



# Sustainable Agriculture

Biodiversity is the foundation of agriculture. It has enabled farming systems to evolve ever since agriculture was first developed over 10,000 years ago. Biodiversity is the origin of all species of crops and domesticated livestock and the variety within them. It is also the foundation of ecosystem services essential to sustain agriculture and human well-being. Biodiversity and agriculture are strongly interrelated because while biodiversity is critical for agriculture, agriculture can also contribute to conservation and sustainable use of biodiversity. Indeed, sustainable agriculture both promotes and is enhanced by biodiversity. Maintenance of this biodiversity is essential for the sustainable production of food and other agricultural products and the benefits these provide to humanity, including food security, nutrition and livelihoods. The different crop varieties and animal breeds used in agriculature around the world are based on the world's genetic diversity. In addition, biodiversity directly supports agriculture systems by helping to ensure soil fertility, polalination and pest control.

For these reasons, biodiversity is key for producing food for a growing world population. Every day, agriculture produces an average of 23.7 million tons of food, provides livelihoods for 2.5 billion people, and is the largest source of income and jobs for poor, rural households. In developing countries, agriculture accounts for 29% of GDP and 65% of jobs. Biodiversity has also a proven economic value for agricultural systems. For instance, bees and other insects that pollinate crops are estimated to be worth more than US\$ 200 billion per year to the global food economy. However, agriculture is facing an unprecedented confluence of pressures that urges for profound changes in our food and agriculture (crops, livestock, forestry, fisheries, and aquaculture) systems. For example, the planet will have to feed an additional 1.5 billion people in 2030, 90% of whom will be living in developing countries; and, the world will need to raise its food production by 60-70% to feed more than nine billion people by 2050. With rapid soil degradation, fast depletion of groundwater, excessive use of pesticides and fertilizers and extreme weather events all collectively putting stress on farming and threatening productivity, it is time to recognize the fact that agriculture cannot remain the same











#### Work of the Convention on Biological Diversity

The Convention's work on agriculture and biodiversity can contribute to the achievement of the targets for Sustainable Development Goal 2 and Aichi Bio¬diversity Targets 7 and 13. The Secretariat works with many part¬ners, including the Food and Agri¬culture Organization of the United Nations (FAO), Bioversity Inter¬national, and the Secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture, to build coordinated approaches for food security and sustainable agriculture.

#### **Aichi Biodiversity Targets**

Both Aichi Biodiversity Targets 7 ("By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.") and 13 ("By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.") are of direct relevance for sustainable agriculture. Given the broad nature of Target 7, progress towards achieving it will, for example, contribute to several other targets, in particular targets 4, 5, 6, 8, 13 and 15. Developing sustainable agriculture, aquaculture and forestry is a precondition for the conservation and sustainable use of biodiversity and the provision of ecosystem services more generally. The ecologically unsustainable consumption of water, use and run-off of pesticides and excess fertilizers, and the conversion of natural habitats to uniform monocultures have major negative impacts on biodiver-





sity. These impacts occur both inside and outside of agricultural areas, and have impacts on forest, inland water and coastal ecosystems. The increasing demand for food, fibre and fuel will lead to increasing losses of biodiversity and ecosystem services if issues related to sustainable management are not addressed. The focus on the national level must be on developing a broad, integrated, multi-sector strategy. Sustainable management can also deliver benefits to production systems in terms of services such as soil fertility, erosion control, enhanced pollination and reduced pest outbreaks, as well as contributing to the well-being and sustainable livelihoods of local communities engaged in the management of local natural resources.

#### **COP 13**

The thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity, to be held in Cancun Mexico in December 2016, will address, among other issues, strategic actions to enhance national implementation, in particular through mainstreaming and the integration of biodiversity across relevant sectors. Agriculture will be one of the main themes discussed at the High-Level Segment of COP 13. Discussions at COP 13 will take into account the combined recommendations from the twentieth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-20) and the first meeting of the Subsidiary Body of Implementation (SBI-1), as part of the thematic focus of the COP on mainstreaming of biodiversity in forestry, agriculture, fisheries and aquaculture, among other sectors.

For additional information, please contact: David Ainsworth at +1 514 287 7025 or david.ainsworth@cbd.int Johan Hedlund at +1 514 287 6670 or johan.hedlund@cbd.int





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- Aichi Biodiversity Targets: www.cbd.int/sp/targets
- Global Biodiversity Outlook 4: www.cbd.int/gbo4
- United Nations Decade on Biodiversity: www.cbd.int/2011-2020
- Programme of Work on Agricultural Biodiversity: www.cbd.int/agro