



# ILHAM-EC

## The importance of the governance context for land restoration: insights from Romania

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## This session will:

- Outline the environmental, economic, political & social changes taking place in southern Romania
- Explore how people are adapting & responding to these sustainability challenges through participatory forestry projects
- Highlight the importance of governance in shaping environmental outcomes

# Study Country: Romania

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- **Population = approx. 22 million**
- **Land area = 237,500 sq km**



## Romania's history



- 1947 – Romania declared a People's Republic under Communist rule
- Late 1940s & '50s- neo-Stalinist style government
- 1965 – Nicolae Ceaușescu became leader
- Declared Romania a Socialist Republic



## Romania's history



- 1980s – obsession with repayment of foreign loans.  
Food exported
- Dec 1989 – anti-government struggles developed into brief civil war
- 1989 - Ceaușescu & his wife tried, found guilty and executed for crimes against the state, genocide and undermining the national economy

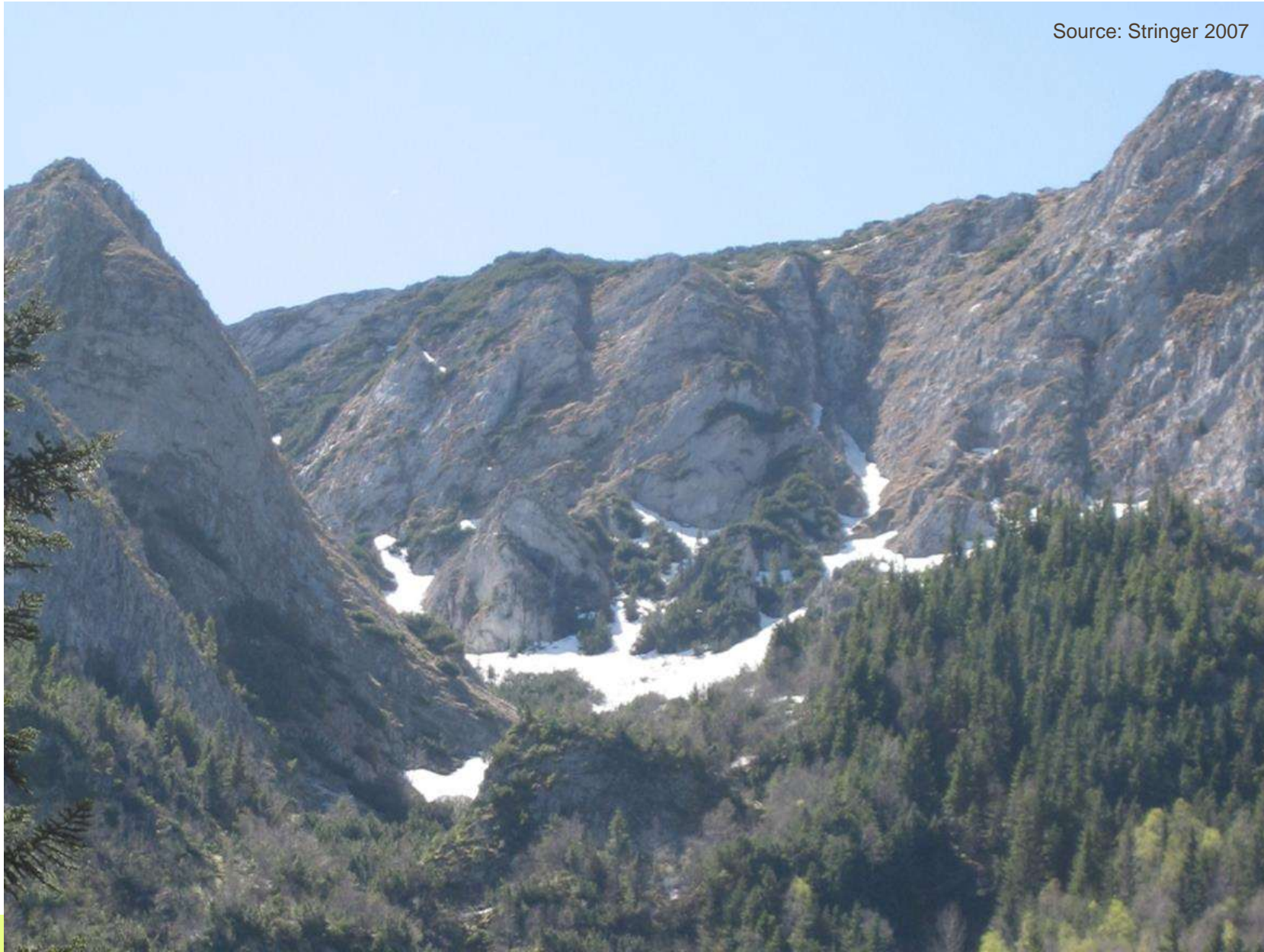


## The Communist Era (1947-1989)

- Central state set production targets
  - top-down approach
- Land confiscated from owners & put to use in large-scale state or collective farms
- Farms & agro-industrial complexes provided jobs for local people BUT used intensive, inefficient production methods, & outdated polluting technologies



Source: Stringer 2007





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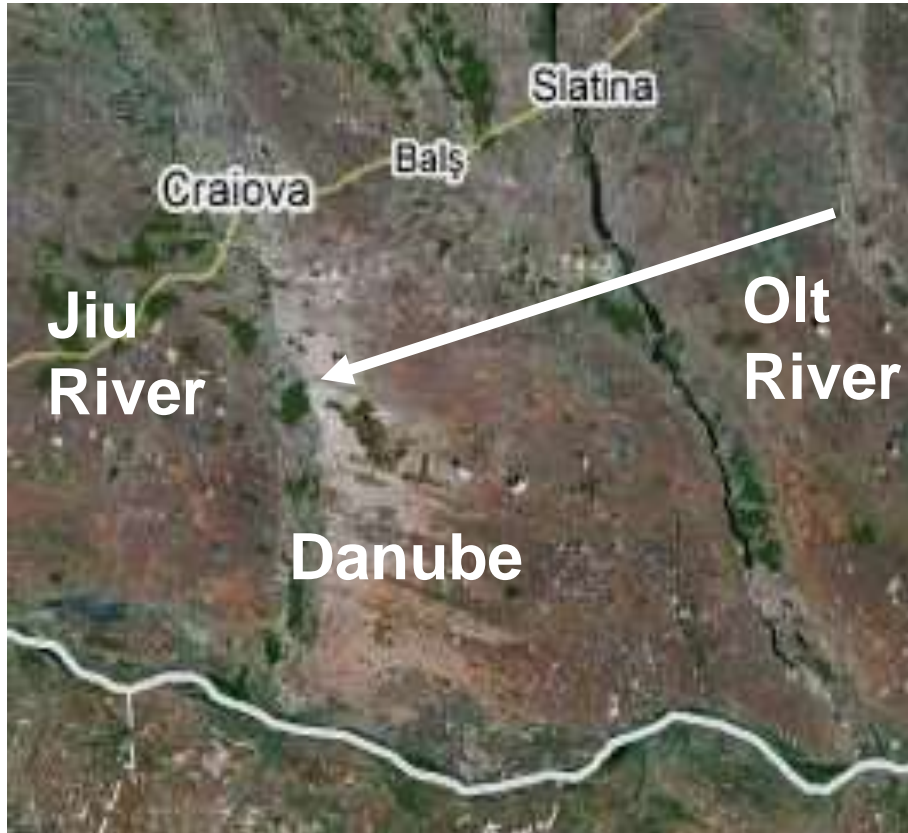




Source: Stringer 2007







## Study Area

- Located between Jiu, Olt and Danube Rivers
- Sandy soils
- Temperate-continental climate; sub-Mediterranean influences





# Environmental history

- Pre-Socialism: dune fields. Inter-dune areas used as pasture, slopes for vineyards, dune crests stabilised by forest
- Socialism: properties confiscated by state. Land levelled for large-scale collective arable agriculture; erosion risk reduced by forest belts
- 1970s: irrigation system built over 75k ha with goal of increasing productivity (unclear if achieved)



