

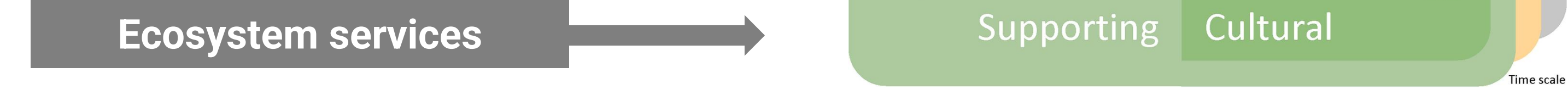
Enhancing ecosystem services through community restoration: The Model Forest approach from the Aterno Valley case to the Mediterranean Network

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1. THE CONTEXT: Why to focus on «community restoration»?

In Europe, extensive spontaneous and uncontrolled reforestation is occurring due to the abandonment of rural and mountain areas, as well as the decline of agrosilvopastoral economies. In contrast, deforestation in the Global South is driven by the demand for wood and primary forest resources in Western countries; in Italy alone, imports account for 80% of the total wood sector.

In 2024, EU nature restoration law aims to restore degraded ecosystems across Europe and promotes the recovery of (among others) forest ecosystems, contributing to carbon sequestration, biodiversity conservation, and sustainable economic opportunities tied to ecosystem services. However, how to contribute through ecosystem services to the active participation and care of communities of the environment where they live?



Source: Nocentini et al., 2022

2. THE MODEL FOREST

A Model Forest is a process for bringing a diverse partnership of individuals and groups together to realize a common vision of sustainable development in a large landscape. Geographically, a Model Forest is a fully working landscape of forests, farms, protected areas, rivers and towns.

The stakeholders' define the governance structure and strategic plan, then work together to define what sustainability means in their own context, identify a common vision and set of goals, devise to achieve the goals set out in that plan. In turn, the process nurtures a depth of trust and transparency, increasing the willingness to implement innovative solutions.

Model Forests are designed to occupy the middle ground between policy and practice. They are living laboratories where governments and decision makers can test new policies or programs before scaling up to other areas, or where innovative practices developed within the partnership can be shared with decision makers for implementation beyond the Model Forest boundary. They are not a project, but aim to undertake projects.

MODEL FOREST' PRINCIPLES



First Model Forest:
Canada, 1992 (Bas-Saint-Laurent)

The network today:
60+ Model Forests in 35 countries covering 73+ million hectares.

First 5 years of the Model Forest focus on:

- ✓ Engagement of the communities, enterprises, associations, institutions,...
- ✓ "Heritage walks" to rediscover the landscape, uses of the forests and promoting contemporary uses
- ✓ Studies and researches on the local forest history, biodiversity, composition, possibilities, relation with the community
- ✓ Studies to assess forest productivity in relation to truffles, depending on different management types

Forest planning to enable municipalities to participate in grants for financing forest management

Now:

- Need to focus on entrepreneurship for agrosilvopastoral economies
- Active use of the forest and its resources
- Integration of ecosystem services
- Reinforce the community active engagement

Because:

- ❑ Lack of businesses related to agrosilvopastoral economies
- ❑ Lack of innovative businesses and opportunities for local development
- ❑ Aging population and migration of youth

QUESTIONS:

1 How can sustainable forest management and valorization of ecosystem services can enhance local value chains while creating local job opportunities?

2 How can activating ecosystem service-based value chains support planned forest management and sustainable local development?

