

# SESSION 3: VULNERABILITY AND RESILIENCE OF MEDITERRANEAN ECOSYSTEMS TO THE IMPACT OF GLOBAL CHANGE



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[www.iii-med.forestweek.org](http://www.iii-med.forestweek.org)



Obama's  
Working-Class  
Woes

Why More Women  
Are Choosing  
C-Sections



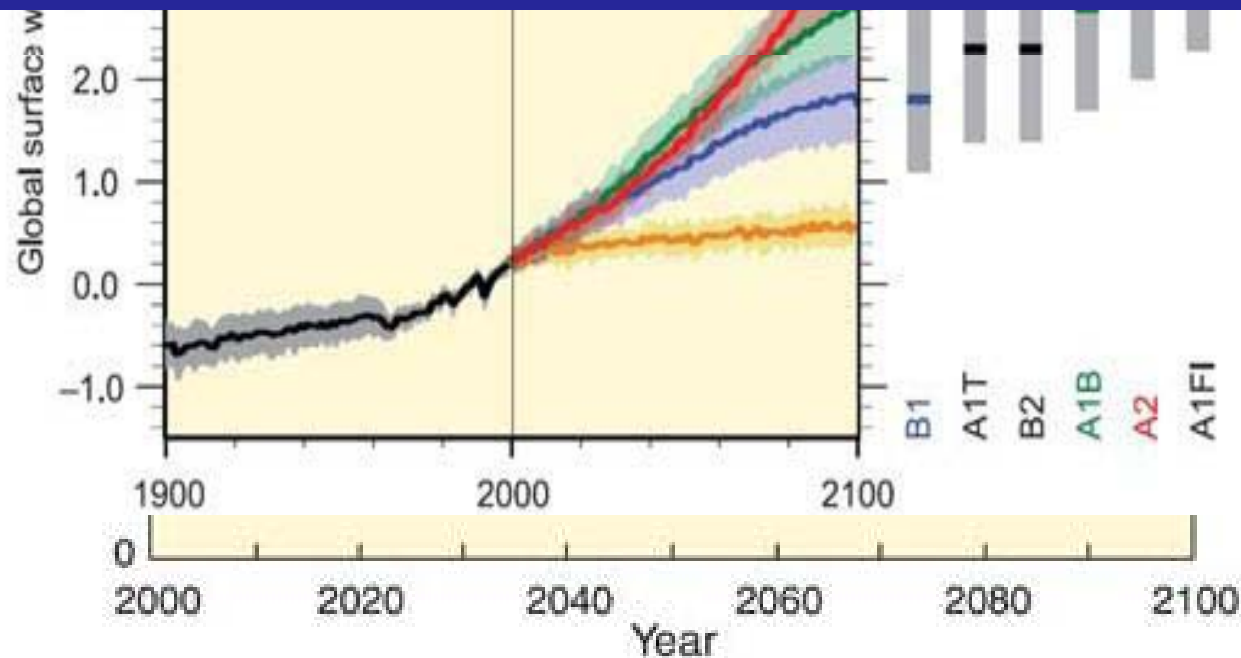
Can Richard  
Branson Save the  
Airline Industry?

TIME

**But we need to focus more on  
uncertainty of predictions,  
vulnerability of ecosystems and  
strategies for  
resilience and adaptation**



**Uncertainties of climate predictions are unavoidable but can be reduced by using models coupled with sea circulation, including soil-vegetation patterns and regionally downscaled (ex. CMCC EuroMediterranean model)**



MAJOR  
CLIMATIC  
TENDENCIES

PHYSICAL  
IMPACTS  
(direct and indirect,  
gradual and one-off)

CONSEQUENCES ON  
RESOURCES

Risks area

Impacts on complex human-environment systems depend on physical hazards and systems vulnerability.

Vulnerability, the propensity to suffer some degree of loss from a hazardous event, has two aspects:

- depends on the nature and extent of disturbances or climate change,
- as well as on the resilience, the ability to absorb unexpected disturbances or stresses so as to reorganize their structure and processes.

# Why focusing on resilience of ecosystems rather than on vulnerability?

Resilience theory envisions **ecosystems as constantly changing**, focusing on renewal and reorganization processes rather than on stable states.

**Adaptive capacity** refers to the ability of the actors to **manage and increase resilience** in coupled, complex social-environmental systems.

Societies and individuals should improve resilience and therefore adaptation by:

- **learning to live with change and uncertainty** (expect the unexpected!)
- combining **different types of knowledge** for learning (global and local, science and community-based monitoring)
- **nurturing diversity** (maintain a livelihood portfolios of resources and options, i.e. social, ecological and political)

# Building capacities in Mediterranean forest research

## The FORESTERRA project:

Coordination of forest ecosystem research between

EU, North-Africa, Near-East and other Med countries

- Joint research calls
- Common infrastructures

*A new generation of  
Mediterranean scientists*

