Consiglio Nazionale delle Ricerche

Implementation examples in Alpine Italy: practical cases of multifunctional and biodiversity-oriented forest management

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Workshop on the EU Forest Strategy 2030 and Alpine Biodiversity Board of Alpine Convention for the Alpine Biogeographic Region - Turin 8 April 2024

European Commission · Alpenkonvention Convention Alpine Alpska konvencija Convenzione delle Alpi · italian delegation alpine convention · Ministero dell'Ambiente e della Sicurezza Energetica · Regione Piemonte

MANFOR C.BD
MANAGING FORESTS FOR MULTIPLE PURPOSES:
CARBON BIODIVERSITY SOCIO-ECONOMIC WELLBEING

LIFE ManFor C.BD 2010-2016

Alps: Implemented in Veneto, Friuli Venezia Giulia, Slovenia

LIFE09 ENV/IT/000078

LIFESPAN 2020-2026

Alps: Implemented in Friuli Venezia Giulia

LIFE19 NAT/IT/000104

LIFE09 ENV/IT/000078

Managing forests for multiple purposes: carbon, biodiversity and socio-economic wellbeing

01/10/2010 – 30/04/2016

€ 5’030’000 (50% cofunded by LIFE+)

With the support of CFS, Slovenian Forest Service, Abruzzo Region Lorenzago di Cadore

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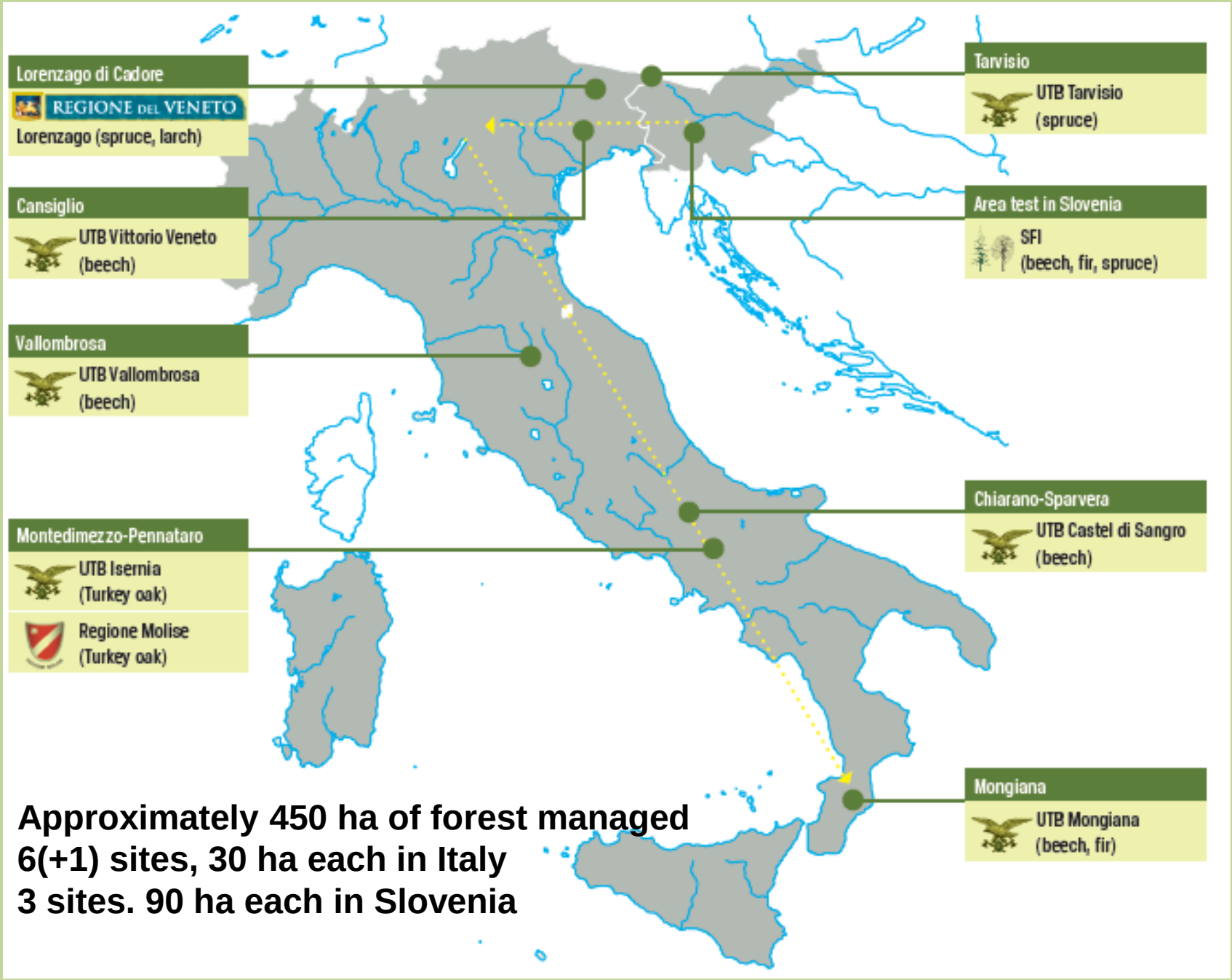
Where we work(ed): Project Test Areas (Sites)



