



## Climate Change Mitigation, Substitution and Adaptation: FAO's Related Activities

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Food and Agriculture  
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## Contents

Examples of FAO's work on forests and climate change:

- o Strengthening capacity
  - o Facilitating action on the ground
  - o Provision of information
  - o Development of tools
- 
- UN-REDD
  - Vulnerability assessments in Mediterranean Forests
  - Analysis of mitigation potential through substitution
  - Climate Change Guidelines for Forest Managers

# The UN-REDD Programme

- The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
- Established in 2008 by FAO, UNDP and UNEP – delivering as “One UN”
- Aim: Support developing countries build capacity to participate in the REDD+ mechanism under the UNFCCC
- Activities are at different levels: Global, Regional and National Programmes
- 64 partner countries
- 21 countries with National Programmes
- US\$ 215 M in donor contributions (Denmark, the European Union, Japan, Luxembourg, Norway and Spain)
- Coordination with other initiatives, e.g. FCPF, FIP, UNFCCC

# The UN-REDD Programme; the role of FAO

FAO's key role in REDD+ readiness is to provide capacity building and technical support to enable the **measurement, reporting and verification (MRV) of country contributions to the mitigation of climate change through REDD+ and facilitating country efforts to put in place the necessary institutional arrangements**

## **Key elements of FAO support under UN-REDD (all elements consistent with UNFCCC modalities);**

- Implement and operationalize National Forest Monitoring Systems (NFMS)
- Establishment of Forest Reference Emission Levels / Forest Reference Levels (FREL/FRL)
- Measurement of REDD+ emission reductions/enhancements and submissions to the UNFCCC (Biannual Update Reports)
- Assisting countries in conceptualizing and implementing REDD+ activities and in the development of policies and measures

