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Forest EcoValue

Economic value of forest ecosystem services

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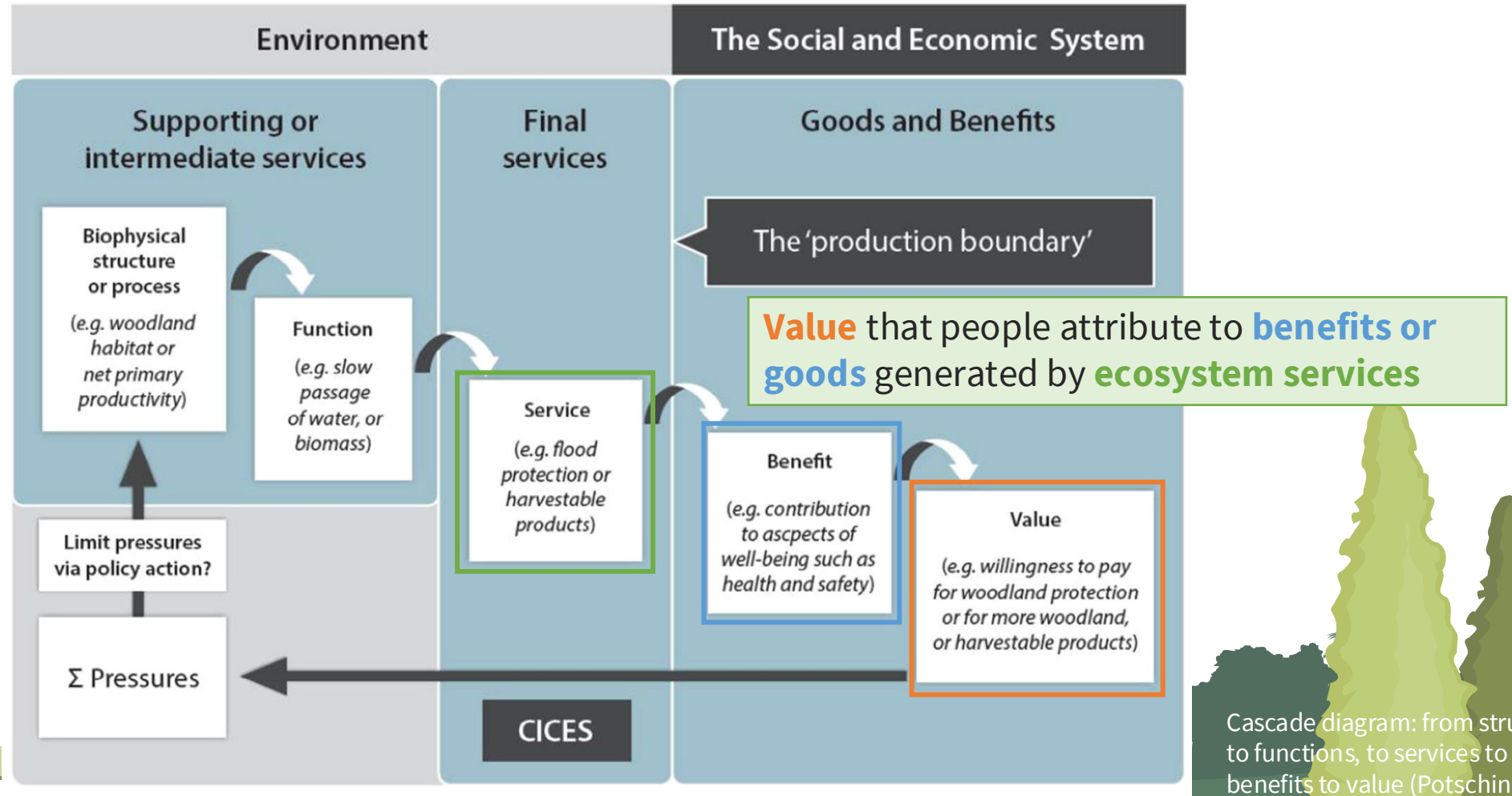


Final Conference: *Forest Ecosystem Services and Sustainable Value Chains in the Alpine Region*

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Economic value of ecosystem services



Cascade diagram: from structure to functions, to services to benefits to value (Potschin and Haines-Young, 2017)

