



SUPERB

Upscaling Forest Restoration

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role in the project: monitoring in Romania

forest-restoration.eu
[@SUPERB_project](https://twitter.com/SUPERB_project)



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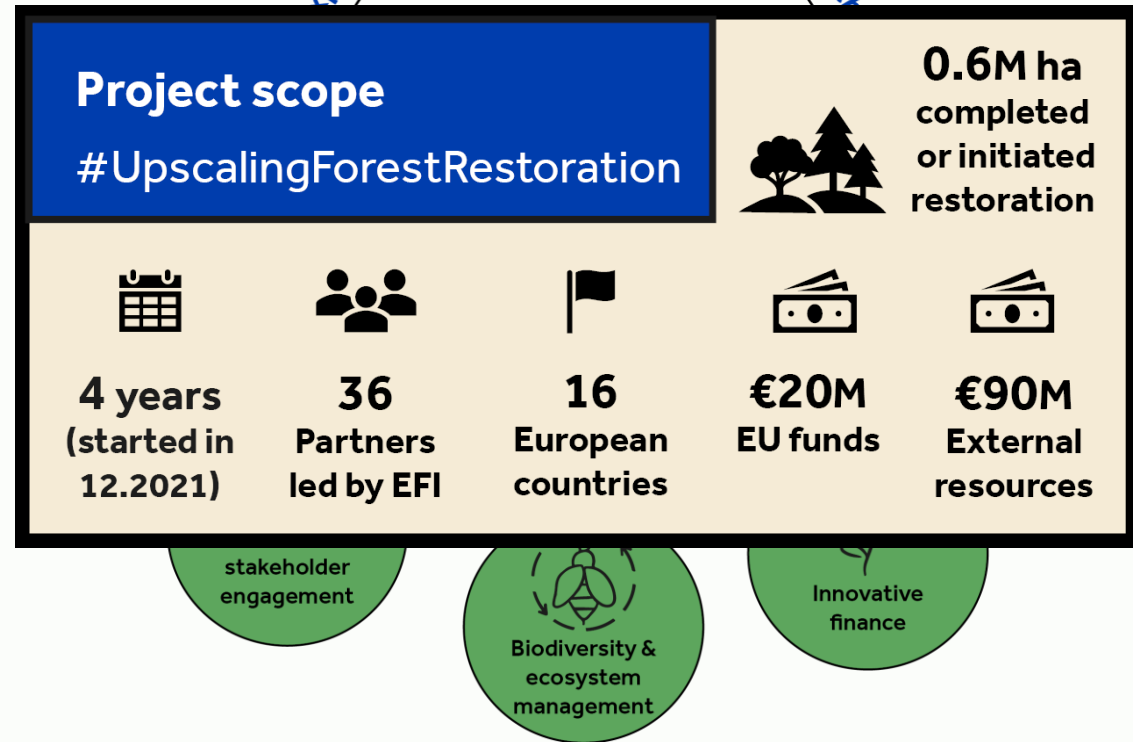
Overall goal



SUPERB aims to **restore forest landscapes** across Europe by creating an enabling environment for the implementation of forward-looking forest restoration at different scales.

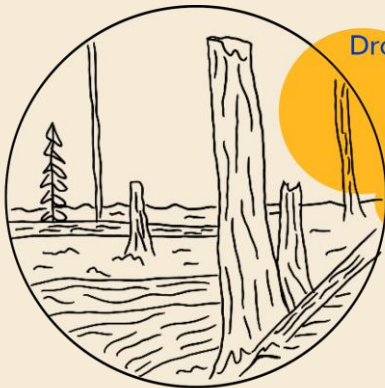


Expertise from practice & science come together



We have **12 large-scale demo areas in 12 countries**, representing **diverse stressors** on European forests and a wide range of necessary restoration actions.

Among other common stressors:

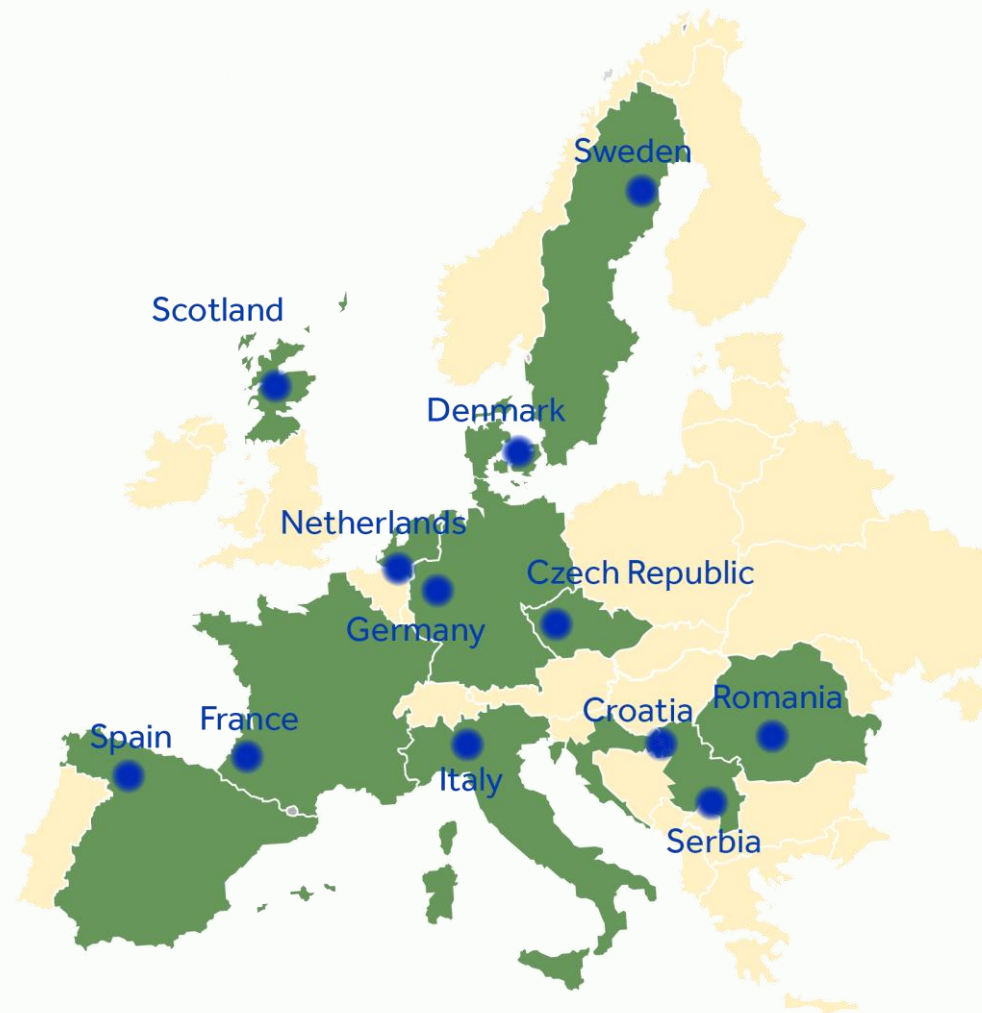


Drought

Bark beetle

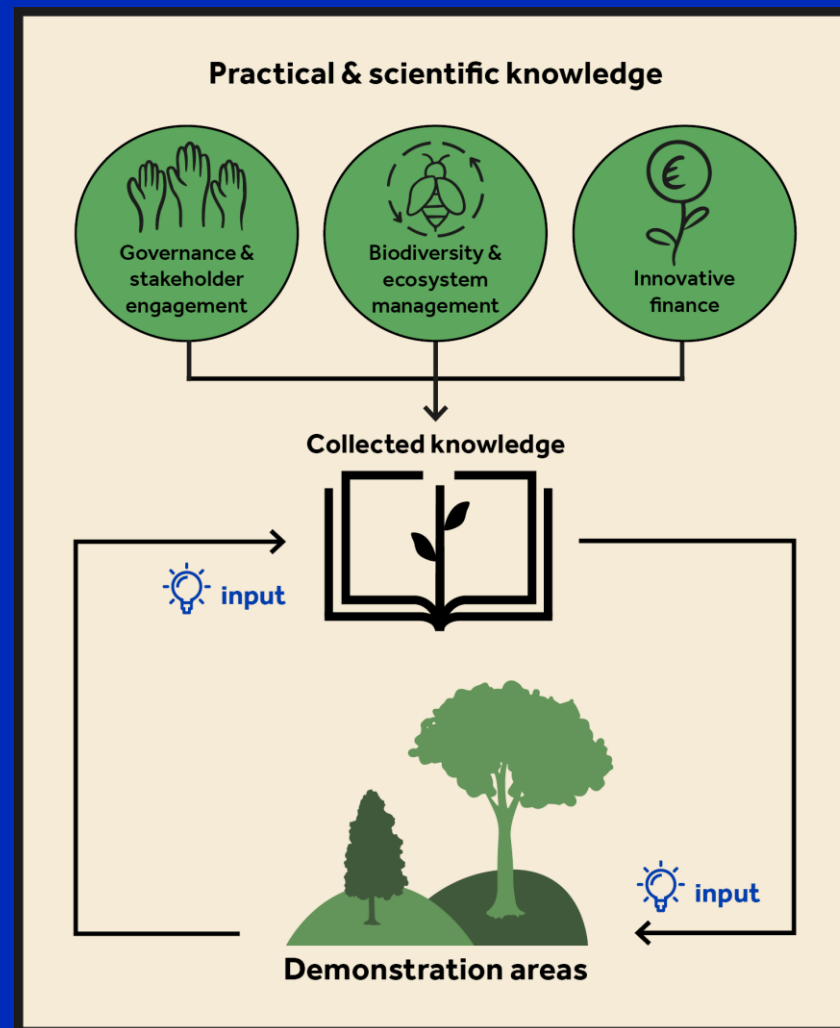
Intense harvesting

Climate change





Our aim is to demonstrate **best practices** and **collect practical and scientific knowledge** on **successful forest restoration** and **synthesise it for action**.