Approximately 450 ha of forest managed
6(+1) sites, 30 ha each in Italy
3 sites. 90 ha each in Slovenia

LIFE09 ENV/IT/000078

ManFor CBD
Managing forests for multiple purposes: carbon, biodiversity and socio-economic wellbeing

Results: examples on biodiversity and carbon

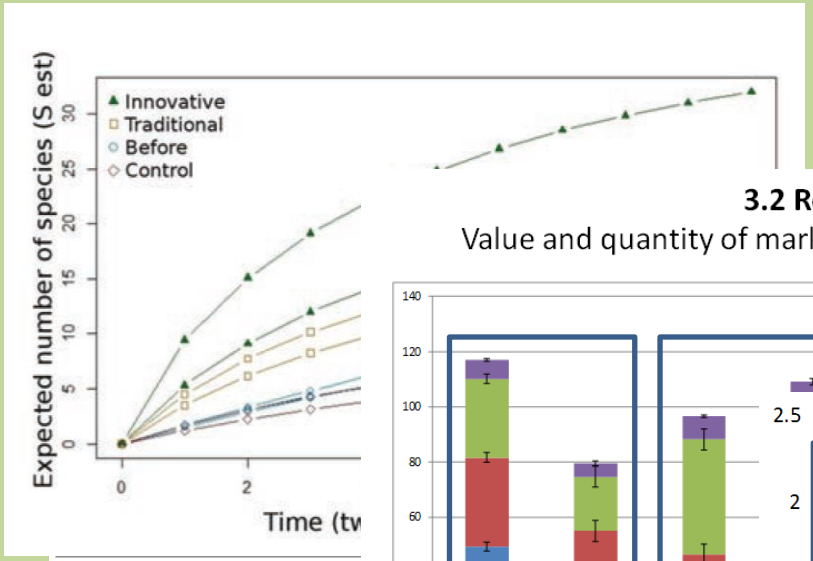
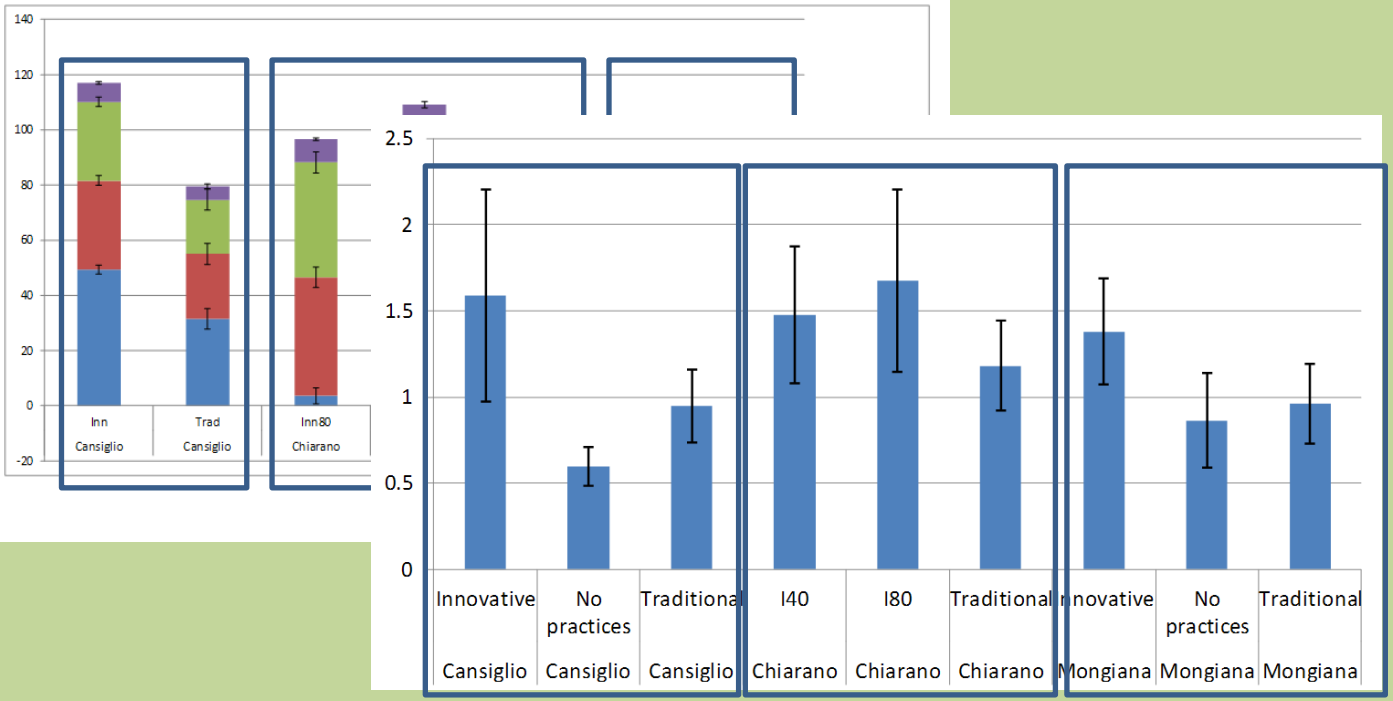


Figure 1. Estimated Syrph
forest found increasing sa
the different management
(n=2), traditional (n=2), c
ing (n=3).

