

Assessment of Italian LR density and species richness: useful criteria for developing in situ conservation strategies

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Objective

WP 4: Landrace conservation

Developing Italian LRs on farm (*in situ*) conservation strategies



Identification of MAPAs (**Most Appropriate Areas to promote planning and implementing *in situ* conservation activities**)

MAPAs could be proposed to National Authorities as the sites where to set or enhance *in situ* (on-farm) conservation activities with priority because of their high value for agro-biodiversity conservation.



Methods

Italy is one of the richest Countries in the European Union for biodiversity

Italy was used as a study area

The study area was subdivided into quadrants using grids of 20x20 km (400 km²).

Each cell being georeferenced using WGS84-UTM32N System (EPSG: 32632).

995 quadrants were obtained



Methods

Taking into account the following relevant documents:

- the 2nd Global Plan of Action (GPA, FAO 2012)
- the EU 2020 Biodiversity Strategy (European Parliament Resolution, 2012)



Three criteria were applied:

- C1) Landraces diversity (LRD)

- C2) Agro-ecosystem ecological Diversity (AED)

- C3) Presence of Protected Areas (PPAs)

On the basis of LR National inventory **Density LR index (LDI)** and **Shannon index (H')** were calculated

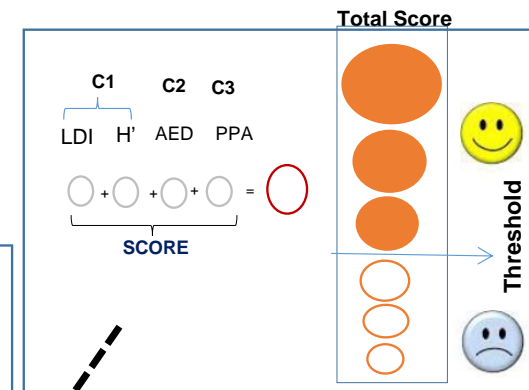
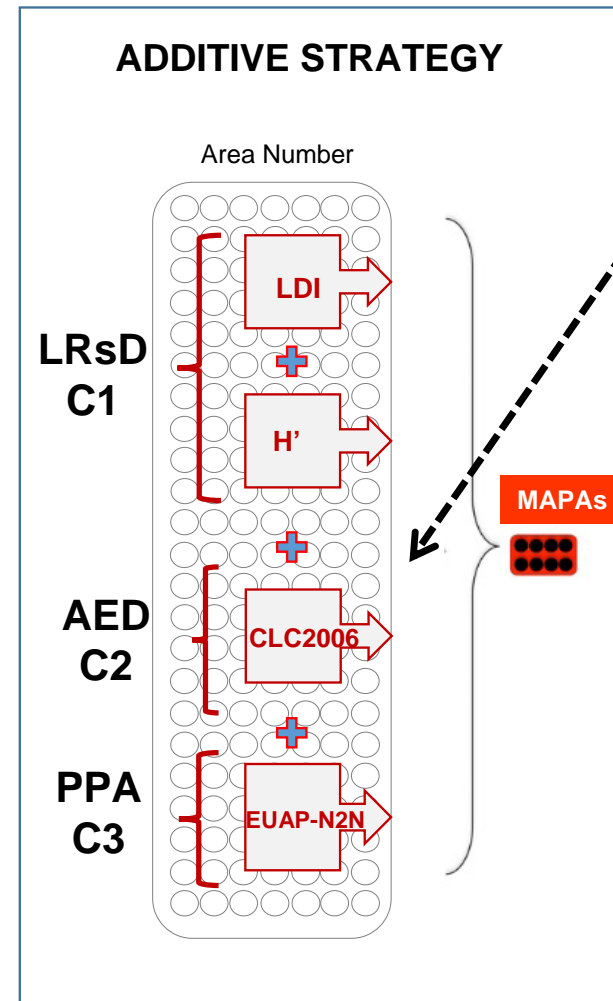
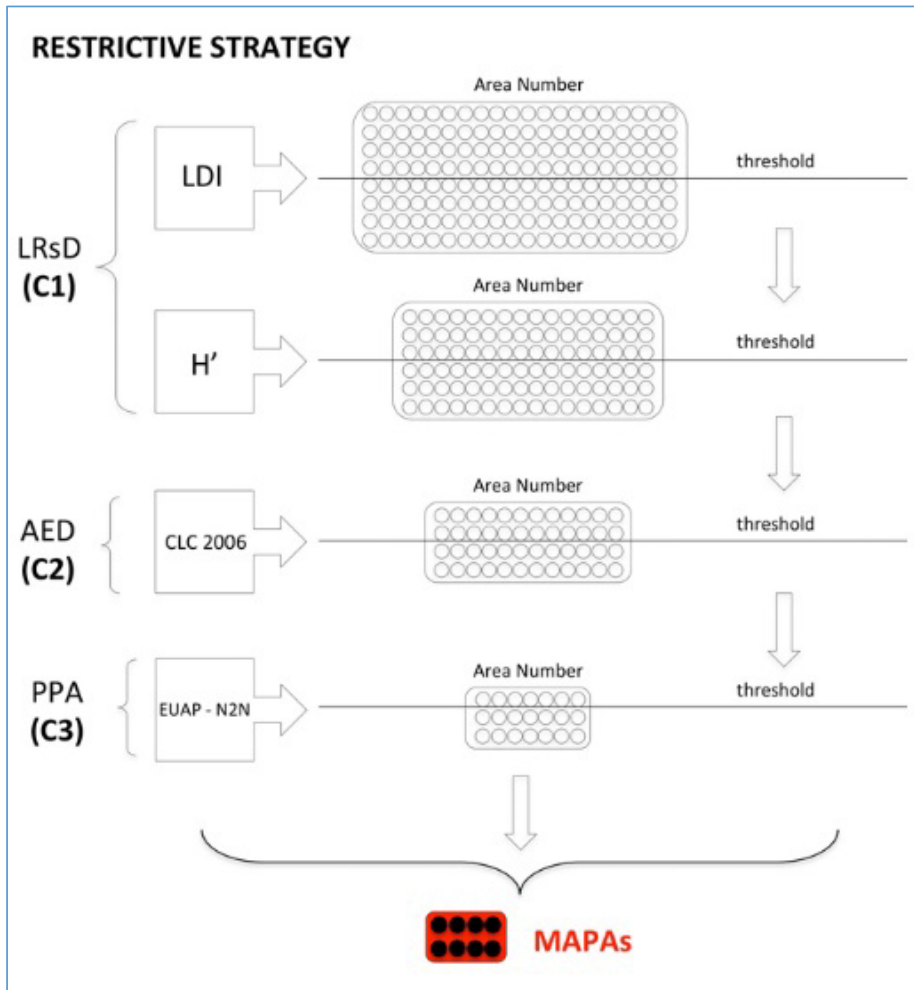
The **Corine Land Cover 2006 (CLC 2006)** (updated to 2012 version) was used as proxy indicator based on existing spatial data at the European scale

On the basis of official National Inventory of **Protected Areas (EUAP)** and **Natura 2000 Network (N2N)**

