

## Plant Microreserves: frequently asked questions

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Plant Microreserves (PMRs) were created back in 1994 (Anon. 1994) by the Regional Wildlife Service of the Generalitat Valenciana, the autonomous government of the Valencia region (East Spain). The initiative has enjoyed an ongoing financial support of the European Commission through two successive LIFE projects 000766 and 006417. Since its onset the network has been steadily growing both in number of microreserves added to the network and in prestige and popularity among conservationists. In fact, other countries, in Europe and outside, are adopting this conservation model. In this short paper, we present a sample of some of the questions commonly put forward in presentations and forums dealing with PMRs. Our aim is to clarify some common misunderstandings and to provide some insight for those wanting to become familiar with this approach to plant conservation. A more technical contribution to PMRs can be found in Laguna (2001) and Laguna and coworkers (2004).

### What's a plant microreserve (PMR)?

PMRs are small land plots up to 20 ha of peak value in terms of plant richness, endemism or rarity, given over to long term monitoring and conservation of plant species and vegetation types. PMRs are statutory reserves whose legal frame confers a permanent status and provides strong protection to plants and substrate, while allowing traditional activities compatible with plant conservation.

### Which are the main goals of the PMR initiative?

- Inventory all sites important to plants in the Valencian region.
- Scientific monitoring of target species - ca. 600 taxa, 350 endemics - and vegetation types to establish long term trends.
- Development of active management actions in the form of ecological restoration, population reinforcements or creation of new populations of threatened species are carried out.

### Can PMRs be considered protected areas?

No, they are plots for plant monitoring and conservation in which protection is a merely a means to achieve these goals.

### In some ways, aren't PMRs redundant with existing conservation schemes, like Natural Parks or other types of large protected areas?

No, PMRs are the answer to the conservation needs of a plant heritage whose *in situ* conservation poses difficulties for reasons like:

- the geographic scatter of the taxa of concern
- the small population size of some taxa
- the ecological traits of our endemic flora
- the extremely localised occurrence and low size of some populations

Plant microreserves allow a close monitoring of target species by trained staff and the development of conservation actions tailored to their needs in the whole territory, whereas large

protected areas only cover a fraction. Another major advantage is that PMRs can be proclaimed for a single target species, the others being trivial, and thus pinpoint isolated areas of high botanical value. In the end this approach leads to a (i) small scale (ii) flexible – able to embrace a variety of conservation situations - approach to plant conservation. This is something inescapable in territories of high floristic diversity if we do not want to overlook an important share of plant diversity.

#### **Are PMRs declared within Natural Parks?**

Yes, it is the best way to closely monitor target species within large protected areas. 46 PMRs are found within the existing Natural Park network.

#### **Are PMRs an alternative to large Natural Protected Areas?**

No, PMRs should be seen as a complement to large protected areas, never as an alternative, as they cannot sustain the ecological processes that take place within large natural areas.

#### **What types of activities are banned within PMRs?**

Those activities that interfere with plants, like direct removal of plants or their aerial or underground organs and those activities that affect the substrate. PMRs have two levels of protection, a general level conferred by the Decree which created the plant Microreserve as a figure for plant conservation and a more specific level established in the management plan for each Microreserve.

#### **How do people know they have entered a PMR?**

Their location is published in the official gazette and they are clearly labelled in the field with landmarks and boards in the roads that approach them. This leads to an additional advantage, that of preventing aggressions in the form of large-scale interventions in the territory.

#### **How many PMRs are there and which is their total surface?**

Currently 230 microreserves have been proclaimed. Together they cover 1440 has or 0.057 % of the Valencian region territory.

#### **Is there a minimum size for PMRs?**

No, currently the smallest PMR is 140 m<sup>2</sup> a small island off the Alicante Coast which sustains populations of two endangered species *Medicago citrina* and *Silene hifacensis*.

#### **Why limit the size of PMRs legally to 20 has?**

For two reasons. The first and most important being that the final aim of PMRs is not protection itself but inventory and monitoring of plant diversity. The second is that the best populations of target species very seldom exceed sites larger than 20 has. Nevertheless, in exceptional cases two or three adjacent Microreserves have been proclaimed.

#### **How is PMRs success measured?**

By the rate of incorporation of three indicators, priority habitats, endemic and threatened taxa. We foresee that by the end of 2006 this objective will be fully accomplished.

### **Are PMRs really useful in stemming the loss of plant diversity in the Valencia region?**

Yes, since the onset of the initiative no microreserves have been destroyed and only six have been affected to some degree by wild fires. In environments of high human impact, like some patches of the valencian coast, PMRs have effectively abutted transformation and are the only fragments that survive.

### **How are PMRs declared?**

After delimitation in the field and scientific works are completed the procedure involves giving notice to those affected by the declaration of the PMR so that they can raise their claims. If no claims are raised, as it is often the case, a proclamation decree simultaneously approves the boundaries and the management plan for each microreserve. The procedure can be completed in less than a year.

### **Is there anything done within PMRs once that they are declared?**

The specifications contained in the management plan are executed. Some of the tasks most commonly performed within PMRs are seed collection, population reinforcements, herbivore exclusion, scrub clearance, population monitoring or environmental education.

### **Who does conservation work within PMRs?**

Conservation work is done by especially trained teams of 4 workmen under the supervision of the plant officers, whose work is to manage PMRs.

### **Where does plant used in population reinforcements and reintroductions come from?**

Plant used for this purposes is obtained from seeds and propagules collected in the field by plant officers and Generalitat Valenciana staff involved in propagation of native flora. Plants are raised in Generalitat Valenciana nurseries, the Botanical Garden or Research Centres of the Generalitat Valenciana (IVIA). A strict tracking of seed provenance and destination is kept at all stages.

### **Can PMRs be established on private grounds?**

Yes, but not against the owner's will. In fact it is the owner who has to start the procedure for a PMR to be proclaimed within his property. Nevertheless PMR staff does get involved into negotiations with owners to persuade them of contributing land to the network once they know an important population of a target species is found within a given state.

### **What are the goals of private PMRs?**

On the one hand they allow the incorporation to the network of extremely valuable sites that are in private hands and on the other they directly involve society in plant conservation.

### **What do owners receive in exchange of their giving up land to conservation?**

Owners and townhalls are given a one off indemnity in return for the permanent transfer of management rights over their property. Additionally, annual calls offer funds to owners so that they can hire staff to carry out active management under the guidance of PMR plant officers.

### **How many private PMRs have been declared since the onset of the initiative?**

29 out of 229, all of them on ground designated as not for building, an inescapable requisite.

**Which is roughly the yearly budget of PMRs?**

854.000 € for year 2004

**What is included in this budget?**

The salaries of three plant officers that supervise and manage the network. The salaries and materials of the staff in charge of plant production – 2 people in charge of aquatic plant production; 2 in charge of endemic and endangered plant production -. The salaries and materials of 3 brigades of 4 workmen in charge of executing the management plans. Contracts with the Botanical Garden of the University of Valencia and research centres – IVIA – that cater for the storage of germplasm gathered in PMRs or the propagation of taxa with special requirements, like native orchids.

To summarise, PMRs are the keystone of comprehensive strategy to protect plants that includes scientific monitoring of plant species, active management and conservation activities and conservation and rescue programs for threatened flora including the production of a high number of endemic taxa and finally education and awareness raising campaigns. In situ and ex situ actions complementing each other with PMRs as the meeting point for all these activities.

**References**

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