3.2 Roundwood

Value and quantity of marketed roundwood (Mg DW ha-1)



De Cinti *et al* (Eds) 2016

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CARBON BIODIVERSITY SOCIO-ECONOMIC WELLBEING

How results from the project can be suggested as «good practices»

Di Salvatore U., Ferretti F., Zapponi L., Cantiani P., Bombi P., Matteucci G., De Cinti B.

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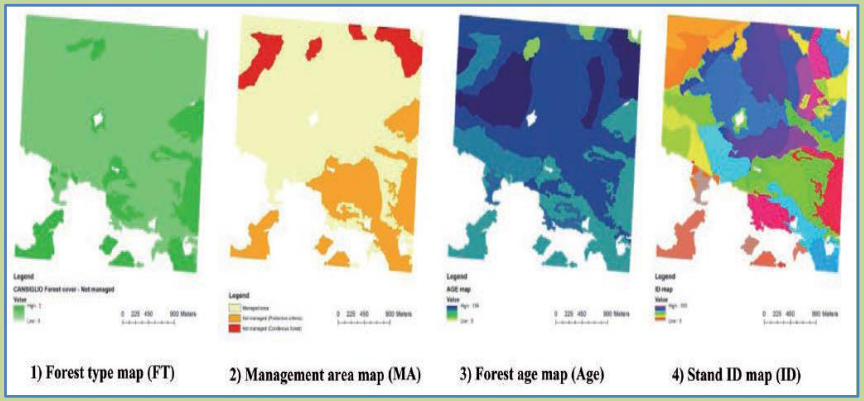
Best practices pro biodiversity conservation

1. to **increase diversity at stand and landscape scale**

Following a **diversified forest management strategy** allowing the co-occurrence of forest patches with different forest structures

Mixing silvicultural treatment. Avoiding systematic thinning or cutting on large areas

Replicating the silvicultural treatment in different areas every few years (**landscape**)



2. to **increase deadwood amount and the retention of veteran and senescent trees**

Releasing standing indifferent trees and intercropping trees.
Increasing the mortality of dominated or defective trees

Girdling or **cutting** some selected trees and **left on the ground** (4-5 /ha) Spatial distribution (**Stepping stones**)

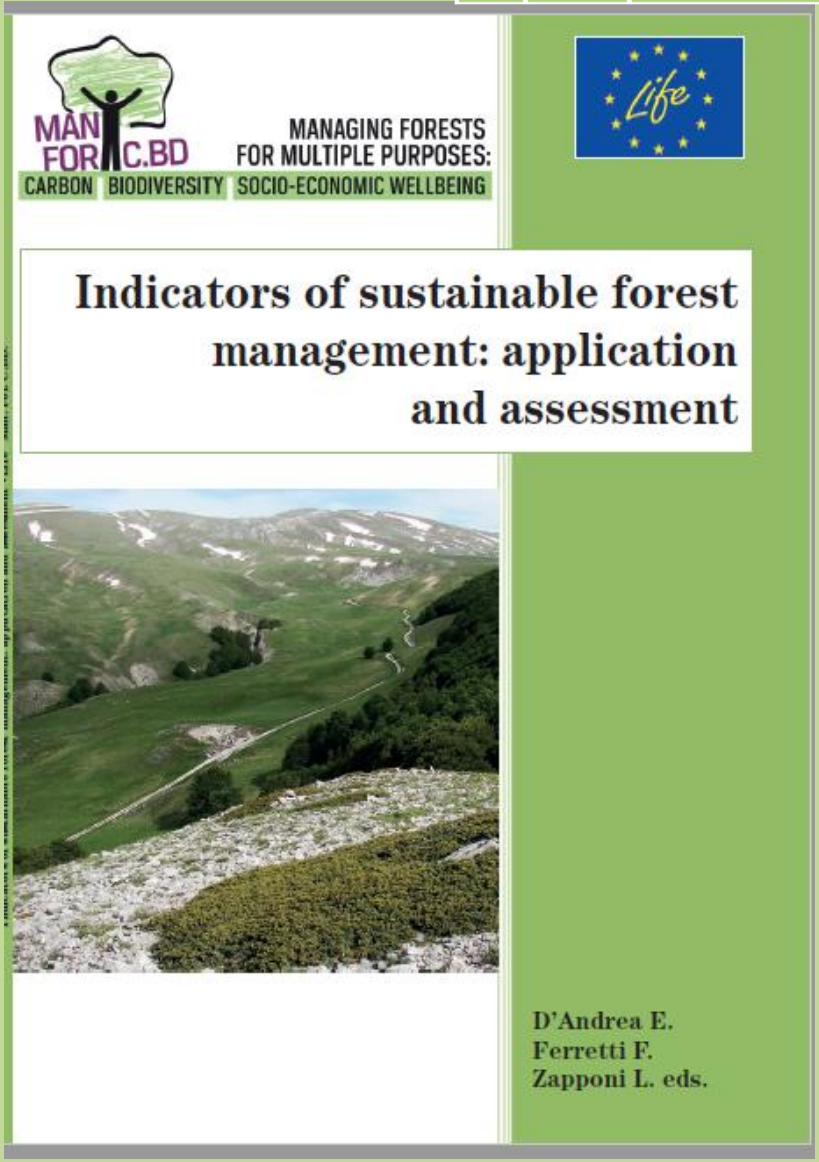
Best practices pro carbon stock (mitigation – adaptation)

