

# Natural Capital Accounting in Action



## Guatemala's forest accounts link forest resources with the economy

**Guatemala lost 40 per cent of its forest cover between 1950 and 2001. Concerns regarding the future of forests and the forestry sector prompted key government agencies, including the Central Bank working with the Rafael Landivar University, to begin constructing forest accounts in 2006, publishing them in 2009. Guatemala had a much higher rate of deforestation than elsewhere in Central America, and the accounts provided more than statistics on the issue. They made explicit the link between forest resources and the economy, as well as the cost of losing the country's forests. The process, and the results, opened up a lively debate between the stakeholders involved, and informed national policies – such as on fuelwood use.**

The Rafael Landivar University kickstarted the process to generate the first set of environmental and economic accounts in 2006, supported by a Dutch government-funded project. National forest accounts were the first in the series. Beyond just designing a methodology to collect data, the process involved formal bilateral agreements for information sharing and capacity building among key institutions such as this private University, the Central Bank, National Statistics Institute, the government Planning Secretariat and the Ministry of Environment. The creation of forest accounts in particular engaged individuals

and organizations that had a stake in Guatemala's forests, with the university providing rigor and public acceptance, as well as the space for dialogue between agencies.

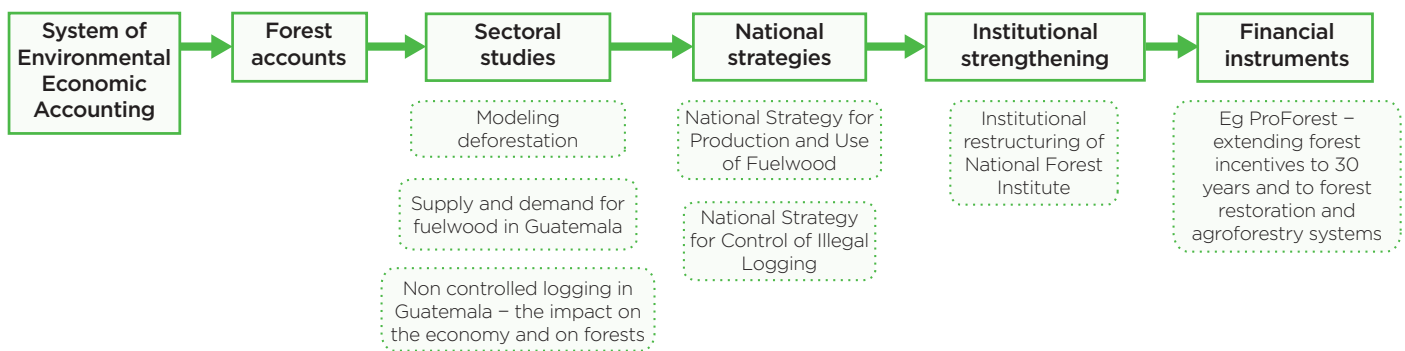
Subsequently other accounts like energy and ecosystems supplemented information on forest assets and the services they provide to the economy. Several rounds of consultation generated the information needed about how forests were used commercially and at the household level, the range of income-generating opportunities they provided, the population's energy needs and the accessible energy alternatives to fuelwood.

## In brief

- While Guatemala's GDP appears to be increasing, the country's forest assets are declining. Between 1950 and 2010, Guatemala lost 47% of its forest cover. 96% of timber extractions are not recorded
- For the first time, national accounts incorporated information from the forestry inventory (eg volume of timber in forests)
- The real contribution of forests to the economy is 2.5% of GDP versus the current 1% that is recorded in the national accounts.
- Depreciation of forests is equivalent to 0.9% of GDP while government expenditure in the forest sector is less than 0.2% of GDP. A big proportion of this is administrative or current investment.

“*The Forestry Enterprises Electronic Systems (SEINEFF) is an example of how information from the forest accounts has been used. This online platform provides trusted, up-to-date information on legal forestry products to promote legal marketing and trade.*”

**Jaime Luis Carrera, Institute of Agriculture, Natural Resources, and the Environment (IARNA)**



The process of data to model to policy impact. Adapted from a slide by Rafael Landívar University and IARNA

They also revealed the cultural practices associated with fuelwood collection and the impact of land use change from forests to greater expanses of pastureland and agricultural land.

This detailed work took several years to complete and the process was not without controversy. Not all stakeholders agreed with the findings. However, the debate was healthy and opened up discussion about the state and value of the country's forests beyond the confines of academia and government departments. This was the first attempt to understand the interplay between forests and the country's broader economic trends.

## What the forest accounts revealed

The accounts show how in 60 years Guatemala has gone from nearly 7 million hectares of forest to just 3.7 million — losing nearly half of its forests in a relatively short time. The added transparency in accounting also revealed the extent of non-controlled logging by private landowners, which takes place outside institutional regulatory frameworks and some of which is illegal. It also revealed households' high dependence on fuelwood: 64 per cent of the population, for example, relies on fuelwood for their main source of energy — two thirds of that number in rural areas. And while the percentage of the population using fuelwood had fallen between 1964 and 2006, the actual amount used in cubic meters had increased.

While the losses associated with forest assets were high, the government expenditure on maintaining the health of the resource was inadequate. Most of this information was not recorded or was not explicit in GDP calculations for the forest sector.

## The impact of the information

Data from the accounts were used to model the relations between deforestation, fuelwood and energy security in the long term, and the results became headline news. In response, the government presented a proposal to Congress for a new public/private strategy for the sustainable production and efficient use of natural resources, including fuelwood and soils. The strategy will combine policies and incentives for forest protection, rehabilitation and reforestation, creating over 20,000 direct and 60,000 indirect jobs and ensuring fuelwood as well as timber supply for small and medium industry. Linked to these reforestation incentives is the National Strategy for Production and Use of Fuelwood, which will supply households with 1.2 million cubic meters of wood each year, and promote technologies for the efficient use of fuelwood through distribution of 100,000 improved cook stoves.

Finally, the forestry section of the National Development Plan, K'atun: Our Guatemala 2032, was formulated on and specifically mentions the findings of the SEEA and the forests accounts.

### What is natural capital accounting?

A set of objective data showing how natural resources contribute to the economy and how the economy affects natural resources. The accounts are an extension of the System of National Accounts. Natural capital accounting integrates natural resources and economic analysis, providing a broader picture of development progress than standard measures such as GDP.



Further resources can be found at [www.wavespartnership.org](http://www.wavespartnership.org)

Facilitated by the World Bank, **Wealth Accounting and the Valuation of Ecosystem Services** is a global partnership that aims to promote sustainable development by ensuring that the national accounts used to measure and plan for economic growth include the value of natural resources



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