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Down to Earth



ΠΑΝΕΠΙΣΤΗΜΙΟ
ΠΑΤΡΩΝ
UNIVERSITY OF PATRAS

The challenges of European regions – Western Greece

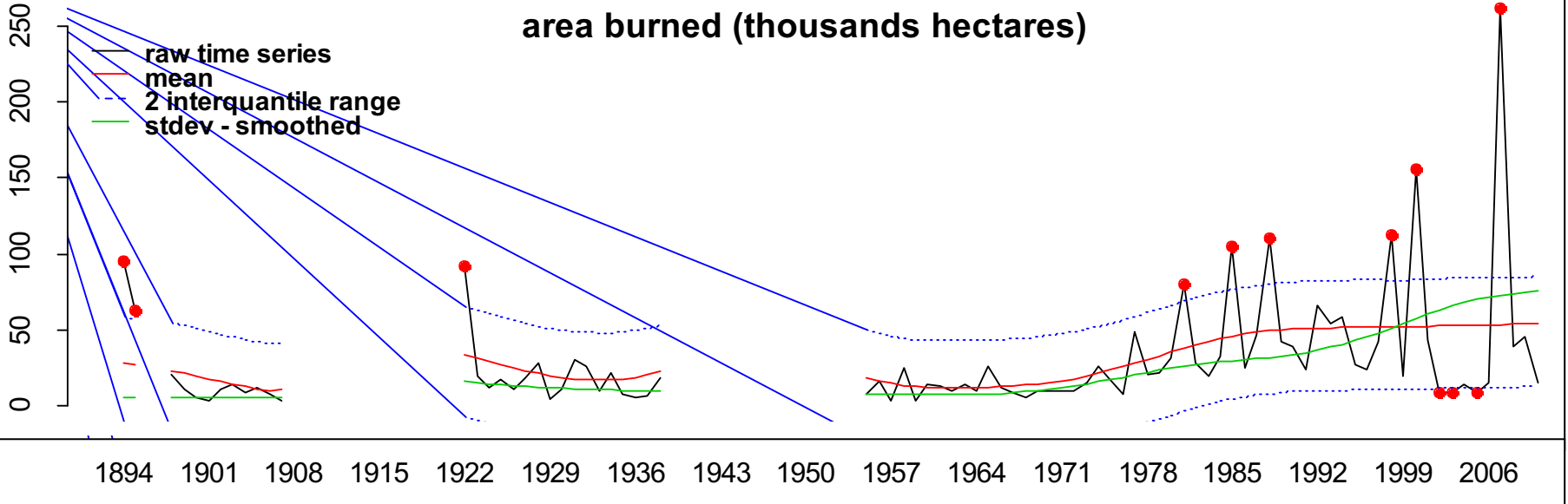
Nikos Koutsias

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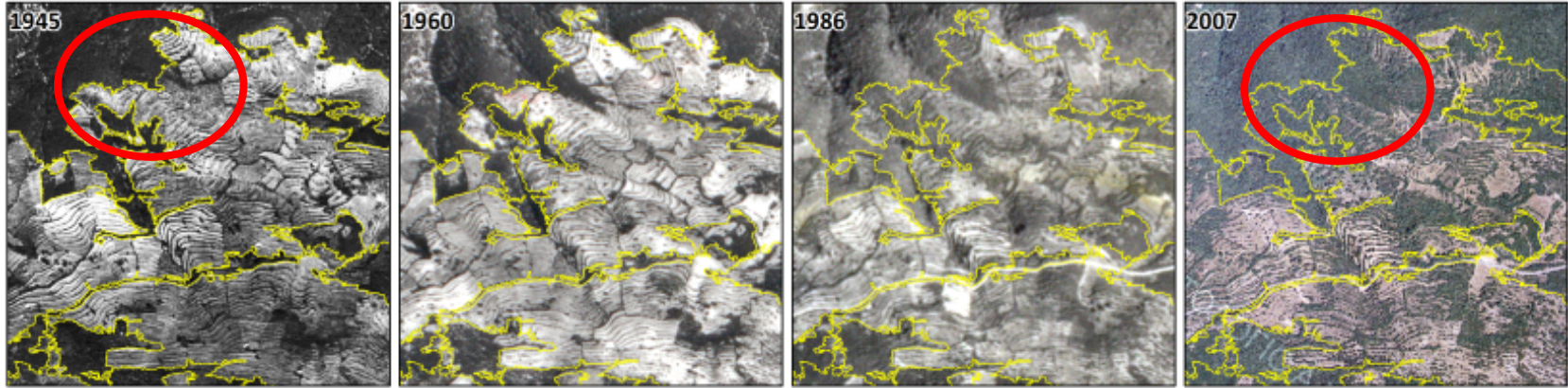
30th June 2023 | Santiago de Compostela

area burned (thousands hectares)

