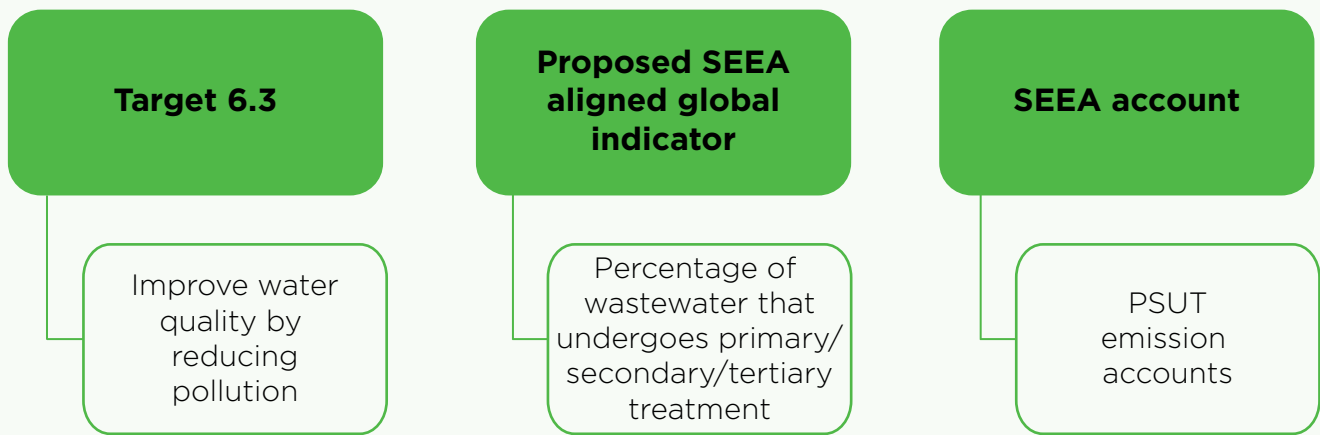
Establishing an integrated system will require a national institutional mechanism to drive integration as well as the sustained commitment by multiple data holding agencies. Key ministries and agencies will need to be strengthened for this to happen.

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An example: developing a standards-based indicator system for SDG 6 — clean water and sanitation

The indicators for the SDGs include indicators for reporting at the international level and a range of national and thematic indicators that countries may compile based on capacity and depending on their policy priorities.[3] A list of global indicators for SDG 6 has been submitted to the Inter-Agency and Expert Group on SDG Indicators. Many of these indicators can be directly measured using the SEEA-Water methodology. For example, target 6.3 can be assessed against a SEEA-Aligned Global Indicator related to the percentage of wastewater that undergoes treatment and is informed by the SEEA Water Physical Supply and Use Tables (PSUT) and emission accounts.[3]

Adopting the SEEA-Water methodology for global reporting on water-related SDG targets promotes methodological consistency across different levels of reporting and between global datasets.

Target 6.3	**Proposed SEEA aligned global indicator**	**SEEA account**
Improve water quality by reducing pollution	Percentage of wastewater that undergoes primary/secondary/tertiary treatment	PSUT emission accounts

Social and distributional issues are core to the SDGs, and while the SEEA does capture some social aspects alongside environment-economy data, the SEEA and SNA can foremost be used to show the distribution of benefits and damages having an impact on different parts of society. To date, the link with social impacts is a little explored area and further development and adjustment of the SEEA is required to fully reflect these issues at a national and sub-national scale.

To develop an SDG indicator system further, an in-depth analysis will be undertaken for each thematic area to:

- Assess the potential to align global indicators with the SEEA standard
- Assess current data availability and monitoring mechanisms at the global level
- Develop national capacity to implement the SEEA and further integrate and modernize statistical production processes.[3]

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Due to the lack of immediate SEEA-based data on a global scale, a gradual transition to SEEA processes is necessary. In the short term, indicators can be derived based on the best available data and where possible aligned with the SEEA, with capacity to report on SEEA-based accounts developed over time.[3]

Notes

1. UNDESA, 2015. Draft report of the Capacity Building Workshop and Expert Group Meeting on Integrated Approaches to Sustainable Development Planning and Implementation. 27–29 May 2015, New York. United Nations Department of Economic and Social Affairs.
2. Independent Expert Advisory Group Secretariat, 2014. A World that Counts – Mobilizing the data revolution for Sustainable Development.
3. UNSD, 2015. SEEA and Transforming Global and National Statistical Systems for Monitoring SDG Indicators. Tenth Meeting of the UN Committee of Experts on Environmental-Economic Accounting. New York, 24–26 June 2015.

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