

Environmental Accounting

Concept Note

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I. Introduction

Environmental accounting is an internationally recognized tool to produce environmental indicators and indicator based assessments. Over the past 20 years the international statistical community developed and endorsed a range of processes and publications that culminated in the adoption of the System of the UN Environmental-Economic Accounting (SEEA) Central Framework by the Statistical Commission in 2012. The SEEA is a multi-purpose system that organizes and integrates environment, economic and socio-demographic data to answer sustainable development and green economy policy questions. The use of environmental accounts ensures that indicators are consistent, comparable and coherent because of their component data are derived from a common conceptual framework.

Integrating environment and sustainable development in decision-making called for establishing the System of the UN Environmental-Economic Accounting (SEEA) to obtain a better measurement of the crucial role of the environment as a source of natural capital and as a sink of byproducts generated during the production of man-made capital and other human activities. The Agenda 21 issued by the Rio Conference of 1992 identified the need for a systems approach to monitoring the transition to sustainable development and proposed a specific solution - the development of integrated environmental and economic accounts (Agenda 21, Chapter 8).

II. System of Environmental-Economic Accounting (SEEA) in support to policy

1. Background

First published in 1993, the SEEA has been revised in 2003 and in 2012, its Central Framework has been adopted by the UN Statistics Commission as an international statistical framework.

The SEEA Central Framework (SEEA-CF) and the related SEEA Experimental Ecosystem Accounting (SEEA-EEA) volume use accounting concepts, structures and principles consistent with the System of National Accounts (SNA 2008). Both documents extend the accounting approach described in the SNA to account for stocks and flows in physical terms. The environmental and economic information organized in a systems approach covers the stocks and flows that are relevant to the analysis of environmental and economic issues. The summary information (provided in the form of aggregates and indicators) can be applied to issues and areas of the environment that are the focus of

decision makers. The detailed information, which covers some of the key drivers of change in the environment, can be used to provide a richer understanding of the policy issues.

The EEA CF stands from perspectives of the economy and its economic units and sectors (inc. households) and incorporates relevant environmental information concerning natural input, residual flows and associated environmental assets. Thus it answers a number of policy relevant questions including related to the use of natural resources as well as depletion of such resources.

In contrast, the SEEA-EEA stands from the perspective of ecosystems and links ecosystems to economic and other human activity. It is a more recent development in the environmental-economic accounting realm and relates to accounting for the degradation of ecosystems and the full suite of benefits that society obtains from the environment. Ecosystem accounting brings together recent developments in the conceptualization and measurement of ecosystem services and ecosystem condition within an accounting framework and based on a spatial approach to measurement.

2. SEEA as a Framework integrating data from different domains and SEIS type support

Starting from the basic economic, environmental and socio demographic data the SEEA organizes and reconciles accounting concepts and structure to obtain time series of consistent, comparable and coherent statistics and indicators and facilitate the linkage with official statistics. Data collection involves many different agencies with different scopes of responsibility, there is usually limited collaboration in the collection, and management and sharing of data across institutions, particularly on environmentally related topics.

The production of environmental accounts is a complex process, involving networks, data and information, tools and methodologies. Using the Shared Environmental Information System (SEIS) principles ensures a better organisation of the available information, facilitates their access and re-use and in the end provides a stable information platform for future regular accounting practice. The accounts compilation process is also intended to identify the data and information gaps or incompatibilities, accessibility and restrictions (confidentiality, formats etc) and to suggest possible ways for addressing and overcoming these aspects.

3. SEEA and Link to the DPSIR framework

Statistics and indicators derived from the SEEA can be communicated through the DPSIR-Driving force, Pressure, State, Impact, Response. Framework describes a stepwise causal chain between economic activity and impact. The SEEA-CF altogether with the SEEA-EEA cover the full DPSIR chain and providing in particular strong connections with Driving forces and Responses.

4. SEEA and Partnership and Cooperation

The implementation of the SEEA must be considered in the context of a large number of other related initiatives that are currently underway either with a focus of improving environmental and statistical information (including the FDES implementation process) towards monitoring SDI at the national level and improving policy responses to environmental, development and resource related issues. (World Bank's Wealth Accounting and Valuation of Ecosystem Services (WAVES) partnership, UNDP's Poverty and Environment Initiative (PEI), UNEP Green Economy and OECD Green Growth programmes). In line with this in 2012, the European Union Strategy for Environmental Accounts was adopted through the EU legislation and requires the compilation of certain environmental accounts by all EU countries. This implementation work is supported by many relevant technical and training materials.

III. ENI SEIS 2 East project and SEEA process

The ENI SEIS East II project aims to strengthen the regular production of environmental indicators and assessments of the SEIS type as a contribution towards knowledge-based policy-making and good governance in the field of the environment. ENI SEIS East II partner countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) have identified environmental accounting as highly relevant and requested capacity building in this domain during the first Regional Project Steering Committee Meeting of November 2016.

