

# Biodiversity for resilience in the restoration of Mediterranean forests

Organized by



Convention on  
Biological Diversity



Time	Content	Speakers
9:00 – 9:10	Introduction	Magda BOU DAGHER KHARRAT on behalf of FERI
9:10 – 9:25	Restoring Resilience in Mediterranean landscapes	Jordi CORTINA- SEGARRA, E., SILVA, W., NAJI, E., CLIMENT, A., ALEDO, A., BONET, G., LOPEZ.
9:30 – 9: 45	Biodiversity Webs of Interactions behind the Success of Ecological Restoration: Role of animals in forest seeds dispersal	Magda BOU DAGHER KHARRAT, Liliane BOUKHDOUD, Carole SALIBA, Rhea KAHALE
9:50 – 10:10	Biodiversity as link between enviromental stability and human communities stability	Grammenos Mastrojeni
10:10 – 10:30	Panel Discussion	Jordi Cortina Magda Bou Dagher Kharrat Chadi Mohanna Grammenos Mastrojeni Moderated by : Michele BOZZANO



## Jordi CORTINA - SAGARRA

- Chair European Chapter of the Society for Ecological Restoration
- Professor - University of Alicante



## Magda BOU DAGHER KHARRAT

- Head of Life and Earth Science Department, Faculty of Science, Saint Joseph University
- President of the Association *Jouzour Loubnan*



## Grammenos MASTROJENI

- Coordinator for the environment and Head of the Science- Science-Policy Interface,
- Ministry of Foreign Affairs, Italy.



Michele  
Bozzano



Chadi  
Mohanna



Grammenos  
Mastrojeni



Jordi  
Cortina



Magda  
Bou Dagher

Panel discussion



## Sixth Mediterranean Forest Week

### Biodiversity for resilience in the restoration of Mediterranean forests

**Organization:** Université Saint-Joseph, Association Jouzour Loubnan / Forest Ecosystem Restoration Initiative - CBD

#### I. Context

Forest restoration projects used to focus on the establishment of single or a small number of species. This simplified approach overlooking the ecological restoration principles hampers the effectiveness of ecosystem recovery. Recently, a shift away from large-scale monospecific afforestation projects, to a holistic approaches with multiple objectives, combining several socioeconomic and environmental benefits is observed. This allows the recovery of ecosystem functions related to human welfare. Restoring biodiversity in forests promotes their resilience to human-induced pressures and is therefore an essential 'insurance policy' and safeguard against expected climate change impacts. Biodiversity should be considered at different scales (stand, landscape, ecosystem, bioregional) and in terms of all elements (genes, species, communities). Increasing the biodiversity in planted forests will have a positive effect on their resilience capacity. This session will explore the following questions: To what extent is this approach feasible in the context of the restoration of Mediterranean forests? What are the data gaps and implementation bottlenecks for scaling up this type of approach? How can we include key stakeholders from various land use sectors in the design of these approaches?

#### II. Rationale:

Many plantation projects are limited to planting trees. Very often of the same species and or with exotic species, disregarding the function of the future forest and its resilience.

Taking into consideration the plant species diversity, the plants genetic diversity, the animal and microbiological components are key factors to ensure the success of the ecological restoration action.

#### Event Objectives and Outputs

- This session is intended to share best practices and foster an exchange of experiences with regards to restoration approaches that include biodiversity for resilience;
- Attendees will share their experience and their views and discuss the potential to amend ongoing restoration programs and projects at national and regional levels is foreseen in order to include best practices for inclusion of biodiversity considerations resilience that have proved their effectiveness.