3. to **increase carbon sequestration and carbon stock**

Increment of the vertical structural diversity to improve photosynthesis and carbon storage (**Release indefferent and intercropping trees**)

Production of good quality wood for durable products (**Selective thinning**)

Support the achievement of older stand ages and higher growing stocks. Increase the **flexibility** of future management options



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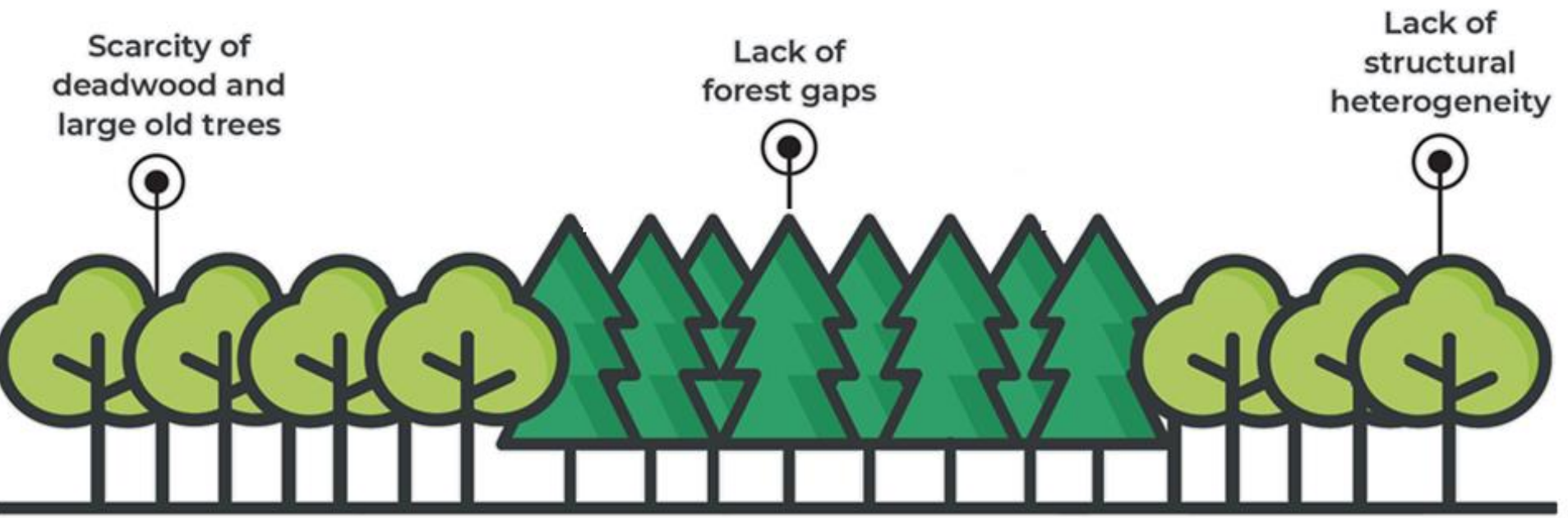
LIFE SPAN Project:
a network for biodiversity

• POSSIBLE PROBLEMS OF TRADITIONAL MANAGEMENT



SPAN
SAPROXYLIC HABITAT NETWORK

- **PROJECT'S OBJECTIVES**

SPAN SAPROXYLIC HABITAT NETWORK

Life

Proposing and testing a management solution for productive stands aimed at protecting forest biodiversity