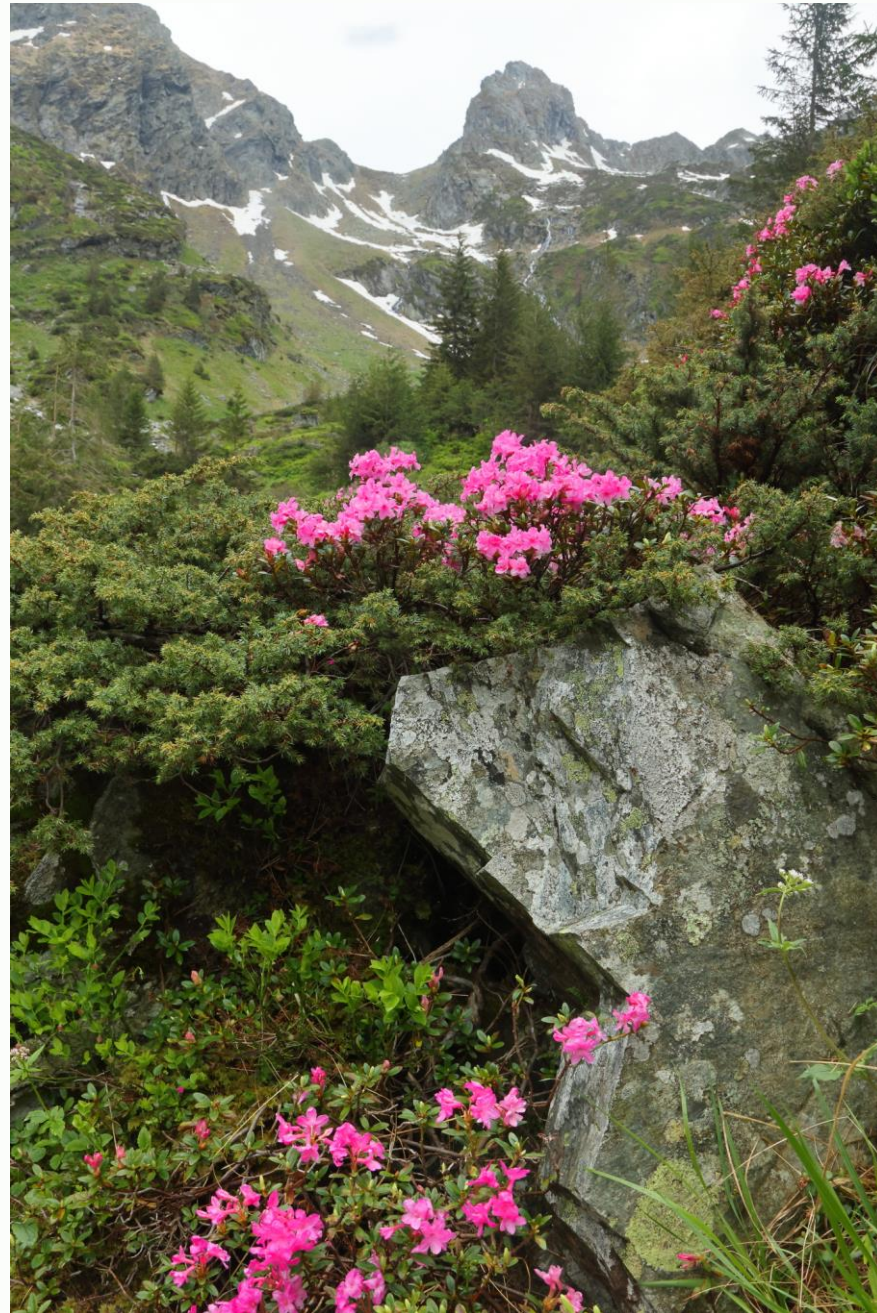


Fagaras Mts.