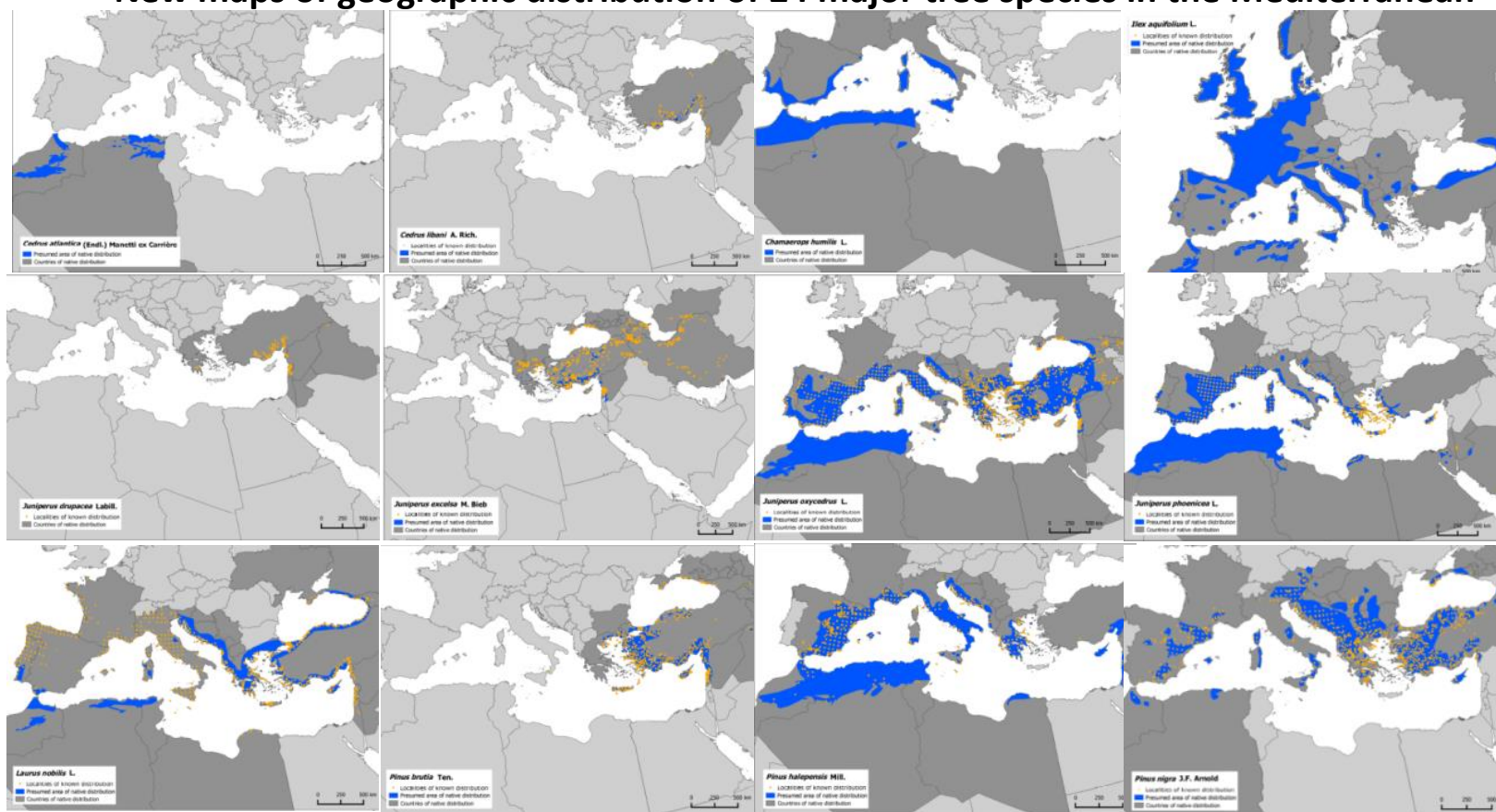
## **Key Principles;**

- National ownership
- Alignment with the UNFCCC process
- Step-wise approach that allows for improvement over time
- Builds upon existing capacities, available data and systems in place
- Use of open-source, freely available data and tools as much as possible
- Strengthening of national capacities (learning-by-doing)



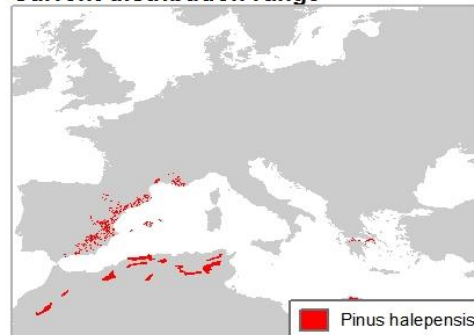
# Maximize the production of goods and services by Mediterranean forests in the context of global changes (FFEM) + Cost Action project on marginal/peripheral populations of forest trees