National governments as well as international organizations have included the SEEA as part of their programs on the green economy and sustainable development. The implementation of the SEEA as part of a development of country's national information system is a valuable and significant investment. There are many potential areas and themes that can be the target of SEEA implementation. In the context of developing an ongoing program of work on linking environmental and economic and social issues, the SEEA may be seen as a catalyst for action by providing a comprehensive, consistent and integrated framework around which relevant arrangements can be organized. Some countries are starting from scratch or a zero base in implementation but it is quite possible that several countries have experience or current processes, which can help inform and support the implementation process.

There are four proposed steps for SEEA implementation. They are:

- I. Strategic planning
- II. Building mechanisms for implementation
- III. Compiling and disseminating accounts
- IV. Strengthening national information systems

SEEA implementation should start following the policy interest and build over time.

There are two key steps in the strategic planning envisioned here.

- First, there is a need to constitute a “core group” and
- Second, an assessment report needs to be completed.

Depending on the administrative and governance processes that exist in a country the core group may be established as a sub-committee or working party from a broader inter-governmental process, for example a board that oversees a national statistical system. It may include a range of people including, as appropriate, experts from academia, particularly those who may have been involved in earlier studies on environmental-economic accounting.

A national assessment report provides a complete coverage of the institutional and data environment within which implementation of the SEEA would be undertaken and provides a link between the relevant policy priorities and the general feasibility of producing particular accounts. The completion of the national assessment report provides a road map that is a basis for making a decision on the direction of SEEA implementation at the national level. Key aspects in preparing an assessment report provides a Self-assessment Diagnostic tool, which is a template for structuring and documenting discussions around the seven key areas noted below.

The assessment report should cover seven main areas:

- i. Stakeholders and institutional arrangements/frameworks
- ii. Policy priorities
- iii. Data sources
- iv. Existing accounts and previous studies
- v. Constraints
- vi. Opportunities
- vii. Road map-Recommendations for priority accounts and next steps

In 2017, key activities on the implementation of environmental accounting will focus on analyzing the present situation and structuring capacity building in respective activities. This will be done using the Self-Assessment Diagnostic tool of SEEA implementation in order to measure the readiness of countries (data availability, institutional and human capacity,) and identify area of work to start. A first cycle of training on environmental accounting will build capacities to implement activities from 2018.

This will include the organization of environmental accounting training at regional level for identified experts from 6 Eastern countries at national level (in English language), linking to the country-specific activities and outcome of the self-assessment of environmental accounting implementation. The training will cover main aspects of the international standard System of Environmental-Economic Accounting (or SEEA), with a focus on accounting for natural capital, land, carbon, water, ecosystem services and biodiversity all covered. Theory and practice are reinforced through hands-on exercises.

This professional development is designed to provide a broad understanding of the environmental accounts, for those charged with developing, implementing or using environmental accounts.

The training is based on the SEEA and its developments at the European Environment Agency (EEA) in the context of INCA and MAES as well as Ecosystem Natural Capital Accounting guidelines developed by UN CBD. It will rely in particular on the EEA 10 year's practical experience in producing and disseminating land cover accounts (the LEAC framework).

The Training cycle expected outcomes are:

- ✓ Production of land cover and land cover change accounts for a test case;
- ✓ Assessment of land degradation involving the analysis of stress factors that cause of urban sprawl, agriculture extension, deforestation and land uptake, for the test case and in the European context (from LEAC 2012/2006/2000/1990);
- ✓ Calculation of the UNECE environmental indicator on land “Land uptake (E1)” based on spatial approach to measurement;
- ✓ Calculation an indicator of landscape degradation (NLEP from LEAC);
- ✓ Awareness rising of opportunities and issues in producing land cover and land cover change maps and databases from high resolution satellite images at the 1/100 000 scale following the CLC experience.
- ✓ Creation of land data platform to support development of National Environmental assessments.
- ✓ Establishment of a “core team” for the SEEA implementation process.

IV. Conclusion

The implementation proposal is to follow a tiered approach, which will allow the progressive implementation of environmental accounts with intermediate milestones and products of interest. Once the basic accounting infrastructure is in place, a streamlined development will be possible considering altogether the overall improvement of the first accounts and the development of priority modules well positioned in the accounting framework. Their operationalisation will require further developments in terms of data improvement (in particular the land cover change database on which are based an important number of accounting modules), capacity building, institutional cooperation necessary for future annual updates.

Proposed list of the activities is provided below. It is important to take a decision on the way forward as outlined in this concept note in order to advance the ENI SEIS II EAST Project implementation.

