



ProEcoServ
Project for Ecosystem Services

Trinidad and Tobago

How Ecosystems Support Us

Bringing the Economic Invisibility of Nature to Light

Counting ecosystem services in dollars saved and dollars earned

Putting an economic value on nature's services may seem abstract. But one way of looking at the value of ecosystems to individual and collective well-being is in terms of dollars saved and dollars earned. Dollars saved refers to giving a monetary value to an ecosystem service that prevents future spending, either by an individual or the state. For example, when the Northern Range forests slow the flow of rain water, bind soil, and store water for later release, these forests are effectively saving property owners thousands of dollars in damage and clean up costs by preventing flooding and landslides. This value is calculated by comparing economic losses in a situation where there is an ecosystem service such as flood prevention, with one where there is no such service.

Dollars made refers to how ecosystems contribute directly and indirectly to generating income by providing services or inputs to livelihood activities. For example, crops grown in the Nariva's wetlands are supported by the pollination services of the wild insects that live in neighbouring ecosystems. Bees, wasps, and butterflies can therefore be thought of as agricultural inputs similar to fertilizer and human labour. This value is calculated by comparing yields of crops that have been pollinated by insects with yields of the same crops that have not.

Addressing the economic invisibility of nature

Increasingly, more information and data on the functioning of ecosystems and the value of the economic and non-economic services they provide are available, but use of this kind of information in policy-making has been limited. And very rarely are the economic benefits and cost of degradation of ecosystems included in cost-benefit analyses for development decision-making. Part of the problem is



Some of the fruits and vegetables grown in Nariva require the services of insect pollinators. Photo: Lena Dempewolf

that environmental statistics and data can be hard to understand and are difficult to compare with economic data, the main 'language' of policy-making.

In Trinidad and Tobago, the Project for Ecosystem Services (ProEcoServ) is attempting to address this "economic invisibility" of nature in development decision-making and national accounts in two ways. First, the project is developing tools for environmental valuation that provide policy makers with relevant, reliable, and easily understood statistics on the importance of ecosystem services to key sectors such as agriculture, tourism, and fisheries. Second, it is developing a method of counting environmental services in Gross Domestic Product (GDP) – the standard measure of economic activity in a country.

Research focus

The goal of ProEcoServ's economic valuation research is to provide data on the social and economic value of ecosystem services in three study areas – south-western Tobago/Buccoo Reef, Nariva Swamp, and the Eastern Northern Range – that policy makers can use to make land management decisions which improve environmental quality while supporting human well-being. Together with the findings from the three sites, work on assessing the contribution of environmental services to GDP though environmentally adjusted national accounts is expected to give a more complete picture of the value of Trinidad and Tobago's ecosystem services and to integrate these values into national planning and accounting.

Research activities are focused on:

- Valuing how pollination services support agriculture in the Nariva Swamp and nationally;
- Valuing the contribution that coral reefs, mangroves, and sea-grass beds make to protecting the coastal zone and to the economy in south-west Tobago;

Tobago's coral reefs form natural barriers that protect the coastline and provide a habitat for many species of fish.
Photo: Jonathan Gomez



- Valuing the importance of forest ecosystems for purifying water and preventing erosion in the eastern Northern Range;
- Identifying the stakeholders who depend most on the ecosystem services that are being examined in each of the study areas and determining how they will be affected by changes in ecosystems, in other words examining the distributional impacts of ecosystem service values;
- Training technical advisors and decision-makers on the opportunities, constraints, and appropriate use of ecosystem service valuation and maps; and
- Piloting the inclusion of ecosystem services in Trinidad and Tobago's national accounts.

Results

The outputs of the research will include:

- Ecosystem service value maps for all three study sites;
- Estimates of the total value of ecosystem services to national welfare; and
- Policy briefs and other training materials for decision makers and policy makers.

This information will feed into national physical development planning processes and other government-level policy decisions on natural resource management.

The economics component of ProEcoServ Trinidad and Tobago is coordinated by Dr. Justin Ram and Alexander Girvan. Research began in 2011 and is expected to be completed in 2014.

The Project for Ecosystem Services (ProEcoServ) 2010 - 2014

The Project for Ecosystem Services (ProEcoServ) is a four-year global initiative that aims to better integrate ecosystem assessment and economic valuation of ecosystem services into poverty reduction and sustainable national development planning.

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ProEcoServ Trinidad and Tobago is led by the Department of Life Sciences, University of the West Indies, St. Augustine Campus and the Ministry of Planning and Sustainable Development, in collaboration with a consortium of local partners.



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For more information on ProEcoServ and the Trinidad and Tobago component go to <http://www.proecoserv.org/>

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