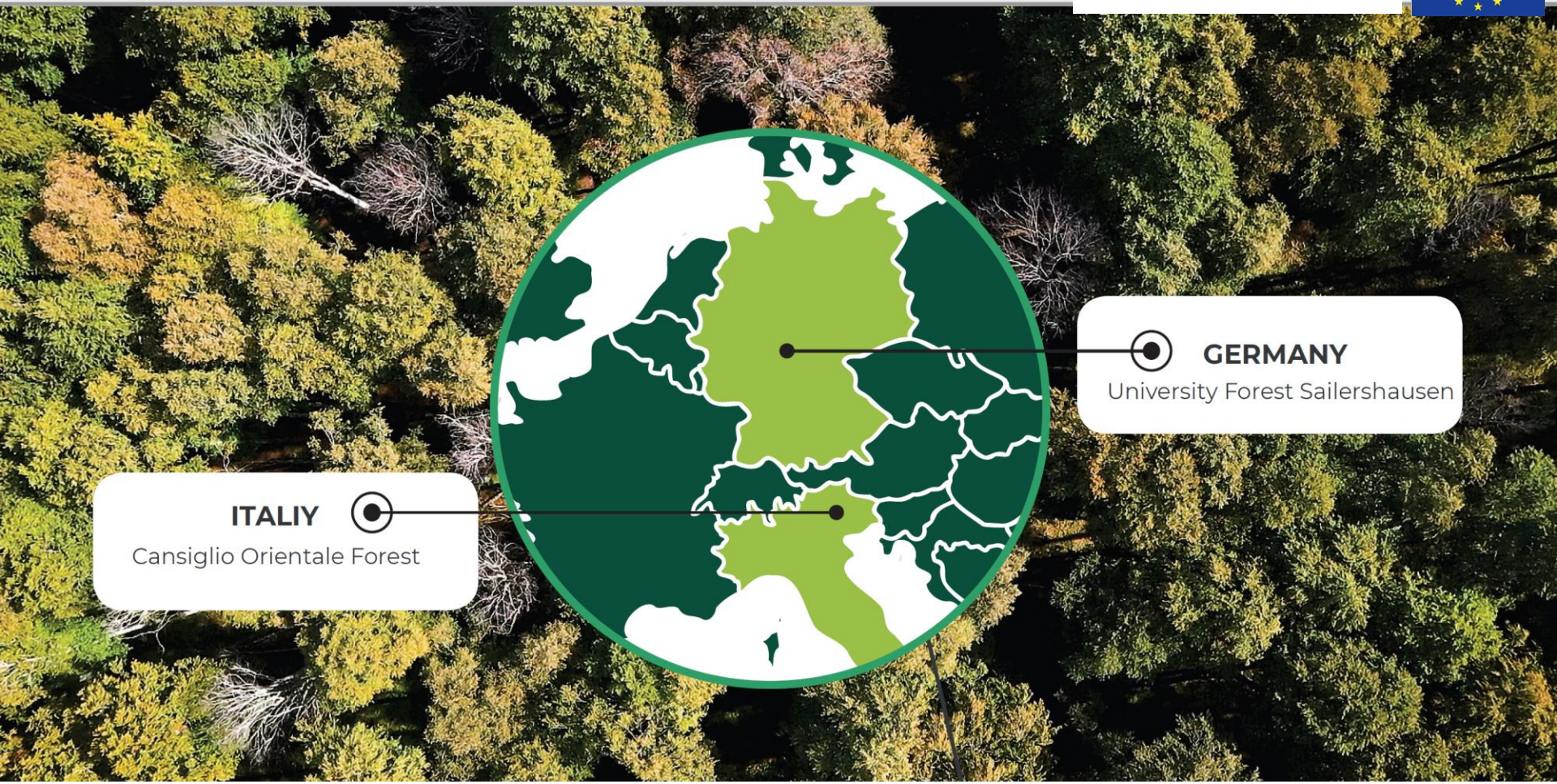
This solution sustain saproxylic spp. through:

- **deadwood management**
- **Integration of proposed/existing solutions**

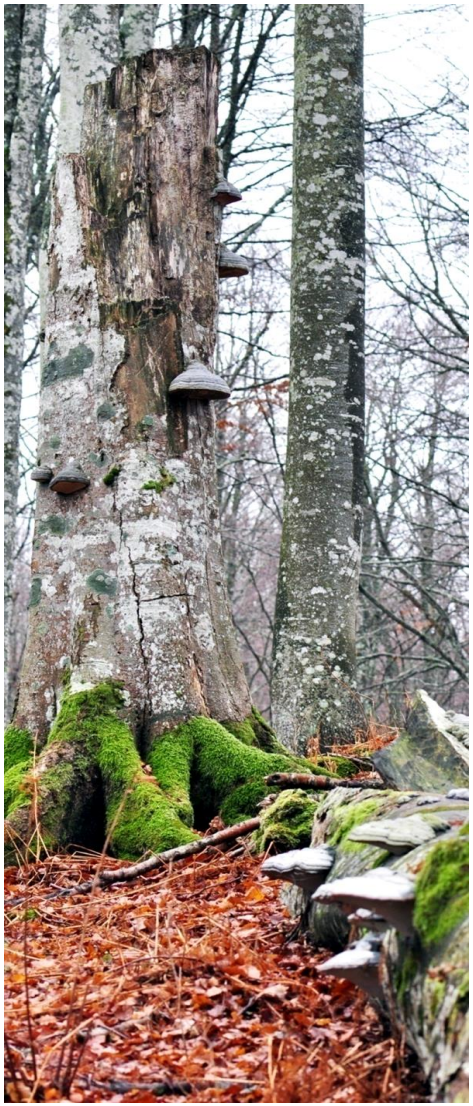
(attention to economic sustainability in the production context)

