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Interactions between beekeeping and livestock farming systems in agropastoral landscapes: a floral resources centered approach

Gabriel Gonella, Estelle Leoni, Léo Mouillard-Lample, Claire Aubron, Marc Deconchat, Axel Decourtye and Cécile Barnaud

IFSA 2022 – Evora

➤ Beekeeping / farming interactions through floral resources



- Agriculture influences beekeeping floral resources structure and access at landscape scale (*Requier et al 2015, Durant 2019, Binimelis 2019, Dolezal 2019...*)
- Adaptation of beekeeping farms to floral resources changes. Resilience often decreased (*Durant 2019, Decourtye 2018, Malkmäki 2016...*)

+ An assumption : livestock farming systems diversity is related to a diversity of impacts on floral resources

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➤ Interactions between agriculture and beekeeping: which gaps?

- Few farming system approach to beekeeping (Adam 2019, Kouchner 2019), taking into account the **variety of beekeeping farming systems**
- No study at the **farming system scale** to elicit farming / beekeeping interactions
- Few research on beekeeping / farming interactions in **mountainous, livestock farming-shaped landscapes**

➤ How does agropastoralism shape beekeeping floral resources ?

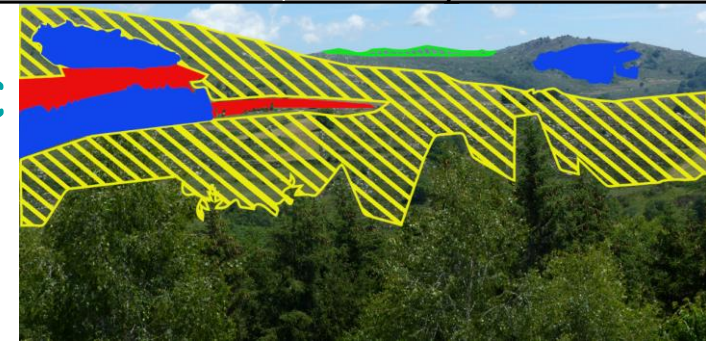
- How do **various beekeeping farming systems** exploit agropastoralism-shaped resources ?
- Hence, which are the **farming practices** the **most** potentially **impacting** for beekeeping floral resources ?
- In which **livestock farming systems** are these practices embedded ? Why do farmers do what they do ?



➤ Methods: agrarian diagnostic

Cochet 2012, 2015

- Landscape analysis
- Agrarian history of the study area (interviews)
- Technical-economical interviews
- Ideal-typical farming system typology and their integration in an agrarian system