3. THE ATERNO VALLEY AND WHY A MODEL FOREST

THE LOCAL COMPLEXITY

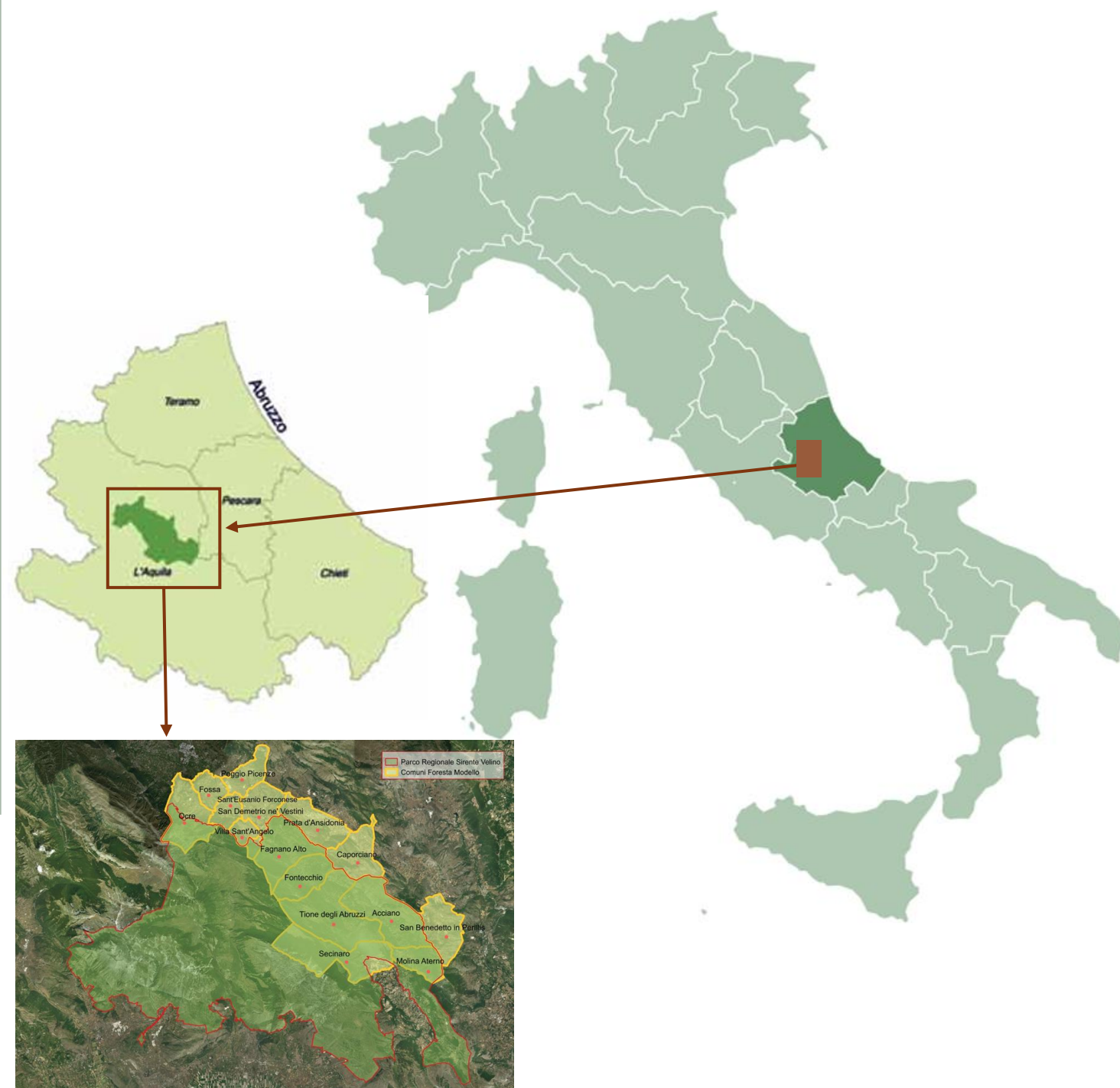
- Ecosystem degradation due to land abandonment
- Severe shrinking population (average -80% inhabitants in a century)
- Loss of traditional forest uses and their integration with agro-silvo-pastoral activities
- Reduction in social and civic services (transport, healthcare, job opportunities, education, etc.)
- Disappearance of the rural mosaic landscape shaped by centuries of human-environment coexistence
- Increased presence of wild animals (as wild boars, deer)
- 2009 L'Aquila earthquake and the destruction of most buildings

Resulting in:

- ❖ Reduced habitability of the area
- ❖ Uncontrolled, spontaneous regrowth of forests

