



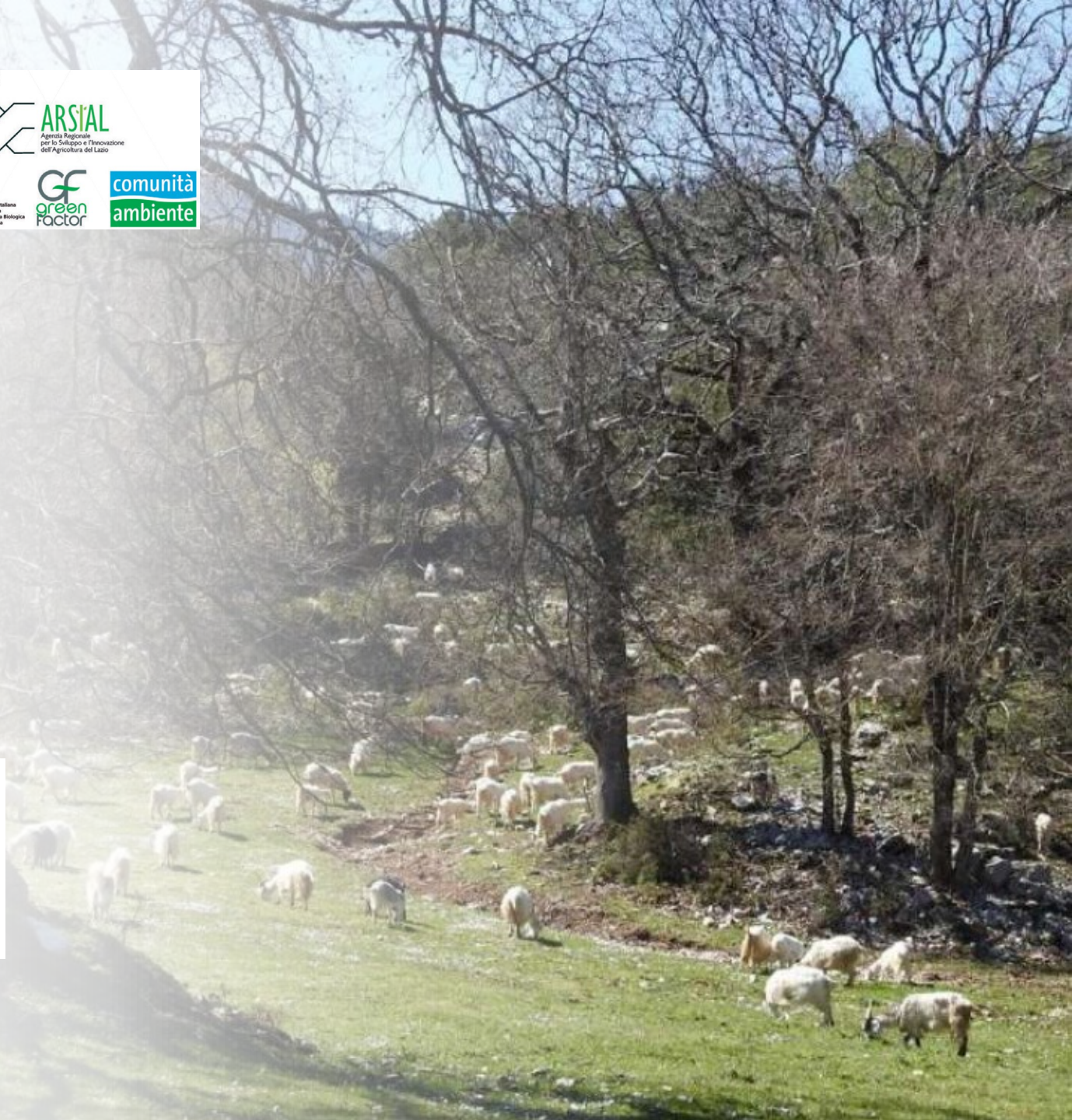
Caso práctico 6: LIFE Grace. Ganadería extensiva para la conservación de hábitats seminaturales abiertos

LIFE Connect Ricotí Final Congress

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Life Grace - GRAsslands Conservation Efforts through usage

- In Central Italy (as in many parts of the Mediterranean basin) extensive grazing created and maintained semi-natural grasslands over centuries.
- These anthropogenic habitats are key Natura 2000 conservation targets->**BIO-CULTURAL HABITAT**
- However, the decline of extensive livestock farming is driving shrub encroachment, rewilding and habitat loss.
- If pastures disappear, both biodiversity and the possibility of restoring grazing-based livestock systems are lost.
- LIFE GRACE (LIFE19 GIE/IT/000977 - **governance**) works to break this vicious circle by using grazing as a conservation process.