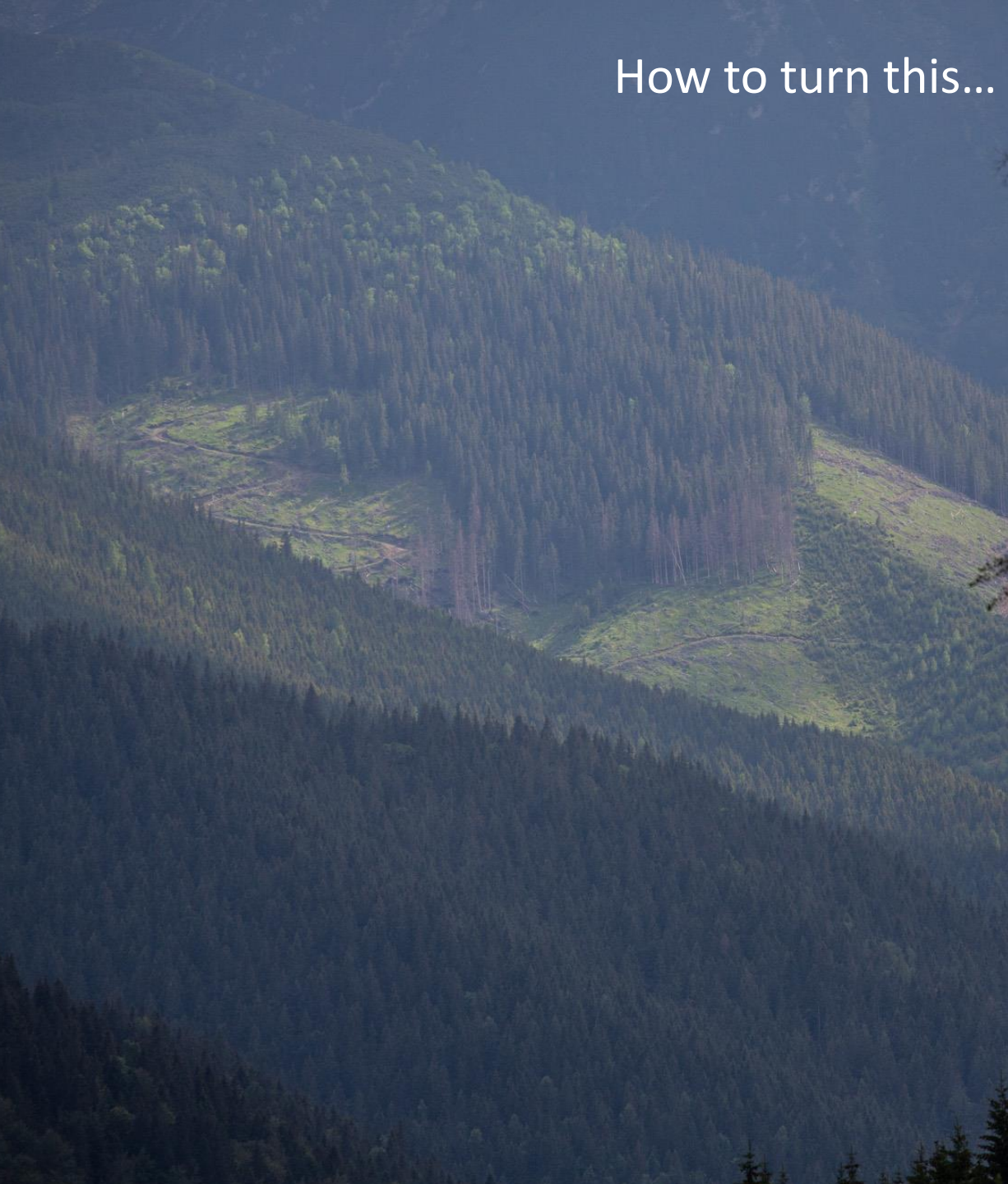
A dramatic landscape of the Fagaras Mountains. The foreground is dominated by a dense forest of tall, dark evergreen trees, some of which are silhouetted against a bright, hazy background. The middle ground shows a thick layer of mist or low clouds that partially obscures the forest. In the background, the mountain slopes are covered in a mix of green vegetation and patches of snow, with sunlight filtering through the atmosphere, creating a soft, ethereal glow. The overall scene is one of a wild, mountainous wilderness.

