

# VIII INTERNATIONAL CONGRESS ON MOUNTAIN AND STEEP SLOPES VITICULTURE

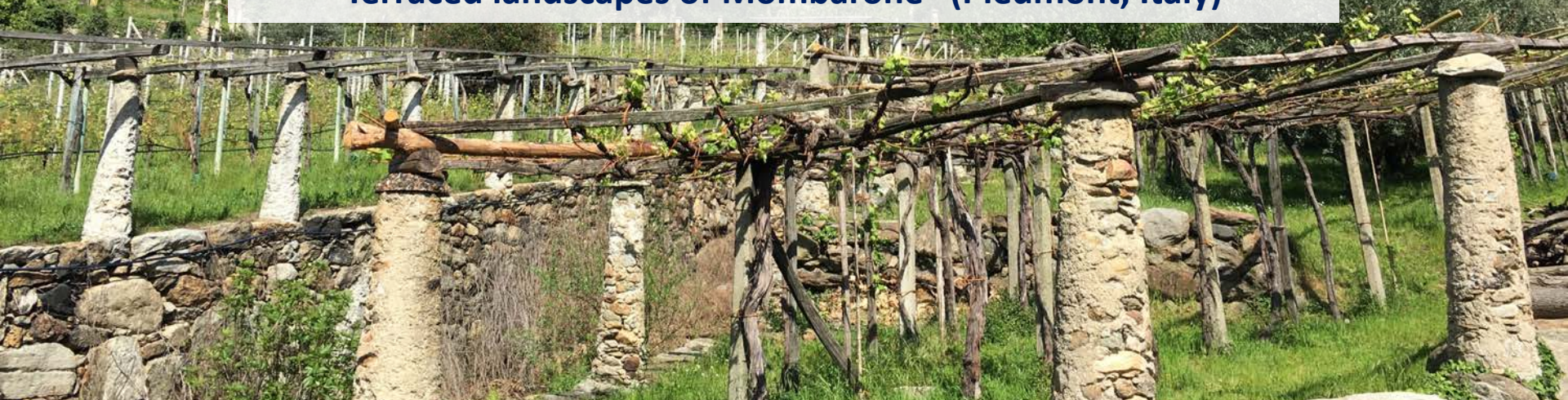
## Heroic Vineyards Serving Worldwide Viticulture

Session I – Unique Landscapes to Preserve

6 May 2026, Montreux, Switzerland



**Historical and Heroic Viticultural Landscapes to Preserve Through Certification Programs: The Case of the “Vineyard and Agricultural Terraced landscapes of Mombarone” (Piedmont, Italy)**



**Enrico Pomatto and Marco Devecchi**

*Department of Agricultural, Forest and Food Sciences, Research Centre for Rural Development of Hilly Areas, University of Turin*

# Historical and Heroic Viticultural Landscapes: values



- **Cultivation on terraces**
- Altitude higher than 500 m above sea level
- Slope greater than 30%
- Cultivation on small islands

- ✓ **Terraces: useful surfaces** for **agricultural purposes** in uncultivable conditions (**slopes**)
- ✓ A specific typology of **agricultural landscape**, completely **anthropic**: water infiltration, flood protection and runoff mitigation
- ✓ Different **geographical backgrounds**: alpine, maritime, fluvial, lacustrine
- ✓ **Ecosystem services** provision
- ✓ Maintenance of traditional agricultural practices and local grape varieties: **agrobiodiversity**



# Historical and Heroic Viticultural Landscapes: **critical issues**

- ✓ Continuous management and efforts (**heroic**)
- ✓ Socioeconomic conditions: **aging of rural communities**
- ✓ **Fragmentation**
- ✓ **Abandonment:**
  - **Loss of historic rural landscapes**
  - **Loss of agrobiodiversity**
  - **Increase of hydrogeological instability**
- ✓ In Italy at least **200000 ha** of terraced areas but it is an underestimation due to a lack of knowledge (Bonardi and Varotto, 2016)
- ✓ Difficulties in **terraces mapping and change monitoring**