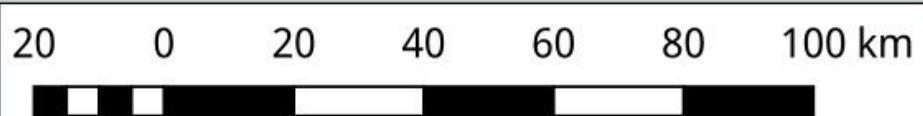
Target Natura 2000 grassland habitats:

6210* Semi-natural dry grasslands on calcareous substrates (*Festuco-Brometalia*)

6220* Pseudo-steppe grasslands with annual species (*Thero-Brachypodietea*)

6230* Species-rich *Nardus* grasslands.





Governance problem: enabling conservation grazing

- **Grazing is not only a technical practice:** animals can maintain habitats only if grazing is legally, logistically and socially possible.
- **Key «governance» barriers must be solved:** difficult land access, fragmented collective/common lands and with complex rules, insufficient infrastructure, unclear responsibilities and administrative constraints.
- **Environmental agreements and grazing plans are essential:** Life Grace translate Natura 2000 conservation goals into practical rules on where, when and how to graze.
- **Livestock products must be valorised:** meat, milk and local breeds linked to Natura 2000 pastures need market recognition, short supply chains and public/private demand to keep farmers economically engaged.
- **Farmers are co-managers of biodiversity:** effective conservation requires trust and coordination among breeders, municipalities, land managers and environmental authorities.



Actions: from knowledge to implementation

Habitat analysis and territorial mapping

Environmental, vegetation and socio-economic analyses were used to identify target grasslands, grazing areas, conservation needs and local constraints.

Farm engagement and stakeholder involvement

LIFE GRACE built relationships with approximately **600 farms** in the target areas, involving breeders, local communities, land managers and public authorities.

Grazing-based conservation management

Environmental agreements, cooperation models and grazing plans were co-developed to maintain or restore semi-natural grasslands through extensive livestock farming.

Valorisation of grass-fed livestock products

The project promoted meat and other pasture-based products linked to Natura 2000 grasslands, supporting short supply chains, market recognition and farmers' economic viability.



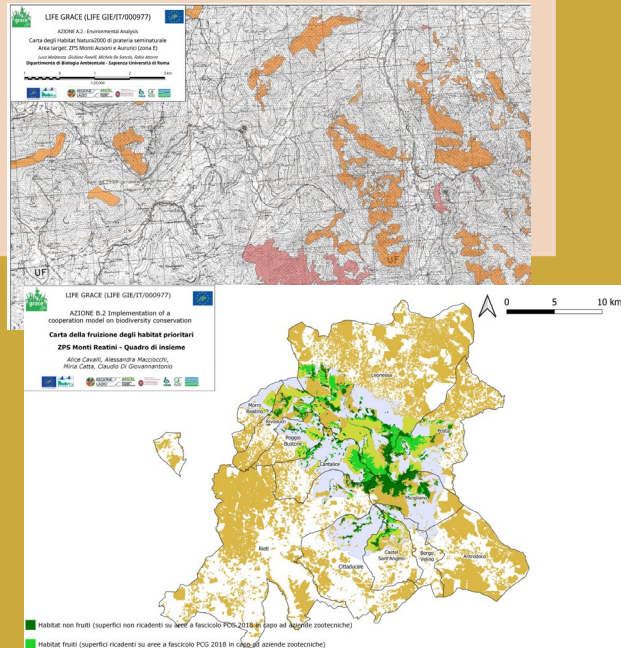
Monitoring: assessing grazing effects on habitat conservation

Vegetation indicators	Floristic composition, target species, grassland structure, bare soil, litter accumulation and presence of shrubs are monitored to assess habitat quality.
Grazing pressure and stocking rates	Livestock species, number of animals, grazing period and stocking density are recorded to evaluate whether grazing intensity is adequate, insufficient or excessive.
Habitat conservation status	Monitoring data are used to assess the condition of the target Natura 2000 grasslands: 6210*, 6220* and 6230*.
Shrub encroachment and vegetation closure	The expansion of shrubs and woody vegetation is tracked as a key warning signal of undergrazing, abandonment and progressive loss of open habitats.
Use pressure and spatial distribution	The spatial pattern of grazing use is evaluated to identify underused areas, overused patches, paths, resting zones and water-point effects.

Results/outputs: operational tools for conservation grazing

Governance tools for Natura 2000 grasslands

- Development of operational tools to make conservation grazing feasible, including **mapping of grazing areas, conservation measures and potential grazing surfaces.**



Environmental agreement models

- A template to **align farmers, land managers and environmental authorities** around shared conservation objective



Cooperation models among actors

- A framework for **joint work among breeders, technicians and scientists** in managing Natura 2000 grasslands.



Guidelines for grassland management and conservation

- **Technical guidance** for maintaining and restoring semi-natural grasslands through grazing.
- Innovation opportunities: **regenerative grazing, supported by virtual fencing and adaptive pasture management.**



GRAZING TECHNIQUES: FROM TRADITIONAL TO REGENERATIVE

Designing grazing pressure for habitat conservation



GRAZING SHAPES HABITATS

Techniques influence vegetation structure, soil condition, biomass removal and shrub control.



MATCH RESOURCES & OBJECTIVES

Integrate forage availability, animal needs, soil fragility and conservation and production goals.



