GENETIC RESOURCES AND BIODIVERSITY FOR FOOD AND AGRICULTURE

A treasure for the future

Genetic resources for food and agriculture are not only of actual but even more of potential value to food security, nutrition and livelihoods. However, biodiversity, and in particular genetic diversity, is being lost at an alarming rate.

ANIMAL

*Only **14** of the more than **30** domesticated mammalian and bird species provide* **90%** *of human food supply from livestock*

*There are about **8 800** breeds of which **7%** are extinct and **17%** at risk of extinction*

FOREST

Forests are home to over **80%** *of terrestrial biodiversity*

*There are over **80 000** tree species, yet less than **1%** have been studied in any depth for their present and future potential*

AQUATIC

*Fish provides about **3 billion people** with almost* **20%** *of their intake of animal protein*

***10 species** groups account for about **30%** of the world marine capture fisheries production*

*The world's aquatic ecosystems contain over **175 000** species of fish, molluscs, crustaceans and aquatic plants*
*Out of those **0,3%** are farmed for food and other uses in fresh, saline, brackish and marine waters*

PLANT

Plants account for over **80%** *of the human diet*

***30 000** terrestrial plants are known to be edible*
***7 000** are cultivated or collected by humans for food*
***30** crops feed the world*
***5** cereal crops provide **60%** energy intake of the world population*

Rice, wheat, maize, millet and sorghum

*Some **7.4 million** samples of crop diversity are stored in **1 750 genebanks** around the world*

*Crop improvement accounts for **50%** of the world's food*

MICRO-ORGANISMS and INVERTEBRATES

The so called "hidden" biodiversity is an array of species so numerous it is incalculable

Micro-organisms and invertebrates contribute to ecosystem services, such as disease and pest control, decomposition of organic matter and nitrogen fixation

They are essential in many food and agro-industrial processes

Pollination services by insects and other animals, affect **35%** *of the world's crop production*

THREATS TO GENETIC DIVERSITY INCLUDE

climate change

loss of natural habitats

environmental degradation

effects of increasing population pressure

change in consumer demand

development and use of a few species, varieties and breeds

FOR A SUSTAINABLE FUTURE FOR GENETIC RESOURCES

Improve policy and legal frameworks

Integrate genetic resources and biodiversity into the development agenda and strengthen conservation and sustainable use

Facilitate access to genetic resources and their related knowledge

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

The Commission provides the only permanent forum for governments to discuss and negotiate matters specifically relevant to biological diversity for food and agriculture. The main objectives of the Commission are to ensure the conservation and sustainable use of genetic resources for food and agriculture, and the fair and equitable sharing of benefits derived from their use, for present and future generations.

www.fao.org/nr/cgrfa

Food and Agriculture Organization of the United Nations

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