Global Biodiversity Loss

Safeguarding biodiversity from an unprecedented range of threats

Protected areas are one of the tried and true methods for safeguarding biodiversity, but in isolation they often do not allow for natural movement of species across landscapes. Connecting protected areas via nature-friendly corridors is a key way of multiplying their conservation effectiveness and resilience.

Conserving biodiversity is crucial to the achievement of most Sustainable Development Goals, including:

- SDG 1 No Poverty
- SDG 2 Zero Hunger
- SDG 3 Good Health
- SDG 6 Clean Water and Sanitation
- SDG 14 Life Below Water
- SDG 15 Life on Land

Impacts of biodiversity loss are being felt across all Earth’s major biomes and the cost of inaction is escalating. Demanding increased investment in conservation and sustainable use on a global scale.

“The Sustainable Development Goals aim to ‘leave no one behind’. If we don’t protect and value biodiversity, we will never achieve this goal.”

Erik Solheim, Executive Director of UN Environment

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Facts and figures

- **7.5 billion** human population in 2017, tripled from 1950 and projected to reach 10 billion by 2050.
- **49%** increase in global material footprint per capita between 1990-2017.
- **50%** increase in the percentage of all land that is occupied by agriculture, from 1951 to 2013.
- **1.3M km²** global loss in forest area cover between 1990 and 2015, which is approximately the size of Peru.
- **416%** increase in global fisheries catch in tonnes between 1950 and 2016, threatening marine biodiversity.
- **63%** increase in tons of pesticides used between 1990 and 2015, which can have lethal effects on pollinators.
- **80%** increase in the percentage of terrestrial area protected, between 1990 and 2014.
- **625%** increase in the percentage of marine territorial waters protected, between 2000 and 2017.
- **14%** of the world’s land is protected, however coverage is uneven and half of the 821 terrestrial ecoregions do not yet meet the Convention on Biological Diversity’s target for 17% protected area coverage by 2020.

Regions with high population density drive habitat fragmentation due to expansion of infrastructure and increased resource and land needs, putting further pressure on biodiversity.

Over the past five decades, deforestation has occurred at a rate of 130,000 km² per year, with agricultural expansion being the main cause.

Despite marine protected areas having expanded in number and size, 31.4% of fish stocks are currently overfished.

Pollination by about 100,000 species of insects, birds, and mammals account for 35% of global crop production volume.

**Action**

**Towards solutions . . .**

- **196** Parties to the Convention on Biological Diversity
- **20** Aichi Biodiversity Targets in the Strategic Plan for Biodiversity 2011-2020, which provides a global framework to coordinate efforts to protect and sustainably use biodiversity.
- **190** Parties that have developed at least one National Biodiversity Strategies and Action Plan

. . . for achieving the Sustainable Development Goals

- Proper management of protected areas
- Ecosystems management
- Integration of biodiversity and ecosystem services
- Marine and Coastal Ecosystem Management
- Improve resource efficiency
- Selection and management of the Biodiversity Heritage Sites

Despite this growth of protected areas, global populations of fish, birds, mammals, amphibians and reptiles declined by 58% between 1970 and 2012, and currently 25% of mammal species and 41% of amphibians are threatened with extinction.

- **2017** human population reached 7.5 billion, a number that has tripled from 1950.
- **2017** global material footprint per capita increased by 49% compared to 1990.
- **2013** agriculture occupied 50% of all land, up from 1951.
- **2015** forest area cover globally declined by 1.3M km², equivalent to the size of Peru.
- **2016** marine fisheries catch increased by 416%, threatening marine biodiversity.
- **2015** pesticides use doubled from 1990, with 63% increase between 1990 and 2015 affecting pollinators.
- **2014** terrestrial area protected increased by 80% from 1990.
- **2017** marine territorial waters protected increased by 625% from 2000.
- **2020** 14% of the world’s land is protected, but only half of the terrestrial ecoregions meet the Convention’s target.

Despite this progress, biodiversity has declined dramatically:

- **1970-2012** global populations of fish, birds, mammals, amphibians and reptiles declined by 58%.
- **2012** 25% of mammal species and 41% of amphibians are threatened with extinction.

To address these challenges, the Convention on Biological Diversity has set Aichi Biodiversity Targets in the Strategic Plan for Biodiversity 2011-2020. These targets aim to coordinate efforts to protect and sustainably use biodiversity worldwide.

It is critical to achieve these targets to safeguard the Earth’s biodiversity and ensure a sustainable future for all.
Initiatives on the ground

European ban on harmful pesticides
Bees and other insects pay a vital role in global food production and over 75% of main food crops rely to some extent on animal pollination. In recent years, pollinator populations have plummeted, and a growing body of scientific evidence has linked this decline to the widespread use of pesticides. In April 2018 the European Commission placed a total ban on the outdoor use of three substances known as neonicotinoids, limiting their use to greenhouses where contact with bees is not expected. This ban on demonstrably harmful substances shows an example of regulatory action by policy-makers.

Forest Restoration Mechanism in Guatemala
Between 1991-2001, Guatemala experienced a forest loss equivalent to 73 hectares per year, which corresponds to a deforestation rate of 1.43% per annum. Disturbances to the forest area have generated a permanent disruption in many ecosystems, which has resulted in a reduction by half of the forest cover over half a century, now only 34% of the national territory. In 2014, the Roundtable on Forest Restoration formulated a National Strategy for Forest Landscape Restoration as a mechanism for rural development. It is dependent upon the engagement and commitment of thousands of landowners and communities. Guatemala now has one of the most innovative incentives programmes in the world to support rehabilitation, recovery, reforestation, and restoration of degraded lands, promoting sustainable forest management and safeguarding biodiversity at country scale.

Protected Areas Improve Livelihoods of Local People in Rwanda
The Sabyinyo Community Livelihood Association (SACOLA) was created in 2004 with the objective to improve the lives of populations surrounding the Volcanoes National Park, who were suffering heavily from the consequences of the guerrilla war of 1997-1998, and to protect the National Park against human encroachment and disease transmission from humans to gorillas. By providing jobs, creating community cooperatives, promoting sustainable tourism, profit sharing with surrounding communities and constructing houses for the most vulnerable, SACOLA was able to invest back into the community while safeguarding the mountain gorillas, an example of sustainable biodiversity conservation in and around protected areas.

Advanced habitat mapping in the United Arab Emirates
The Environment Agency-Abu Dhabi (EAD) completed mapping of terrestrial and marine habitats, land use and land cover for the Emirate of Abu Dhabi. The project covered the entire Emirate – 59,640 square kilometers of terrestrial and 28,220 square kilometers of marine environments. This is possibly the largest and most detailed delineation of habitats in the world to date. The advanced image processing techniques together with validation through field surveys have resulted in data accuracy, exceeding 90% on the land and 75% in marine areas. This powerful data set will allow environmental decision-making to be much more objective and quantitative.

Indigenous Community Conservation Areas in the Philippines
This cost-effective approach to managing key biodiversity and other high conservation and cultural value areas in the Philippines recognizes that indigenous communities have the right to manage their ancestral domains through traditional resources and management practices, as well as define the development and conservation priorities of these ancestral domains. As of 2012, 12% of a total area of about 4.3 million hectares was designated as Approved Ancestral Domain in the Philippines. The approach is recognized to be empowering indigenous communities and fostering conservation, leading to progress towards Aichi Biodiversity Targets 11 (protected areas) and 18 (traditional knowledge).