



**COST ACTION FP 0703**

**Echoes: Expected Climate cHange  
and Options for European Silviculture**

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## Country Report: Major points

### **GREECE**

22-24 January 2009, Florence - Italy

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# Greece: General background

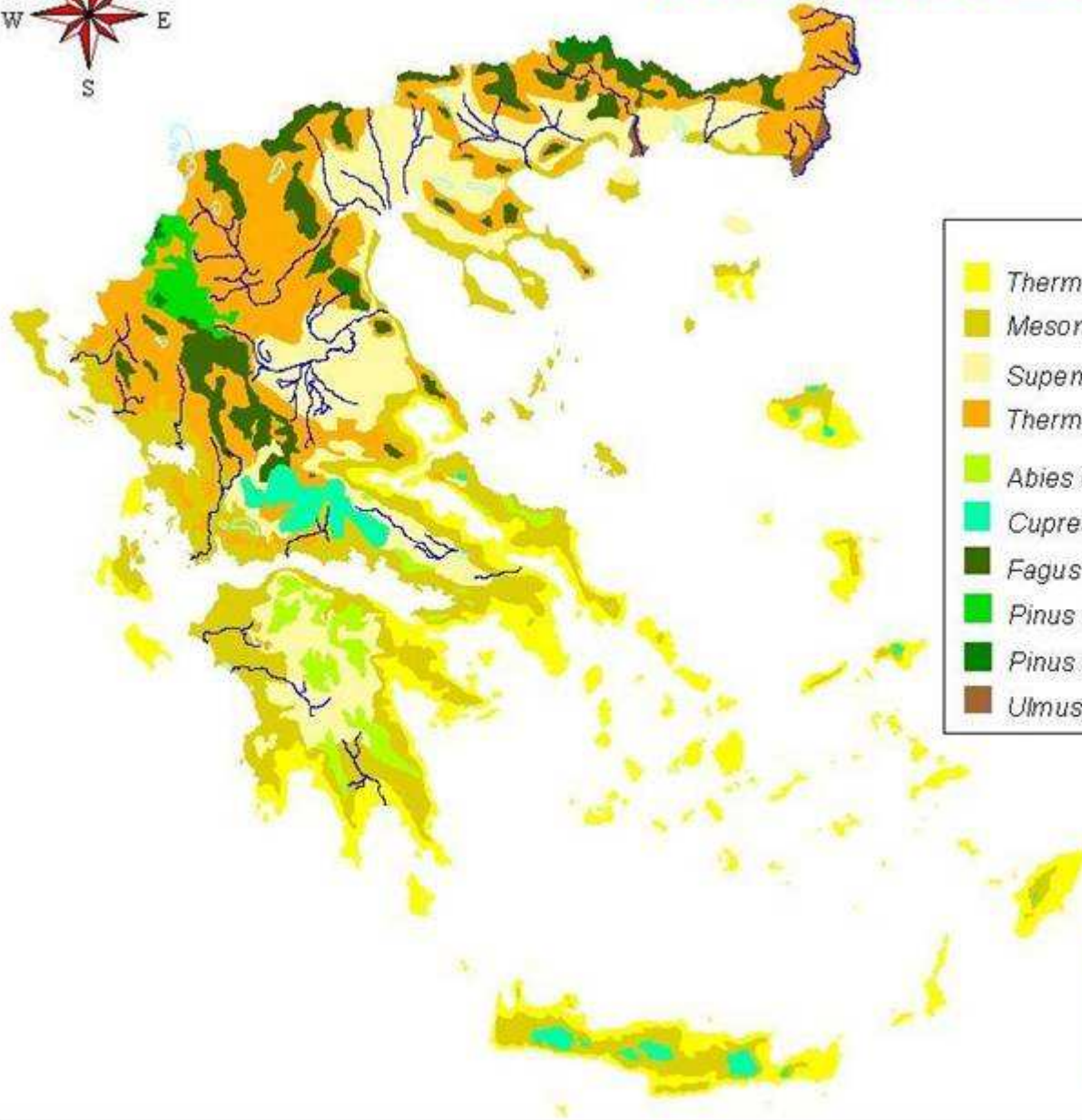


Area : 13 Mha

Forested area: 7 Mha

High productive forests:  
3 Mha

# VEGETATION MAP OF GREECE

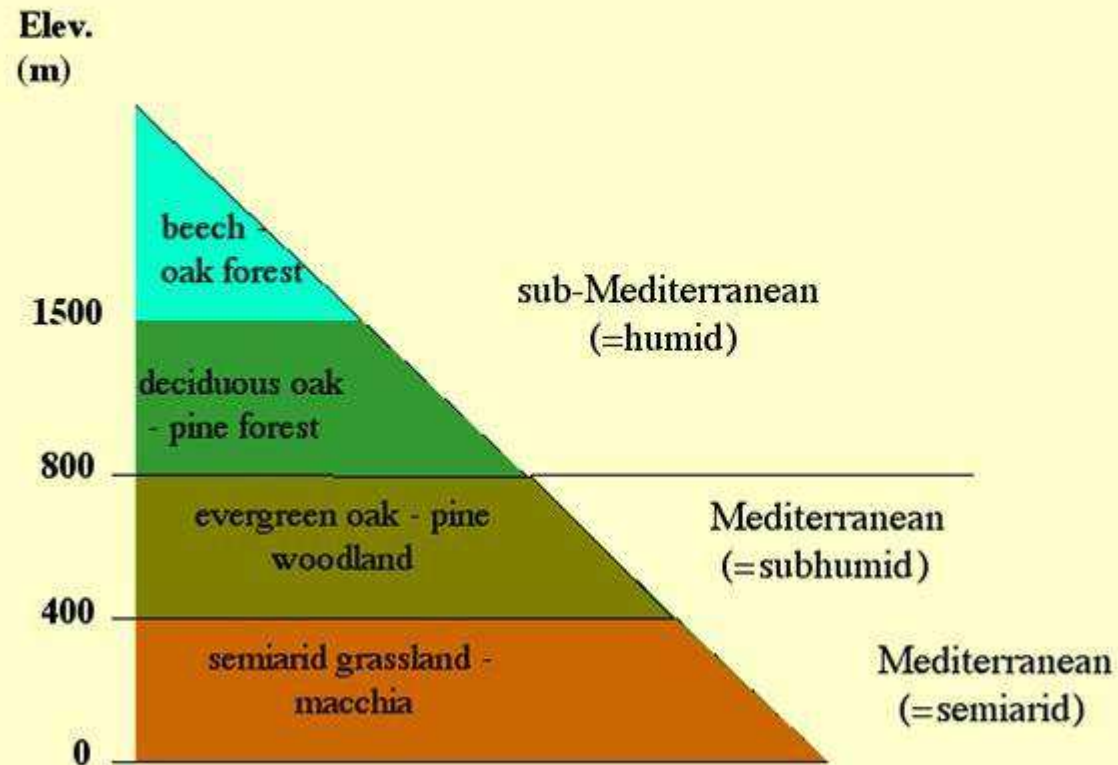


## LEGEND

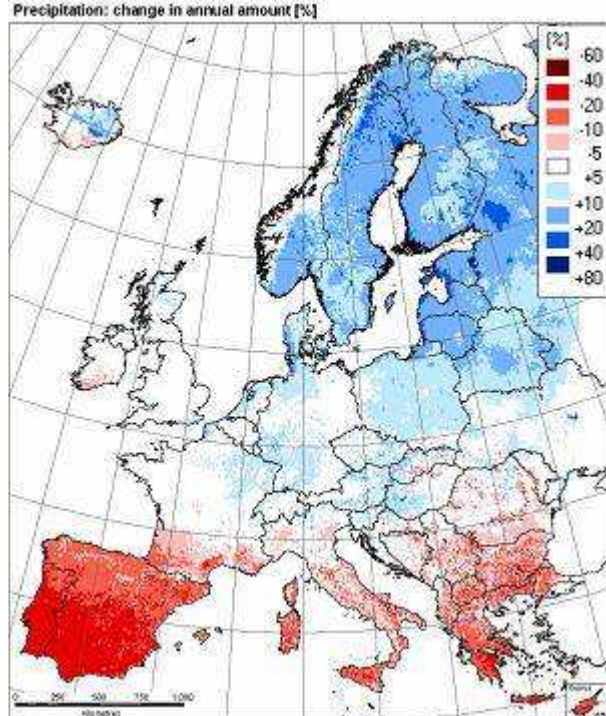
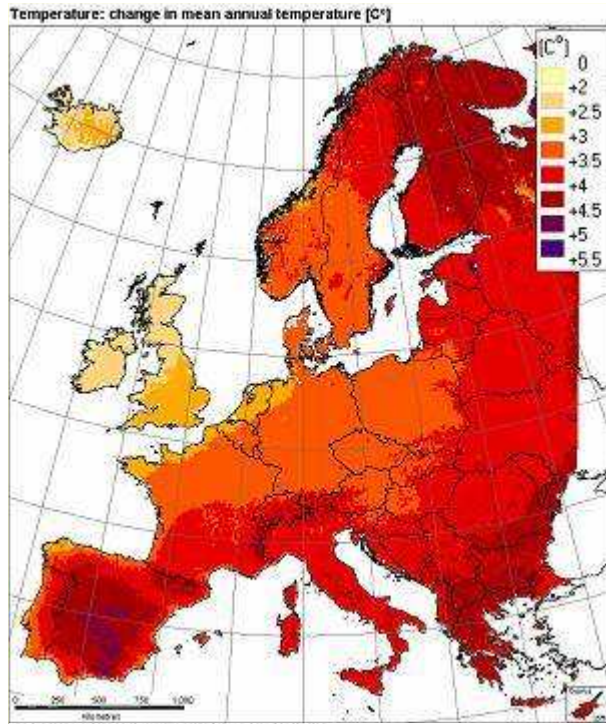
- Thermomediterranean vegetation
- Mesomediterranean vegetation of *Quercion ilicis*
- Supramediterranean vegetation of *Carpinus orientalis*
- Thermophiles subcontinental formation of *Quercus*
- Abies cephalonica* and *Pinus nigra*
- Cupressus*
- Fagus moesiaca* and *Abies borissii regis*