• LIFE SPAN sites

SPAN
SAPROXYLIC HABITAT NETWORK



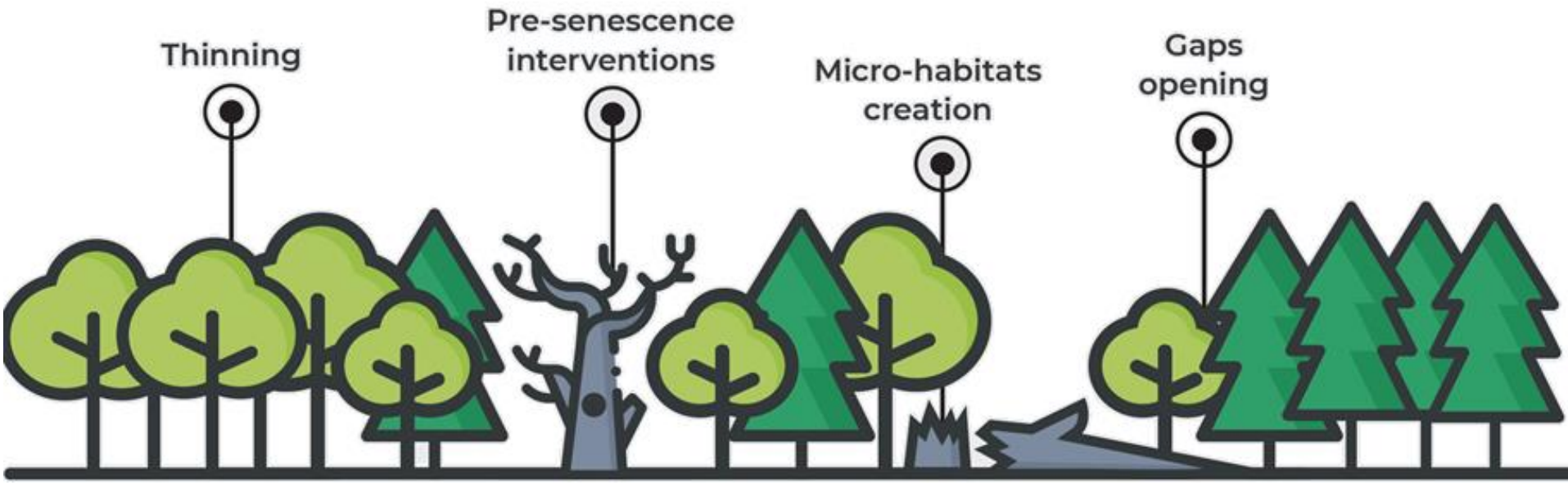
îlot de sénescence (IdS)



"micro-reserves" functional to the survival of saproxylic species

- dimension
  - 0,5 ÷ 4 ha
- intervention
  - progressive acceleration of stands ageing
  - dead wood release
- positioning
  - in the cultivated matrix of the forest, in which silvicultural activities continue
  - creation of a system connected by stepping stones (habitat trees)

- **SHS – SAPROXYLIC HABITAT SITES**



Thinning: lying trees

SPAN
SAPROXYLIC HABITAT NETWORK

Life

European Commission

ALPENKONVENTION
CONVENTION ALPINE
ALPSKA KONVENCIJA
CONVENZIONE DELLE ALPI

italian delegation
alpine convention

MINISTERO DELL'AMBIENTE
E DELLA SICUREZZA ENERGETICA

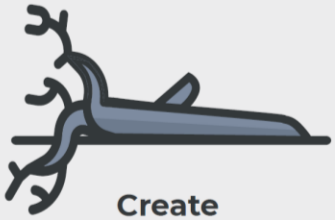
REGIONE PIEMONTE

• PRE-SENESCENCE AND MICROHABITAT CREATION

Within the SHS, **the process to have habitat trees** and improve the quantity and quality of deadwood **will be speeded up by specific interventions** in order to create key structure for the nesting and growth of saproxylic organisms.

