

Laguna Lake Basin: Frequently Asked Questions

What is ecosystem accounting?

Ecosystems are an intricate web of interdependence between humans and nature. We depend on ecosystems for our basic needs such as food, water and fuel. We also use its natural resources to drive our economies.

Some of these resources are reflected in our country's GDP. But services naturally provided to us by a healthy, well-functioning ecosystem such as flood control, air and water filtration and soil erosion prevention are neither quantified nor assessed for their economic value.

Ecosystem accounting is a way of accounting for the all the benefits--both concrete and intangible--that ecosystems give us. In accounting for all the value nature provides us, we can manage these resources more sustainably and leave a healthier planet for future generations.

The framework of ecosystem accounting is based on the System of Environmental-Economic Accounting (SEEA), an internationally agreed standard of concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics on the environment and its relationship with the economy.

What are ecosystem services?

Ecosystem services are the benefits people obtain from nature's ecosystems. Tangible benefits are used in economic and other human activity such as the use of timber to build houses or for energy. There are other ecosystem benefits that are intangible like water purification and flood control. Without these ecosystem services, our quality of life would be reduced.

Ecosystem services are classified into three types:

1. **Provisioning services** - reflects material and energy contributions generated by or in an ecosystem. For example, a fish or a plant with pharmaceutical properties. The associated benefits may be provided in agricultural systems, as well as within semi-natural and natural ecosystems.
2. **Regulating services** - results from the capacity of ecosystems to regulate climate, hydrological and bio-chemical cycles, earth surface processes, and a variety of biological processes. It is also commonly referred to as "regulating and maintenance services".
3. **Cultural services** - relate to the intellectual and symbolic benefits that people obtain from ecosystems through recreation, knowledge development, relaxation, and spiritual reflection.

What is the WAVES partnership and how is it related to ecosystem accounting?

WAVES stands for Wealth Accounting and the Valuation of Ecosystem Services, a global partnership that aims to account for the natural capital and services provided by ecosystems to know the full value of these resources for better planning.

The Philippines has been selected as one of the eight core implementing countries where the WAVES Global Partnership Program (WAVES - GPP) has been launched.



Wealth Accounting and the
Valuation of Ecosystem Services
www.wavespartnership.org

Why was Laguna Lake chosen as the pilot site for the ecosystem account?

The Laguna Lake is the largest inland body of water in the Philippines and the third largest in Southeast Asia. Around 100 rivers and streams drain into the lake with the largest contribution of inflow coming from the Pagsanjan River. The Laguna Lake Region is a multiple-use resource that provides food, transportation, energy and shelter to the provinces of Rizal and Laguna; selected towns in Cavite and Batangas, and Quezon; and the cities of Muntinlupa, Taguig, Pasig, Marikina, Quezon, Caloocan, Pasay and Manila.

The Laguna Lake is an example of an ecosystem that supports the life, economy and well-being of a large urban population. It also serves as a case study of an ecosystem that is threatened by various alarming issues.

What was the data produced for the Laguna Lake and who were the agencies/organizations involved in putting together this data?

There were four experimental ecosystem accounts that were produced for Laguna Lake:

1. Land account containing land cover and changes
2. Ecosystem condition account containing various water quality indicators, soil types and elevation, changes in bathymetry and sediment loading
3. Ecosystem production account indicating the flow of ecosystem services such as fishery production, water supply, flood mitigation and soil erosion regulation
4. Ecosystem asset account showing the levels of water and fish stock

The Laguna Lake Development Authority took the lead in developing these four ecosystem accounts. Staff from several of its technical units undertook the analysis supported by international and national experts.

But the deteriorating state of the Laguna Lake has long been known, what is new about this information you're telling me?

True, but this is the first time that we have scientific evidence-based information that will tell us two things: the degree of deterioration and which parts of the lake are most affected.

Ok, so how will this information help the Laguna Lake Development Authority manage the lake services?

The ecosystems accounts developed in this study will help LLDA and policy makers prevent further degradation of the Laguna Lake through informed policies that will strengthen water resource management, improve water quality and align development plans or planning laws.

Sources:
<http://biodiversity.europa.eu/topics/ecosystem-services>
http://unstats.un.org/unsd/envaccounting/eea_white_cover.pdf