

# Are the Targets of the Nature Restoration Regulation Achievable at a Regional Scale? An Analysis of Natura 2000 Sites on the Island of Sardinia

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## Introduction and Objectives

### Nature Restoration Regulation (NRR) objectives:

- restore **20%** of marine and **terrestrial** degraded ecosystem of European territory by 2030;
- restore **30%** of all **terrestrial habitats** not in good condition by 2030, prioritizing **Natura 2000 areas**.



### Our objectives:

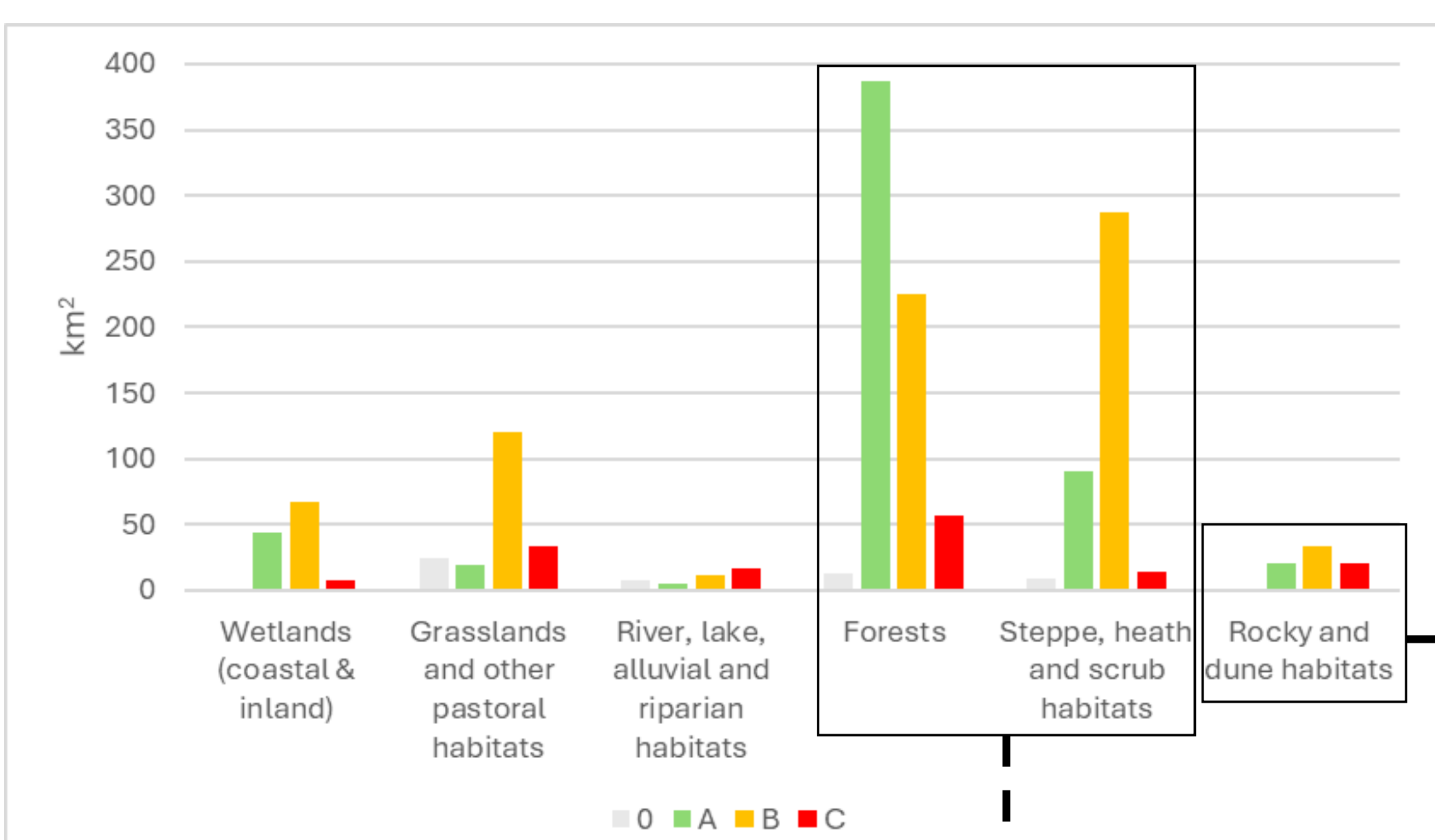
- estimate the proportion of Sardinia's land that could potentially be subjected to ecosystem restoration measures (**20% threshold**);
- estimate the proportion of the **total habitat area** within the Sardinian Natura 2000 network that could be subjected to ecosystem restoration measures (**30% threshold**).

## Material and Methods

- We collected ecological data from Natura 2000 **Standard Data Forms**;
- We defined that, in the NRR framework, **degrees of conservation B (good conservation) and C (bad conservation)** of a habitat trigger the restoration needs;
- We conducted statistical analysis to determine differences between **habitats' surface areas, degrees of conservation and geographical location**.