Four preliminary phases for planning

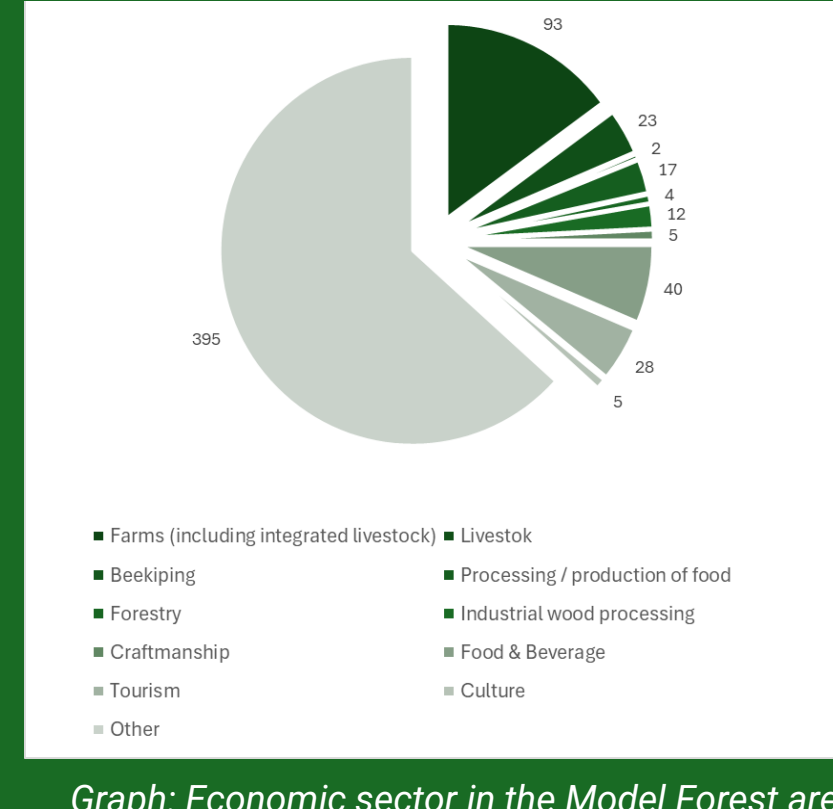
- Survey of the forests' condition, focusing on dendrometric, structural, and species composition aspects
- Analysis of local residents' perception of the forest
- Analysis of locally-suitable ecosystem services, focusing on those accessible to citizens and businesses
- Analysis of a set of biodiversity indicators (mosses, lichens, soil microfauna) that reflect the health of the forests



Map: Model Forest geographical area (national, regional, local scale)

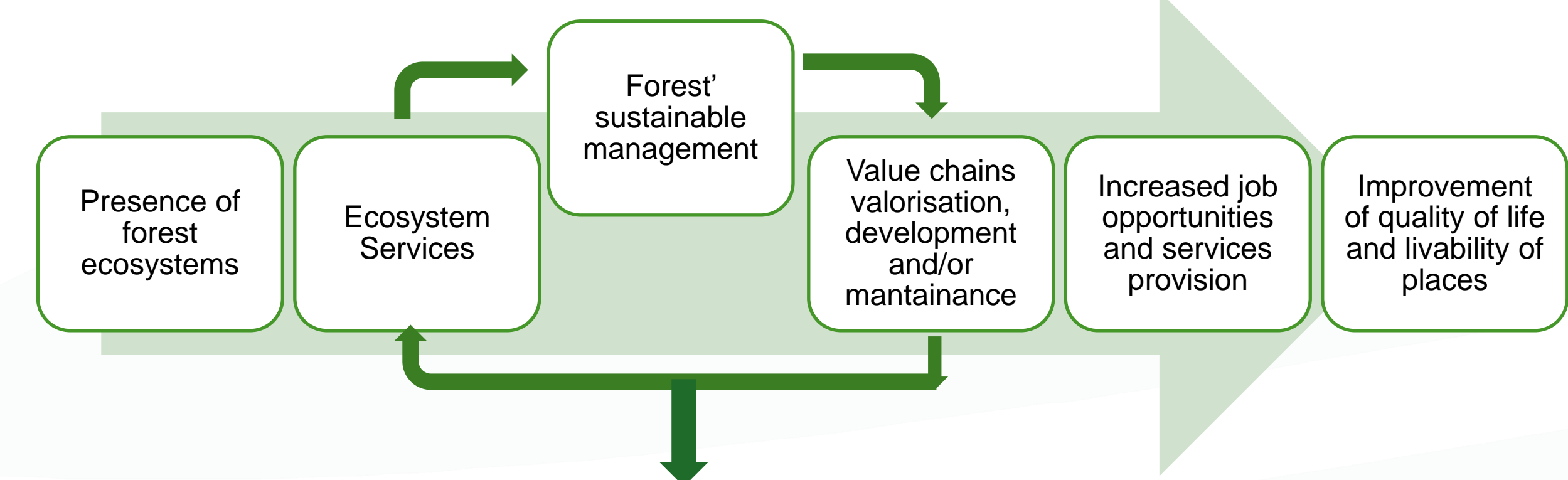
FORESTA MODELLO Valle dell'Aterno

- **2018** (foundation)
- **15** municipalities
- **1** Regional Natural Park
- **+ 100** members
- **60%** average forested area
- **17.535** ha of forests
- **8.271** inhabitants in 2021
- **(-10.5%** since 1991)