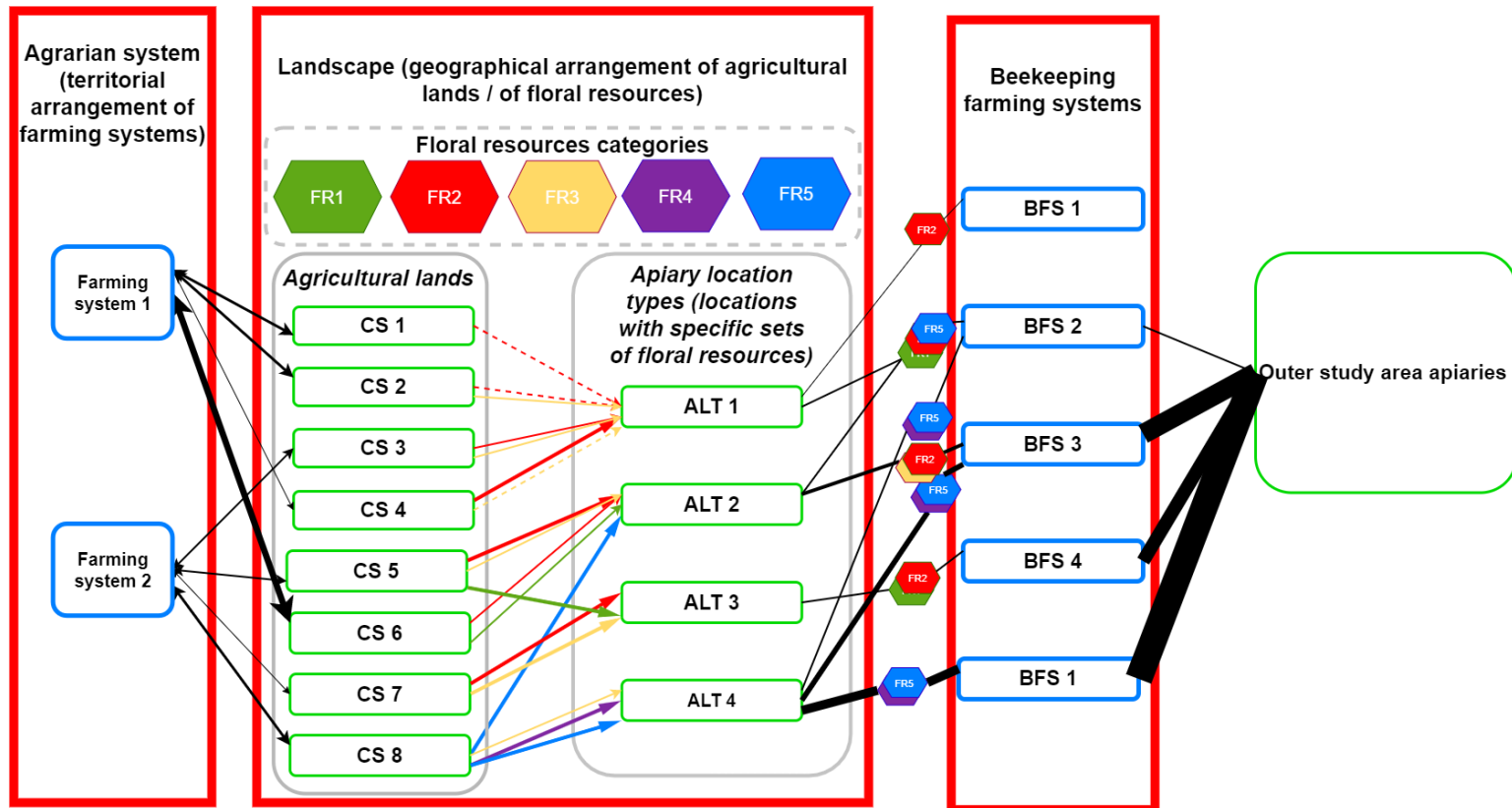


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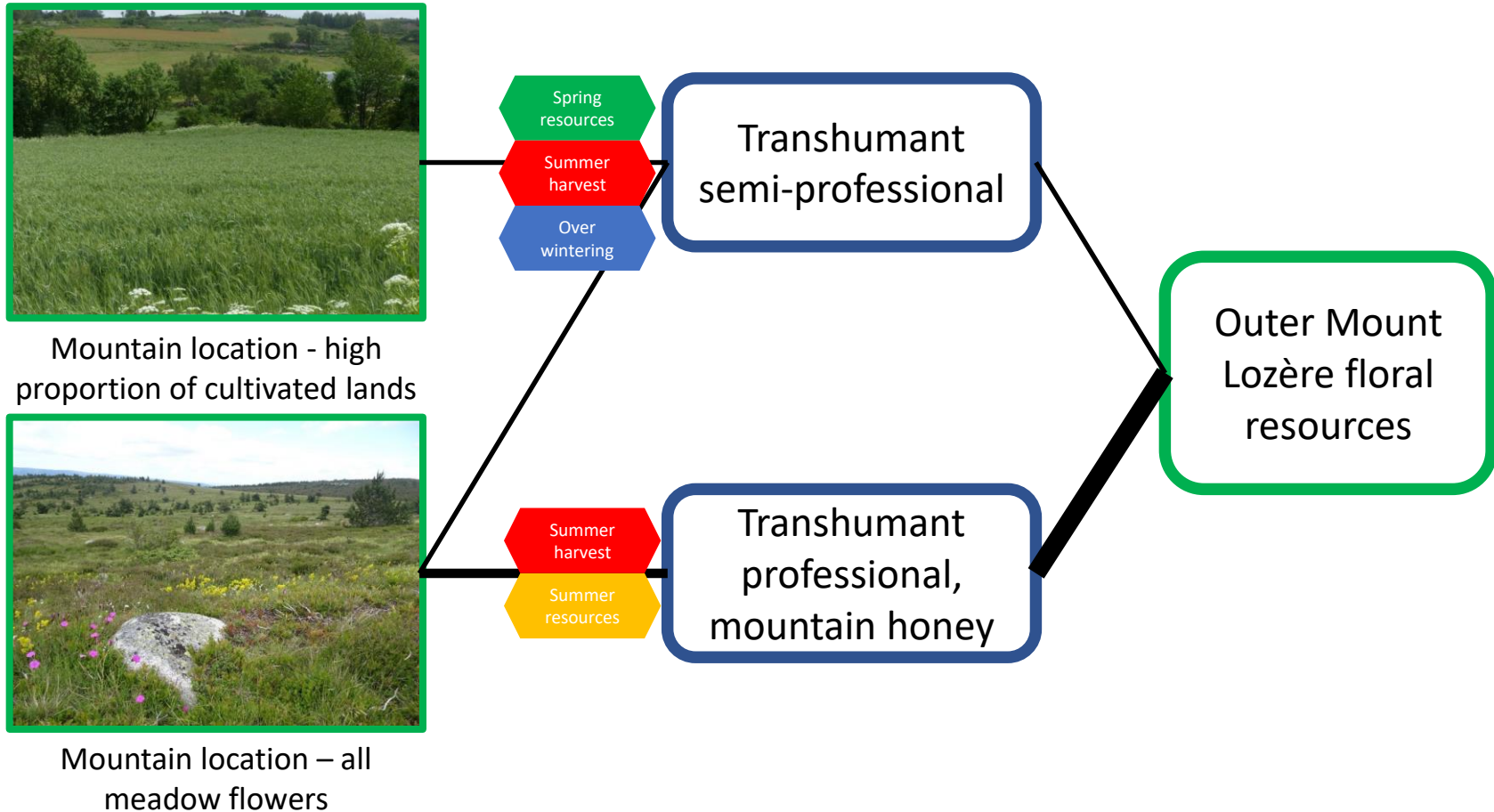
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➤ Conceptual framework : an original model of floral resources uses and production system