Connecting & enlarging old growth remnants, Fagaras mountains

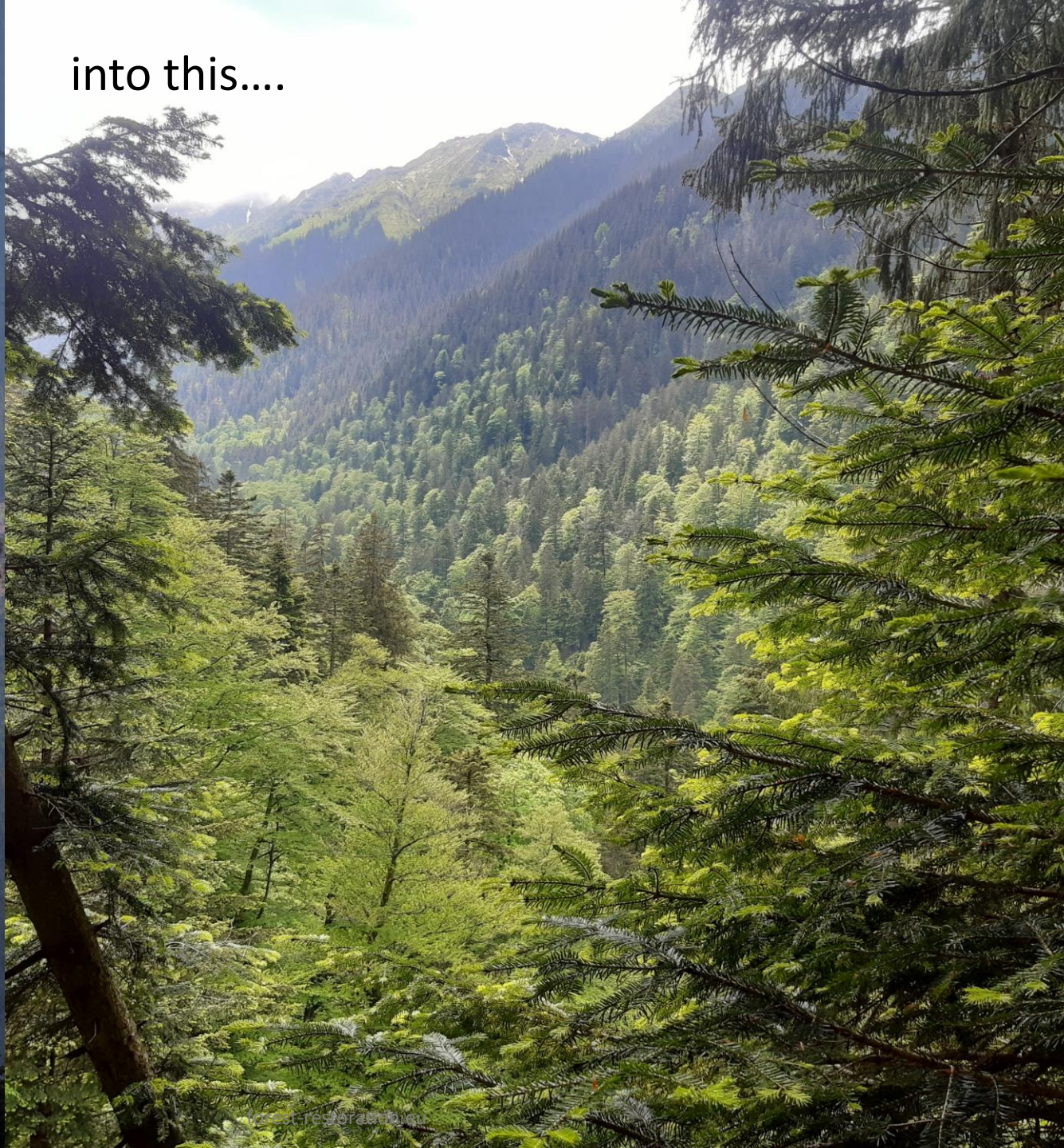
- protect and connect old growth forest fragments
- establishment of buffer zones for primary forests
- application of ecological forestry in special areas to increase the structural diversity and a transfer to a non-destructive economy.
- restoration of the upper timber line and alder galleries



How to turn this...



into this....



Spruce
monocultures (40
and 85 years old)
- transfer to
mixedbeech
dominated forests
– after thinning
planting saplings
of species such as
Fagus sylvatica,
Abies alba and
*Acer
pseudoplatanus*



In case of natural disturbance, the area left for natural regeneration and spontaneous development, with no wood extraction



Diversifying the composition of species inside planted clear cut areas



Restoration of riparian habitats and alder galleries: elimination of spruce, planting of alder galleries, the release of beaver.