All criteria were applied on the entire Italian territory in each quadrant

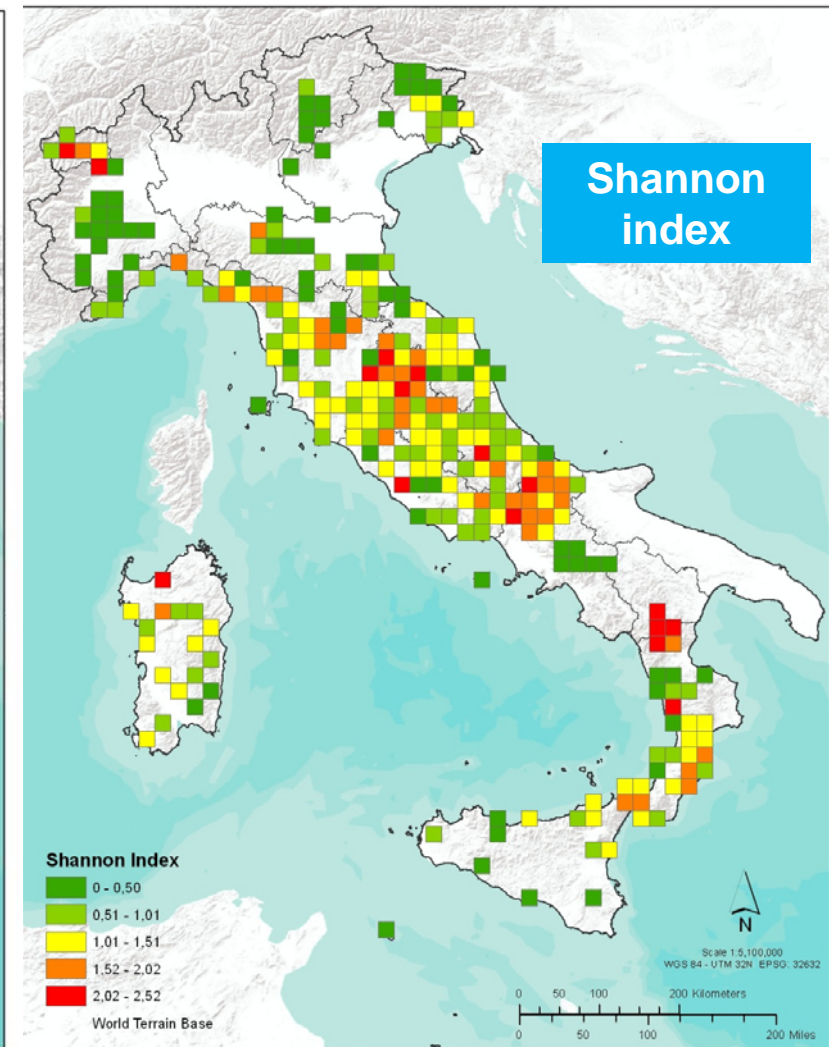
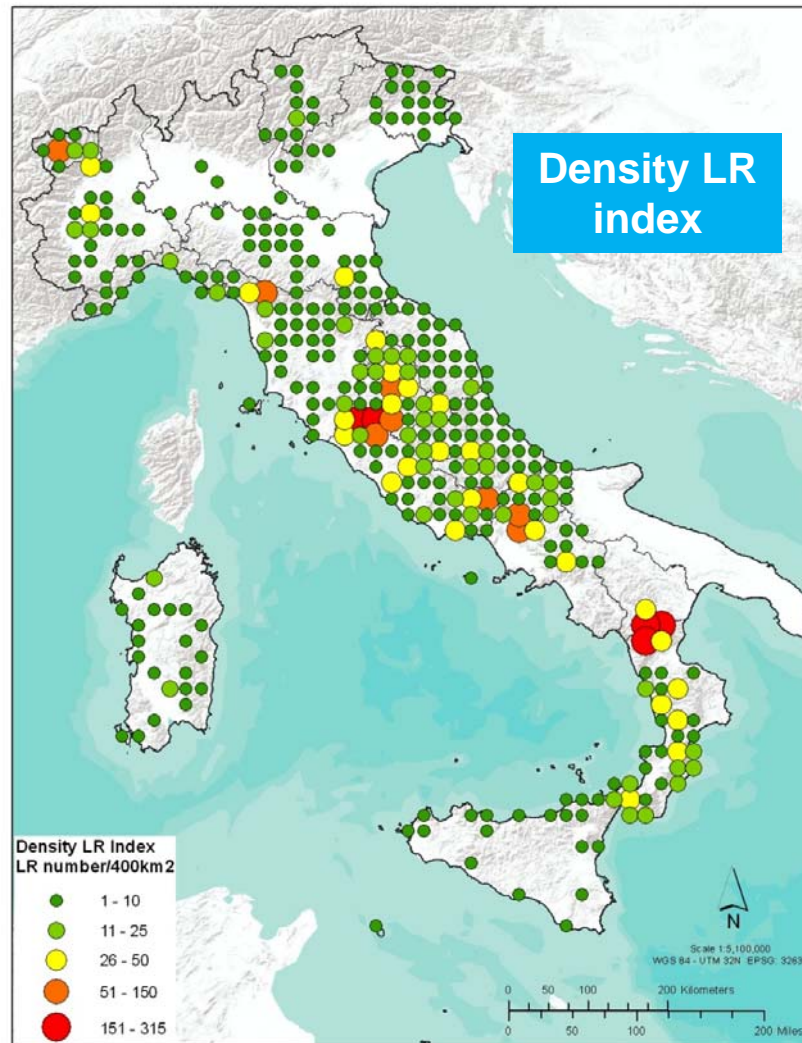