Activites	2017				Implementation		Deliverable
	I	II	III	IV	EEA	Partnership	
Activity 3.1: National training and expert assistance on SOER production, based on SEIS-compliant data							
Specific training programmes					EEA	Eionet	event/people
Specific training programmes (set up the training programmes of the EEAcademy and Eionet School)					EEA	Eionet	event/people
Specific training programmes (expert technical assistance and visits)					EEA	Eionet	visit/people/data, indicators, report online
Ukraine							
Moldova							
Belarus							
Georgia							
Armenia							
Azerbaijan							
Visit countries to the EEA Seminars, Eionet countries					EEA	Eionet	visit/people/data, indicators, report online
Study on efficiency and effectiveness of the recent environmental assessments reports					EEA	REC/Zoi	reports online
Activity 3.2: Methodological support for production of indicator-based assessments							
Overview availability of the UNECE environmental indicators and assessments online					EEA	NFPs	Information online
Elaborate National Indicators/Data catalogue					EEA		Draft designed online
UNECE Environmental indicators reviewing process and updating of the core set of Environmental indicators					EEA	UNECE	input
Participation in meetings of the UNECE Joint Task Force on environmental statistics and indicators					EEA	UNECE	event/people
Participation in meetings of the UNECE WGEMA					EEA	Eionet	event/people
Expert technical assistance and visits to the countries					EEA	Eionet	
Ukraine							
Moldova							
Belarus							
Georgia							
Armenia							
Azerbaijan							
Environmental accounting							
Assessment of environmental accounting implementation					EEA	UNECE	draft of the report online
Training on environmental accounting					EEA	Eionet/CIRAD	event/19 people
Participation in seminar the UNECE on SEEA					EEA	UNECE	event/people

Activites	2018				Implementation		Deliverable	
	I	II	III	IV	EEA	Partnership		
Activity 3.1: National training and expert assistance on SOER production, based on SEIS-compliant data								
Specific training programmes (attendance and participation in training programmes of the EEAcademy and Eionet)			28-30 August		EEA	Eionet/PBL	1 event/ experts	18
Specific training programmes (expert technical assistance and country visits)					EEA	Eionet/SEA	4 visit / experts	112
Ukraine				2-4 October			24 experts	
Belarus		18-20 April					12 experts	
Georgia		15-17 May					52 experts	
Azerbaijan			17-19 July				24 experts	
Activity 3.2: Methodological support for production of indicator-based assessments								
Overview availability of the UNECE environmental indicators and assessments online	March	May		October	EEA	NFPs and NAs	Information online,	
UNECE Environmental indicators reviewing process and updating of the core set of Environmental indicators				October	EEA	UNECE	input	
Participation in meetings of the UNECE Joint Task Force on environmental statistics and indicators				25-26 October	EEA	UNECE	1 event/ experts	10
Participation in meetings of the UNECE WGEMA		May			EEA	UNECE	1 event/ experts	10 experts
Expert technical assistance and visits to the countries					EEA	Eionet/SEA	4 visit / experts	112 experts
Ukraine				2-4 October			24 experts	
Belarus		18-20 April					12 experts	
Georgia		15-17 May					52 experts	
Azerbaijan			17-19 July				24 experts	
Environmental accounting								
Workshop on SEEA-CF	15-18 January				EEA	UNECE/OECD/Statistics Netherlands	1 event/ experts	6 experts
Participation in UNECE/OECD Seminar on SEEA-CF and SEEA-EEA	21-22 February				EEA	UNECE	1 event/ experts	10 experts

Activites	2019				Implementation		Deliverable
	I	II	III	IV	EEA	Partnership	
<u>Activity 3.1: National training and expert assistance on SOER production, based on SEIS-compliant data</u>							
Specific training programmes (attendance and participation in training programmes of the EEAcademy Summer School on Integrated Assessment)			28-30 August		EEA	Eionet/PBL	event/experts
Specific training programmes (expert technical assistance and visits)					EEA	EEA/SEA	visit/experts/ data,indicators, report online
Moldova		2-4 April					
Armenia			4-6 June				
Visit countries to the EEA/Eionet meeting				8-9 October	EEA	EEA/SEA	visit/people/ data,indicators, report online
<u>Activity 3.2: Methodological support for production of indicator-based assessments</u>							
Overview availability of the UNECE environmental indicators and assessments online	March			September	EEA	NFPs and Nas	Information online
UNECE Environmental indicators reviewing process and updating of the core set of Environmental indicators					EEA	UNECE	input
Participation in meetings of the UNECE Joint Task Force on environmental statistics and indicators				28-29 October	EEA	UNECE	event/experts
Participation in meetings of the UNECE WGEMA		May			EEA	Eionet	event/experts
Expert technical assistance and visits to the countries					EEA	Eionet/SEA	event/experts/ report online
Moldova		2-4 April					
Armenia			4-6 June				
Visit countries to the EEA/Eionet meeting				8-9 October	EEA	EEA/SEA	visit/people/ data,indicator, report online
<u>Environmental accounting</u>							
Self Assessment of environmental accounting progress	March				EEA	UNECE	report online
Vocational training on environmental accounting and new indicators production			2-6 September		EEA	ETC/CIRAD	event/people
Participation in the UNECE Seminar on SEEA	20-21 February				EEA	UNECE	event/experts