European Environment Agency

Abstract

EEA contribution to the "Beyond the GDP" conference

Accounting fully for ecosystem services and human well-being

"Because National Accounts are based on financial transactions, they account for nothing Nature, to which we don't owe anything in terms of payments but to which we owe everything in terms of livelihood." Bertrand de Jouvenel 1968

Introduction

Ecosystems sustain biodiversity, the basis for all life on earth. Ecosystem services are the benefits people obtain from ecosystems. They include *provisioning services* such as food, water and timber; *regulating services* that effect climate, water, soil, waste and disease; *cultural services* that provide recreational and spiritual benefits.

Ecological truth & market prices in accounting for ecosystem services

Ignored benefits: The actual value for people's well being from ecosystem services is accounted only when these services are incorporated into the price of products. When their market price is zero, however, as in many cases, they simply don't exist, whatever their importance. They can be accordingly appropriated for production or simply degraded without any recording. These free ecosystem services should be measured, valued and added to the GDP for computing a more **inclusive aggregate, called Inclusive Domestic Product (IDP)**.

Ignored costs: The negative impacts on ecosystem services of, for example, over-harvesting, waste disposal, fragmentation by dams, and sealing of soil for development have no direct counterpart in GDP. This means that

The full cost of producing and consuming domestic goods and services are not covered in

many cases by their market price. This is also the case for the price of imported goods and services generated from ecosystems that are not maintained: their price doesn't reflect their full cost for the exporting country.

Allowances should be made for these ignored costs and added to the current production output and imports of countries, sectors and companies for computing **the full cost of domestic and imported goods and services, called the Full Cost of Goods and Services (FCGS)**.

IDP and FCGS for policy decisions

Once computed, these two aggregates can provide added-value to policy makers in terms of better informing decisions on the costs of action versus the costs of inaction, on the internalisation of environmental externalities and as a result of these, where to target actions around Ecological Tax Reform. The aggregates aim at **supplementing GDP**, not at replacing or adjusting it.

The two aggregates are based on environmental accounting for ecosystems. These ecosystem accounts can be established in both physical and monetary terms. **Physical accounts of the natural capital**, stocks,

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material /energy flows, resilience, services can be benchmarked according to stated policy objectives. This is possible for example in reference to European environmental regulations and directives and international conventions. IDP and FCGS can be derived by applying monetary valuations to the results of physical ecosystem accounts.

Implementation

Environmental accounting is a joint activity between Eurostat, EEA, OECD, the UN and many EU Member States in the context of the European Strategy on Environmental Accounting and the revision of the UN-SEEA2003. Subjects covered at EEA include land, ecosystems, water, and production and consumption (based on material flows accounts and NAMEA). Physical accounts for land and elements of NAMEA have already been published. First water accounts will follow in the next year.

Ecosystem accounts will be delivered through to 2012 under the European Ecosystem Assessment of Europe – Eureca! which will assess what the ecosystem accounts mean for policy, today and in the future. Intermediate accounts will be published for wetlands and forests ecosystem services and biofuels by 2010.

The Shared European Environmental Information System (SEIS) is the umbrella under which physical accounts are being developed. SEIS provides the basis for a harmonised geographical data infrastructure for producing a range of indicators such as: Landscape Ecological Potential, Ecological Footprint, HANPP and other indicators derived from Material Flow Accounts.

Accounting for environmental benefits and costs