

# Putting monetary values on beaches and coral reefs



By Ingrid van Wees

**T**HE ecosystem services, or ecoservices, provided by nature are fundamental to human evolution and economic prosperity. The natural assets which generate these services are referred to as natural capital. Tourism dollars attracted by beaches and coral reefs are just one of many services that coastal and other ecosystems provide.

Sadly, the full economic value of many of these free ecoservices and inclusion of the associated natural capital in economic accounts at national or subnational level were never fully recognised and developed.

Assigning monetary values to these assets and their services will help policymakers make informed decisions. The inclusion of ecoservices at their net present value of benefits and related avoided cost can strengthen the economic viability of much essential environmental infrastructure.

For example, proactive shoreline investments such as expansion of mangrove forests and the maintenance of barrier reefs not only strengthen climate resilience by reducing the impact of typhoons and storm surges on coastal infrastructure, but also enhance carbon sequestration and local aquatic biodiversity.

Costing and accounting for the future benefits derived from the avoided cost of damaged coastal infrastructure, carbon credits generated by the expanded mangrove forest, and sustained biodiversity for local fisheries resulting from both healthy mangroves and reefs

will partially repay the required up front investment.

A lot has been said about the shortcomings of gross domestic product in measuring economic development. Inclusion of ecoservices in the measurement of economic performance, such as "gross environmental product", could be a complementary indicator.

Despite various initiatives in the past decade to develop appropriate standards on ecoservice accounting, which is encouraging progress, ecosystem accounting is still nascent. The March 2021 update from the United Nations System of Environmental Economic Accounting confirmed that it has increased traction globally.

In Asia, the People's Republic of China (PRC), India, and Indonesia have been implementing their framework of environmental accounts. Some countries have published accounts and the PRC has already calculated a "gross environmental product" for five provinces.

## Exciting opportunity

While maintenance and expansion of natural capital should be funded by regular contributions from the public and private sectors, the extensive cost of damage caused by extraordinary events should be shared with other market participants.

There is an exciting opportunity for alternative market participants through the insurance sector, which already recognises the economic value of natural capital such as barrier reefs and mangroves that can absorb up to 97 per cent of the intensity of a storm surge.

In the Mesoamerican Reef in Mexico, communities keep their barrier reef intact to maintain the livelihoods of coastal communities through the fishery and tourism sectors.

Local governments, in an innovative public private partnership with the local hotel industry, purchased a parametric insurance for their stretch of the coral and adjacent beaches. If the reef is damaged from storm surges or other disasters un-

der the terms of the insurance, a payout from the insurance is triggered to fund post disaster actions to reinstate the reef's health. The premium is largely paid by visiting tourists.

Such a scheme is a viable solution for stretches of coastlines that combine urban areas with communities that are dependent on coral reefs. But it can only be developed if the value of the reefs to the respective community is appropriately valued. This requires, among others, an in-depth understanding of the risks that threaten the coastlines; the quantification of vulnerabilities of the communities; and first and foremost a cost benefit analysis of the coral reefs.

Asian Development Bank (ADB) has launched a project to introduce a similar coral reef maintenance and protection scheme in four countries: Fiji, Indonesia, the Philippines, and Solomon Islands along the Coral Triangle, a global hotspot for coral reef biodiversity supporting more than 500 species of coral, and thousands of other invertebrates, algae, and reef fish. The desired outcome is to establish a multi stakeholder partnership to support, catalyse, and enable long term financing solutions, including risk transfer mechanisms, to support operations and management of coral reef, mangrove, and other coastal ecosystems in Asia and the Pacific by 2025.

The International Public Sector Accounting Standards Board is also undertaking a natural resources project to develop a consultation paper on accounting and reporting natural resources. The scope includes subsurface resources, living resources, and water. The consultation paper will be an important step towards developing robust accounting standards. However, this is a complex project and is still in its early stage, with the current roadmap showing completion in 2024.

For natural resources to be recognised in public sector financial statements, they will need to meet the definition of an asset. This would mean the reporting entity should control the resource, as evidenced



Tourism dollars attracted by beaches and coral reefs are just one of many services that coastal and other ecosystems provide. PHOTO: REUTERS

by the past events. In addition, the natural resource should provide service potential or the ability to generate economic benefits. The challenging component for natural resources is how to measure the resources to fairly represent the qualitative characteristics.

The ability to recognise the natural resources in public sector financial statements will provide added assurance on the quality of the information and the process of reporting such information.

## Blue carbon is the new credit card

Mobilising financial resources for biodiversity is at the heart of international negotiations in the run up to the United Nations Convention on Biological Diversity Conference of Parties 15 taking place in October 2021 in Kunming, China.

To reverse biodiversity loss by 2030, the Paulson Institute, a non partisan think and do tank based in the US, has estimated that the world will need to invest at least US\$700 billion per year, for the next 10 years for conservation and sustainable use of ecosystems and natural resources, including the ocean.

According to an assessment of the International Development Finance Club, the world to date invests less than 20 per cent of this amount with the vast majority (about 80 per cent) from public funds. Therefore, more green and blue finance including from private sources is crucially needed.

Accounting for ecoservices facilitates the creation of innovative financing mechanisms which can catalyse private sector funding.

Carbon credits are a well known example of monetising future ecoservices. This concept can be expanded to blue and environmental credit issued by a government, based on internationally and/or regionally agreed standards, to help fund maintenance and expansion of critical blue ecosystems.

At the same time, it puts a price on harmful practices and neglect of natural capital.

Developing an internationally recognised method to define the economic value of the invaluable oceans ecosystems and services will benefit economies, improve management of public goods, and include nature. It will allow policymakers and stake-

holders to cost in the deterioration and value the merits of maintenance and investments in these ecosystems.

ADB is seeking strong partners to help governments in the region work towards healthy oceans. We have signed up partnerships with Bloomberg Philanthropies, the European Investment Bank, and The Nature Conservancy to make this happen. We also issued our first ever blue bonds on Sept 10. These can be easily replicable and scalable by other issuers.

The proceeds will finance projects that enhance ocean health through ecosystem restoration, natural resources management, sustainable fisheries and aquaculture, reduction of coastal pollution, circular economy, marine renewable energy, and green ports and shipping.

In contrast to Oscar Wilde's cynic who knows the cost of everything but the value of nothing, many of us know the value of nature and we now need to cost it.

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