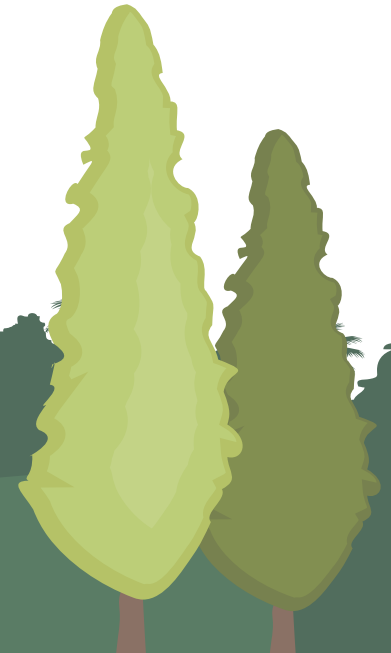
Monetary valuation of ecosystem services

Value \neq Price

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1. 0 price \neq 0 value
2. X value \neq X price

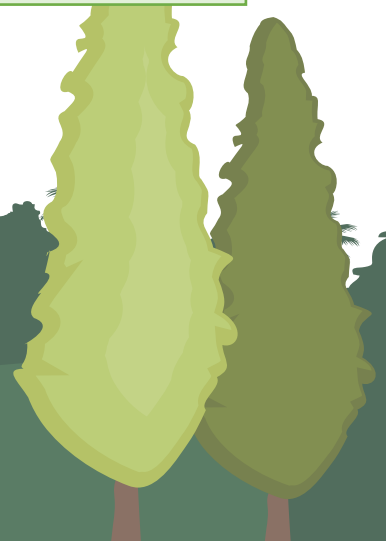


Monetary valuation of ecosystem services

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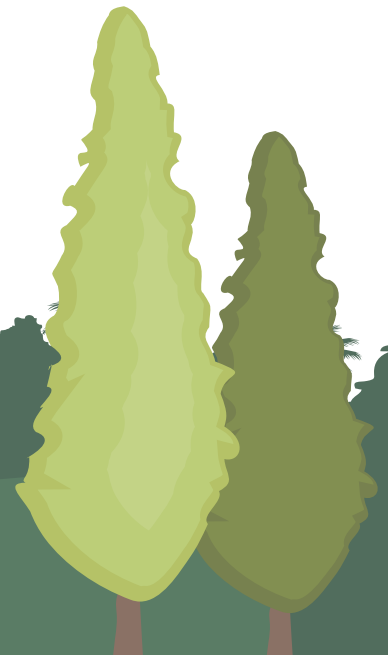
Monetary valuation helps to understand how much **welfare** ecosystems generate and evaluate **trade-offs**



Economic valuation in Forest EcoValue

Three main questions

- How much **welfare** do ecosystems generate in the pilot areas?
- What are the potential **trade-offs** to be aware of in decision-making?
- How can economic value **inform and inspire** payment schemes, business models and markets?



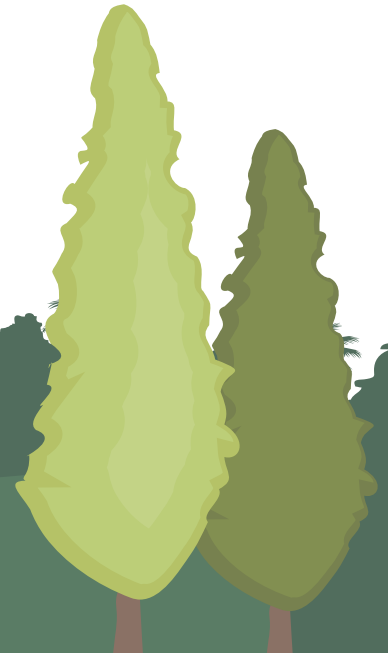
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Context and challenges

- A transnational network of Living Labs
- Different geographical, socio-economic and forestry contexts
- A variety of forest ecosystem services in focus
- A necessity to produce a holistic valuation that covers as many ecosystem services as possible
- Limited resources



