Biodiversity for Sustainable Development

Introduction

The 2030 Agenda for Sustainable Development, agreed by the 193 States Members of the United Nations, sets out an ambitious framework of universal goals and targets to address a range of global societal challenges.

Biodiversity and ecosystem services contribute directly to human well-being and development priorities. Nearly half of the world's population is directly dependent on natural resources for their livelihoods. Many of the most vulnerable people depend directly on biodiversity to fulfil their daily subsistence needs. Biodiversity is also at the centre of many economic activities, including those related to agriculture, forestry, fisheries and tourism. The importance of biodiversity and ecosystems is reflected in many of the Sustainable Development Goals (SDGs) and targets.

Therefore, consideration of biodiversity and ecosystems will be essential as countries embark on the implementation of the 2030 Agenda and its SDGs, and in the implementation of key national priorities for sustainable development.

Implementation of the Strategic Plan for Biodiversity 2011-2020 will contribute to achievement of many SDGs.

The Strategic Plan for Biodiversity 2011-2020 and its twenty Aichi Biodiversity Targets provides a globally-recognized framework for priority actions on conservation and sustainable use of biodiversity, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The 2030 Agenda carefully considered and is consistent with this framework. The 196 Parties to the Convention on Biological Diversity are striving to achieve the Aichi Targets, and the actions taken will support implementation of the 2030 Agenda.

This leaflet provides illustrative examples of how biodiversity can play an essential role in efforts to achieve the SDGs.

Goal 1 - End poverty in all its forms everywhere

Biodiversity provides resources and income, particularly for the rural poor, the majority of whom directly depend on biodiversity and ecosystems for their subsistence.

Biodiversity also underpins millions of jobs. For example, more than 180 million people are directly or indirectly employed in fisheries and aquaculture, providing income to households totalling around 540 million people, of whom more than 90% live in developing countries. Ecotour-

COP13 - Mainstreaming Biodiversity for Well-Being

The thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP13), to be held in Cancun, Mexico in December 2016, will focus on the linkages between biodiversity and a number of key sectors: agriculture, fisheries, forestry and tourism, as well as on cross-cutting policies including development and finance. COP13 will thus provide an important opportunity to make advances for the implementation of the 2030 Agenda for Sustainable Development.

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ism is a fast-growing sector worth around US$100 billion per year that can generate significant employment and income for poor rural communities.

Goal 2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Biodiversity is a key element of food security and a means of improving nutrition. Many of the most vulnerable people depend on food gathered from natural ecosystems, such as forests, grasslands, oceans and rivers. Biodiversity also underpins ecosystem functions, such as pollination and the maintenance of soil fertility, and water quality, which are central to agricultural productivity. Further maintaining genetic and ecosystem diversity in agricultural practices (agro-biodiversity) can reduce farmers' vulnerability to climate change and to market variability.

CASE: Fighting hunger and malnutrition with biodiversity, Brazil (Goal 2)

In Brazil a variety of ministries (including those of social development and fight against hunger, health, education, agriculture, and agrarian development) worked to improve nutrition by raising awareness of the nutritional value of native species. They worked to create markets, and supported cultivators through minimum price guarantees. Products are supplied to social entities and schools.

Source: IIED and WCMC (2015) Mainstreaming biodiversity and development. Tips and tasks from African experience.

Goal 3 - Ensure healthy lives and promote well-being for all at all ages

Nearly 1 in 4 deaths globally is attributed to environmental risk factors. Healthy ecosystems help to mitigate the spread and impact of pollution by both sequestering and eliminating certain types of air, water and soil pollution. Agricultural biodiversity contributes to increased sustainable production, reducing the need for pesticides and other chemical inputs, resulting in benefits to human health. Further, a substantial proportion of the world's population depends on traditional medicines derived from biodiversity for their health care needs.

Goal 5 - Achieve gender equality and empower all women and girls

Women play a vital role in agriculture, nutrition and the well-being of families and communities. Recognizing women's roles as key land and natural resource managers is central to sustainable development. In addition, loss of biodiversity and associated ecosystem services can perpetuate gender inequalities by increasing the time spent by women and children in performing certain tasks, such as collecting valuable resources, including fuel, food and water.

Goal 6 - Ensure the availability and sustainable management of water and sanitation for all

Ecosystems help maintain water supply and quality, and guard against water-related hazards and disasters. For example, wetlands play a role in surface, subsurface and ground water storage, and reduce the risk of flooding. They also help to capture, process and dilute pollutants. Similarly, vegetation, such as grasslands and forests, supports the healthy functioning of watersheds. Managing ecosystems to maintain these types of services is generally more cost-effective than employing built technologies. It also helps prolong the lifetime and productivity of water infrastructure such as reservoirs, water supply facilities, irrigation networks and dams.

