



NATURAL RESOURCES AND ENVIRONMENT

issues in the spotlight...

Safeguarding biodiversity

The Commission on Genetic Resources for Food and Agriculture

Safeguarding biodiversity for food and agriculture is crucial for achieving global food security. With its more than 170 Member Countries, the intergovernmental FAO Commission on Genetic Resources for Food and Agriculture plays a critical role in the development, strengthening and implementation of policies and programmes at national, regional and international levels to ensure the conservation and sustainable utilization of biological diversity and genetic resources for food and agriculture and the equitable sharing of benefits derived from their use. The Commission provides the only permanent forum in which governments can discuss and negotiate matters specifically related to biological diversity for food and agriculture. The Commission also oversees global assessments of the state of the world's plant, animal, forest and aquatic genetic resources for food and agriculture.

In light of so many challenges threatening global food security - population growth, high food prices, outbreaks of disease, increased occurrences of natural disasters, climate variability - safeguarding biological diversity for food and agriculture is more important than ever. What are some of the key areas where preserving biodiversity is crucial to ensuring food security for future generations?

Plant genetic resources - Throughout history, over 7 000 species of plants have been cultivated or collected. Surprisingly, despite this wealth of genetic diversity, it is estimated that today only about thirty crops provide 95 percent of human food energy needs. The four main crops - rice, wheat, maize and potatoes - provide a full 60 percent of human food energy needs globally. Yet challenges to attaining food security, such as climate change, the erosion of the natural resource base and outbreaks of disease, are causing the international community to concentrate efforts on conserving plant genetic biodiversity. Commission members work to increase support for conservation and use of traditional and underutilized crop species, with special attention to those which are often associated with poorer farmers cultivating marginal lands.

Animal genetic resources - An estimated 70 percent of the world's poor keep livestock and rely on it for a substantial portion of their livelihoods. Yet Commission members face many challenges to the conservation and sustainable use of these valuable genetic resources. Of the 8 000 breeds reported to FAO by its member countries, more than 1 700 are at risk of extinction. Climate change and emerging diseases have an adverse impact on animal genetic resources. Since we are still learning which species and breeds will best adapt to new realities, it is crucial that we ensure that potentially valuable genetic resources are not lost before they can be deployed. A priority area for safeguarding animal genetic resources will be harnessing local and traditional knowledge about livestock.

Forest genetic resources - Forests cover about 31 percent of global land area and are home to 80 percent of terrestrial biodiversity. As the world's population increases and pressure on forest lands intensifies, coordinated efforts to preserve forest genetic resources are more crucial than ever. 1.6 billion people around the world are dependent on forests for their livelihoods and their daily subsistence needs. With an ever larger population to feed and consensus about the need to mitigate the effects of climate change, maintaining forest genetic resources will be more urgent than ever.





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Aquatic genetic resources - Fisheries and aquaculture provide opportunities for food security, poverty reduction and general well being for people around the world. Capture fisheries still rely on hunting, gathering and trapping aquatic genetic resources. There are about 32 000 species of fish in the world and around 5 000 are harvested for food and other purposes. The use of aquatic genetic resources in aquaculture, the farming of aquatic plants and animals, has a quite recent history of domestication – currently over 500 aquatic species are farmed and new breeds are being developed. Aquatic genetic resources are the basis for continued survival of wild species and the continued improvement of farmed species. The Commission has recognized the importance and vulnerability of aquatic genetic resources, their roles in an ecosystem approach for food and agriculture and their contributions to meeting the challenges presented by climate change.



A road map for preserving genetic resources in light of climate change

- It is clear that climate change issues serve as a challenge to conserving biodiversity for food and agriculture, yet agricultural biodiversity is often overlooked in the climate change debate. An ecosystem approach - with an emphasis on its associated biodiversity - will be key to formulating robust adaptation strategies in relation to climate change. The Commission will be identifying steps to increase understanding and proposing specific measures countries can take to most effectively address these challenges, thereby creating a road map for better linking biodiversity objectives to climate change adaptation and mitigation policies and programmes.



WEB SITE:

Commission on Genetic Resources for Food and Agriculture

www.fao.org/nr/cgrfa/cgrfa-home/en/

PUBLICATIONS:

The second report on the State of the World's Plant Genetic Resources for Food and Agriculture

www.fao.org/docrep/013/i1500e/i1500e00.htm

The State of the World's Animal Genetic Resources for Food and Agriculture

<http://www.fao.org/docrep/010/a1250e/a1250e00.htm>



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