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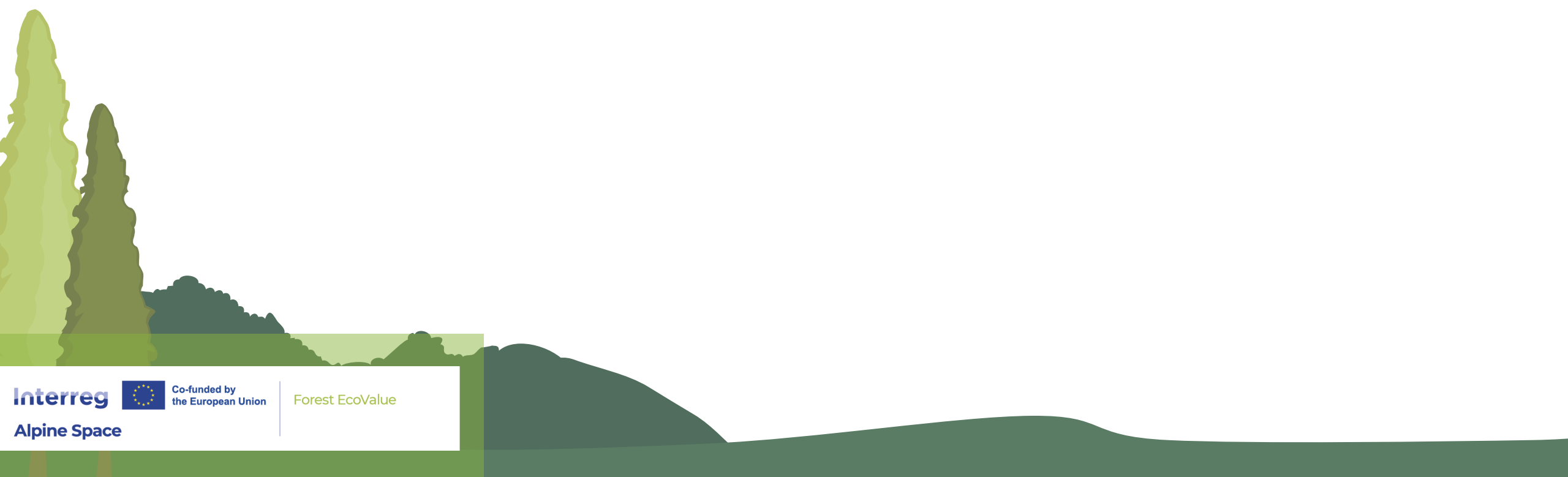
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Valuation method: *value transfer*

- Low methodological requirements
- Cover all national Living Labs, address multiple ecosystem services and explore potential trade-offs
- Commonly used in policy making

Value transfer for Alpine forests

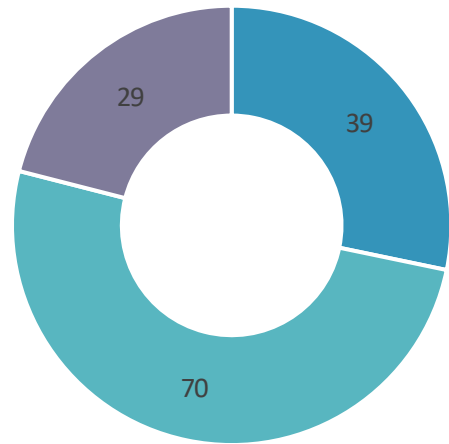
Applying values from primary European FES valuation studies to pilot (Living Lab) areas



Value transfer for Alpine forests

Applying values from primary European FES valuation studies to pilot (Living Lab) areas

**138 value observations
from 29 studies**

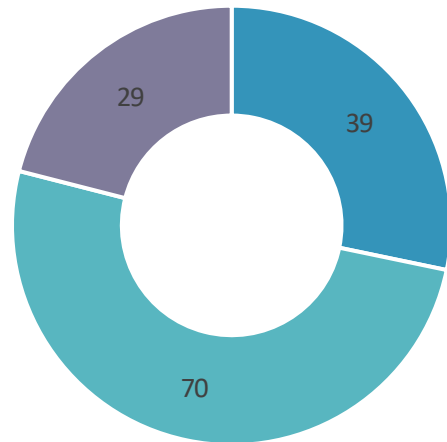


■ Provisioning ■ Regulating ■ Cultural

Value transfer for Alpine forests

Applying values from primary European FES valuation studies to pilot (Living Lab) areas

**138 value observations
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■ Provisioning ■ Regulating ■ Cultural

20 FES thematic groups

Provisioning

Timber
Other non-wood forest products
Mushrooms
Game
Water
Energy wood
Other wood forest products

