

SECTION  
**one**

A grayscale photograph of a woman with short, wavy hair, wearing a white short-sleeved shirt and a patterned shawl. She is holding a small plant with several leaves and a clump of soil in her hands. The background shows a natural landscape with a body of water and hills under a cloudy sky.

**Environmental and  
species conservation**

## **The conservation of biodiversity and the sustainable use of its different elements are global concerns.**

As the pressure on natural resources mounts, there is a growing need to take action to protect vulnerable plant and animal species and the often fragile ecosystems on which they depend. One of the most effective and frequently implemented ways of protecting environments is to establish nature reserves where particular species, ecosystems and landscapes can be conserved and, if necessary, rehabilitated.

In general, nature reserves involve limiting human activity to a minimum; creating zones where total protection is ensured for important habitats and species; preparing and implementing, with the participation of local people, development and natural resource management projects (for example, ecotourism) that minimize any detrimental impact of human activity within and around the reserve; and creating beneficial links between local people and the reserve (for example, through providing markets for local handicrafts). Two of the following four case studies, both from Jordan, describe the rationale behind the creation and management of nature reserves.

While such nature reserves provide, among other things, the facilities for in situ conservation of plant and animal species, plant species can also be successfully protected and developed ex situ. In other words, they can be grown in specially designed laboratories or field centres where their growth, development and living conditions are carefully tended by scientists and technicians. As well as ensuring the survival of threatened plant species, ex situ conservation also makes it possible to produce larger numbers of plant specimens than can usually be taken from the wild. Farmers can then be provided with seeds or young plants from which to raise commercial crops for food, medicinal preparations and other uses. Ex situ conservation also offers opportunities for experimenting with the plants in order to establish optimum methods for raising them or to develop new strains that have the potential to improve local farmers' incomes and living standards. Two of the following case studies, from Chile and Tunisia, describe projects that use such ex situ plant conservation to achieve these ends.

---