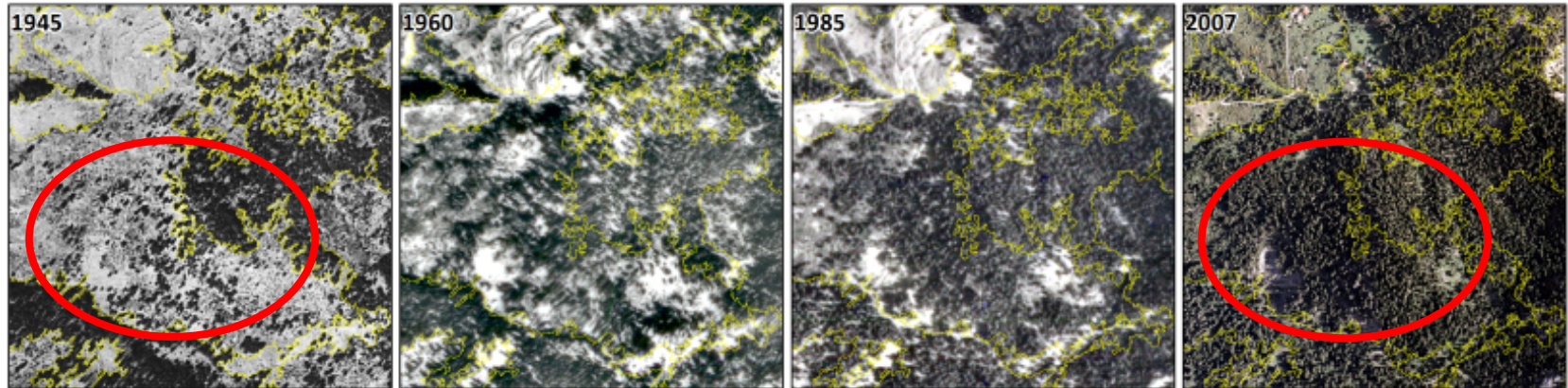


Processes favoring fuel built up

Agricultural abandonment: Here, croplands in terraces are abandoned.

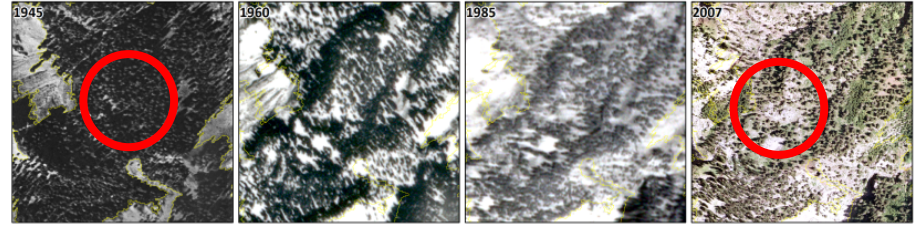
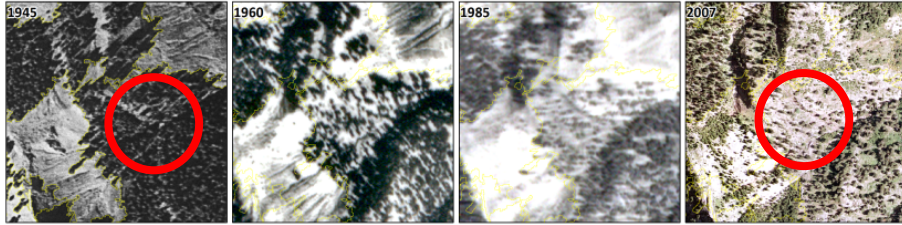