In accordance with the three criteria (LRD, AED, PPAs) two prioritization strategies were defined:





RESULTS

Criterion 1: Landraces diversity (LRD)



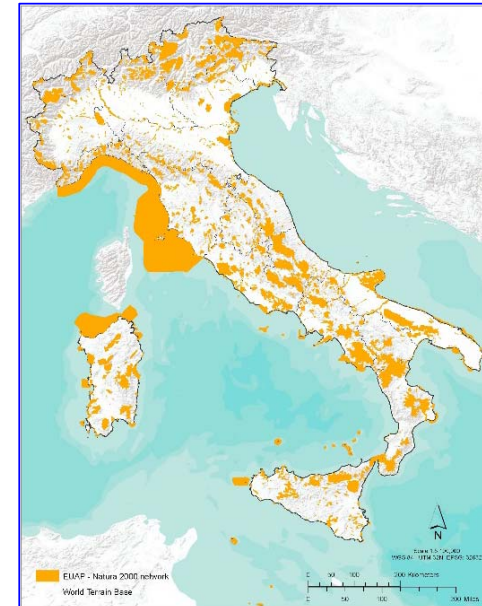
RESULTS

Criterion 2: Agro-ecosystem ecological

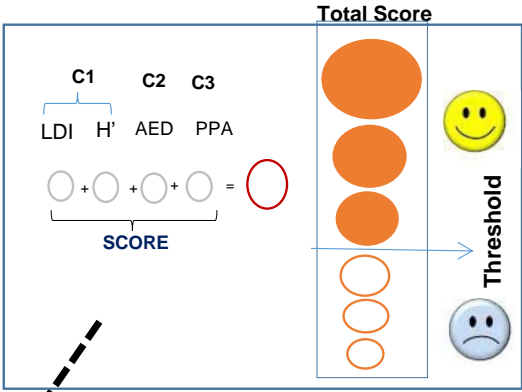
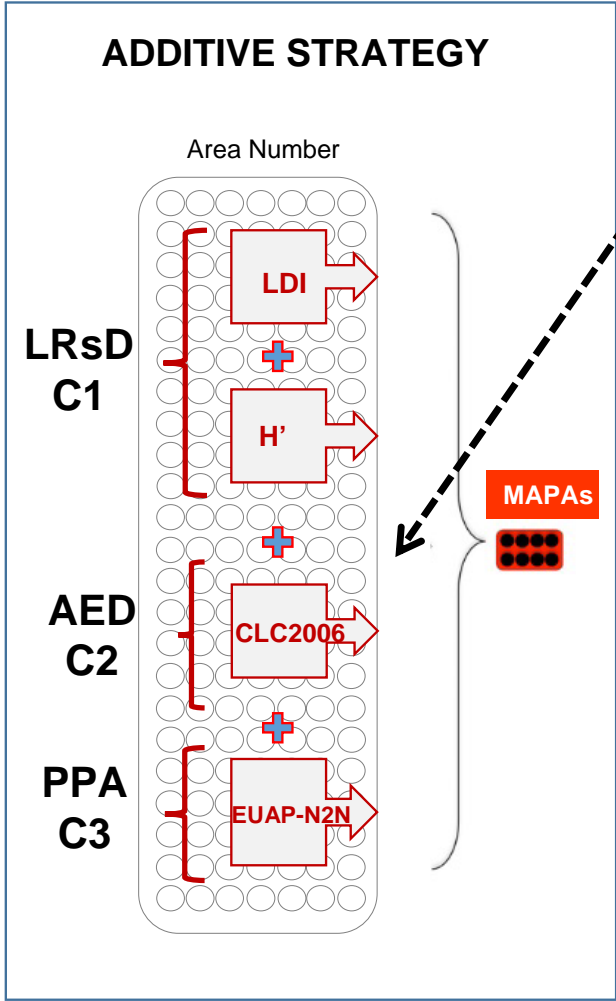
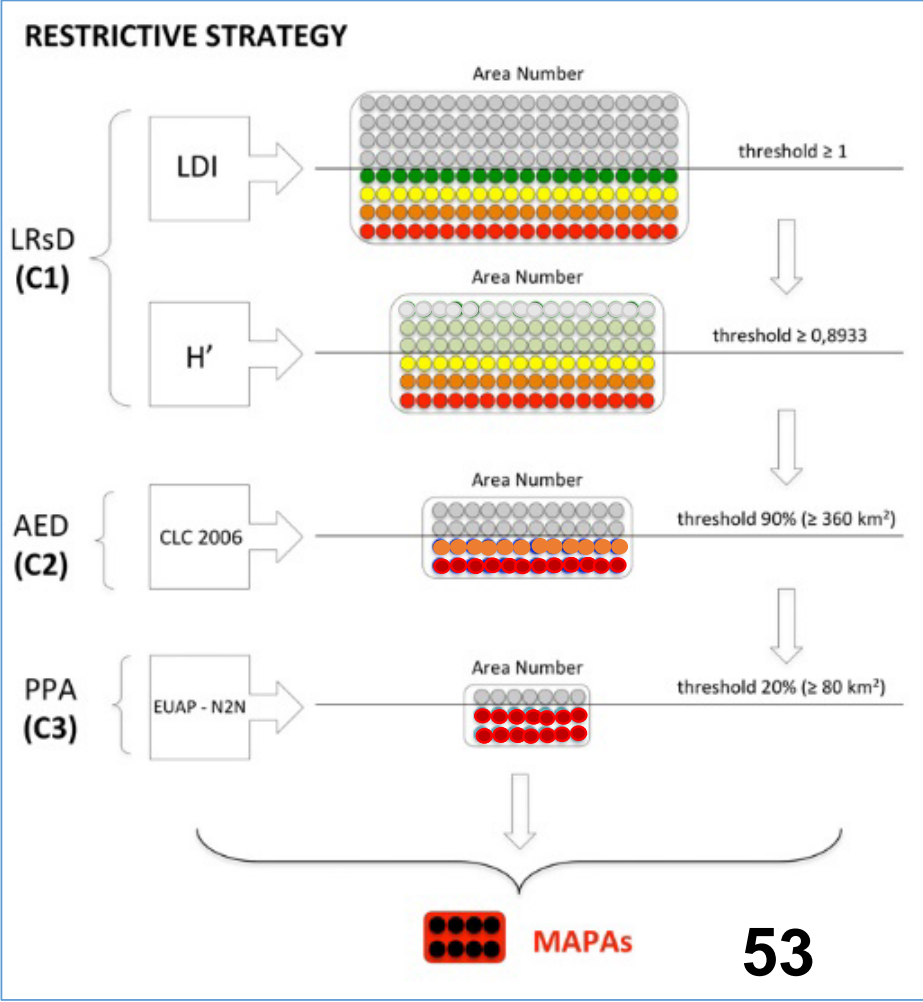
-  Forests and semi-natural environments
-  Agricultural Land



