Biodiversity

The diversity of the planet’s biological assets found in genetic material, species and ecosystems.

2011–2020 has been declared the UN decade on biodiversity.

Valuing biodiversity

Should we worry if honey bees are in decline, a forest is cut down or we learn that plankton in the world’s oceans is under threat? If the majority of the world’s population is living in cities, do we need to give much thought to wild species in rural areas? The answer is yes each time. The livelihoods of millions of people are inextricably linked to the health of the planet’s natural resource base, and the fate of biodiversity will also play a big role in how humanity deals with the challenge of climate change. Issues such as who controls large parts of the natural world, what value can be put on biological assets, and how the benefits of biodiversity should be shared are vital topics for debate at Rio+20 and beyond.

Who is in control?

Some of the most biodiverse countries are also home to many of the world’s poorest people, with populations mainly living in rural areas, serving, in effect, as stewards of the ecosystems they are part of. These forests, coastal areas, deserts and drylands have the potential to yield income, and so the question of who has the rights to the land or water, to decide how it is managed, or to receive the financial reward is paramount.

For poor communities, biodiversity is a form of insurance against natural hazards, illness, food insecurity and unstable environments. Small holder farmers conserve the seeds of plant varieties they know can cope with drought, in preference to buying new varieties on the market. Swathes of mangrove swamps are a defence against flash floods, cyclones and tsunamis. (One of the first actions of regional governments after the 2004 Asian Tsunami was to launch a mangrove replanting scheme to create a ‘coastal bioshield’.) Rainforest plants, used in traditional medicines for generations, have the potential to be turned into blockbuster drugs on international markets. Big business coming in to patent crop types, new medicines or secure the rights to large areas of land could be a threat to poor rural livelihoods and homes, or provide an economic lifeline and a route out of poverty.

Conservation strategies may also be a threat of course. There’s the question of who decides the strategy and whether poor rural communities are part of the decision-making. Plus the issue of access to land and the right to retain ownership of intellectual property – that is, the traditional knowledge about biological resources found on ancestral lands.

More to think about

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<th>Who in your country is the voice of poor rural and/or indigenous communities? Have you ever spoken to them and represented their views in your work?</th>
<th>Would ministers support the creation of a new index for measuring the value of biodiversity to poor communities?</th>
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<td>Most countries have a National Biodiversity Strategies and Action Plan, created to meet their obligations under the CBD. Are you familiar with yours and what it entails for governments, civil society and private sector?</td>
<td>Who controls natural resources and ecosystems (fisheries, forests or wetlands, for example) in your country and what impact does this have on biodiversity management?</td>
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<td>What is your government’s position on sharing the benefits of diversity? If your country is a party to the CBD, has it yet ratified the Nagoya Protocol and what changes will this create in how researchers from other countries access genetic resources in your country?</td>
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In Namibia, the national government has shown that it is possible to work with poor communities to generate revenue from the environment sustainably. Since 1990, the ministry of environment and tourism has worked with 14 non-governmental organisations and the University of Namibia to support more than 220,000 people in rural communities to take control of the natural resources and ecosystems on their land and manage them sustainably, with resulting benefits from tourism, hunting and other biodiversity-based enterprise.

**Sharing the benefits**

The debate around who should benefit from biodiversity, whether it should be the communities in which ecosystems exist or the companies that can harvest and process resources to create new products, or both - is ongoing. In 2010, parties to the UN Convention on Biological Diversity (CBD) agreed the Nagoya Protocol, which will set rules for equitable sharing of benefits arising from access to genetic resources. The protocol has yet to enter into force and even when it does, it will have a major gap in its global coverage because the United States — home to many of the private companies that stand to profit from genetic resources — is not a party to the CBD.

**Putting a price on nature**

Measuring the value of natural ecosystems and resources in preparation for sharing them is a thorny issue. Many environmentalists believe that nature should not have a price.

Others are of the view that by assigning a value that measures social, economic and environmental wealth, we can be made more aware of what is at stake. As long as the ‘flow of value’ of biodiversity into poor households is not included in economic measures and national accounting systems, it remains invisible. This undermines the immense importance of biodiversity and hides the significance of depletion, particularly its impact on livelihoods for poor rural communities. By putting a value on biodiversity, such communities are more likely to be able to negotiate on an equal footing when benefit sharing is up for discussion.

**Accounting for biodiversity**

‘Green accounting’ — measuring the value of biodiversity and adjusting the figure to allow for the cost of depletion — falls at the first hurdle if an inadequate unit of measurement is used. Traditional statistics capturing national income, such as gross domestic product (GDP), fail to represent natural resource flows accurately, if at all. Since poor rural communities rely heavily on these for their income, it appears that GDP does not give an accurate indication of their economic wellbeing and development.

Neither do alternatives such as the Human Development Index, which was created to look at human wellbeing as much as economic progress; it too does not include the contribution of natural resources to livelihoods. Add to that what some policy researchers call the ‘tyranny of the average’ where indicators average out the fortunes of rich and poor to arrive at a national figure and once again, the real state of wellbeing of poor communities is hidden.

**GDP of the poor**

A UN study on the economics of ecosystems and biodiversity (TEEB) has proposed a new indicator – the ‘GDP of the poor’. This weighs up the value of ecosystem services for people who normally do not appear in accounting statistics: herders, small farmers and foresters and others involved in informal, natural resource-based work. The results reveal the huge dependence of the poor on biodiversity and their vulnerability to its loss.

**Looking ahead**

It’s a challenge to relate the importance of biodiversity to many people’s lives, but the future wellbeing of all communities depends on the health of other forms of life. Beyond Rio+20, national governments and international bodies should be prioritising biodiversity management, finding credible methods for valuing ecosystems, formally agreeing a way to share benefits equitably, and creating mechanisms to include all relevant parties in decision-making. Sustainable economies in the future will come from healthy and diverse ecosystems that support vibrant rural livelihoods.