

• IBC as Focal Point of CBD

Globally, the value of biodiversity as a key component of the environment and as a critical factor for socioeconomic growth and development was recognized during the build-up to the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. During this conference, Ethiopia endorsed and signed the Convention on Biological Diversity (CBD). The IBC is the focal point to CBD since July 2005.

• Collection and Conservation

The gene bank is the largest gene bank in Africa and has accomplished a tremendous work in exploration, collection, and conservation of plant genetic resources. Currently, the gene bank holds more than 65, 000 accessions of some 300 plant species obtained through collection, repatriation and donation. The Institute has also established a number of field gene banks in different agro-ecological zones of the country.



Diversity in Sorghum

• Accomplished Projects

1. Dynamic Farmer's Based Approach in the Conservation of Ethiopia's Crop Genetic Resources
2. Forest Coffee Conservation
3. National Biodiversity Strategic Action Plan
4. Forest Genetic Resources Conservation
5. Rift Valley Lakes Strategy and Action Plan



Wondo Genet Forage and Pasture Field Gene Bank

The Gene Bank holds various species collected from all over the country with similar environments to the cultivating area.

• Ongoing Projects

1. Conservation and Sustainable Uses of Medicinal Plants
2. Crop Germplasm Utilization Study
3. East Africa Plant Genetic Resources Network
4. RPSUD Granted Projects:
 - * Biodiversity Assessment and Human Impacts in and Around Yangudi Rasa National Park (Ecosystem and Ethnobiology Departments)
 - * Soil Seed Flora and Regeneration Dynamics study in Kalala Dalocha District (Forestry Department)



Bale Medicinal Plants Field Gene Bank

The Gene Bank Holds Medicinal plants collected from different areas with similar environments to the cultivating area

• Future Direction

IBC will continue to implement the conservation and sustainable utilization of Ethiopian Biodiversity. The existing strategies will also be improved and refined in view of new development. International standards will be adopted and special efforts will be made to tackle the enormous qualitative and quantitative dimensions of conservation problems unique to Ethiopia. In addition to seed storage, the Institute will make a major effort to increase *in situ* conservation in relevant ecosystems. A major component of these plans will be the conservation of species where many of the wild and weedy relatives of cultivated crops species will exist. On site conservation of indigenous and local breeds of animals, both domestic and wild, will be enhanced. New and appropriate conservation techniques and methodologies will be adopted for aquatic and terrestrial biodiversity. The rich indigenous knowledge associated with biodiversity will be studied and used for biodiversity conservation and promoting sustainable utilization.

Contact US

P. O. Box: 30726
Phone: 251-1-612244/6512032
Fax: 251-1-613722
E-mail: dg-ibc@ethionet.et
ddg-ibc@ethionet.et
or abiyotmulu@yahoo.com
Addis Ababa, Ethiopia

For further information please visit our web-site:

<http://www.ibc.gov.et>

Biodiversity of Ethiopia, Conservation Endeavors



Institute of Biodiversity Conservation

ብዙሀ አይወት ጥበቃ ኢንስቲትዩት



The staff of the former PGRC/E (1976)

Ethiopia's Biodiversity

• Floral Diversity

The flora of Ethiopia is very heterogeneous and has many endemic elements. The Simien and Bale Mountains have been identified as areas of plant endemism of global importance. Their flora is diverse and the afroalpine representatives show affinities to South African, Eurasian and Himalayan elements. The southwestern broad-leaved evergreen forests show affinity to the Congolian forests of western Africa. The number of higher plants is estimated to be 6500-7000 species of which about 12% are endemic.

• Faunal Diversity

Likewise, the country is a critical region for faunastic diversity. With limited studies, numerous categories of terrestrial and aquatic resources such as mammals (277 spp.), birds (861 spp.), reptiles (201 spp.), amphibians (63 spp.), and fish (101 spp.) out of which 31, 16, 9, 24 and 4 endemic species are recorded, respectively.



