

Agriculture and climate change in Mediterranean countries

Some initial questions

Agriculture today

- Still a major economic sector
- A major employer in south and east banks
- Linked to others sectors tourism industry
- Still a major driver of land use and land management
- Highly dependent on climate variations and with strong impact on growth
- water is a central piece of the picture

evolving roles

- Not only production but population management and control
- Land and landscape management
- Food quality
- Ecological services

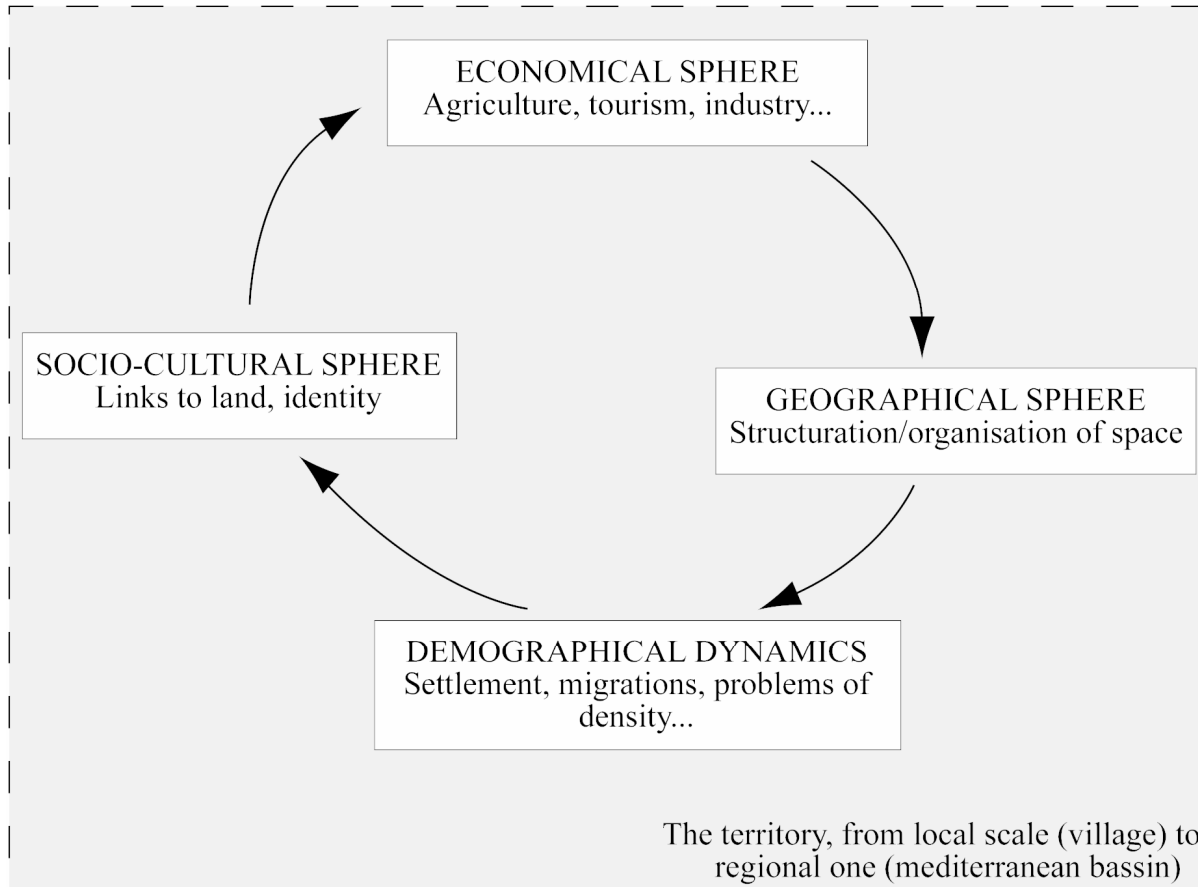
Potential impacts of climate change

- Rise in temperature means shorter vegetative cycles favourable for some crops difficult for others (winter crops, perennial)
- Higher CO₂ concentration , more photosynthesis, less water loss, more efficient water consumption, rise in yields but not all crops respond the same : issue for cereal production

Potential impacts 2

- Modification of precipitation regime and soil quality, extreme events and droughts
- Migration of crop zones (1°/150km latitude/150 m in altitude)
- Human migration (South/north)
- Impact on territory

Agriculture and Development



**POPULATION GROWTH
and GLOBALIZATION**



CLIMATE CHANGE

Which future for agriculture ?

