

# Increasing the value of windstorm damaged forest: combining restoration practices and agroforestry

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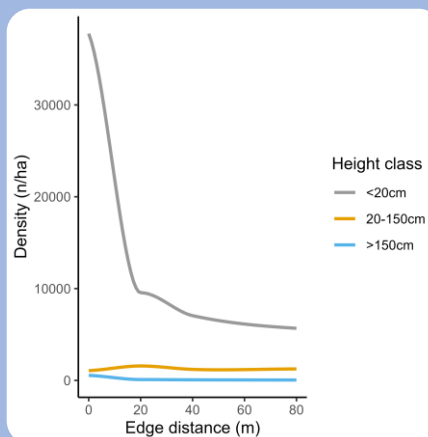
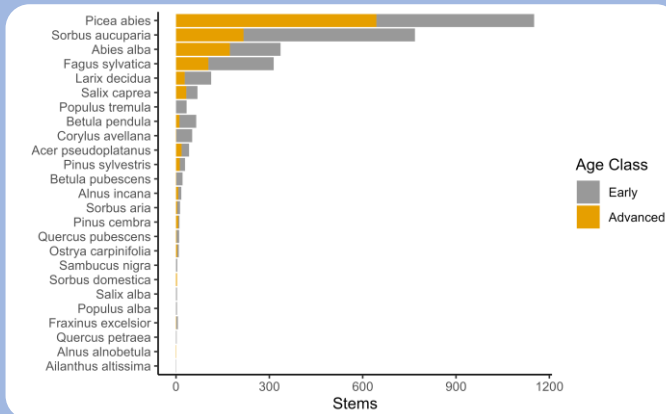
## Natural regeneration monitoring: Objectives

- Monitoring the natural regeneration state of the art after logging operations
- Infer the role of edge distance on seed dispersal
- Assessing the importance of species and advance regeneration

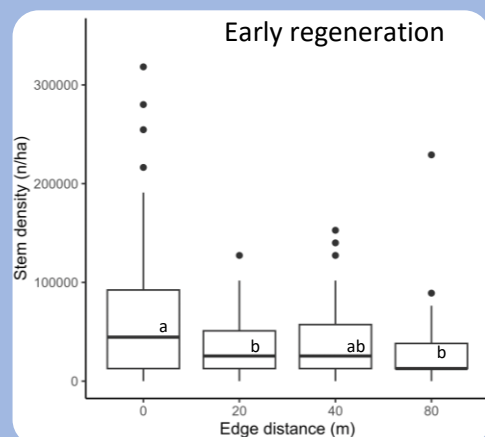


## Natural regeneration monitoring: Results

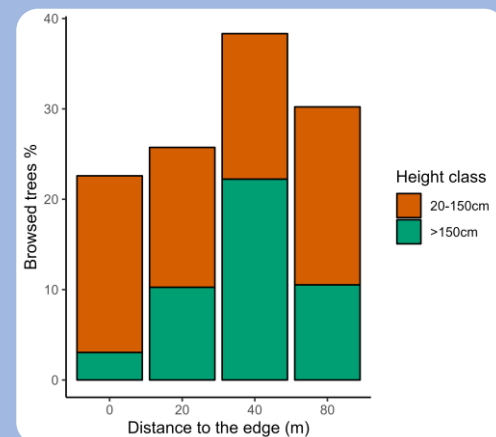
- The species composition is similar to the previous stands
- Increasing in animal-dispersal seeds species
- Soil as preferred substrate after salvage logging
- Increasing the distance from the edge the seedling availability and the seedling density decrease drastically
- More browsing damages far from the living edge



Stem density trend according to distance from the living edge, depending on height class.



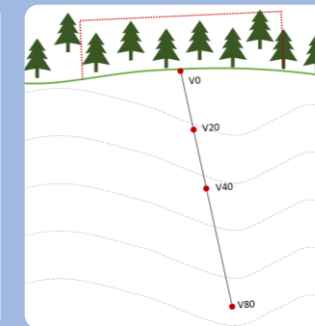
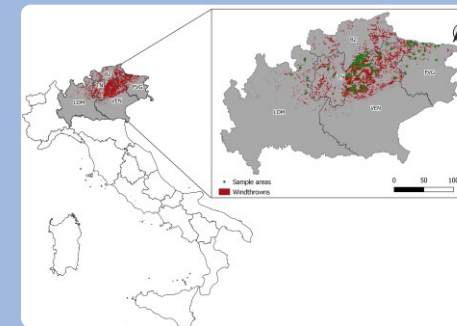
Difference in stem densities between the plot at increasing distance for early regeneration. Letters shows the results of Tuckey HSD Post-Hoc test.



Browsing damages according to height class. Each column represent the percentage of browsed trees respect to total trees samples at the given distance.



## Natural regeneration monitoring: methods



- 148 cleared areas in the Northeast of Italy
- Survey along a transect starting from the living edge
- Four plots at increasing distances from the standing edge (0,20,40, 80 m)
- Sapling natural regeneration, deadwood and soil cover



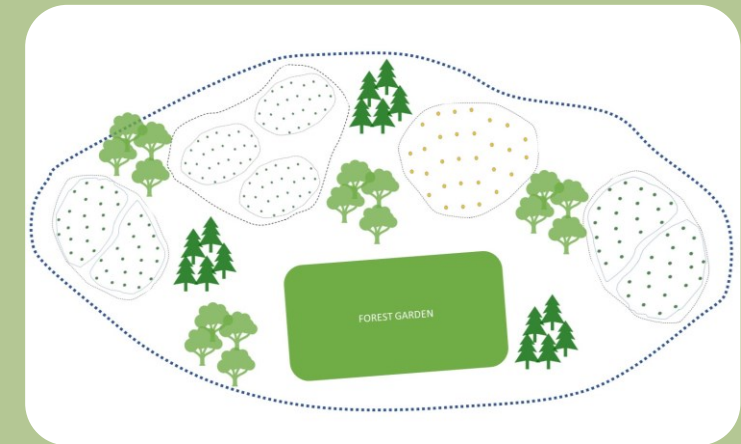
## Restoration protocol: the VAIA approach

**OBJECTIVE:** applying agroforestry within disturbed areas, to reduce economic losses and promote a close-to-nature restoration approach

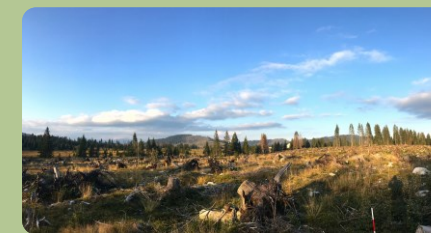
**METHOD:**

- Horticultural cultivation and bee breeding in small garden in damaged areas
- Forest restoration clustered around favorable microsites, adopting both the applied nucleation and the assisted regeneration
- Choosing species composition to make forest more resistant and resilient to future climate changes

**PRELIMINARY RESULTS:** plantation of forest gardens and forest regeneration



Quiroga (Lugo, Galizia, NW Spain)



Asiago plateau (Veneto, NE Italy)



Vaccinium myrtillus L.)propagation (FEM, Pergine Valsugana, Trento, Italy)

## LIFEVAIA

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