## New maps of geographic distribution of 24 major tree species in the Mediterranean

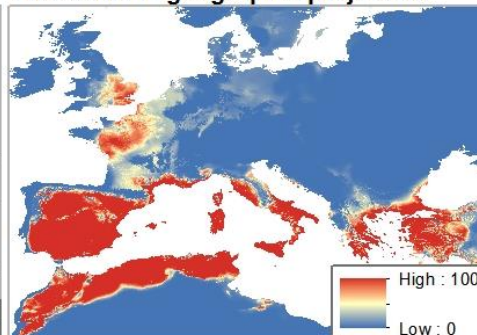


## Identification of marginal populations for use to adapt to future conditions

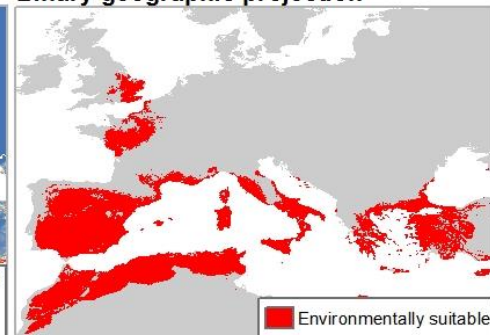
**Current distribution range**



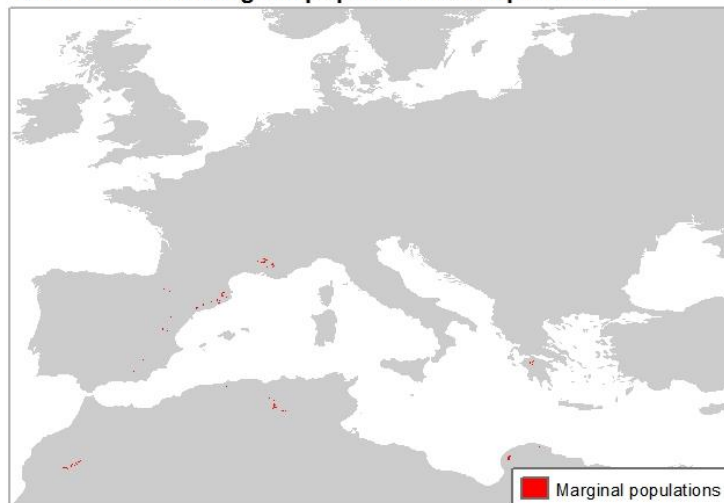
**Probabilistic geographic projection**



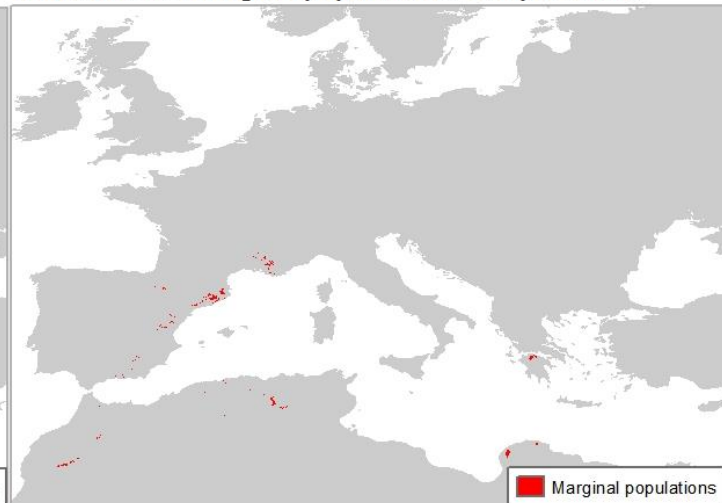
**Binary geographic projection**



**Environmental Marginal populations: 5th percentile**



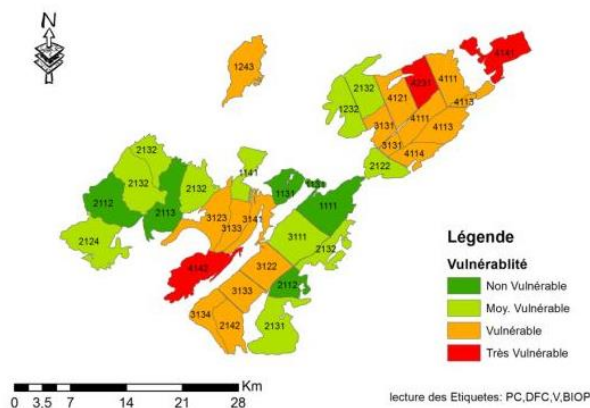
**Environmental Marginal populations: 10th percentile**