➤ Variety of floral resources uses among beekeeping farming systems

Variety of technical-economical interests among beekeeping farming systems



➤ Farming practices and floral resources

An example with meadow and rangeland resources



Intensity of rangelands management (pastoral load, cuts...)



Spring resources



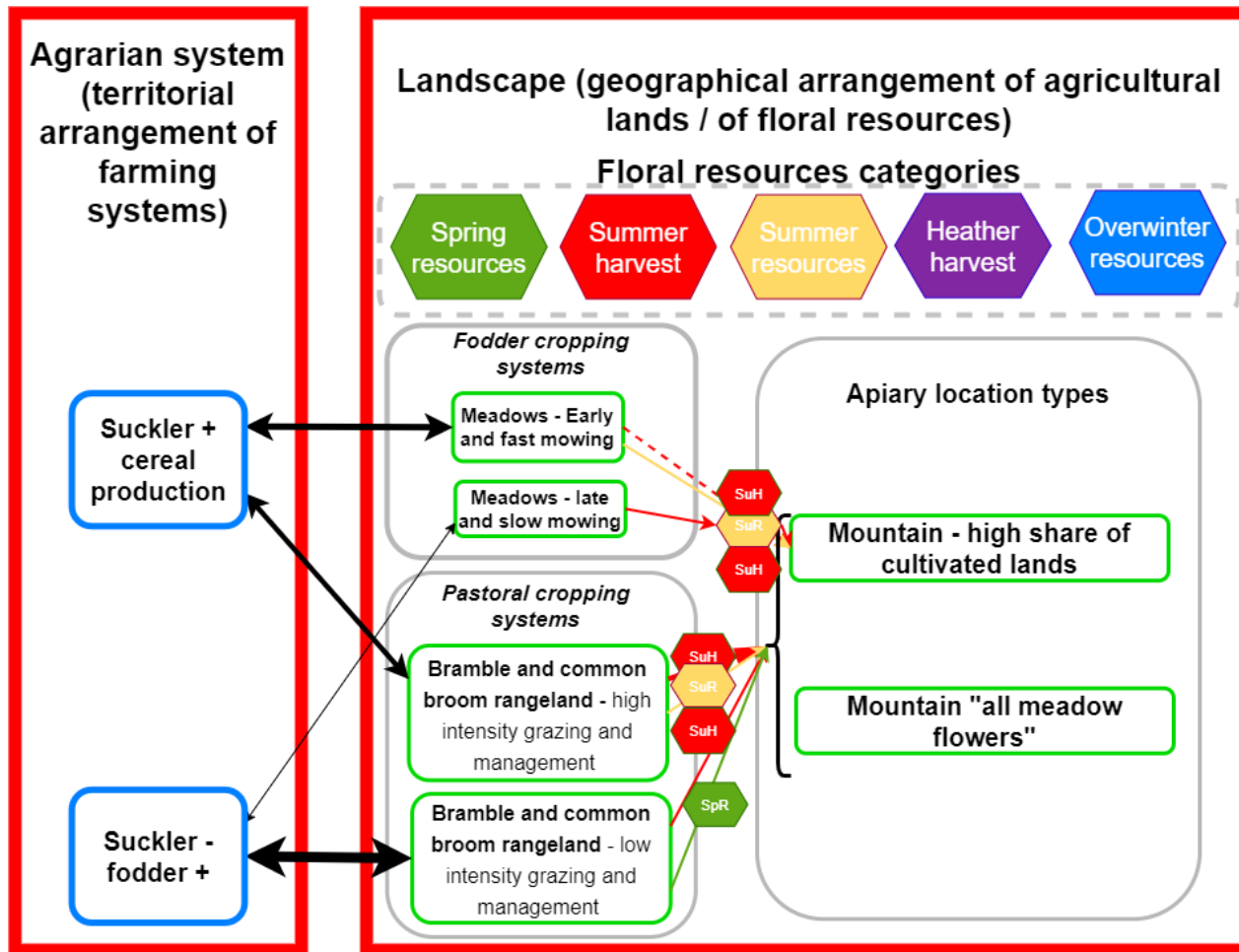
Intensity of meadows management (early & fast mowing, ploughing, species choice...)



