Yemen - Biodiversity conservation data

MAIN PHYTOGENETIC RESOURCES OF YEMEN AND THE MAIN THREATS

There are 3,418 plant species in the Arabian Peninsula (Milles, 1991), of which 2,500 are represented in Yemen. The number of endemic species is 137. The Island of Socotra is unique because, in an area of just 3,625 km2, it has 722 plant species, of which 240 species and 10 genera are endemic. Of special relevance are the Gramineae, Amaranthaceae, Acanthaceae, Capparaceae, Brassicaceae and Caryophyllaceae families. Most plants in Yemen are phanerophytes, and the main genera are Commiphora, Ficus and Acacia. 55% of the endemic species belong to the Asclepiadaceae and are succulents such as Huernia. The Euphorbiaceae family provides 33% of the endemic species. There are also some endemic Liliaceae.

There is a wide diversity of cultivated species in Yemen, present both as growing material and in their former wild forms. Amongst the most relevant factors in the process of genetic erosion of biodiversity are periodic droughts, changing cultivation patterns, tree felling and excessive grazing, urban expansion and the construction of new settlements on faming land. The growing area for some wheat species (Triticum diccocum) has seen a marked decrease, because their yield is much lower than that of commercial varieties and they are harder to thresh. The same occurs with other traditional cultivated species such as *Eleusine crocana* and *Brassica napus.*

STATUS OF IN-SITU AND EX-SITU CONSERVATION

In-situ conservation

The local Yemeni communities are experts at plant conservation and in the development of traditional pharmacopeia. Their knowledge has been developed over centuries and serves as a basis for modern science in farming and medicine. In addition to strengthening and restoring traditional knowledge on plants as a means of in-situ conservation through co-managed farms, the government has taken measures to conserve natural habitats of special interest which are

coordinated with assistance from international collaboration. These areas are characterised by their varied vegetation. The areas being considered for protection are the Island of Socotra, Houf (Mahra), Montaña Bura'a (Tihama), ?abal Eraf (Taiz), Jabal Al-Araias (Abyan Gover), the Bir Ali Mangrove Swamps (Shabwa) and Mifa Hajar (Hadramout).

Ex-situ conservation

Managed farms are considered a very important system for conservation which provides a basis for genetic variability that can be used directly. However, a system of this sort is unlikely to achieve registration and complete characterisation of genetic material.

Yemen does not yet have a Germplasm Bank or an effective network of botanic gardens. For efficient conservation of resources, ex-situ conservation methods must also be considered, such as Experimental Stations for fruit trees. This type of experimentation is being carried out in some of the country's research centres, but the aim is research rather than the conservation of genetic plant resources.

Some areas proposed by the Yemeni government for the construction of botanic gardens are: El-Kod (Abyan), Taiz (Taiz), Sanaa (Sana'a), Bajil (Hodeidah) and Seyun (Hadramout).

The Yemen Genetic Resources Centre is a laboratory at the University of Sanaa where programmes for research and conservation of plant biodiversity are under way. On the island of Socotra there is a Botanic Garden and a nursery reproducing the island's native vegetation.

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Centers of plant diversity

- Yemen Genetic Resources Center
- Socotra Botanic Garden

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