Afroalpine Ecosystem of Bale Mountains National Park

This ecosystem is known for many endemic animals (e.g. Red fox) and plants (cushion forming plants)

• Microbial Diversity

Ethiopia is believed to have a wide diversity of microbial heritage which are hardly explored, collected, identified, characterized, conserved and utilized. Until recently, A total of 195 genera and 432 species of microorganisms were isolated and identified in the different sectors of Ethiopia. These include 56 genera and 127 species of Bacteria, 35 genera and 45 species of fungi, 96 genera and 247 species of Algae, 8 genera and 20 species of Protozoa, and 27 species of Viruses.

• Cultural Diversity

Ethiopia is well known for its unique and multi-ethnic population living in harmony with mutual respect. Some studies show the presence of about 80 ethnic groups with different languages, culture, and invaluable indigenous knowledge, innovations and practices which play a crucial role in biodiversity conservation and sustainable utilization.



One of the cultural practices of maintaining seeds for a long time

Threats to Biodiversity

Human activities have greatly reduced biodiversity around the world. The greatest threat to biodiversity is loss of habitat as humans clear woody vegetation for agriculture, grazing livestock, and unsustainable use of such as draining wetlands and deforestation for agricultural land. Polluting the air, soil, and water through chemical compounds such as herbicides, insecticides, etc. also contribute a lot for biodiversity loss. In Ethiopia, the most drastic damage has occurred in the natural high forests and their biological resources that once covered more than 42 million ha (35% of total land area) of the country, are now less than 3%. Together with this, animals, microbes and the associated indigenous knowledge are being lost before we know their benefits.

Conservation Efforts

At the beginning of the 1970s, the Consultative Group on International Agricultural Research (CGIAR) strongly recommended the formation of a network of plant genetic resources centers (or gene banks as they are frequently called) around the world. Ethiopia was given highest priority because of its tremendous plant diversity and endemism. The Government of the Federal Republic of Germany expressed interest in assisting Ethiopia. Accordingly, a Plant Genetic Resources Center, Ethiopia (PGRC/E) was initially established in May 1976 through a bilateral technical cooperation agreement between the Governments of Ethiopia and Germany. In 1998, the Institute of Biodiversity Conservation and Research (IBCR) replaced the former PGRC/E broadening its mandate and duties. A new key component, the research mandate, was a step forward in the progress of the Institute. The name of the Institute was further changed to IBC reflecting the focus of its mandates.

Nevertheless, conservation based research is the mandate of the Institute.



Horticultural Plants Field Gene Bank

The Gene Bank holds particularly of horticultural plants used as food, ornamentals and beverages.

Institute of Biodiversity Conservation

• General Objectives

The overall objective of the Institute is to undertake conservation and promote the development and sustainable utilization of the country's biological resources, traditional knowledge and their ecosystems.

• Mandates and Duties

Ethiopia has set clear national policy directives on conservation of biological resources. In the past, conservation efforts focused on plant genetic resources and priority was given to field crops. Since 1998, the Institute was given a wider mandate of conservation and sustainable utilization of all forms of biological resources including plants, animals and microbial genetic resources. Ecosystem management is also recognized as one of the areas to be given top priority. The Institute, thus, has power and duties related to the conservation and promotion of the sustainable utilization of biodiversity. This includes maintaining and developing international relations with bilateral and multilateral bodies having the potential to providing technical assistance. The Institute, on the basis of national legislation, has the responsibility and duty to implement International Conventions, Treaties and agreements on biodiversity to which Ethiopia is a party.

• Organization

The Institute has overall ten technical departments and four services. The departments are Forest and Aquatic Plants, Medicinal Plants, Horticultural Plants, Field crops, Pasture and Forage plants, Animal Genetic Resources, Microbial Genetic Resources, Ecosystem Conservation, Biotechnology and Biosafety, and Ethnobiology. The services include Information and Documentation, Herbarium and Cold Storage, Administration and Finance and Audit and Inspection.