Create artificial snag through pollarding and crushing of standing trees

Create different kind of cavities on trunks to host saproxylic



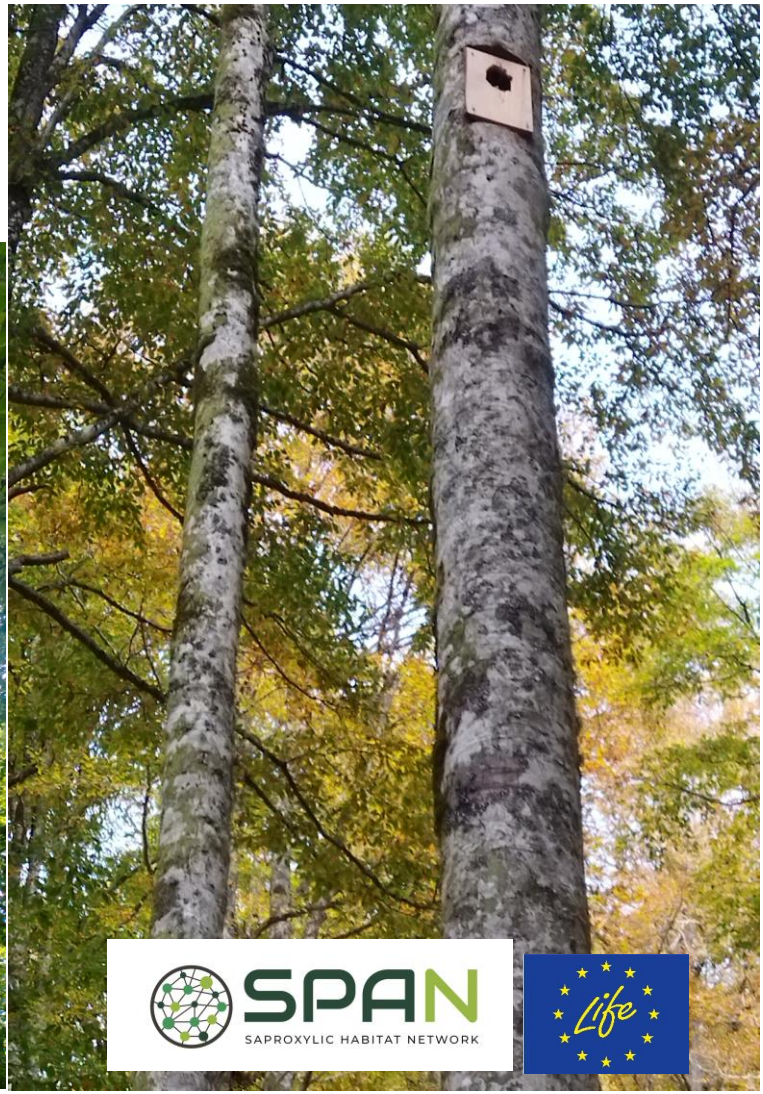
Create artificially uprooted trees simulating natural disturbance effects

Create standing dead trees (girdled)

SPAN SAPROXYLIC HABITAT NETWORK

Artificial snags: pollard trees

Creation of cavities on trunks



Creation of cavities on trunks: basal slits

Microhabitat creation: uprooted trees

Standing dead trees creation: girdled trees (type A, B and C)

A)

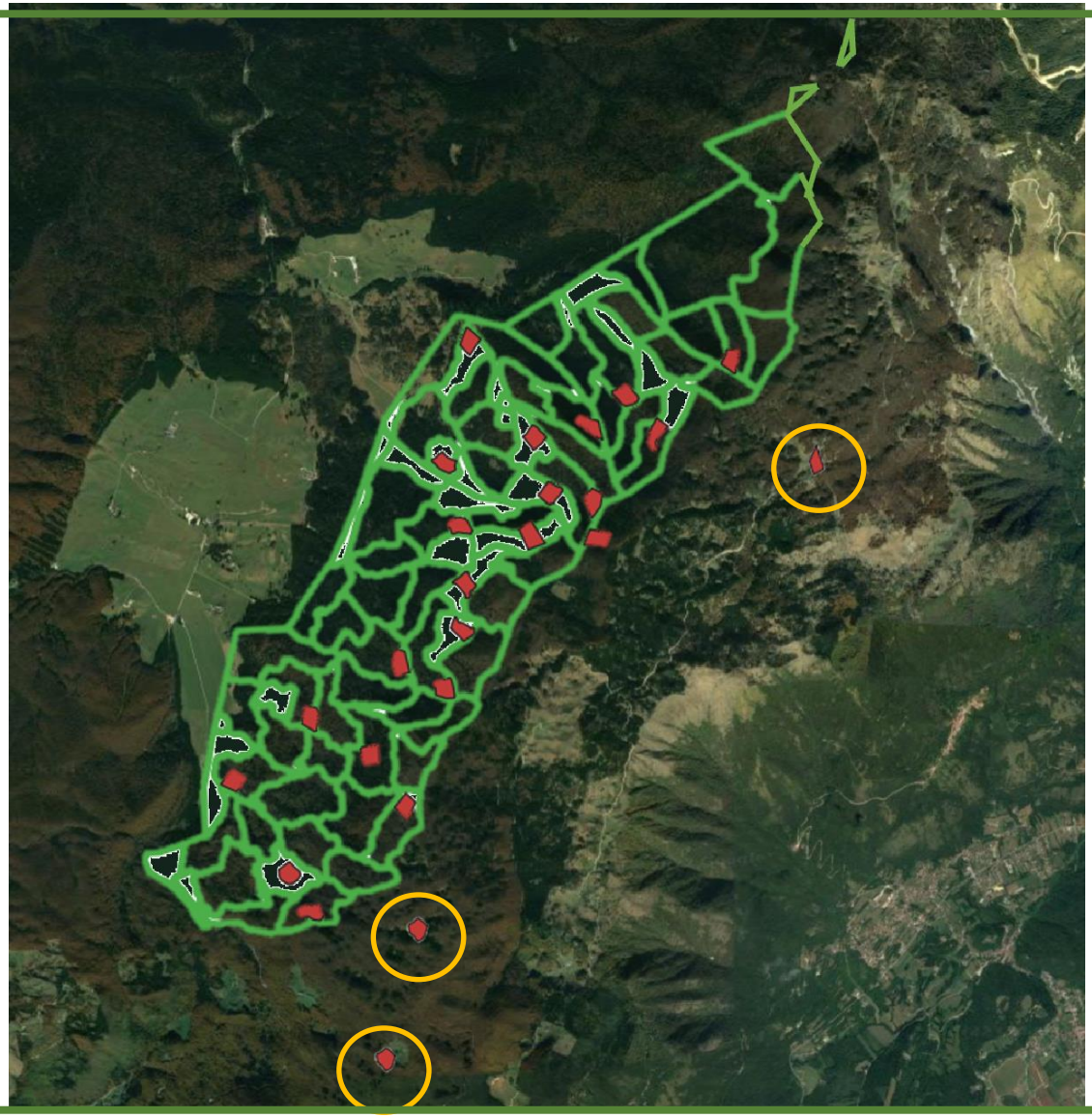
B)