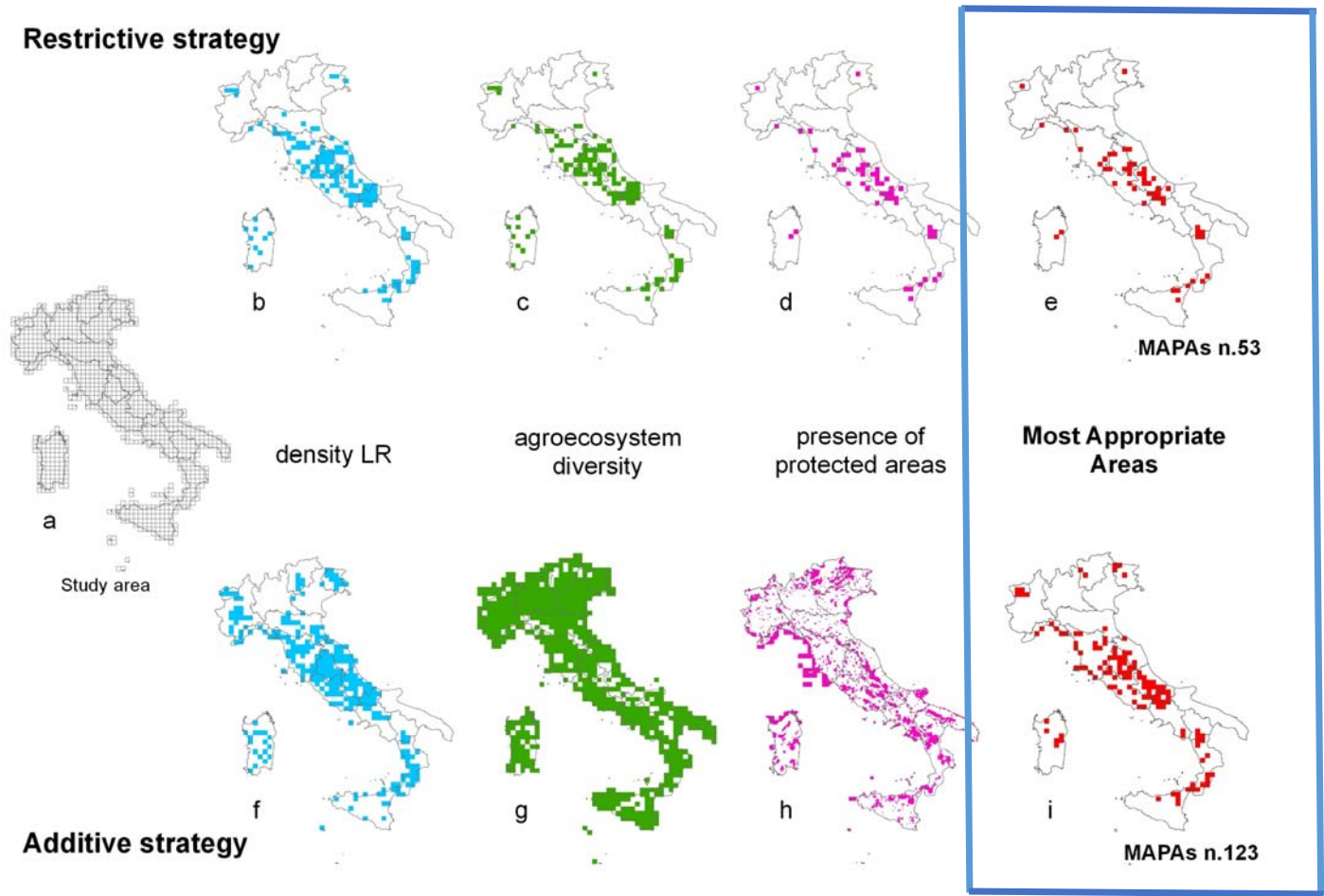
Criterion 3: Presence of Protected Areas



RESULTS



RESULTS



53 MAPAs were identified mainly located in Latium, Abruzzi, Molise, Umbria and Basilicata Regions

Hotspots of Agro-biodiversity

Additive strategy defined 123 MAPAs in the same Regions + Veneto and Emilia

CONCLUSIONS

The methodology presented here may be applied at the European level, in fact:

- The data related to agro-ecosystem ecological diversity (CLC 2006) and the presence of protected areas (Natura 2000) were readily available

- European LR Inventory

.....is desirable...



Thank you for the attention