ROTATION REDUCES PRESSURE

Alternating areas prevents soil compaction, avoids overuse and allows vegetation recovery.



ANIMALS AS ECOSYSTEM MANAGERS

Well-managed grazing maintains open habitats, increases plant diversity and ecosystem resilience.



1. TRADITIONAL SYSTEMS



GUIDED / CONTROLLED GRAZING

Animals are supervised by the farmer. Useful where fences or water points are limited.



ROTATIONAL GRAZING

The area is divided into sectors used in sequence. Animals graze for the time needed, then move on. Vegetation recovers during the rest period.



2. THE TRANSITION: TECHNOLOGY ENABLES ADAPTIVE MANAGEMENT

VIRTUAL FENCING



GPS collar + mobile app define virtual boundaries and move animals in real time.

WHY USE VIRTUAL FENCING TO MAKE THE TRANSITION?

- ✓ Better distribution of grazing pressure
- ✓ More efficient use of resources
- ✓ Reduced soil compaction and overgrazing
- ✓ Improved vegetation recovery
- ✓ Lower labour requirements
- ✓ Greater flexibility and adaptability



Virtual fencing provides precise, flexible and real-time control of animal movements, enabling regenerative grazing at scale.



3. REGENERATIVE SYSTEMS



ADAPTIVE MULTI-PADDOCK GRAZING

Short occupation (1–2 days) with adequate rest periods adapted to conditions.



MOB GRAZING (HIGH DENSITY – SHORT DURATION)

High stocking density for very short periods to stimulate soil life and plant regrowth.



TARGETED GRAZING

Animals target shrubs and woody encroachment. Combined with cutting or brush removal if needed.



GOAL

Improve soil health, biodiversity and ecosystem resilience while maintaining livestock production.



4. RESTORE, THEN SUSTAIN AND REGENERATE



AFTER RESTORATION: SUSTAIN AND REGENERATE

New grazing techniques conserve the restored grassland over time.



ATTRACT YOUNG GENERATIONS

Innovation, technology and modern management make grazing more efficient, profitable and attractive for the next generation.



REGENERATE THE PASTURE

Well-managed grazing stimulates soil carbon sequestration, biodiversity, plant productivity and long-term resilience.



GOAL

A living system that endures: restored today, productive and resilient tomorrow.

THE RESULT



Healthier grasslands



Greater biodiversity and resilience



Better soil and water function



Carbon sequestration



High-quality products and added value



Attracts younger generations



Well-designed grazing pressure, supported by virtual fencing, creates the conditions for conservation and sustainability.

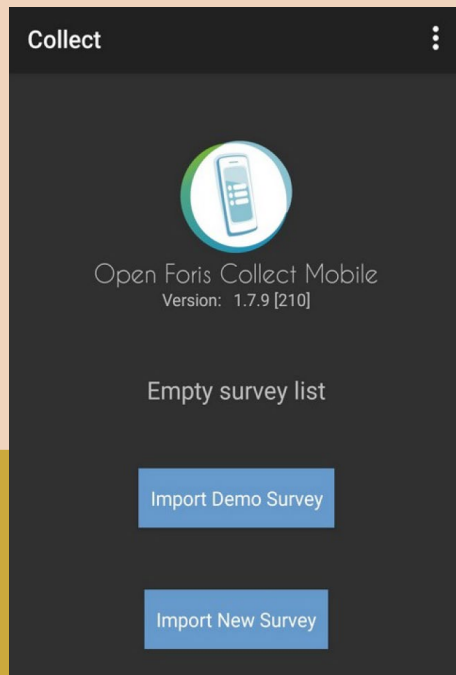


CONSERVATION GRAZING IS NOT ANIMAL PRESENCE; IT IS THE SPATIAL AND TEMPORAL DESIGN OF GRAZING PRESSURE.

Results/outputs: operational tools for conservation grazing

Monitoring protocols and mobile app

- **Simplified tools** allowing farmers to contribute to biodiversity and habitat monitoring



Marketing and valorisation tools

- **Community brand** specifications, business network agreements and models for promoting Natura 2000 livestock products.



Replicable approach

- A **Code of Conduct** and a **replicability plan** to transfer the LIFE GRACE approach beyond the original project areas.



Socio-economic dimension: making conservation grazing economically viable



Grazing delivers ecosystem services, and these services need to be economically recognised.

- Farmers can continue to manage these habitats only if their products receive adequate value in the market.



Pasture-based animal products link conservation and production

- Meat, milk and dairy products from animals grazing Natura 2000 grasslands can express more than nutritional value: they reflect biodiversity conservation, landscape stewardship, local breeds and territorial identity.



From pasture to gastronomy

- Short supply chains, territorial branding and high-value gastronomic products can turn pasture-based livestock production into a diversified local economy, linking conservation, food culture and rural income.





Transferability to open habitats in Europe

- LIFE GRACE offers a transferable governance model linking farmers, habitats, products and biodiversity.



- This directly connects with LIFE Connect Ricotí and other projects: open-landscape species require actively managed open habitats.



**Thanks for your
kind attention!**

grace
Life