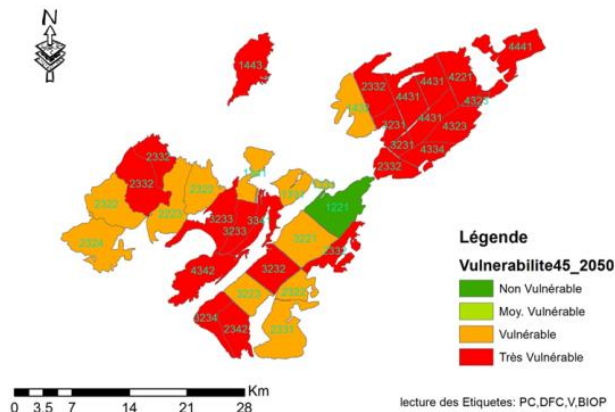
# Vulnerability assessment and adaptation capacities of Mediterranean forest ecosystems to climate change impacts in five pilot sites: e.g. Senalba forest (Algeria)

## Vulnerability assessment

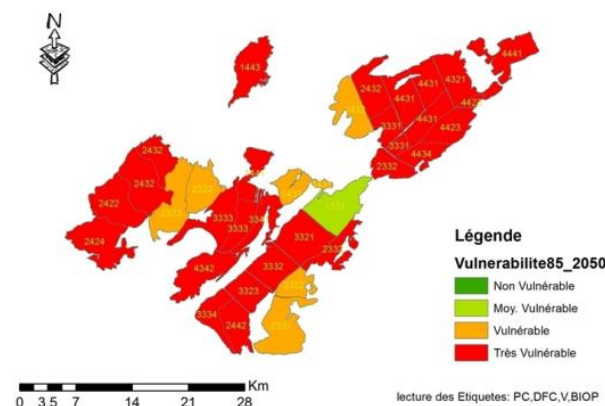
2000



PC: grazing pressure  
DFC: water stress  
V: aging  
BIOP: Biophysical factor



2050, RCP4.5



2050, RCP8.5

# Analysis of Mitigation Potential through Substitution with Forest Products

- **Biofuels and biopower** derived from wood and forest residues can reduce GHG emissions by significantly (more than 50%) depending on the wood fuel technology and the baseline fossil fuel displaced. However, wood supply is a limitation and needs to be accompanied by measures to promote efficient use and recycling.
- **Use of wood products in construction** can also have a high mitigation potential by displacing more carbon intense products and by extending life of harvested wood products. Wood use in buildings is being promoted with the implementation of green building policies and standards (e.g. building with zero carbon standards in UK).
- **Use of wood-based packaging** to substitute for more carbon intensive materials may have mitigation potential, but lifecycle studies are complex and economic analyses remain limited so it is difficult to draw conclusions.
- Sustainable forestry is fundamental for achieving a system-wide climate benefit from wood-based products.



# Climate change guidelines for forest managers

## Possible uses

- Awareness raising amongst stakeholders
- Planning adjustments of forest management plans and strategies and implementation
- Monitoring and review

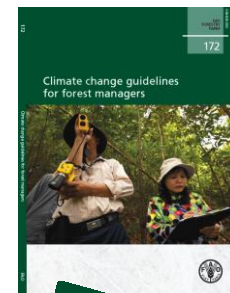
## Pilot projects

- Kenya & Peru - Increasing community adaptation capacity against the impacts of climate change

## Forest management and climate change in Europe, Bialowieza, Poland; 21-23 April 2015

- attended by representatives from 9 European countries and 2 regional bodies
- countries presented their actions, priorities and needs related to forest management and climate change and FAO support requested to:
  - Raise awareness of climate change priorities for forestry among forest policy & decision makers, forest practitioners, other stakeholders supporting forest policy & management;
  - Support the integration of climate change into forest policies and forests into climate change policies
  - Facilitate the communication of relevant information on forests and climate change to decision makers and practitioners
  - Support capacity development on climate change within the forest sector (private, state, CSOs)
  - Facilitate networking & promote partnerships for the exchange of information, experiences & technology within and across countries
  - Provide information on climate change impacts, risks, challenges and opportunities for forests (thru FRA)
  - Support research, information generation & dissemination

**EUROPEAN FOREST WEEK - SILVA2015**



# THANK YOU!



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