Food Safety and Biodiversity

Health is supported by good nutrition, which rests on a diverse diet. Biodiversity, through a diversity of species, varieties and breeds of plant and animal foods, including wild food underpins dietary diversity, good nutrition and health. Global declines in biodiversity in terrestrial, marine and freshwater systems will present major public health challenges for resource-dependent human populations, particularly in low- and middle-income countries. In this way, the protection of biodiversity contributes to ensuring better health outcomes around the world and is a way to ensure food security and good health.

Safe food protects consumers from the risks of food poisoning and foodborne diseases, acute or chronic. Unsafe food can lead to a litany of health problems (e.g. diarrhoeal disease, viral disease, reproductive and developmental problems, cancers). Food safety is a prerequisite for food security, especially as new threats to food safety are constantly emerging. Biodiversity can play a role in building sustainable food security and nutrition through its role in the provision of food. A diversity of species as the basis for food can help ensure and enhance food quality, diversification of diets, help ensure a source of food to the poor in times of crisis, and as a key component of traditional food systems and food cultures.

Biodiversity also contributes to the maintenance of microbiota. Humans, like other living beings, have a microbiota - ecological communities of commensal, symbiotic and pathogenic microorganisms that literally share our body space and outnumber our human cells ten to one. The majority of these microbes provide vital functions for human survival, and interaction with microbes present in the environment are an important part of the healthy maintenance of our human microbiota. Reduced contact of people with the natural environment and biodiversity, and biodiversity loss in the wider environment, leads to reduced diversity in the human microbiota, which itself can lead to immune dysfunction and disease.

- Biodiversity is the source of crops, livestock, farmed fish and the genetic diversity within these that ensures continuing improvements in food production, allows adaptation to current needs and ensures adaptability to future ones.

- Healthy ecosystems are the lifeblood of food security, especially in developing countries, where a majority of people are supported directly by the land, forests, rivers, lakes, seas and oceans.
• Safe food production and supply support livelihoods, national economies, trade and tourism, contributes to food and nutrition security, and underpins sustainable development.

• Unsafe food creates a vicious cycle of diarrhoea and malnutrition, threatening the nutritional status of the most vulnerable.

• As the world’s population grows, the intensification and industrialization of agriculture and animal production to meet increasing demand for food creates both opportunities and challenges for food and water safety and security.

• With food supply chains crossing multiple national borders, cross-sectoral collaboration between governments and with producers and consumers helps ensure food safety.

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All information sourced from the World Health Organization and the Secretariat of the Convention on Biological Diversity.

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Important links

• Convention on Biological Diversity: www.cbd.int

• Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets: www.cbd.int/sp

• Global Biodiversity Outlook 4: www.cbd.int/gbo4

• Connecting Global Priorities: Biodiversity and Human Health: www.cbd.int/en/health/stateofknowledge

• World Health Day: www.who.int/campaigns/world-health-day/2015/en