Afforestation: Here, open shrublands is transformed into dense forest



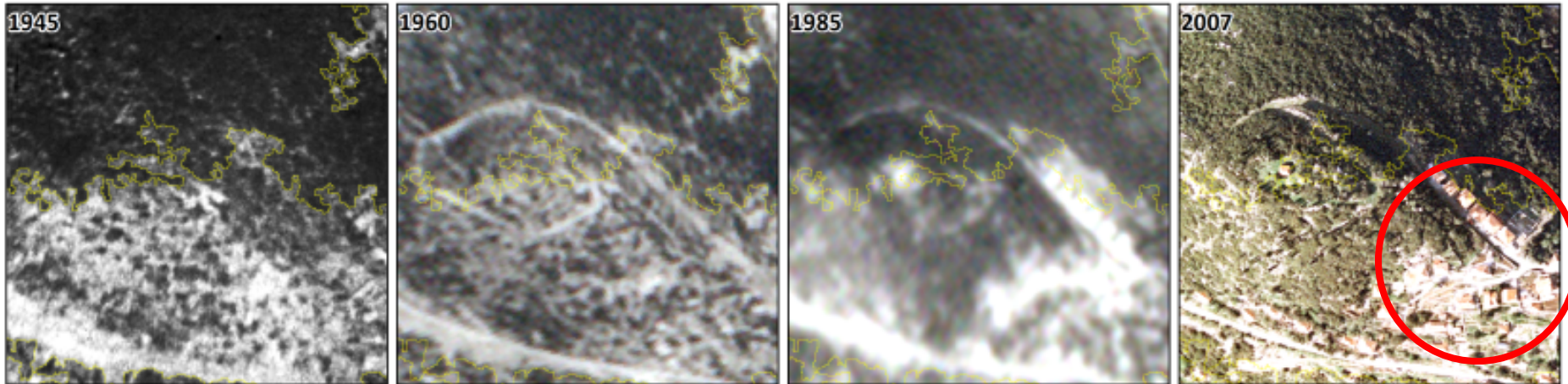
Opposite - Processes

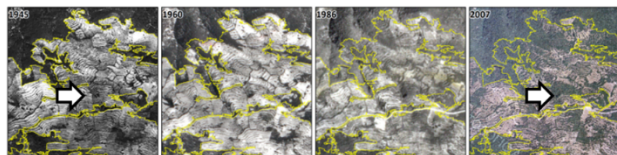
Degradation: Here, dense forest is transformed into sparse vegetation **Thinning:** Here, dense forest is transformed into open forest



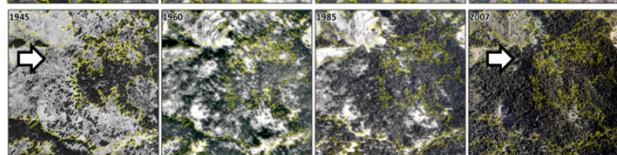
Urbanization: Here, dense shrubland is transformed in urban

Wildland Urban Interface (WUI)

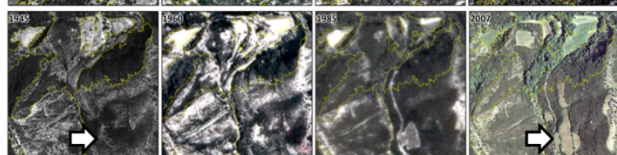




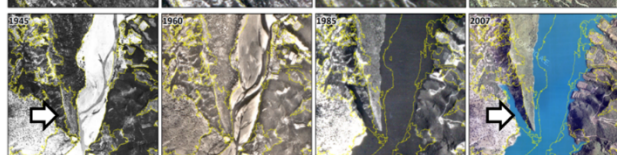
1. Agricultural abandonment:
Here, croplands in terraces are abandoned.



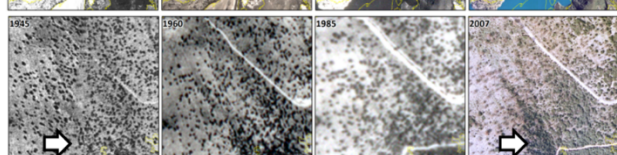
2. Afforestation: Here, open shrubland is transformed into dense forest



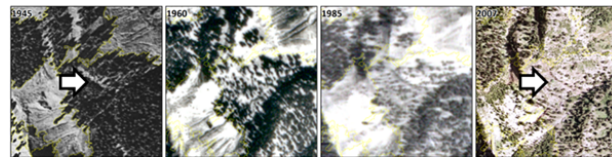
3. Agricultural intensification:
Here, dense shrubland is transformed into agricultural cultivation



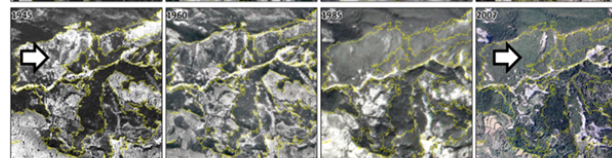
4. Artificialization: Here, various natural LULC classes are transformed into water bodies