Regulating

Air quality maintenance
Carbon sequestration
Carbon storage
Natural hazards protection
Pollination
Habitat maintenance
Water quality maintenance
Climate regulation
Soil loss prevention

Cultural

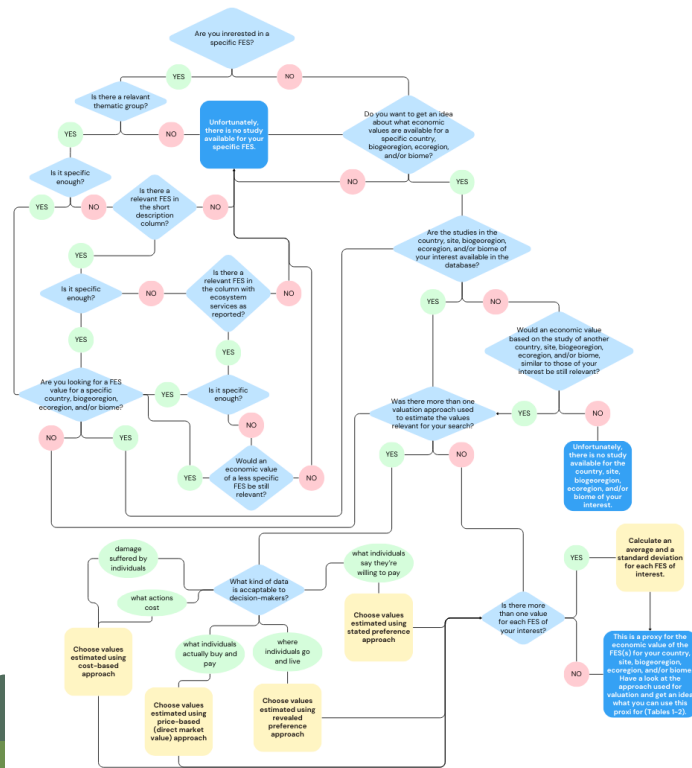
Recreation
Non-recreation
Leisure mushrooming
Leisure hunting

Value transfer for Alpine forests: How to

Individual approach: decision tree

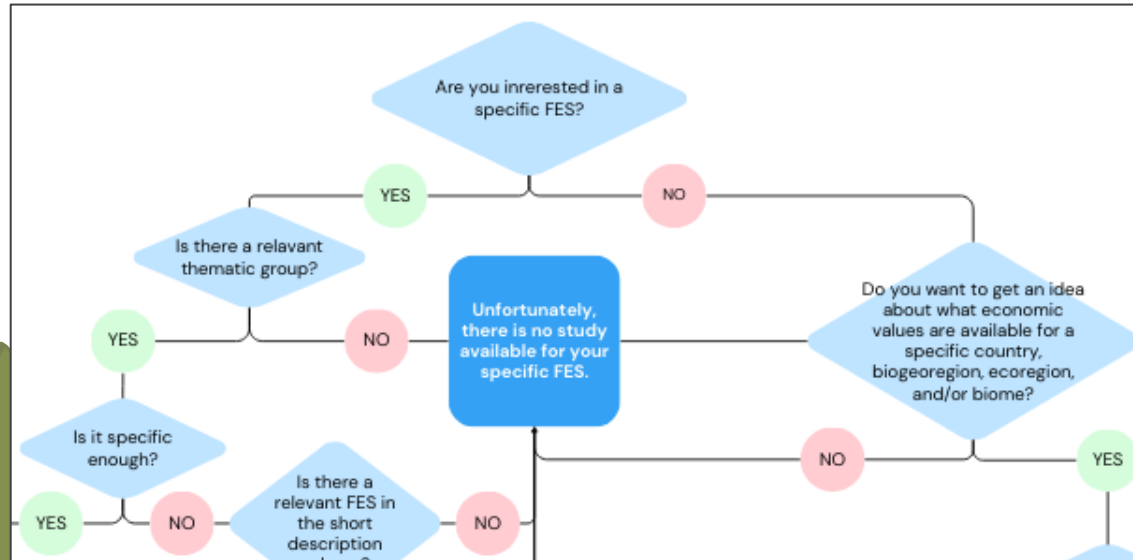
Quick overview: Alpine average

Based on pre-estimated Alpine average proxies for Austria, France, Germany, Italy and Slovenia