C)

Gap creation

SHS numbers

- Microhabitats:
  - at least 15 habitat-trees/ha (e.g. trunk cavities)
- Deadwood: more than 20 m^3/ha
  - uprooted trees (min. 1/ha)
  - standing dead trees (min. 4/ha)
  - lying dead trees (min. 10/ha)
  - Pollard trees (5/ha)
- Forest gaps:
  - open areas of 0.15 ha



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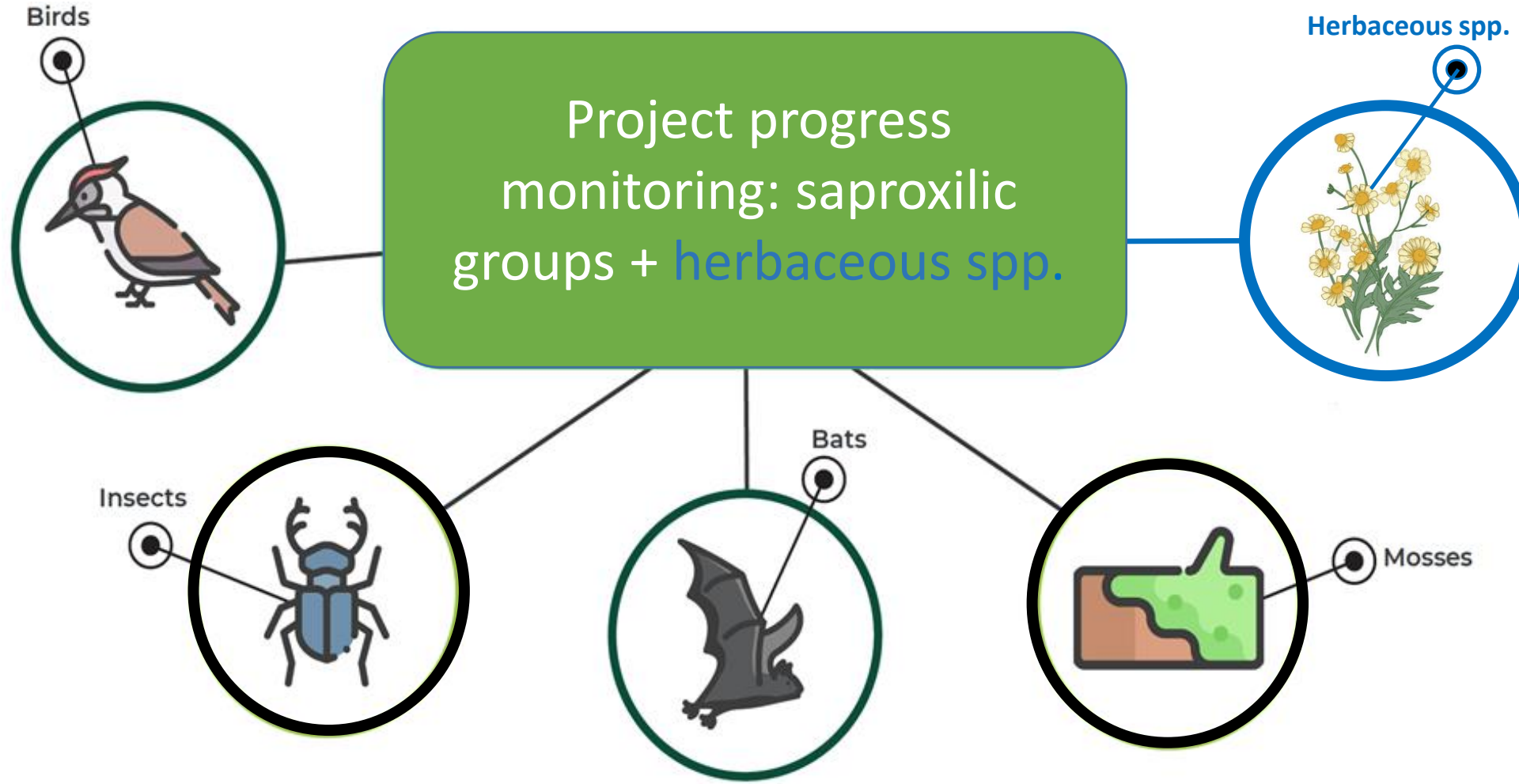
SAPROXYLIC HABITAT NETWORK

- **Groups monitored**



Thanks for your attention

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