

Genmedoc

BANQUES DE SEMENCES DE LA
MÉDITERRANÉE

In the Mediterranean basin, where the greatest diversity of plant life in Europe is currently found, human occupation of the land over many centuries has led to the fragmentation of ecosystems and the development of a complex landscape mosaic of great socio-economic interest. Over the past few decades, however, human impact has triggered major processes of deterioration in these fragile systems in which regeneration is slow.

The first practical measures taken to protect nature, after numerous conventions and national and international laws had been drawn up, were directed primarily at ensuring conservation *in situ* (national parks, nature reserves, etc.). Even though these actions are essential in maintaining the ecological conditions of the habitats and species, the growing threats faced by the natural environment (urban development, climate change, etc.) created a need to conserve species outside their natural environment. Therefore, over 20 years ago, the first seed banks were created to conserve forest plants, fundamental tools of *ex situ* conservation policies. However, as a result of structural deficiencies and a lack of common methodologies, the intensity of the effort made to create these centres in regions around the Mediterranean basin, always stemming from individual initiatives and with local objectives, proved to be unequal.

Ex situ conservation techniques allow the genetic material of species (individuals, fruits, seeds, tissues, pollen, etc.) to be maintained and preserved outside the habitat in which they live. As part of these activities, seed banks, together with botanical gardens and clonal orchards, among others, play an essential role in guaranteeing the survival of species in the long term.



AN INTER-REGIONAL NETWORK OF MEDITERRANEAN SEED BANKS.

Given this situation, the GENMEDOC project set up a network of seed banks that allows for the exchange of technical information and the adoption of common protocols for *ex situ* conservation work on genetic resources of the Mediterranean flora, particularly endemic, rare or threatened species in the habitats covered by Directive 92/43/EEC. This project, which is coordinated by the forest seed bank of the Centre d'Investigació i Experiències Forestals (CIEF) de la Generalitat Valenciana (Forest Research and Experimentation Centre of the autonomous region of Valencia), was approved in April 2004 as part of the INTERREG IIB MEDOCC programme for a period of 2 years (June 2004 to May 2006) and is co-funded by the European Union.



The INTERREG IIB MEDOCC (www.interreg-medocc.org) Community initiative, co-funded by the ERDF (European Regional Development Fund), encourages transnational co-operation by establishing partnerships, and contributes to the carrying out of projects that promote sustainable, harmonious and balanced development in the Western Mediterranean area.

The actions are taking place in 8 regions of 4 Member States in the MEDOCC area and in Tunis, as a representative of the southern coast of the Mediterranean:

1. CIEF. Conselleria de Territori i Habitatge. Generalitat Valenciana (Valencia)
2. Centro Conservazione Biodiversità. Università degli studi di Cagliari (Sardinia)
3. Conservatoire Botanique National Méditerranéen de Porquerolles (Provence-Alpes-Côte d'Azur)
4. Dipartimento di Botanica. Università di Catania (Sicily)
5. Jardí Botànic. Universitat de València (Valencia)
6. Fundació Jardí Botànic de Sóller (Balearic Islands)
7. Mediterranean Agronomic Institute of Chania (Crete)
8. Institut / Jardí Botànic de Barcelona (Catalonia)
9. Consejería de Industria y Medio Ambiente. Región de Murcia (Murcia)
10. Institut des Régions Arides (Tunis)



The sharing of techniques and experiences among the various members has made possible the elaboration of a practical manual for collecting, treating and preserving the genetic material. The manual covers the basic steps from the location and selection of the species to the storage of their seeds in the bank. During the course of the GENMEDOC project, over 300 plant species have been collected and preserved from 38 Mediterranean habitats included in the Areas of Community Interest (ACI), natural areas with important elements for biodiversity and put forward as candidates for the future NATURA 2000 network. A total of 75 of these species have been duplicated and exchanged among the members for the purpose of guaranteeing their conservation in the event of a disaster. Furthermore, effective germination protocols are being drawn up for 60 species of special interest, in order to guarantee the production of seedlings during potential future action which could be taken to reinforce populations or reintroduce species into the natural environment.



This interregional co-operation will make it easier for coherent directives to be adopted throughout the Mediterranean basin in order to establish development policies that respect the need for conservation of the biodiversity. The GENMEDOC network has achieved stability and permanence, and is the launch pad for a new initiative called SEMCLIMED, dedicated to studying the impact of climate change on the Mediterranean flora and more specially on its conservation.

“GENMEDOC: Création d'un réseau de centres de conservation du matériel génétique de la flore des régions méditerranéennes de l'espace MEDOCC”

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