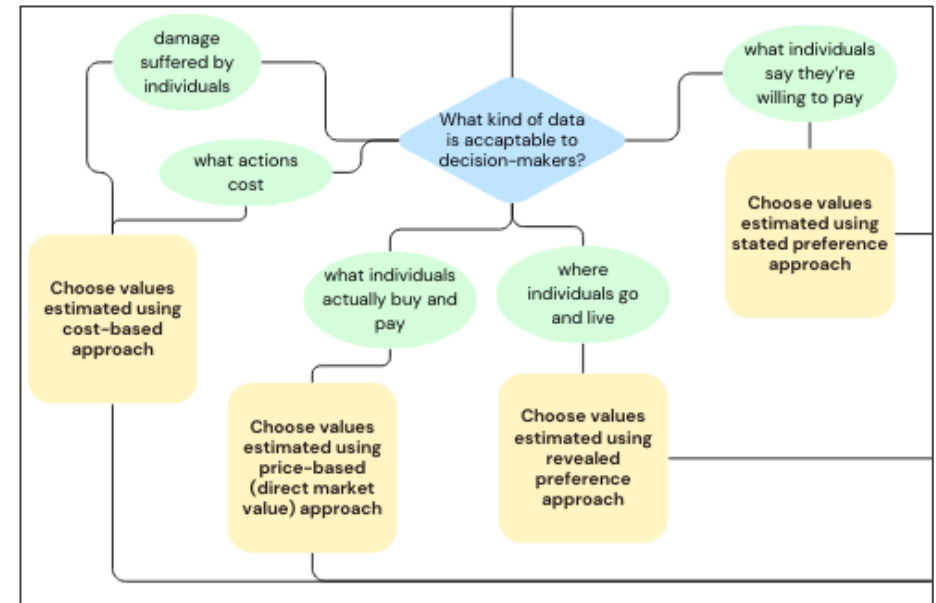


Value transfer for Alpine forests: Decision tree

Start: Ecosystem service / geographical relevance



End: What questions do we want valuation to answer?



Value transfer for Alpine forests: Alpine average

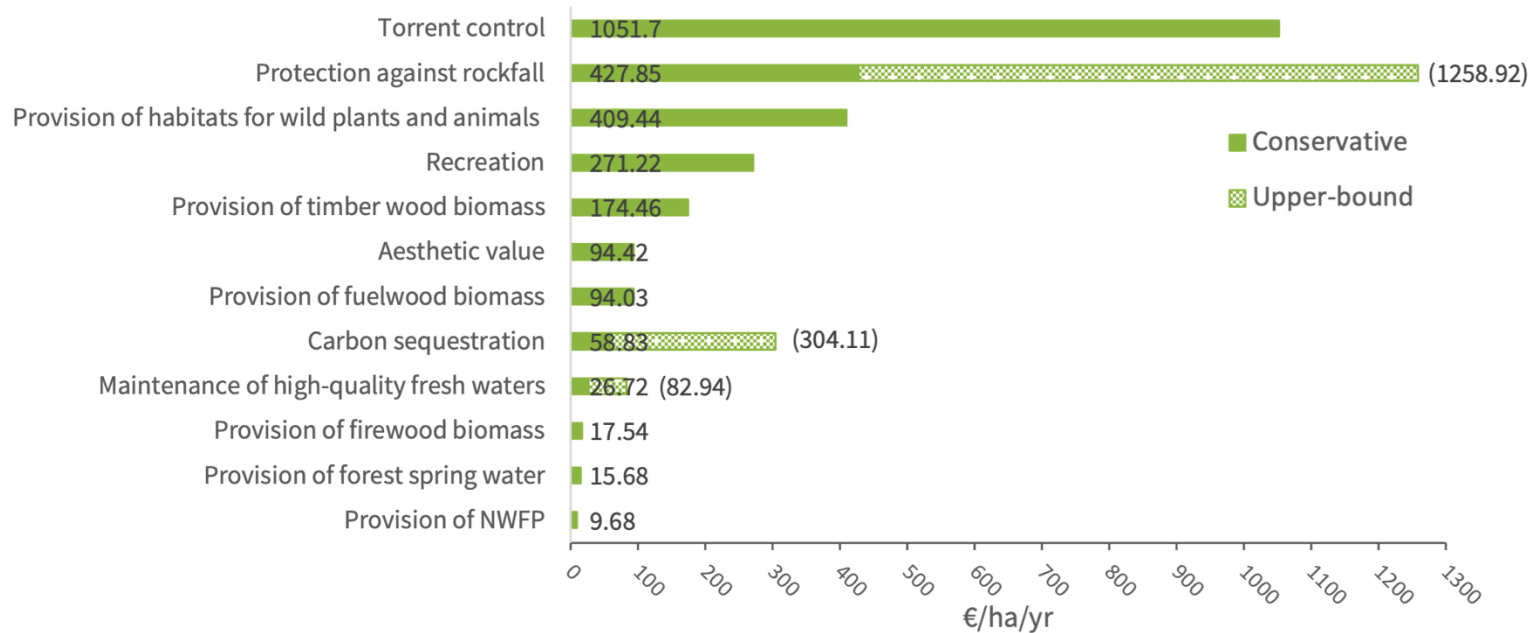
- **Average value in euro per ha of forest**, based on different grouping criteria (e.g., method or ecoregion)
- **Adjusted to local socio-economic context** of five partner countries by Purchase Power Parity conversion factor