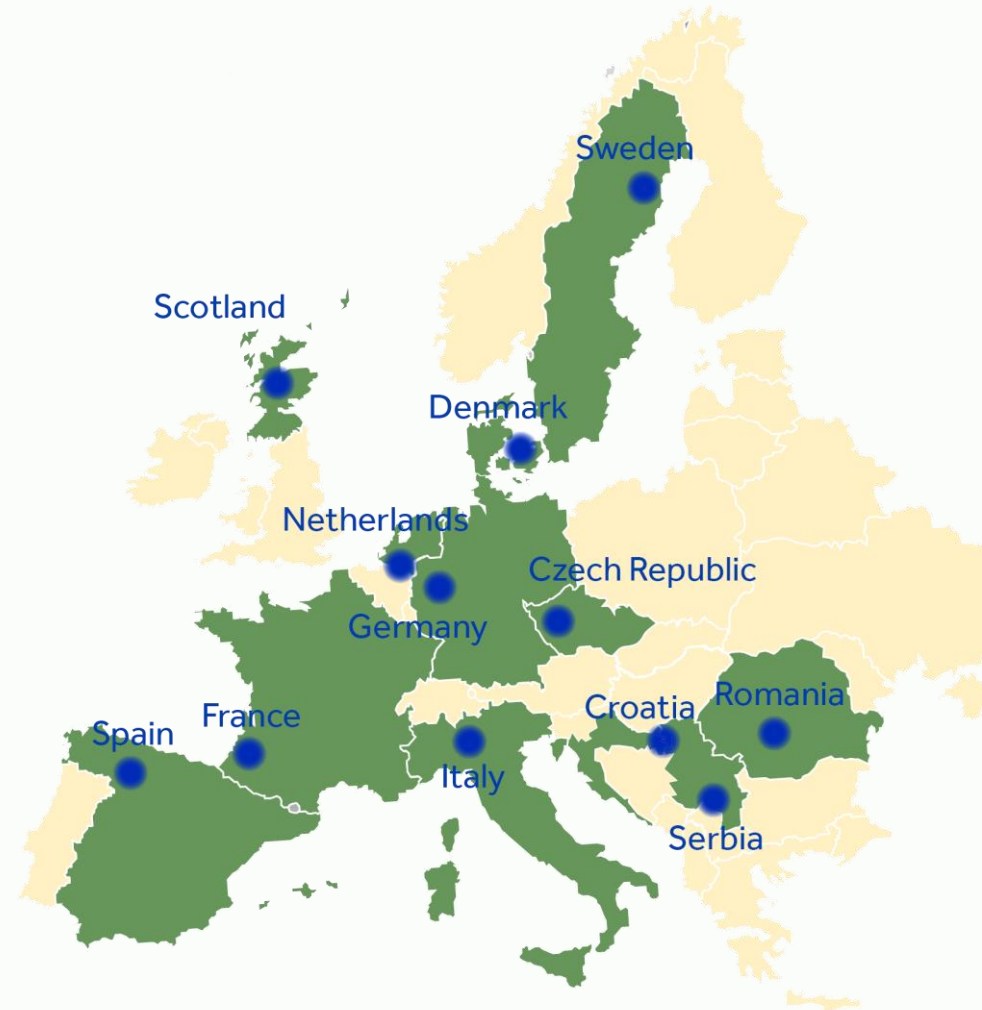


Restoration activities in alpine areas:
Arrolla pines regeneration in upper timber line dengraded by grazing



Biodiversity and Carbon Monitoring

- sampling chronosequences of restoration pathways in the 12 demos
- Structural inventory (structural biodiversity indicators, aboveground carbon)
- biodiversity assessments assisted by remote sensing, citizen science, DNA metabarcoding, and bio-acoustic recording of species.
- measurements of soil carbon content, stability, and biological activity
- demonstrate the effectiveness of restoration in the 12 demos and derive guidelines.





**Primary forests =
reference sites for
the foresters**



- some remaining primary forests are still not identified and/or protected
- forest owners and authorities are not willing to declare protection of these areas
- there is a lack of trust on long term in the official compensation payments system.
- Moreover, lack of immediate financial compensation affects the decision-making processes.