Goal 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Biodiversity and ecosystems underpin many national and global economic activities, including

CASE: Urban planning cherishing wetland's wastewater purification function, Uganda (Goals 6, 11)

Uganda's Nakivubo wetland purifies Kampala's urban wastewater before it is discharged into Lake Victoria, which is the source of drinking water for adjacent settlements. One study suggests that the economic benefits of the wetland, in terms of wastewater purification and nutrient retention, far exceeds those from constructing and operating artificial facilities. The wetland is designated part of Kampala city's greenbelt zone, and efforts are underway to conserve and restore the wetland.

Source: TEEB case study (2010) Using Valuation for Decision Support: Saving Sewage Treatment Costs through Wetland Protection in the Nakivubo Wetland

those related to agriculture, forestry, fisheries, energy, tourism, transport and trade. Biodiversity conservation and sustainable use can lead to higher productivity, more efficient resource use, and long-term viability of resources.

Goal 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Biodiversity and healthy ecosystems can provide reliable and cost-effective natural infrastructure. For example, coral reefs and mangrove forests protect coasts against flooding that are expected to increase with climate change. Natural infrastructure such as vegetation in cities can reduce the run-off of pollution into water bodies. Such green infrastructure can offer multiple benefits and are often more effective than built infrastructure in terms of cost, longevity and effectiveness.

CASE: "Eco-safe" road infrastructure against natural hazards, Nepal (Goals 1, 9, 11)

Rural roads are vital for communities to have access to markets and basic social services. In Nepal, the Government works with communities to improve mountain road construction that resists natural disasters by combining simple civil engineering structures with low-cost eco-engineering technology that uses locally available vegetation.

Source: Devkota et al. (2014) Community-based bio-engineering for eco-safe roadsides in Nepal

Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

Ecosystems and biodiversity underpin the day-to-day functioning of human settlements by delivering the basic services and conditions that enable, support and protect human production, consumption and habitation. Biological resources provide many of the foods, building materials, energy, and medicines that are consumed in urban centres. Urban planning that integrates biodiversity consideration can contribute to more sustainable, cost-effective and healthy human settlements.

Goal 12 - Ensure sustainable consumption and production patterns

Consumption and production of all goods and services require the transformation of many natural resources, which in turn impacts biodiversity. Current unsustainable consumption and production patterns can undermine the ability of ecosystems to provide services for industries and communities that rely upon them.

Utilizing cleaner and more resource-efficient approaches that minimize wastes and pollutants can bring about economic opportunities and better quality of life for consumers and producers alike, and at the same time benefit biodiversity.

Goal 13 - Take urgent action to combat climate change and its impacts*

Ecosystems, such as forests, peatlands and wetlands, represent globally significant carbon stores, and their conservation and sustainable use is a critical element for avoiding dangerous changes to the Earth's atmospheric temperature and climate system. Efforts to protect and restore habitats offer cost-effective and proven ways to mitigate climate change. Such ecosystems can also serve as natural buffers against climate extremes and other disasters, and strengthen adaptation to climate change.

CASE: Reducing business risk by taking care of environment and people in mining industry, South Africa (Goals 12, 17)

Biodiversity and ecosystem degradation inflicts a wide range of business risks related to productivity, supply chain management, legal matters, market, reputation, and finance. Following protests by South African civil society against mining operations near Mapungubwe National Park in 2011, mining companies, civil society, government and academic representatives came together under the South African Mining and Biodiversity Forum, to discuss the development of a set of consensus-based guidelines for mining operations. The experience has enabled large-scale platinum and coal mining companies to start utilizing ecosystem data in the strategic planning phase of their activities, thereby reducing business risks.

Source: IIED and WCMC (2015) Stories of change: mainstreaming biodiversity and development.

*Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change

Goal 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development

The conservation and sustainable use of biodiversity in marine and coastal ecosystems is a key aspect of sustainable development. Biodiversity underpins all fishing and aquaculture activities, as well as other species harvested for foods and medicines. Conservation and sustainable use of marine and coastal biodiversity is essential to ensure that the world's oceans, seas and marine resources remain vital for current and future generations.

Goal 15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss

The conservation, restoration and sustainable use of terrestrial ecosystems is essential for sustainable development and for achieving other SDGs. Targets under this goal include a call to integrate ecosystem and biodiversity values into national and local development planning, poverty reduction strategies and accounts (Target 15.9). Other targets highlight the importance of particular ecosystems, including freshwater, forests, deserts and degraded lands, and mountain ecosystems.

Goal 16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Conflicts over natural resources, environmental degradation and contamination can be one of the factors leading to social insecurity and violence. Vulnerable people are often disproportionately affected. Strengthening the rights of communities over natural resources management, combating illegal exploitation and corruption, and ensuring transparent decision-making on social and environmental issues constitute an important process toward building an inclusive society based on justice.

Goal 17 - Strengthen the means of implementation and revitalize the global partnership for sustainable development

The Strategic Plan for Biodiversity 2011-2020 provide opportunities for strengthening global partnership on science, technology and innovation, dissemination of environmentally sound technologies, and for building national capacity for monitoring the progress of the 2030 Agenda for Sustainable Development.

United Nations Decade on Biodiversity

more information:

www.cbd.int/sp
secretariat@cbd.int