Value transfer for Alpine forests: Alpine average

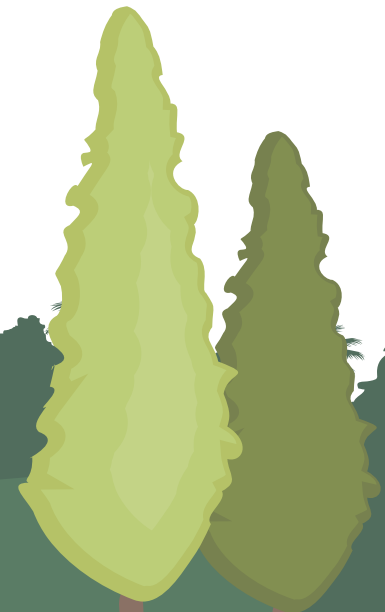
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Example of France, Annecy Living Lab

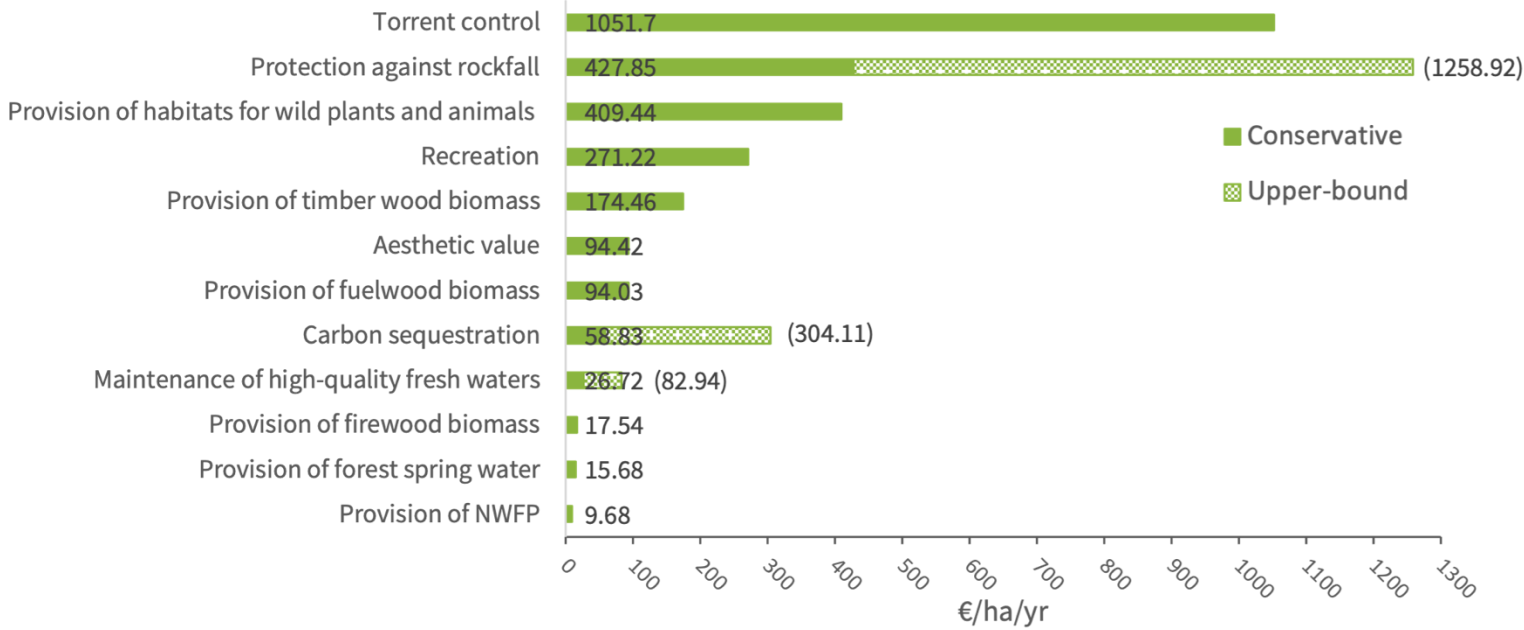
Annecy LL: Alpine average in France