Sambata





Unmapped primary forests - Ucisoara

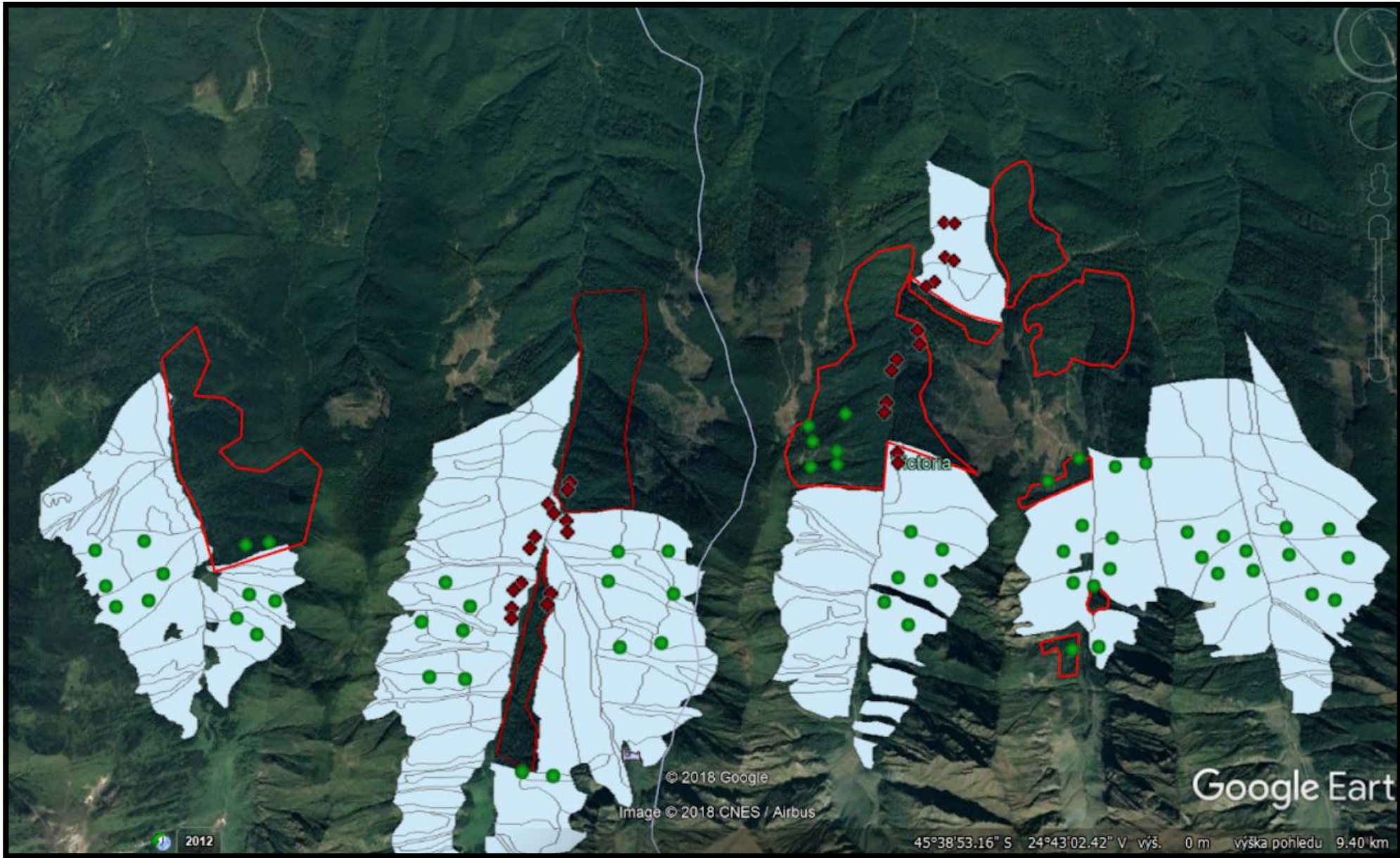
Ucea Mare

Unmapped primary forests

just few meters from the road (45° 39.521'N, 24° 42.494'E). Presence of the Ural owl (*Strix uralensis*) was documented in the unmapped primary forests .