# Post-Socialist era social & economic impacts of change (1989 onwards)



- Unemployment increased
- Land returned to pre-WW2 owners
- Many people returned to rural areas to work the land
- Low-input subsistence agriculture dominated
- Production declined





- Irrigation system not maintained & components stolen (currently dysfunctional)





Who to maintain which  
aspects remains unclear





# Post-Socialist era: Environmental changes

- Soil fertility concerns: inputs too expensive
- Deforestation of forest belts and illegal logging of private woodland
- Climate change (in last 100 years average temp increased by  $0.5^{\circ}\text{C}$ ; accelerated in last 25 years)
  - Increased sand mobility & land degradation









# Methods and data



- Literature review
- Questionnaire surveys in 2 communities (n=100)
- Time-series remote sensing images (1990s-present)
- Oral histories
- Meteorological data (average monthly temp, total monthly rainfall)
- Interviews with land owners, foresters, associations, government officials
- Focus groups with school children and pensioners
- Policy analysis

→ **transdisciplinary AND participatory**



## How are people responding?

- Many people migrate to cities for work from Monday-Friday, returning to work their land at weekends
- Little adaptation of agricultural practices (e.g. change to type of crops grown and time of planting/harvesting)
- Lack of conscious adaptation exacerbated by absence of extension advice



# Adapting through reforestation & afforestation



- Forestry seen by many owners as the only viable (affordable) land use – land unsuitable for agriculture unless irrigated
- Funding available for reforestation projects **BUT** only over larger areas
- Establishment of Associations of Local Forest Owners (ALFOs) important step in accessing funds
- Reluctance to associate/cooperate due to Socialist legacy



# Forestry: multiple benefits?



- Land use change to forestry decreases carbon emissions
- Reforestation primarily with black locust (*Robinia pseudoacacia*)
- Rapid growth (cut after 15-20 and 30-35 years)
- N-fixing ability: can improve soils
- Drought tolerant





# Community forestry

- Alternative livelihood opportunities
  - Fuel wood/bio-energy production
  - Potential for mono-floral honey production
  - Plans to sell carbon credits



## BUT...



- Planting semi-indigenous species
  - introduced from North America in 17<sup>th</sup> century
- Can threaten natural oak stands
- Difficult to get rid of
  - cutting increases sucker & sprout productivity
  - burning enhances seed germination
- Does *R. pseudoacacia* really offer a win-win solution?
  - More research needed on longer-term impacts on biodiversity and ecosystem structure





# Balancing the three pillars of sustainability

- Difficult to balance economic, social and environmental demands
- No Environmental Impact Assessment (EIA) or biodiversity survey carried out before planting the trees
- Void of environmental legislation, regulation & enforcement remains from the Socialist era



## Now you should be able to:

- Understand some of the sustainable development challenges faced by Romania, and how they relate to the country's past governance
- Appreciate that a range of participatory and conventional research methods may be used to undertake interdisciplinary and transdisciplinary research
- Identify some of the social, economic and environmental trade-offs associated with participatory forestry projects in Romania



## Related reading



- Fraser, EDG; Stringer, LC 2009 Explaining agricultural collapse: Macro-forces, micro-crises and the emergence of land use vulnerability in southern Romania, *Global Environmental Change*, **19**, pp.45-53.
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- Muller D, Sikor T 2006 Effects of post-socialist reforms on land cover and land use in South-Eastern Albania. *Applied Geography* **26**,175–191
- Stringer LC, Scrieciu SS, Reed MS 2009 Biodiversity, land degradation, and climate change: Participatory planning in Romania *Applied Geography* **29**(1) -90.
- Stringer LC, Harris A 2014 Land degradation in Dolj County, southern Romania: environmental changes, impacts and responses. *Land Degradation & Development* **25** (1) 17-28
- Stringer LC, Paavola J 2013 Re-orienting biodiversity governance in Romania: towards participation in conservation and protected area management. *Environmental Conservation* **40**, 138-146