### III. Panel discussion

- To what extent is this approach feasible in the context of the restoration of Mediterranean forests?
- What are the data gaps and implementation bottlenecks for scaling up this type of approach?
- How can we include key stakeholders from various land use sectors in the design of these approaches?
- What are the main challenges facing the funding of long term projects (Forest ecosystem restoration) by the international institutions?
- When we restore a degraded landscape, very often we have to cope with a local human population that, directly or indirectly, is the major threat to the intervention. The very same human population, very often, is also the main beneficiary. Is it so difficult to explain the importance of a public good?
- The 40 million trees project launched by the Ministry of agriculture in 2012 ... how it is tackling biodiversity issues ? how feasible is the application at large scale of the scientific dogmas that we heard about earlier?
- We just heard why it is important to have high level of biodiversity. We also learnt that we have the needed knowledge to restore diversity-based resilient forests. These interventions are more expensive and need more qualified practitioners. Most of the large-scale restoration interventions that we see around the Mediterranean are done with very low level of diversity, resulting in a short time re-greening of the site, definitely not the restoration of a resilient ecosystem. Where is the problem: in the capacity of the practitioners, in the lack of awareness of policy makers and funding agencies, or....

## Report for the session “**Biodiversity for resilience in the restoration of Mediterranean forests**”

Tuesday April 2, 2019

The session about “Biodiversity for resilience in the restoration of Mediterranean forests” was held during the IV forest Mediterranean week, in Broumana Lebanon on Tuesday April 2. More than 40 participants from different nationalities and domains have attended this session (list attached).

This session started with a quick introductory word by Prof Kharrat about the **Forest Ecosystem Reforestation Initiatives- FERI** program that is supported by the Korea Forest Service of the Republic of Korea and implemented by the Secretariat of the Convention on Biological Diversity (CBD). She explained that the main targets of this initiative are the support of developing country Parties as they develop and operationalize national targets and plans for ecosystem conservation and restoration within the framework of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets, especially Targets 5, 14 and 15. In addition to providing countries with best practices and foster an exchange of experiences including challenges and opportunities to contribute towards the planning and implementation of forest ecosystem conservation and restoration.

Prof Kharrat then tackled the FERI project with an in depth review of the main methodology and results of the project showing the success factors of the ecological restoration in the pilot site in Lebanon. The presentation also included some tips on Identifying and using the reference landscapes for restoration as well as some insights on the selection of appropriate tree species for plantation, and documenting their different dispersion mode, dates, and time to introduce in the restoration dynamic including the foster and record of animal biodiversity.

She also addressed on how restoration projects have often focused on the use of one or a small number of species. This simplified approach, which neglects the principles of ecological restoration, hinders the effectiveness of ecosystem restoration.



A shift has been made nowadays from this large-scale monospecific reforestation to a more holistic method with multiple objectives, combining several socio-economic and environmental benefits. This change allows the introduction of the link between restoration of ecosystem functions and human beings.

Therefore, restoring biodiversity in forests strengthens their resilience to anthropogenic pressures and is therefore considered as an essential insurance against the expected and known impacts of climate change. Biodiversity should be considered at different scales (population, landscape, ecosystem, biogeographic region) and taking into account all its dimensions (people, species and communities)

During the session, different experts from different domains explained the importance of the resilience restoration of the Mediterranean forests through various aspects:

- Jordi CORTINA, Chair European Chapter of the Society for Ecological Restoration Professor - University of Alicante , talked about “Restoring Resilience in Mediterranean landscapes”. Funded by FAO.
- Grammenos Mastrojeni, Coordinator for the environment and Head of the Science- Science-Policy Interface , Ministry of Foreign Affairs, Italy explained how “Biodiversity is the link between environmental stability and human communities stability”. Funded by the Italian cooperation.

Finally, a panel discussion was animated by Michele Bozzano from the European Forest Institute. On the panel, the newly *Silva mediterranea* appointed President Mr. Chadi Mohanna, Director of rural development and natural resources at the MOA Lebanon and our presenters. The discussion tackled different questions: to what extent is this approach feasible in the context of the restoration of the Mediterranean forests? What are the missing data and the major implementation obstacles to extend this type of approach? How can we include key stakeholders from different land use sectors to design these approaches?





*Figure 1 : During the session on Biodiversity resilience of the Mediterranean forests*





Figure 2 : Prof Kharrat presenting the success factors of ecological restoration



Figure 3 Roundtable with experts on Biodiversity resilience and ecological restoration



THANK YOU

## Identifying biodiversity-related success factors of ecological restoration projects

**Tuesday April 2<sup>nd</sup> 2019**




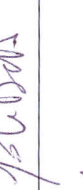







Grandhills Hotel  
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