Graph: Economic sector in the Model Forest area

4. CHANGING PARADIGMS: THE PROCESS AND METHODOLOGY APPLIED



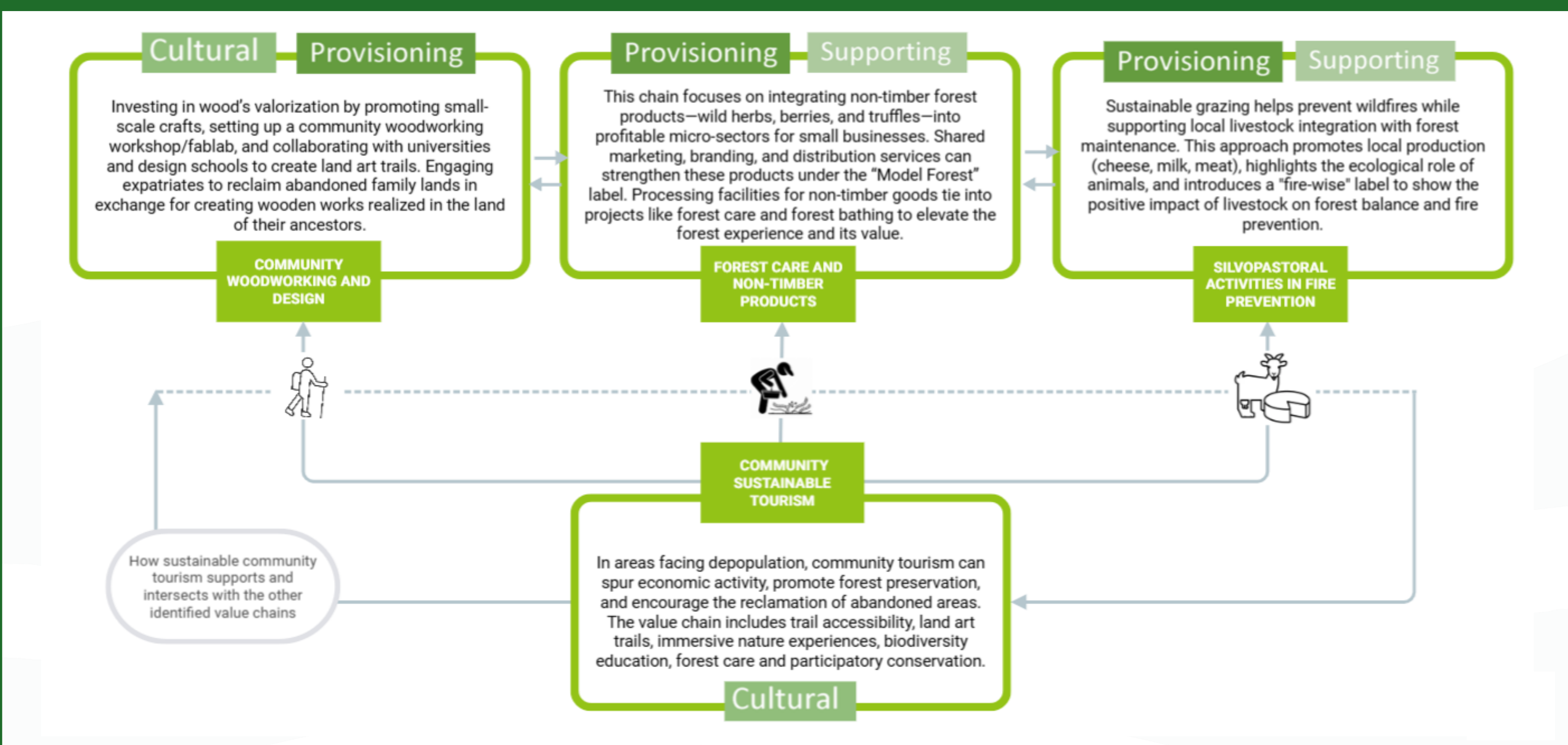
Phase 1

Research and analysis of forest value chains related to local environment and communities and related ecosystem services, focusing on those accessible to citizens and businesses, rather than those—although important—that cannot, in the short term, generate income and thus a positive feedback on the relevant ecosystem.

Phase 2

Development of projects to activate the value chains identified in the research phase to enable local economies and job opportunities through sustainable forest management.

