

IUFRO Joint International Meeting
Global Change and Mediterranean Pines: Alternatives for Management

10-12 February 2010 University of Valladolid at Palencia (Spain)

Scientific Summary

Mediterranean Pines: Adaptive Management under Global Change Scenarios

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From 10th to 12th February 2010, the IUFRO Meeting on “Global Change and Mediterranean Pines: Alternatives for Management” was held in Palencia (Spain), with the aim to provide an international debate, joining researchers from various institutions, for presenting and discussing experiences, and to share knowledge, related to the ecology and silviculture of Mediterranean pines with focus to climate change: potential effects and adaptive solutions.

The Meeting was promoted by IUFRO Unit 1.01.10 - Ecology and silviculture of pine and co-sponsored by IUFRO Units 2.02.13 – Breeding and genetic resources of Mediterranean conifers and 4.01.00 – Forest mensuration and modelling. The event had the scientific support of Sustainable Forests Management Research Institute UVA-INIA, and the technical collaboration of FAO Silva Mediterranea and EFI Mediterranean Regional Office – EFIMED. There were present 63 participants, from Spain, Portugal, France and Italy and a variety of institutions (research centres, forest services, international bodies). Presentations included the invited speeches of the sponsors, 20 voluntary oral presentations and a considerable number of posters. Abstracts are available for download from IUFRO Unit 1.01.10 homepage (<http://www.iufro.org/science/divisions/division-1/10000/10100/10110/>) and the Meeting webpage.

The meeting included two technical visits to Maritime and to Scots pine stands, which allowed participants to observe *in situ* issues addressed at the meeting sessions, such as CO₂ ecosystem estimation and sustainable forest management practices. The presentations contributed to a better understanding of the importance of pine ecosystems at the Mediterranean areas and of the major constraints and threats that these pine ecosystems are faced to, nowadays or predicted to occur under a climate change scenario.

Mediterranean pine forests have an important role on local and regional level economy from timber and non-wooded products and also non-paid benefits, such as CO₂ uptake and storage. Nevertheless, menaces such as fire, drought and water stress might put in risk the valuable legacy associated to these forest resources. Seed production and seedling establishment for naturally regenerated pine stands might be already in risk, as pointed out for some of the Mediterranean species.

Additionally, in a global change scenario, changing of environment conditions might lead to irreversible consequences on spatial distribution of pine forests and on ecosystem dynamics. To deal with the uncertainty, a better understanding of pine ecology and of genetic adaptive capacity of pine species response is needed. Research developed in this area assumes a major role as a strategy to cope with global changes, putting in evidence the behaviour of materials in unfavourable conditions, such as drought. Results from experiments must be communicated to the policymakers and to the forest managers as different policies and silvicultural options might be needed under an adaptive forest management context.

The constraints pointed out to the Mediterranean pine ecosystems as well as the researchers' proposals to deal with the critical factors and the predictable changes will appear in a special issue of *Investigación Agraria: Sistemas y Recursos Forestales* journal.