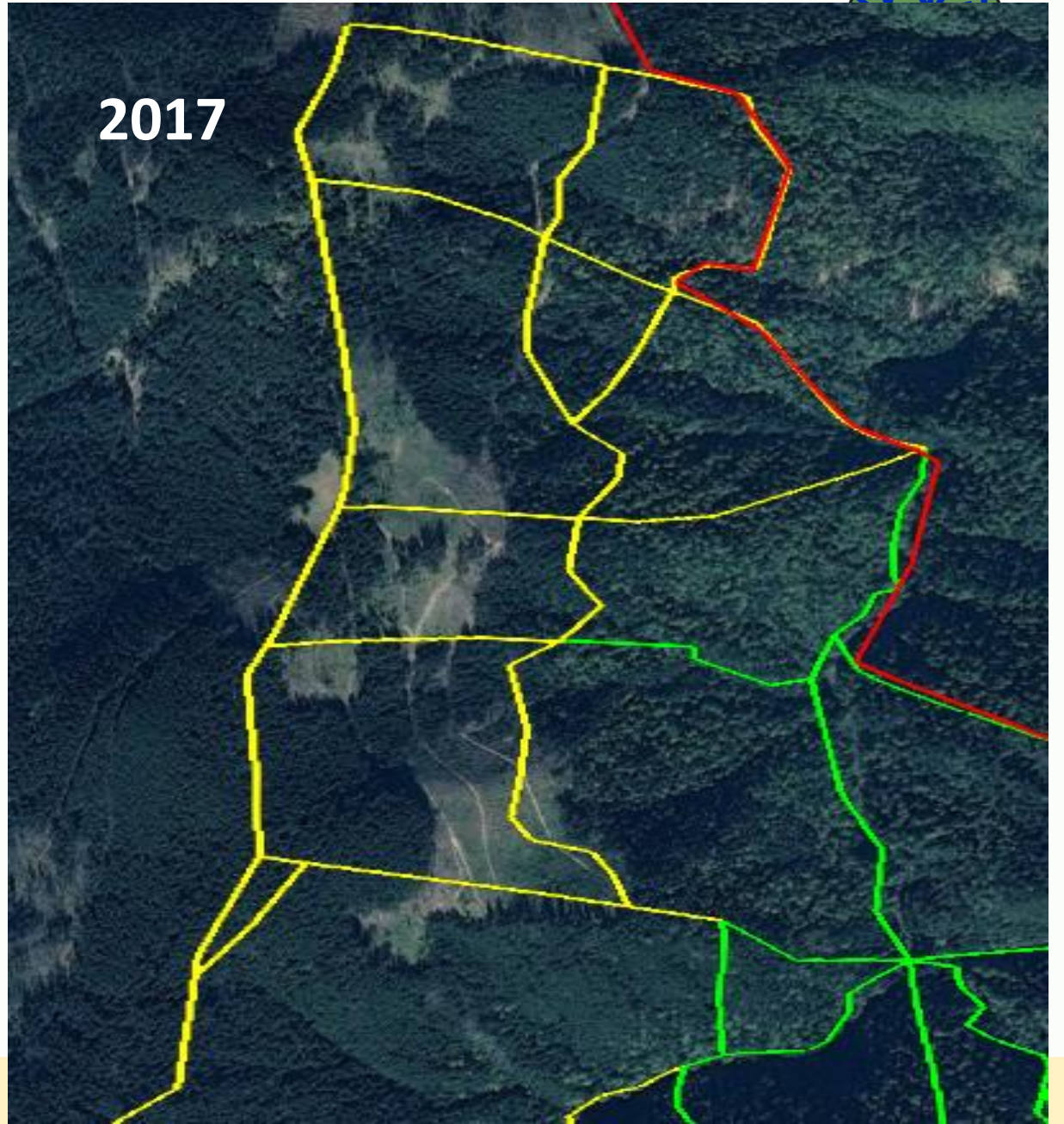
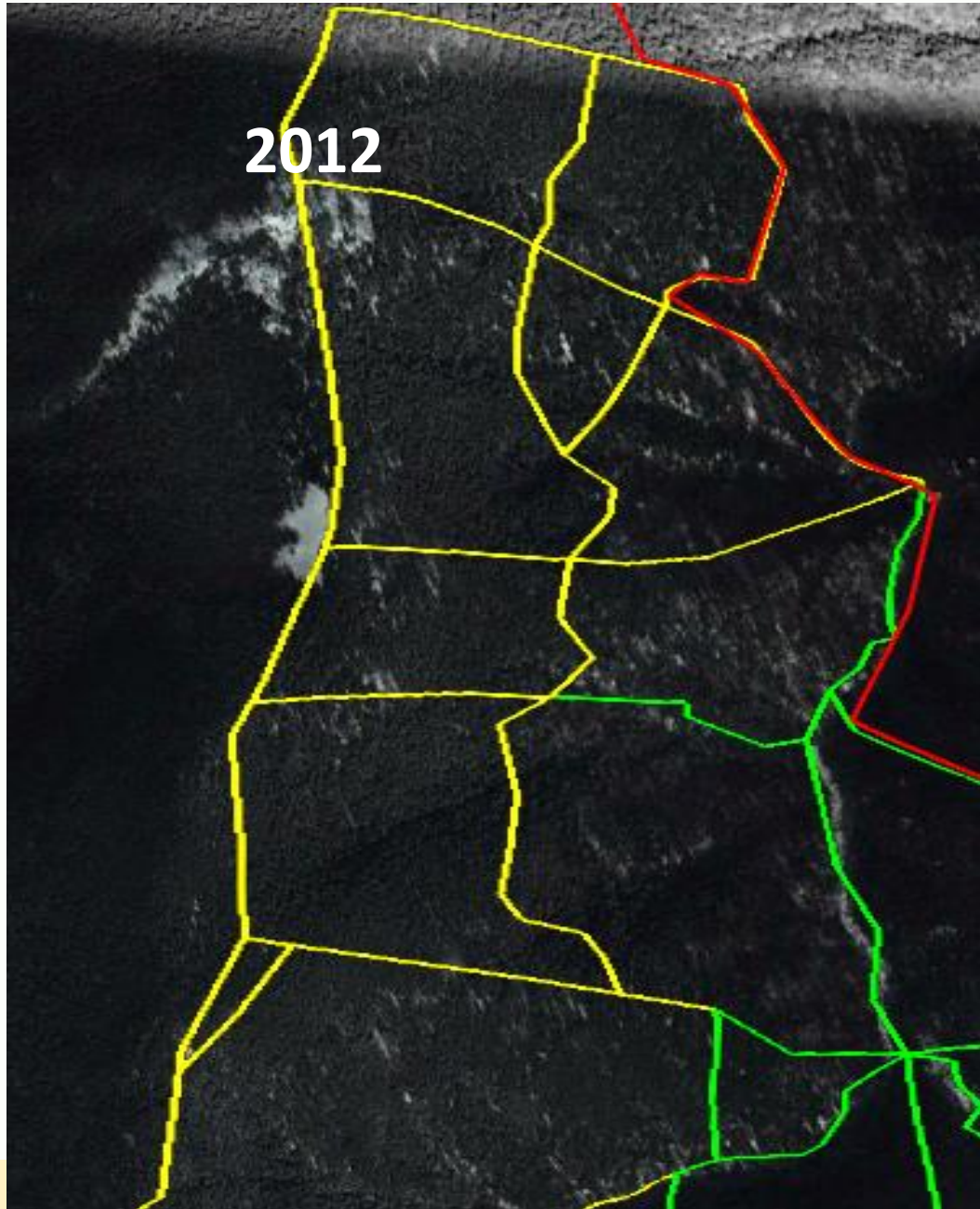




Logging of permanent research plots









- Many primary forests are still not mapped and are not protected
- Conservation of only primary forests stands is insufficient, conservation targets should be also the natural forests, valley systems, secondary old growth forests and habitats of protected species if biodiversity conservation and carbon sequestration is the objective
- Ecological forestry approach can be used to restore degraded habitats





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Thank you!

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role in project: monitoring in Romania and Czech Republic



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