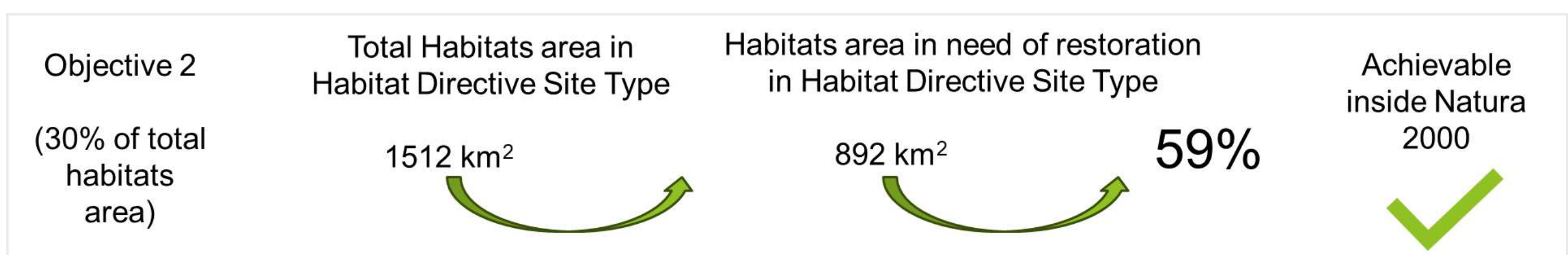
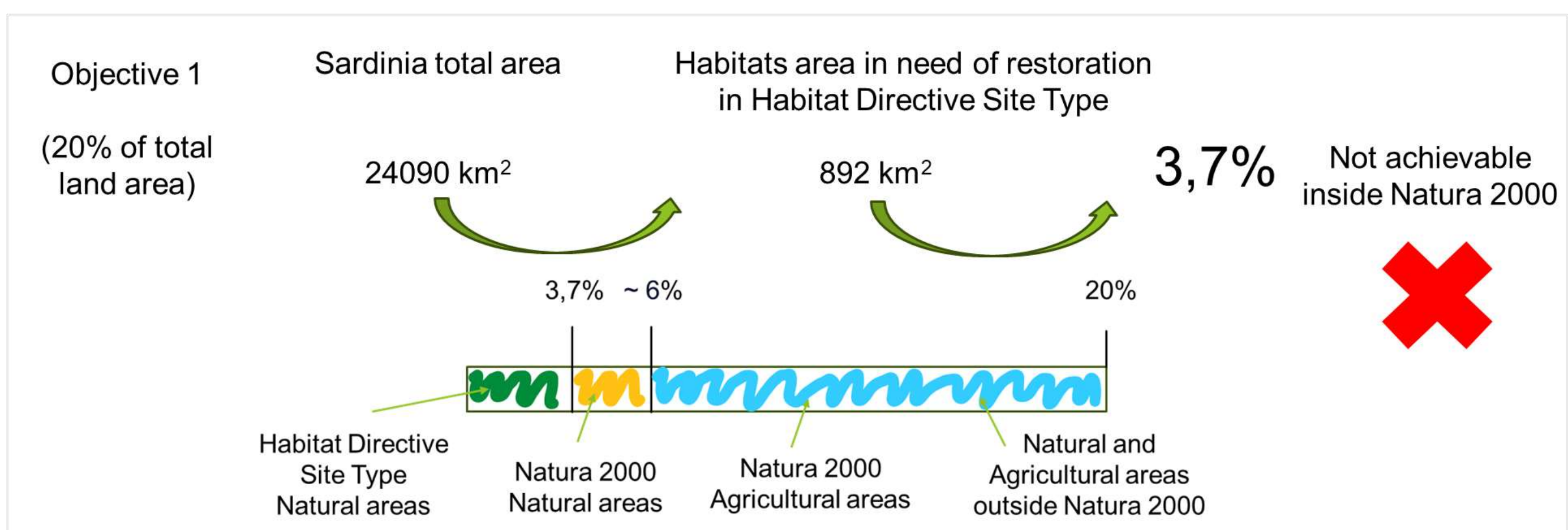
## Results and Discussion



Distribution of the surface area of NRR Groups per different degrees of conservation in Habitat Directive Site Type (Special Areas of Conservation and Sites of Community of Importance).



- **Most habitats in a bad conservation status but limited surface;**
- **Low contribution to NRR targets.**
- **Largest surface in good and bad conservation status;**
- **High contribution to NRR targets.**



Schematization of the results of the two objectives.