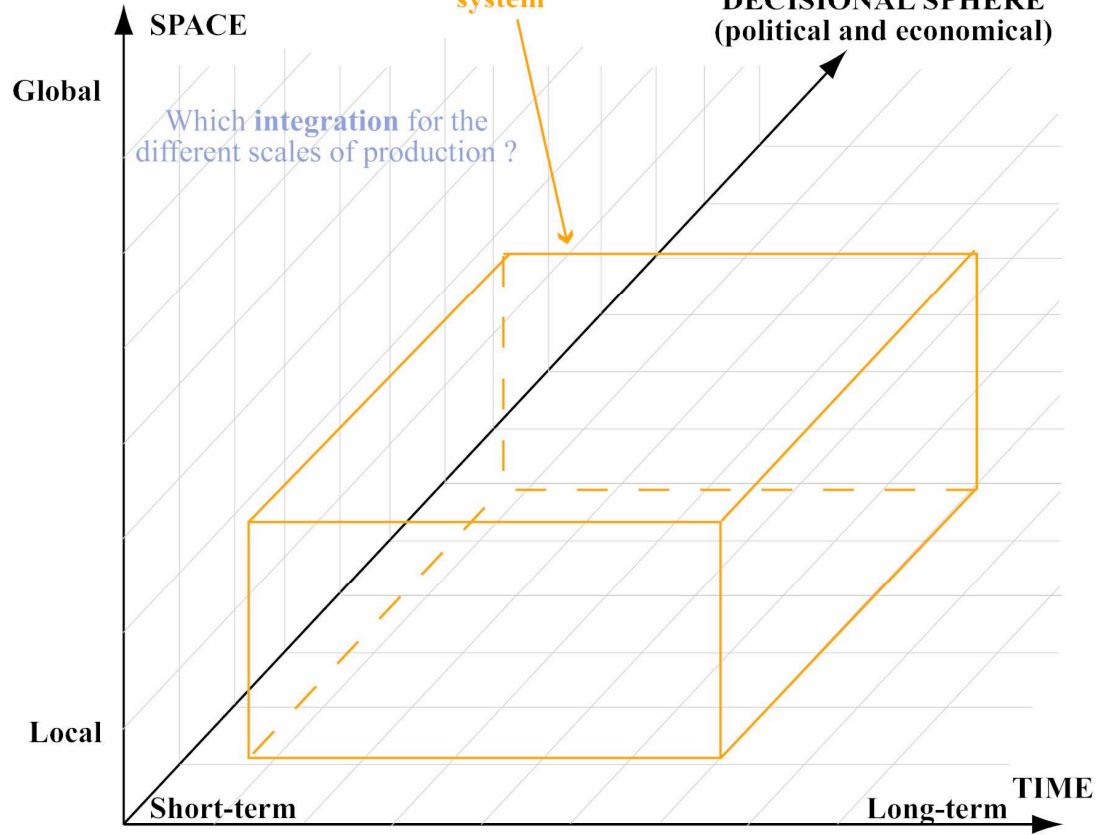
Adaptation strategies

- Short term/long term policy changes
- Spatial dimension of impact uneven effects at local/regional level
- EU/Mediterranean countries economic and political relations are a major driver of spatial evolution and will remain so in the future (e.g. agricultural specialization and exports)

GLOBALIZATION, DEVELOPMENT ↔ CLIMATE CHANGE

The agricultural system

DECISIONAL SPHERE (political and economical)



Acceleration of rythms of development

Which flexibility for agricultural systems ?

Adaptation 2

- Collective strategies or specific designs?
- Marginal changes in farm practices (seed time, irrigation) or
- Re-assessment of the agricultural development model?
- Insurance mechanisms? Incentive policies
- markets frameworks
- Mainstreaming CC in future CAP and agricultural policies

Adaptation 3

- Is diversification of production niche markets, food quality an option?
- Demographics and food needs, region food dependency
- What kind of intensification?

Adaptation 4

- Needed
- Understanding evolutions
- Monitoring tools
- Anticipation in the decision making in agricultural practices, R&D, policies
- Rapid change and adaptation yet experienced in the region

Is CC an opportunity to redefine
the agricultural development
model?