Nordic Council of Ministers

SUMMARY FOR POLICY MAKERS

Ecosystem accounting in the Nordic countries

Contents

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Summary

This policy brief presents key findings of the ongoing work and use of ecosystem accounting in each of the five Nordic countries including the Faroe Islands. Specifically, this policy brief is

- illustrating advantages and disadvantages between the different countries regarding the use of existing ecosystem accounts.
- presenting to which extent ecosystem accounts coincide with new international standards on ecosystem accounting.
- providing an overview of the ongoing *work* on *ecosystem accounting* at an international level, including the development of international standards for ecosystem accounting.
- presenting recommendations for the Nordic countries on how to advance the development of ecosystem accounting.

Introduction

During the *last decade* major developments have been made *in* analyzing and evaluating ecosystems in terms of their economic value for the society and human wellbeing.

This development has created a need to quantify and assess systematically the status of current ecosystems, thus their ability to provide ecosystem services. This framework is named ecosystem accounting. More specifically, ecosystem accounting is a statistical framework for organizing data, tracking changes in the extent and the condition of ecosystems, measuring ecosystem services and linking this information to economic and human activities. Ecosystem accounting is built upon an internationally agreed framework to integrate nature into the decision-making processes. This is done in a harmonised and consistent manner by measuring and recording changes in ecosystems and ecosystem services.

Ecosystem accounting at the international level

At an international level, the UN Statistical Commission adopted the System of Environmental-Economic Accounting Ecosystem Accounting in March 2021 (SEEA EA) which provides methodological guidance in measuring the extent and condition of ecosystems, and how to quantify ecosystem services. The SEEA EA framework is flexible and can be implemented in various parts. For example, a country may choose to implement only a sub-section of the accounts, considering the country-specific environmental and economic contexts. Countries are also encouraged to contribute to the further methodological development of ecosystem accounts for policy use and decision-making processes, both in the public and private sector. The SEEA EA consists of five core accounts and is using spatial data and information about the functions of ecosystem assets as well as the ecosystem services they produce. Within international working groups and task forces there are several ongoing initiatives on ecosystem accounts and ecosystem services. Once a year, the OECD and the UNECE jointly organise an annual seminar on advancing the implementation of SEEA. All the Nordic countries participate actively in this meeting.

At the European level, the EU Commission is currently preparing a legal proposal which suggests that the development of ecosystem accounts and reporting of data should be mandatory across all EU Member States. The proposal needs to pass through the European Parliament, and it can take more than four years before it becomes legally binding. Basically, the Nordic countries are following the EU legal typology and modeling which has been developed by the Eurostat task force which is aligned with the UN SEEA EA framework. All the Nordic countries are to some extent on the same timeline, due to the new EU legislation requirements. The first reporting year for all EU Member States is proposed to be year 2026. This new legal act is the main legal document which guides all the Nordic countries timelines in terms of implementing the SEEA-EA framework. At the Eurostat director's level, there are regular meetings which relates to the development of environmental accounts in general, including ecosystem accounts. Denmark, Norway, Finland, Iceland and Sweden are actively participating in these meetings. Concurrent to the Eurostat directors' levels meeting there is a general working group on environmental accounts, including ecosystem accounts. Within this space the same Nordic countries are represented. Integrated below these working groups, Eurostat hosts a specific task force on ecosystem accounting. However, only Norway and Finland are active members in this task force.

Differences between the Nordic countries

The interviews with experts in ecosystem accounting and related fields in the five Nordic countries illustrate several differences between the countries in terms of developing national frameworks for ecosystem accounts.

In Norway there is a longstanding established cooperation between Statistics Norway and several research institutes in terms of data exchange and developing methods, thus creating ideas for the advancement of ecosystem accounts. Statistics Norway has started planning how to integrate the UN SEEA EA framework into its regular statistical production from year 2024. The country has established a good foundation for implementing the SEEA EA framework as a large amount of research, methodology development and pilot testing has already taken place between different organisations in Norway during the last couple of years.

In Finland, there is a growing interest for ecosystem accounting and environmental economic accounting. Statistics Finland and the Finnish Environmental Institute (SYKE) have been working jointly for many years on developing ecosystem accounts. The country has not yet decided who will be the responsible organisation for developing ecosystem accounts. Both organisations have experts and access to national data which covers basic statistics, national accounts, ecosystem and biodiversity. Finland has mapped different alternatives for ecosystem extent accounts and has long time series data on land cover as well as forestry. Pilot studies on mapping ecosystem services have also been conducted throughout the past years.

In Denmark, ongoing cooperation between Statistics Denmark, University of Copenhagen and Aarhus University is taking place in terms of data production and data exchange for ecosystem accounting. The first steps have been processed via the national development of a Danish land use database. The country is closely following the legal process at the EU level, in terms of requirements and how it will affect Denmark's reporting demands. Statistics Denmark has defined a schedule for drafting an internal roadmap within the organisation. Denmark has consistent data on land use and forestry. In several studies they have mapped, quantified and valued ecosystem services.

In Sweden, limited cooperation between different organisations have taken place in terms of developing ecosystem accounts. Independently, some pilot studies have been made, but more extended cooperation is needed. Statistics Sweden will establish a road map for how the country will manage and implement the framework for ecosystem accounts. The national statistical office is closely following the ongoing legal discussion at the EU level, in terms of how the requirements will affect the country's reporting demands. Currently, high quality data on ecosystem extent accounts is available, and the data sources are interlinked to private- and public ownership.

Iceland is presently at an early stage and the country still needs to understand the whole concept of ecosystem accounting, in terms of setting-up the entire framework, as well as to understand and map relevant data sources. Iceland believes the current design of the SEEA EA framework does not fit well with Iceland's conditions as the country has little vegetation, forest or small amount of land area under arable cultivation.