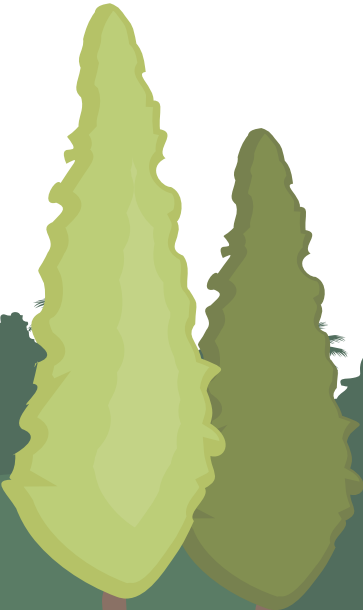
- Which FES are most and least valued?
- What does it mean? High/low social relevance? Or high/low awareness? Or scarcity/abundance?



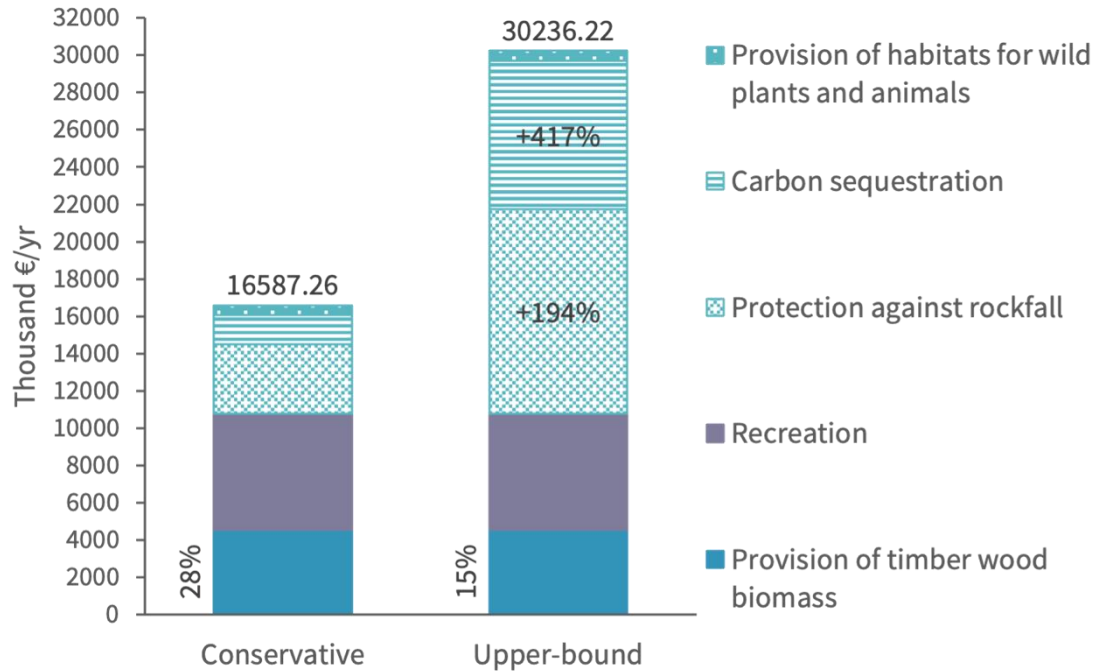
Annecy LL: From unit values to total economic value