- Pinus nigra*
- Pinus silvestris* and *Picea excelsa*
- Ulmus*, *Populus*, *Salix*, *Alnus*, *Fraxinus oxycarpa*

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# Elevation - vegetation relations



Thermo-Mediterranean Meso Mediterranean Supra Mediterranean  
Montane-Mediterranean and Oro- Mediterranean



# Climate projections

Reduced precipitation

+

Increased temperature

= Drought

More Extreme Climate Events  
(heat waves, storms etc.)

# Impacts

- ❖ Growth reduction
- ❖ Forest declines
- ❖ Increased risk of fires
- ❖ Shifts in species range
- ❖ Species loss
- ❖ Phenological changes
- ❖ Physiological and Metabolic changes

# Impacts



Decline of a fir forest in  
Central Greece

Wildfires burn even  
high altitude forests  
in Northern Greece



# Impacts

Shifts in species range and ecosystem boundaries

- *Pinus halepensis* and *P. brutia* upslope
- *Fagus sylvatica* upslope at highest altitude 1600-1700 m
- Tree line moving towards higher altitude





# Adaptation

## **General principles for adaptation to CC in Greece**

- Maintenance and enhancement of ecosystem resilience
- Intense protection of forests and ending of forest land loss through land use change
- Reduction or removal of non-climatic stresses on species and ecosystems
- Restoration of degraded forest ecosystems
- 'No regrets' decisions based on the 'precautionary principle'

# Adaptation

Restoration of  
degraded ecosystems



Protection against illegal  
land use change



# Mitigation

- ✓ Large afforestation potential
- ✓ Agroforestry
- ✓ Forest management for mitigation
- ✓ Carbon retention in harvested wood products
- ✓ Guidelines for policy makers
- ✓ Carbon accounts

# Mitigation



Hardwood plantation in  
abandoned agricultural  
land

Use of wood as building  
material





**Thank you**