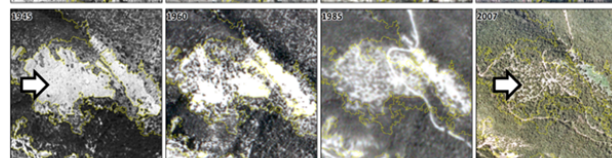
5. Deforestation: Here, open forest is transformed into dense and open shrubland



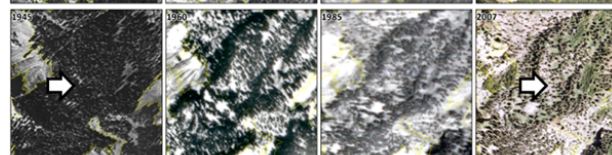
6. Degradation: Here, dense forest is transformed into sparse vegetation



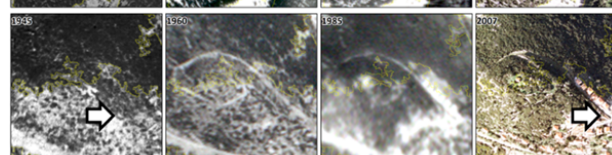
7. Densification: Here, open shrubland is transformed into dense shrubland



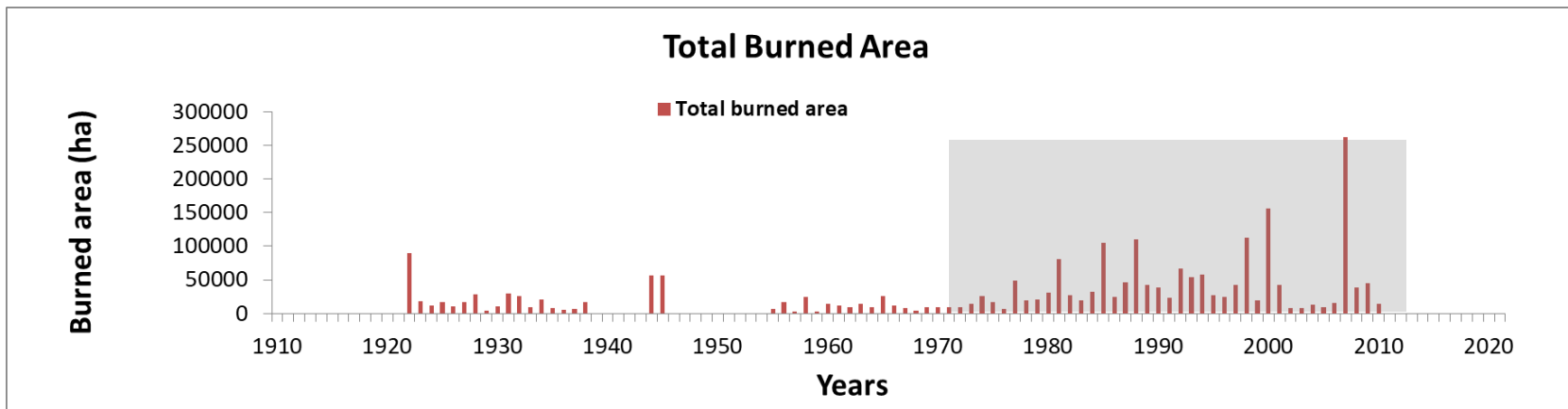
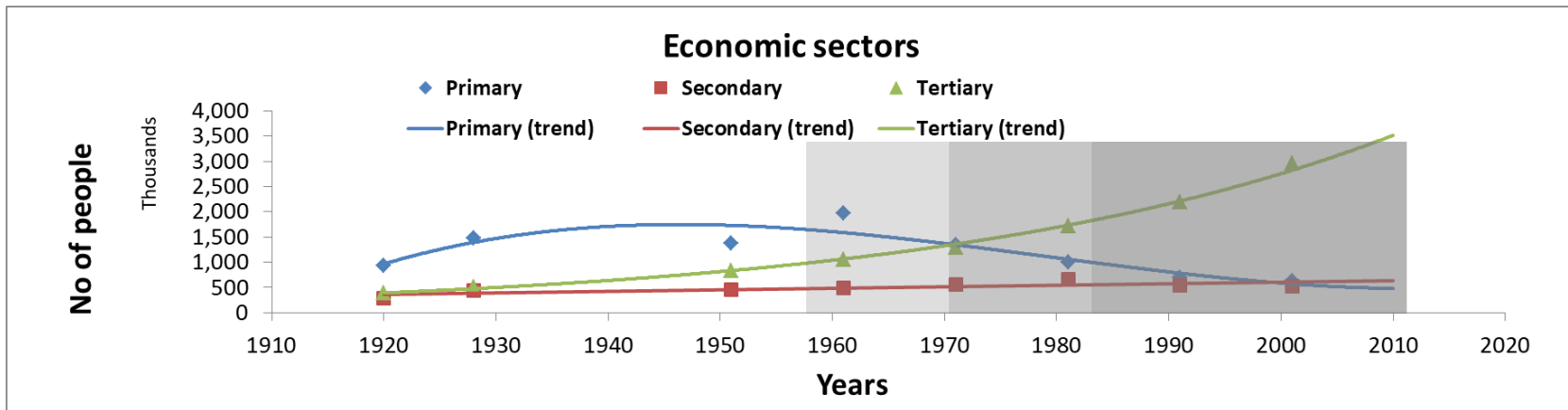
8. Encroachment: Here, grassland is transformed into shrubland