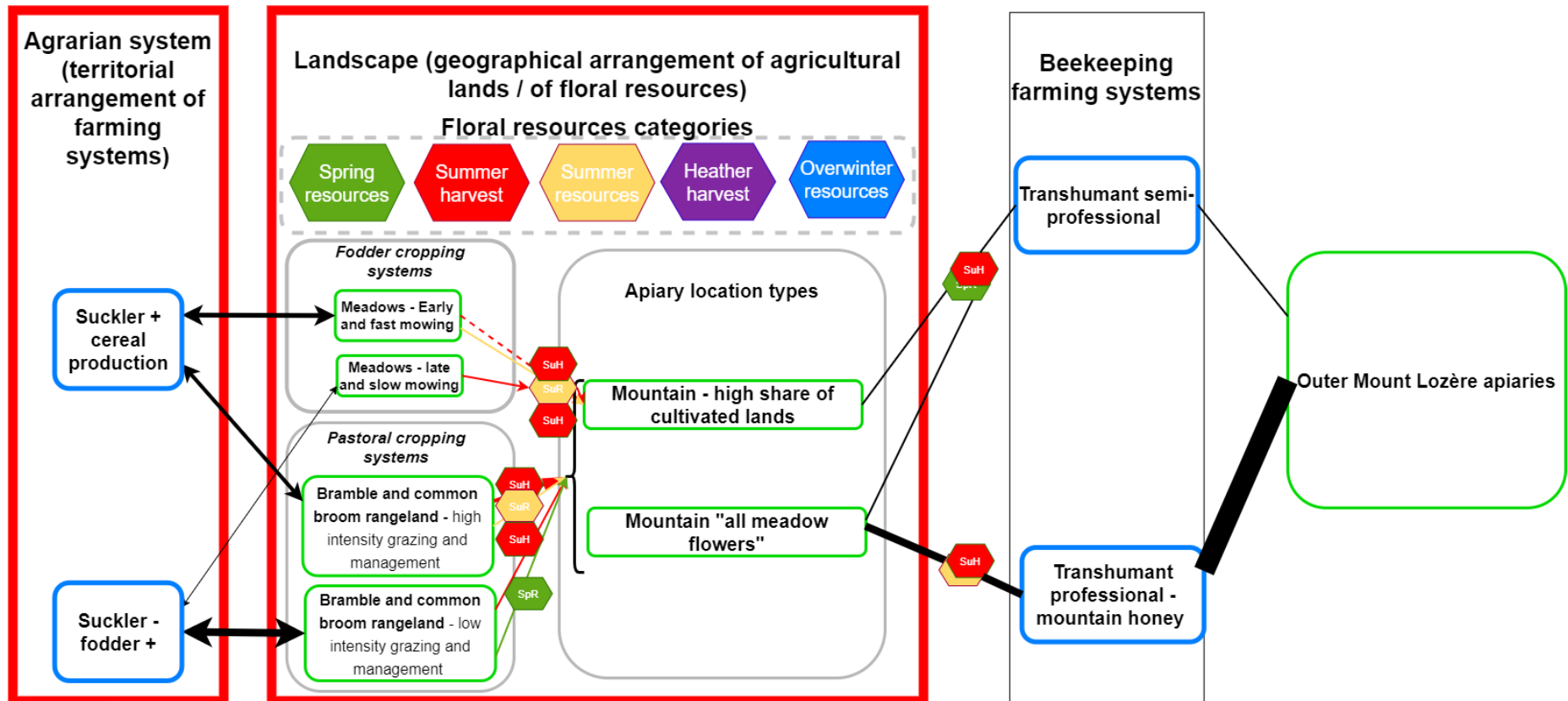
Summer harvest

➤ Unequal and paradoxical impacts of agropastoral farming systems on floral resources

The farming system scale to see beyond isolated practices



➤ Conclusion : complexity of beekeeping – farming interactions at farming system scale



➤ Thank you for your attention !



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➤ Supplementary slide : the whole picture

