

Presenting SEEA CF and SEEA EEA statistics together: UK experience

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Introduction

In 2011 the UK Government committed to working with the UK Office for National Statistics (ONS) to incorporate natural capital into the UK Environmental Accounts by 2020. The natural capital accounts aim to record the services and benefits society receives from natural assets, primarily using the SEEA-EEA as a framework. The main UK Environmental Accounts are satellite accounts to the main UK National Accounts and measure the contribution of the environment to the economy, the pressures of economic activity on the environment, and society's response to environmental issues. They are compiled in accordance with the SEEA-CF.

As the 2020 target draws near and the natural capital accounts become more developed, it has led to discussion and thought about how the main environmental accounts and the natural capital accounts will work together.

This short note discusses some of the issues faced in bringing statistics from these two frameworks together. It is hoped this will be useful to other practitioners using or thinking about how the two frameworks interrelate.

UN SEEA development in the UK

In the UK, environmental account compilation is split into these two areas, the established environmental accounts following the central framework and the more experimental natural capital accounts following the SEEA-EEA. Table 1 sets out the topic areas covered.

Both frameworks have specific uses, but there are some areas where they interact, which the table demonstrates.

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Table 1: Statistics developed in the UK environmental accounts and areas of interaction (grey areas)

Central Framework	'Grey areas'	Experimental Ecosystem Accounts
Air emissions		Extent
Energy		- Land cover
- Fuel use	Material flows and provisioning services (timber, minerals etc)	- Land use
- Energy consumption		Condition Indicators by broad habitat
- Energy intensity	Water use and water provisioning	Ecosystem provisioning services
- Oil & Gas stocks		- Timber, agricultural biomass, fish, water
Material Flows		Abiotic flows
Environmental Protection	Carbon dioxide emissions and carbon sequestration	- Minerals, oil and gas
Expenditure (EPE)		- Renewable energy
Environmental goods and services sector	Air emissions and air filtration	Other ecosystem services
Environmental taxes		- Carbon sequestration
Waste	EPE and restoration cost accounts	- Air filtration
Water use ¹		- Recreation
		Restoration cost accounts

¹available for 2012 only

Potential in combining the two frameworks

Working separately with the two frameworks has allowed us to make significant progress and produce robust accounts in a number of areas. In developing [environmental accounts](#) and [natural capital accounts](#), the UK now has a broader range environmental statistics to use for analysis.

Trends and stories from these statistics are brought out in bulletins. Currently the main environmental accounts and experimental natural capital accounts are published separately, but it is recognised there is substantial value in presenting the two together, in particular by focusing on certain topic areas. This would require viewing the two frameworks as one.

Issues faced in combining the two frameworks

As far as environmental assets are concerned, the Central Framework focuses on individual components, for example, timber and water resources. It considers the stocks of these assets in terms of their direct use as natural inputs to the economy for use by enterprises and households. These assets are not valued in terms of their non-material benefits from indirect use. In contrast, the Ecosystem Accounts focus on the ecosystem as a whole (such as forests rather than timber), as a supplier of range of material and non-material services.

This distinction between the two frameworks, whilst clear theoretically, can be difficult to convey in practice. This is especially true for forestry: if woodland is used for a range of services and (as in the UK) there is no clear distinction between plantations and other forested areas, then the separation between the Central Framework valuation based on incremental growth in the volume of standing

timber available for harvest, and the EEA valuation of (other) woodland based partly on actual felling of trees for timber, is likely to be arbitrary and lead to confusion amongst users.

The interaction between the accounts can also cause confusion when considering the pressures on the environment revealed by the main environmental accounts alongside accounts for the regulating and cultural services provided by ecosystems. For example, farming can have a significant impact on the environment through releases of greenhouse gases from cultivation; farmland as an ecosystem may provide a range of ecosystem services such as recreation, flood prevention and a limited amount of carbon sequestration. The potential source of confusion is that not all farmland is used for farming, and not all farming takes place on farmland. Spatially disaggregated accounts are needed in order to identify the extent to which farmland used for farming provides ecosystem services and the extent to which those farming practices account for pressures on the environment, but this may require spatially disaggregated central framework accounts.

A similar distinction is needed between air emissions and air filtration services. The natural capital accounts estimate the amount of air pollution removed by vegetation, whereas the main environmental accounts estimate the emissions released as a result of activities by economic units. Analysing the two together could provide users with a more complete picture of various impacts on air quality, yet there are a number of issues which prevent the two accounts being presented together. One issue is that air emissions are calculated on a residency basis, whereas the pollution removal estimates are on a territory basis.

Another issue is that the air filtration accounts are based on estimates of the pollution removed from the atmosphere, including pollution created from chemical reactions in the air and pollutants transported from abroad, whereas the air emission accounts record those pollutants which are actually released to the atmosphere. Care is needed when attempting to explain how much of the UK's pollution is mediated by vegetation in the UK.

In the case of expenditure on the environment (an increasingly important policy issue in the UK), it will be necessary to determine the extent to which ecosystem maintenance and ecosystem restoration costs are included in the Resource Management and Environmental Protection Expenditure accounts.

Lessons learnt

It is important to have the two frameworks to aid the development of the accounts, however when analysing the results and comparing the two together a bridge between the two is needed in order to enable a holistic understanding of the accounts as a whole.

In practical terms this means identifying all areas of overlap and explaining differences in the concepts and methods. Practically, it will also be necessary to ensure the same assumptions and data sources are used where appropriate and using the same approach to analysis and communication with users.

Both frameworks have a lot of value in aiding the development of a suite of environmental statistics, but for the value to be fully realised the two frameworks need to be linked together more both to help practitioners develop the accounts and end users to understand them.