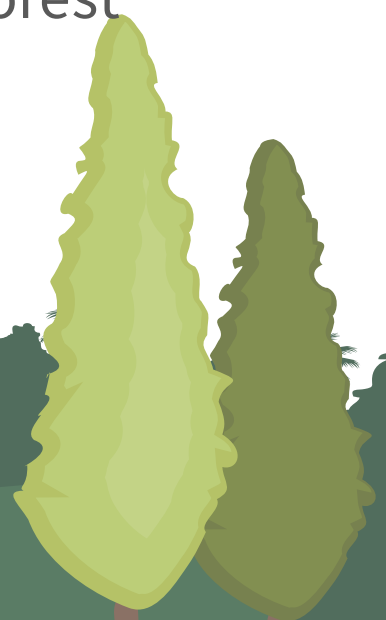
X forest area providing respective FES (ha)



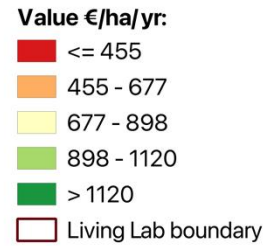
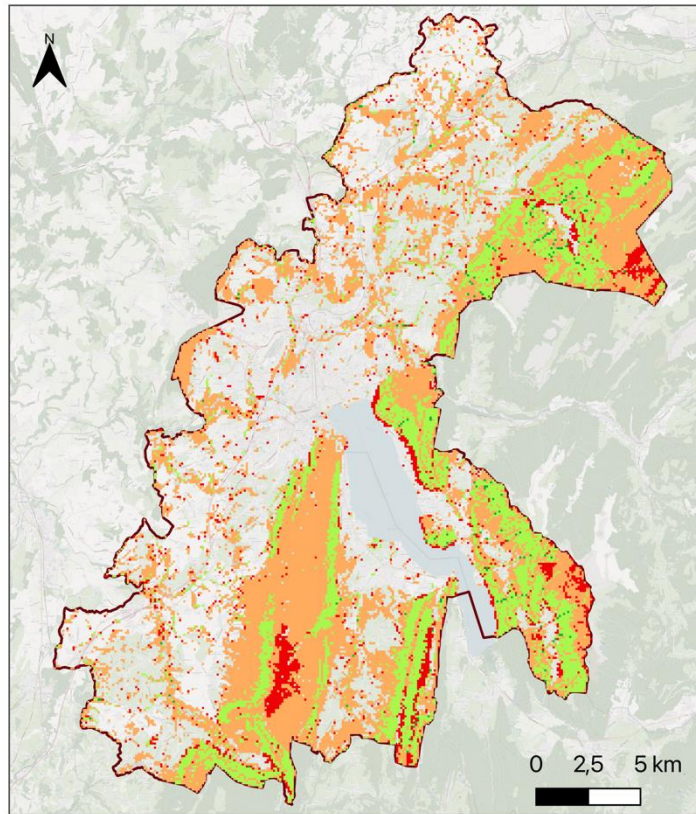
Annecy LL: From unit values to total economic value



- How much welfare do ecosystems generate?
- What are the potential trade-offs to be aware of in decision-making?
- How does the reduction of forest area differently affect FES?



Annecy LL: FES economic value mapping

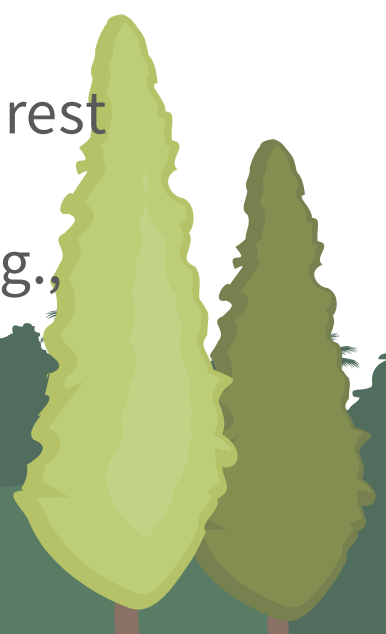


Questions that we need to ask:

- How are values distributed?
- What areas demand protection?
- What areas demand care?

Supplementary maps could help answer:

- Who provides these FES (e.g., forest ownership)?
- Who benefits from these FES (e.g., residential areas vs. tourist infrastructure)?



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All materials available on

www.alpine-space.eu/project/forest-ecovalue/

Methodology in

- D.1.3.1 Working Group Eco – Report
- D.1.3.2 Methodological guidelines and tools



Valuation results will be published by April 2026

