

2nd Mediterranean Plant Conservation Week

“Conservation of Mediterranean Plant Diversity: Complementary Approaches and New Perspectives”

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S1- Ex situ plant species conservation

TITLE: Ex situ conservation actions of the project "CARE-MEDIFLORA"

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ABSTRACT:

Although in situ conservation measures are the best methods for preserving plant diversity, ex situ conservation provides an alternative and complementary method for preventing immediate extinction (Godefroid et al. 2011). As a precautionary measure, more importance should be given to ex situ conservation in seed banks, which may support further interventions, such as translocations. One of the most effective ways to preserve plant diversity through ex situ conservation is the storage in seed banks, which allows conserving large amounts of genetic material in a small space and, under suitable conditions, for a long time with minimum risk of genetic damage.

The CARE-MEDIFLORA project, an initiative implemented by institutions of six Mediterranean islands and the IUCN/SSC Mediterranean Plant Specialist Group with a long lasting experience in the field of plant conservation, promotes the use of ex situ collections to experiment with in situ actions for threatened island plants (Fenu et al. 2017). Ex situ measures, such as seed collection, curation and storage, are an integral part of the project and represent a further step of the activities carried out in a previous project named "Ensuring the survival of endangered plants in the Mediterranean".

Germplasm collection and curation are carried out according to the national and international regulations and standards. Based on a set of common criteria, a preliminary list including 706 taxa of target plants, for which ex situ activities were planned, was created, mainly selected by the regional responsibility criterion and/or assessed as threatened in the global and/or regional IUCN RedList.

For a selected group of target threatened species, ex situ conservation has been guaranteed in seed banks.

Germination tests are carried out to assess the germination requirements and plants are produced for the species selected for in situ actions. As a precautionary measure, aiming to ensure the conservation of the collected germplasm, accessions are duplicated in the seed banks of other partners of this project or, if appropriate, with other institutions. In addition to the long term seed conservation, each institution guarantees seed availability for future recovery or restoration programmes.

The results of the CARE-MEDIFLORA project significantly contribute to the achievement of Target 8 of the Global Strategy for Plant Conservation for 2020 (GSPC 2008) aiming that 'at least 75% of threatened plant species are conserved in ex situ collections, preferably in the country of origin, and at least 20% available for recovery and restoration programmes'

KEY WORDS: Ex situ conservation, Mediterranean islands, threatened plants, storage, germination tests, duplications