

MEDPINE 5 - Dynamic session 1

THE ROLE OF MEDITERRANEAN PINES IN ECOLOGICAL RESTORATION

The session was moderated by Gidi Ne'eman (Haifa University, Israel) and José Climent (INIA-CIFOR, Spain). More than 50 people participated and 20 actively contributed to the discussion that lasted about an hour.

After a brief introduction about the format and the aim of the session, Omri Bonne (KKL, Israel) gave a short talk about his poster presenting a change of paradigm in afforestations: reduction of planting density, discarding wood production as the main objective and assuming fire as a perturbation instead of a disaster to be eradicated. Gradual natural recruitment of broadleaved trees and shrubs and the possibility of reconvertng the monotypic plantations into mixed sustainable forests were mentioned as future trends.

After this introductory talk, all participants were invited by the chairs to present their views and homeland experience. The main points are summarized here:

Ecological restoration and afforestation are not synonymous, and targeted tree plantations, mainly for wood production, were out of the scope of the session. Moreover, many restoration projects based on autochthonous broadleaves (as an alternative to the use of pine afforestations) are not considering genetic variation.

The main points raised in the discussion can be compiled as follows:

Strengths and opportunities	Weaknesses and threats
Frequent and fast colonization of pine plantations by broadleaves (mainly oaks) is widespread and contributes to diverse and sustainable forests, but little studied (Israel, Portugal, Spain).	Tree cover by itself, and hence dense pine plantations are not necessarily the target of a restoration program. ("encroachment" as a risk).
Management can help attaining the "second stage" of diverse and sustainable forests with higher ecological value and improve their services to society.	Many Mediterranean pine plantations need to be managed to reduce competition and increase facilitation enhancing natural recruitment of other native species.
Paleobotanists have demonstrated that pines were present in many Mediterranean landscapes where they were regarded as non-native and therefore excluded their use in ecological restoration programs.	Pines and mainly Aleppo pine is an invasive species, and even where native, it can heavily colonize and change neighboring ecosystems causing loss of diversity .
Pines are not to be blamed for devastating wildfires. Many evidences suggest that forest structure and lack of management are more important factors increasing fire risk and severity than forest composition itself.	Pines are highly flammable species with massive post-fire recruitment. Lack of management and difficulties to eradicate pines can result in permanent, dense, even aged pine forest with low biodiversity.
Mixed pine-oak forests should be defined as	Pre-natural forests with pines can become

“cultural” landscapes in restoration programs instead, or in addition to, strictly natural forests that are often difficult to define.	permanent after recruitment of the alternative species due to lack of management and/or difficulties to eradicate the pines
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Most participants agreed with a general take-home message: “Go in the way nature goes” that decrease costs while increasing the probability of success.