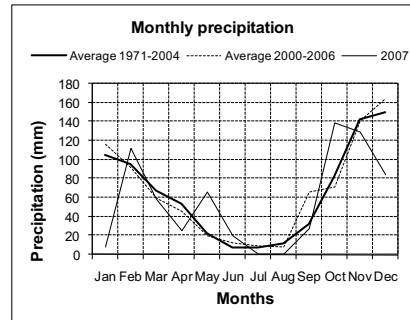
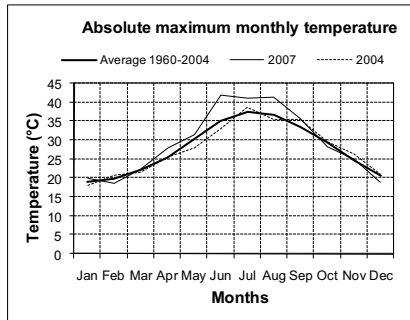
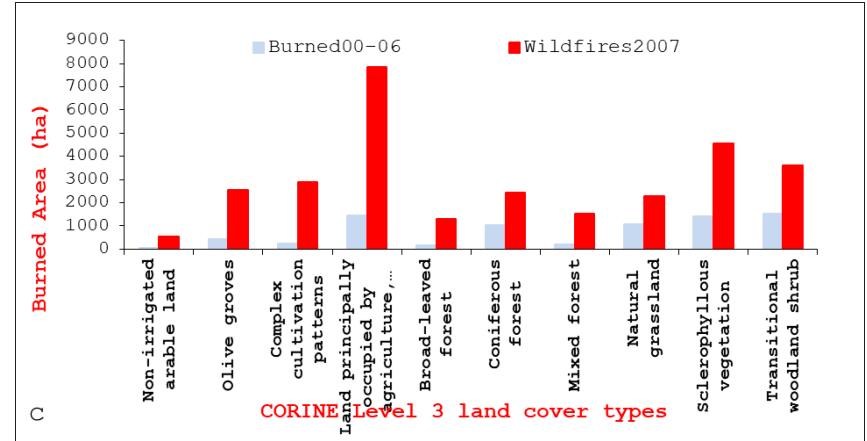
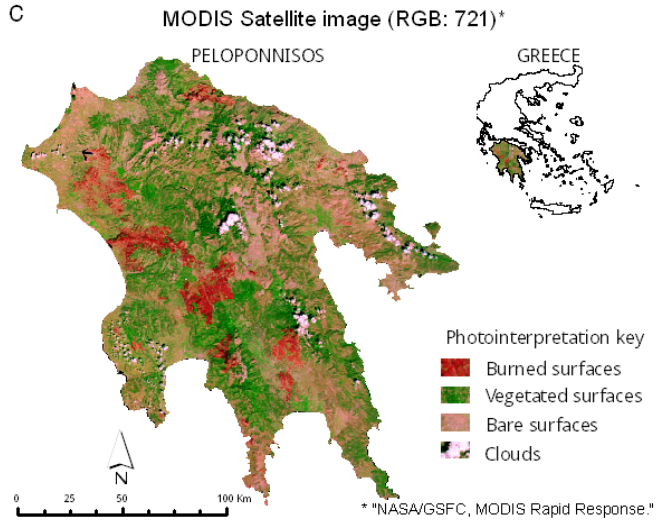
11. Thinning: Here, dense forest is transformed into open forest