Ecosystem accounting is not a priority statistical area for the Faroe Islands. The fact that the Faroe Islands is not part of the European Union implies the country is not part of the European statistical cooperation, thus it does not have any legal reporting requirements in this regard.

Common user areas for the ecosystem accounts across the Nordic countries

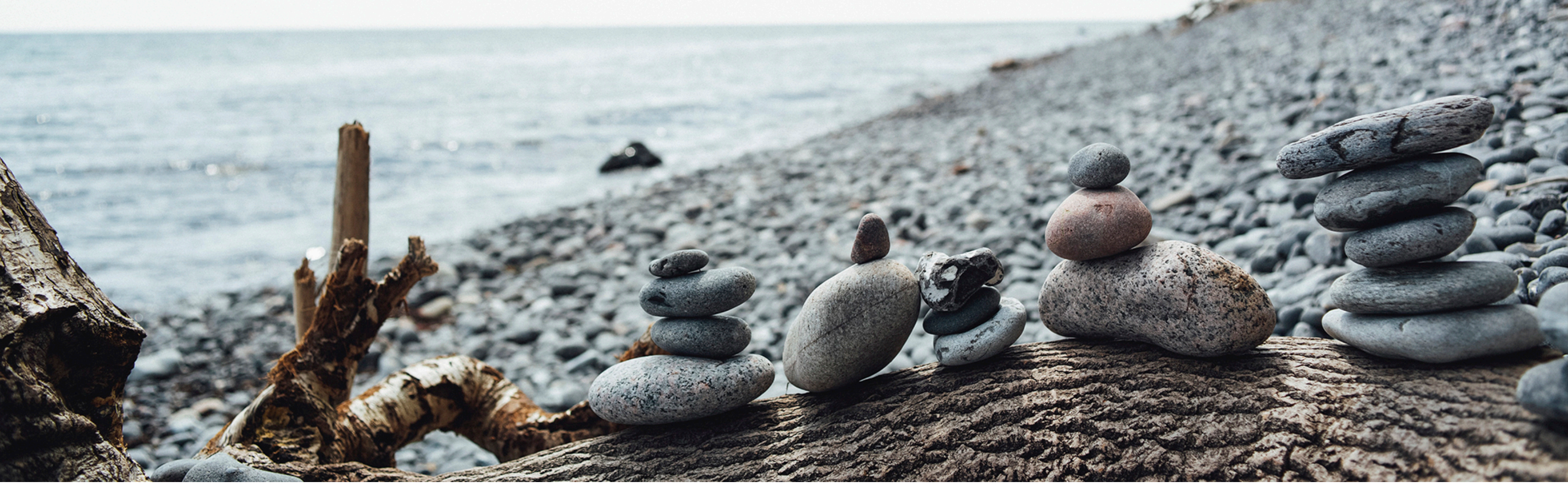
The interviews revealed that there were several common user areas for the ecosystem accounts across Finland, Sweden, Denmark and Norway. It was highlighted that user areas including such policies for land use planning, water resource planning and infrastructure development are of great importance when these countries will commence developing ecosystem accounts at national levels. These four countries have a common understanding of the need for creating a harmonised statistical framework for its national ecosystem services. Most Nordic countries consider its output data to be very useful tool in terms of policy planning at both a national and regional level. Furthermore, the Nordic countries consider the international harmonised framework to be a strength when it comes to different policy purposes.

Many of the Nordic countries mentioned that they believe it is useful to develop a common statistical framework based upon national ecosystem data, which is harmonised across countries. Also, many of the Nordic countries consider it to be beneficial to develop longer time-series with ecosystem accounting data, with the aim to investigate and follow the development of the country's different ecosystems, thus make targeted policy decisions. Another common benefit which has been highlighted is the fact that all Nordic countries believes it is an advantage to develop new partnerships and networks, once developing ecosystem accounts, as input data come from various institutes and agencies.

Moreover, four of the six Nordic countries (Norway, Denmark, Sweden and Finland) mentioned that they consider trade-offs between ecosystem services to be of great importance. However, they have not yet considered trade-offs from an accounting perspective. Monetary valuation is currently part of the development process of ecosystem accounts and was mentioned as highly important work in Finland and Norway. The other Nordic countries have no current plans at this stage to include monetary valuation into their ecosystem accounting framework.

All the Nordic countries lack additional resources for implementing this new ecosystem accounting framework. All the countries in the study also find it to be resource intensive and comprehensive to compile. Several Nordic countries believes that the development of ecosystem accounts is a major national coordination task, as the input data exists in different formats and units. Input data originates from a wide range of data sources within various national organisations. All countries expressed a need to receive additional funding to be able to cope with the new legislated requirements, in terms of reporting mandatory data to Eurostat.

Moreover, several countries mentioned that a big challenge relates to finding appropriate data which fits the purposes of ecosystem accounts. Nationally there exists much spatial data, but this data is not set-up for accounting use as required for ecosystem accounts.



Policy recommendations for the Nordic countries

Based on the outcome of our analysis on the ongoing work and use of ecosystem accounting in the Nordic countries, we provide recommendations observed from this report. The *following six recommendations* are proposed:

- Allocate additional resources for the development of ecosystem accounts in all five Nordic countries and the Faroe Islands
- Appoint national coordinators for ecosystem accounting
- Establish a base for knowledge sharing in terms of skills development in utilising existing and potentially new data sources
- Launch information campaigns to increase public and private sector awareness relating to the importance of ecosystems and ecosystem accounting
- Development of ecosystem accounts is a technical challenge – more country case studies are needed
- Use monetary valuation methods with care

About this publication

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