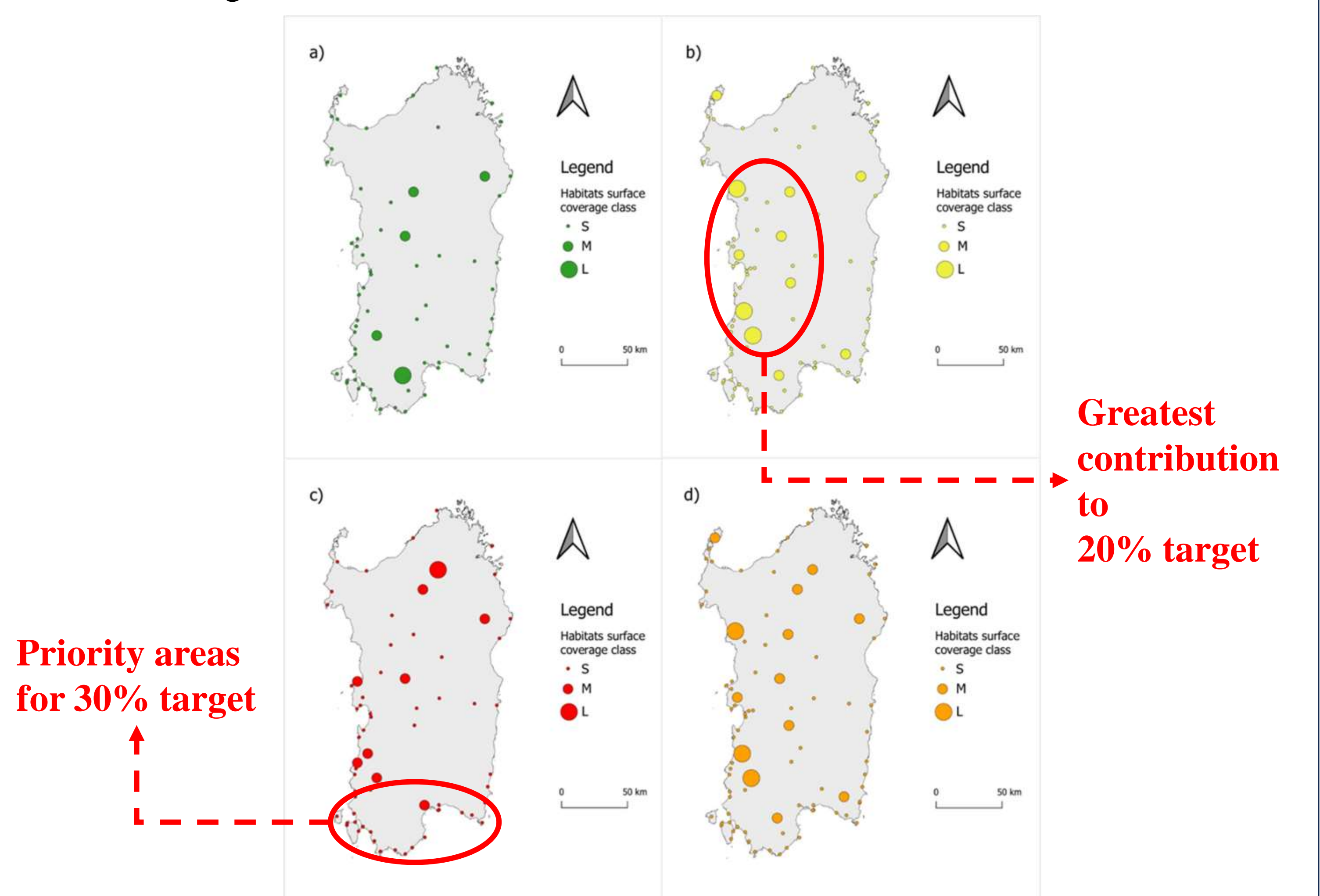
- Reaching the first objective (**20% target**) in Sardinia means putting in place restoration measures also in **agricultural and natural areas outside** the existing **Natura 2000** network;
- The second objective (**30% target**) can be largely achieved.

## Conclusions – Take home messages

- Nature Restoration Regulation targets are **not achievable** considering **Natura 2000** only;
- **Forest and scrub habitats** can contribute the most to reaching the NRR targets;
- Restoration in **agricultural, urban, and other natural and semi-natural habitats outside Natura 2000** is needed;
- The **smaller the habitats, the worse the degree of conservation**;
- **Fine-resolution habitat analysis** is needed for planning **proper restoration measures**.

## Implications for practice

- We observed that the **habitat dimension** is **unevenly distributed** on the island, being statistically bigger in the Northern part;
- Since the **30% target** can be largely achieved, the restoration of the **more endangered and smaller habitats** can be **prioritized** to contribute to the achievement of the 30% target (**Southern area**);
- The restoration of **more extensive habitats (Northern area)** could take place in a second phase, providing the greatest contribution to achieving **20% target**.



Geographical distribution of habitat surfaces across the Habitat Directive Site Type. The habitat surface coverage classes S (small), M (medium) and L (large) have been obtained by Jenks natural breaks classification method. a) Habitats with a degree of conservation of A. b) Habitats with a degree of conservation of B. c) Habitats with a degree of conservation of C. d) Habitats with a degree of conservation of B and C together (habitats in need of restoration).