12. Urbanization: Here, dense shrubland is transformed in urban

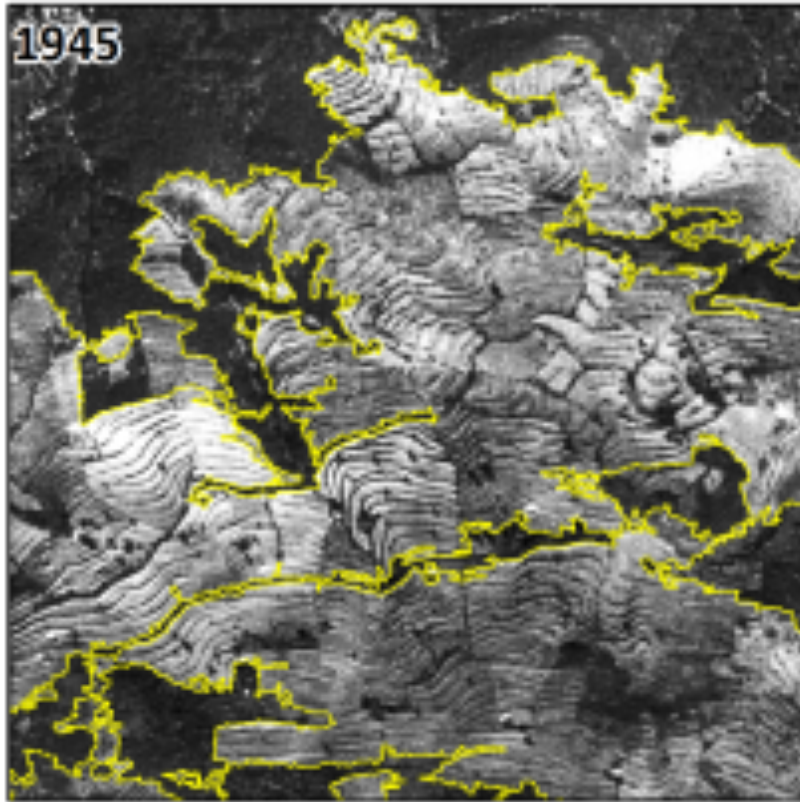


2007 large fires in the Peloponnese (Greece) - Synergy of fuel and weather



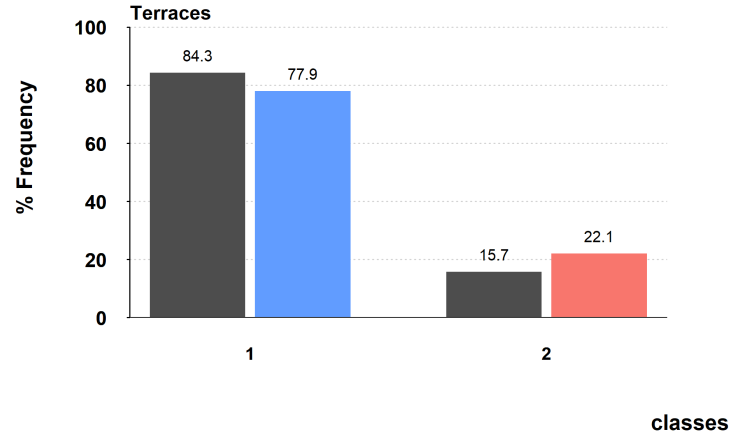
Koutsias N, Arianoutsou M, Kallimanis AS, Mallinis G, Halley JM, Dimopoulos P (2012) Where did the fires burn in Peloponnisos, Greece the summer of 2007? Evidence for a synergy of fuel and weather. *Agricultural and Forest Meteorology* 156:41-53

Agricultural abandonment: Here, croplands in terraces are abandoned.

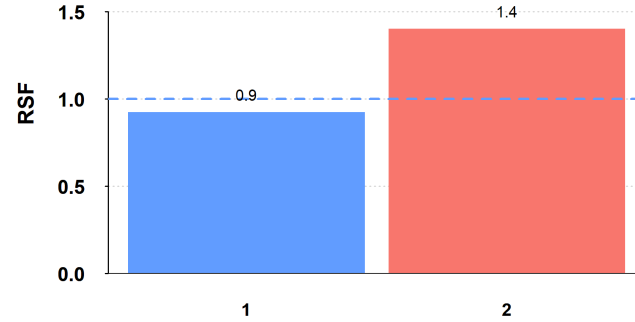


Selectivity of Burned Areas on Terraces classes (Andros)

Burned vs Available (%)



Resource Selection Function (RSF)



1 Other

2 Terraces

Terraces abandonment: Environmental and Cultural losses



Thank you for your attention