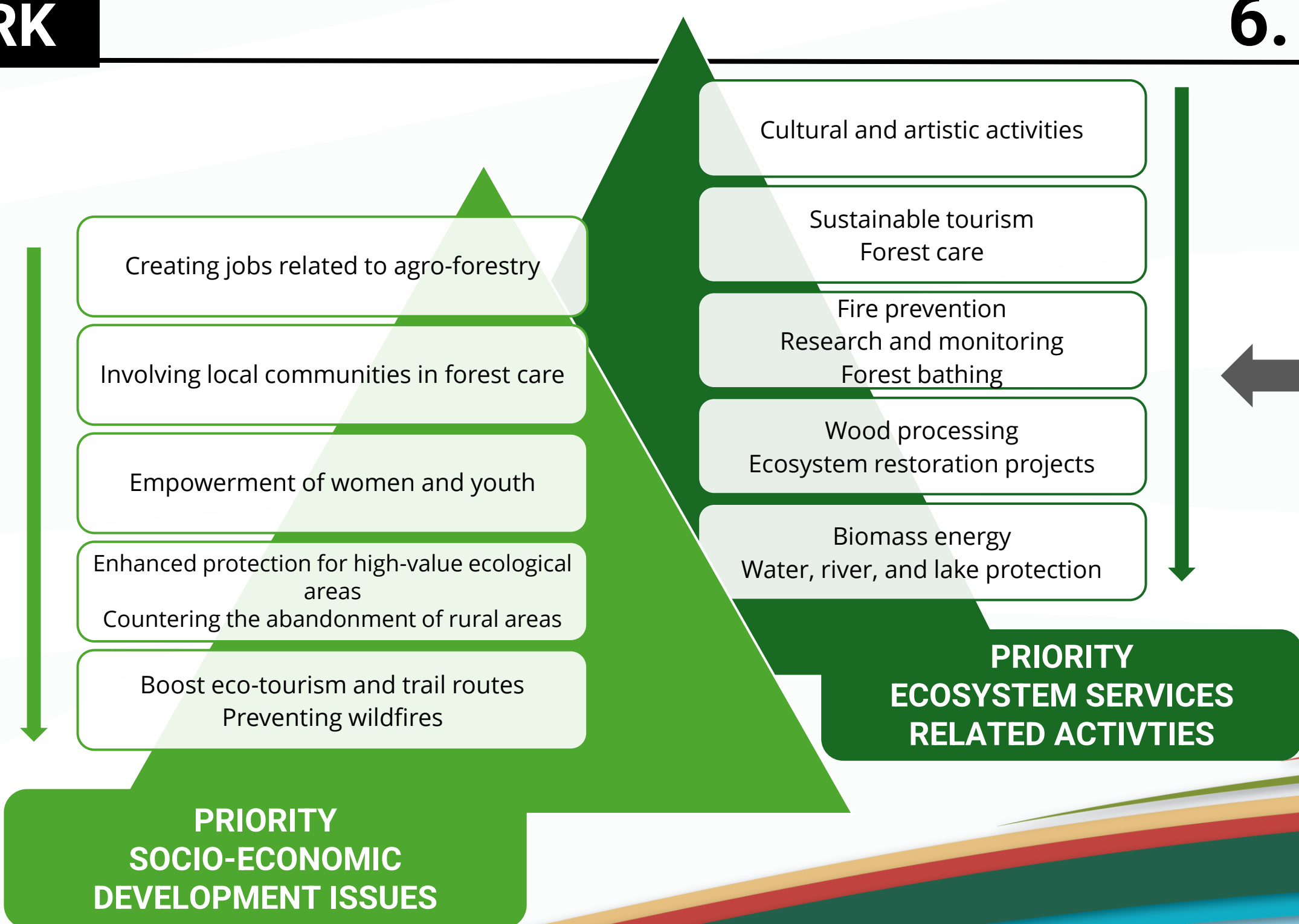
5. PRELIMINARY RESULTS: THE FOUR VALUE CHAINS AND ECOSYSTEM SERVICES FOR THE ATERNO VALLEY



THE MODEL FOREST MEDITERRANEAN NETWORK



Map: Model Forest Mediterranean Network



6. FROM THE LOCAL TO THE MEDITERRANEAN

What are the priorities for ecosystem services and socio-economic activities across the Mediterranean network of Model Forests?

Starting with this question, we are exploring the needs and potential areas of interest for collaborative work across the Mediterranean region, which will inform future:

- JOINT ACTIVITIES
- INTERNATIONAL PROJECTS
- KNOWLEDGE EXCHANGE
- EDUCATIONAL PROGRAMS

Reinforcing the network while acting at the local scale is the foundation of the Model Forest approach.

Preliminary results are shown on the left (8 respondents out of 13 Model Forests in the Mediterranean Network)