

indicates that some countries think these are outweighed by the risks (see page 199). For others, the development of nuclear energy is unaffordable. If the world is to achieve net zero carbon emissions, the focus must be on renewable energies – and one of their greatest benefits is that their sources are available, freely, to all nations.

Momentum on valuing ecosystems is unstoppable

The idea that ecosystems have monetary value creates a welcome route to conserving Earth's endangered regions.

Sierra de Manantlán is a 140,000-hectare biosphere reserve in west central Mexico. It is home to 3,000 plant species and a forest whose soils and limestone mountains enable purified water to reach the nearby town of Colima.

Twenty years ago, researchers at the University of Guadalajara in Mexico proposed that Colima should consider paying to use the forest's clean water, and that the money could go to supporting the biosphere reserve's inhabitants.

The 30,000 people who lived in the forest were poor and in ill health. Unemployment was high, and there were few schools or medical clinics. But the absence of buildings, piped water and electric power had an unintended consequence: it was keeping the forest intact. In return for looking after nature, the researchers argued, the people of Sierra de Manantlán should be compensated, and the funds used for education, health care and employment training. Although not a new idea for Mexico, it was rejected by the city's authorities. The concept that a forest ecosystem had monetary value – and that its custodians could be compensated – was controversial and much misunderstood.

Last week, however, countries took a giant step towards enabling public authorities to put a value on their environment. At its annual meeting, the United Nations Statistical Commission – whose members are responsible for setting and verifying standards for official statistics in their countries – laid out a set of principles for measuring ecosystem health and calculating a monetary value. These principles, known as the System of Environmental-Economic Accounting Ecosystem Accounting (SEEA EA), are set to be adopted by many countries on 11 March.

The principles were agreed after a 3-year writing and review process that involved 100 experts and 500 reviewers from various disciplines and countries. Once adopted, they will give national statisticians an internationally agreed rule book. It will provide a template for payments for ecosystem

services – such as those once proposed for Colima – and an official benchmark against which the condition of ecosystems can be judged by policymakers and researchers over time.


The decision didn't go as far as it might have done. The overwhelming majority of participating countries – led by Brazil, Colombia, India, Mexico and South Africa, among others – wanted the new rules to be designated as a statistical standard. These countries, rich in biodiversity, want to get on with valuing their natural systems, partly so that any ecological losses can be compared with potential gains from economic development. The designation of a statistical standard would also have enabled statistics offices to access public and international funding to carry out what would be regarded as a core part of their work, and not something voluntary or non-essential.

But the United States and a number of European Union countries objected. This was partly on the grounds that there is still much debate over valuation methodology, meaning that it is too soon to use 'standard' as a label. This setback was unfortunate: participating countries could have adopted the label while creating a system for revision and refinement, ensuring that the new standard could continue to be improved. Fortunately, the meeting's attendees chose the next best thing – calling the rules "internationally recognized statistical principles and recommendations".

The objections raised are a reminder that opinions on setting monetary values for nature are deeply held, with persuasive arguments on all sides. Some argue that nature is too valuable to be regarded in the same way as a commodity, and belongs to all. Valuation in the economic sense suggests that someone has ownership rights – but ecosystem services are rarely, if ever, 'owned' by anyone. The new principles do take this into account.

The record of the statisticians' meeting shows that much debate remains on how to value something that isn't bought and sold in a conventional way. But at the same time, this is an active area of research. Many studies have been captured in a landmark report, *The Economics of Biodiversity: The Dasgupta Review*, published last month by the UK Treasury. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services is also conducting a review of the concept of valuation, which will include additional perspectives from the humanities, and voices from under-represented communities, such as Indigenous peoples.

The debates will continue, but agreement between the world's statisticians is nevertheless an important step. It means, for example, that those wishing to compensate low-income and marginalized communities for protecting nature – such as the communities in Sierra de Manantlán – now have an internationally agreed template to work from. And policymakers will have to contend with the heads of statistics agencies if they object. UN chief economist Elliot Harris rightly called the new principles a game changer. "The economy needs a bailout, but so does nature," he said. "What we measure, we value, and what we value, we manage." Momentum on valuing ecosystem services is now unstoppable, and that is a good thing.

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