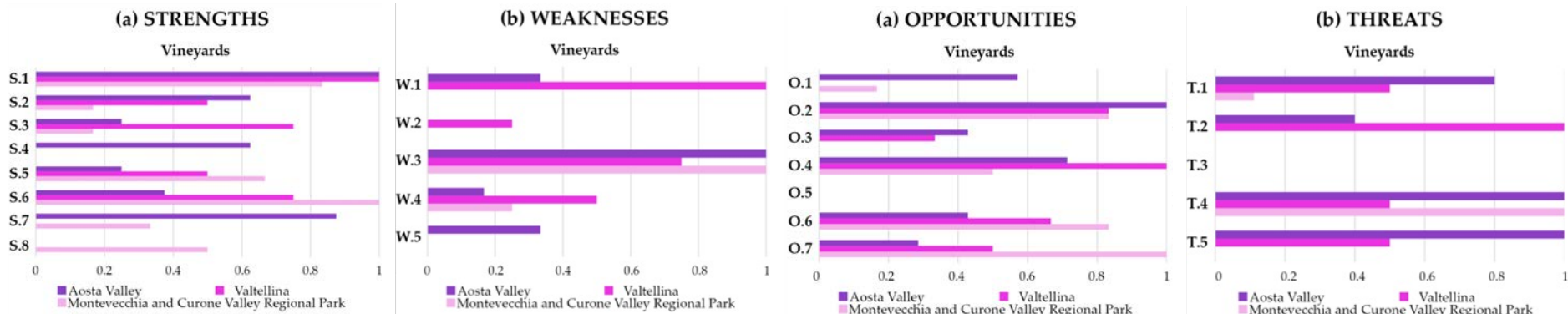
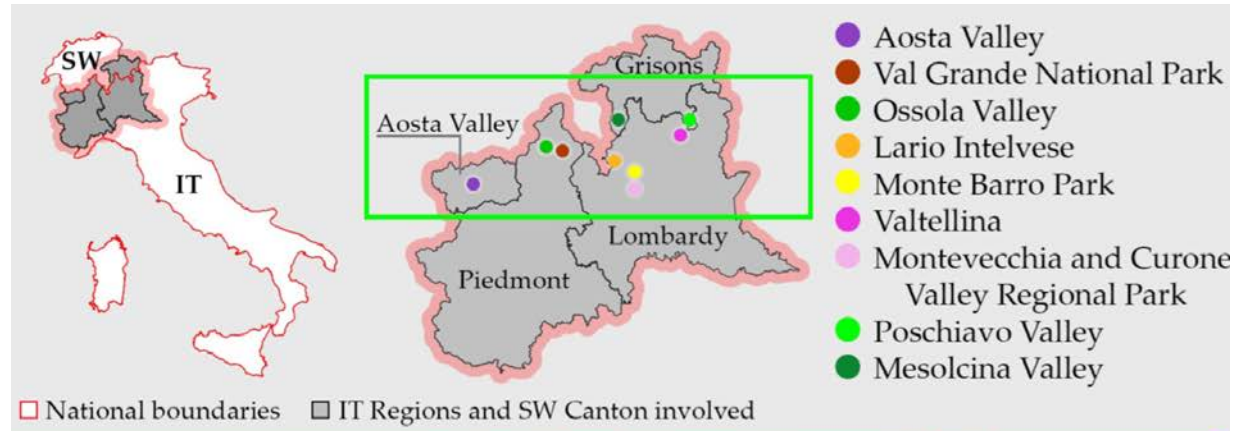
*Ossola Valley*



*Borgofranco d'Ivrea*

# Identification of development actions based on participatory characterization

## InTERRACED\_net Project: Strategies and Networks for the Conservation and Enhancement of the Transboundary Terraced Landscape



## Alternative and future landscape strategies for the enhancement of the terraced landscapes:

- ✓ ...
- ✓ Participating in national and international enhancement programs
- ✓ ...



land

an Open Access Journal by MDPI

Landscape Strategies for Terraced Landscapes in the European Alpine Region Using a Mixed-Method Analysis Tool

Enrico Pomatto; Paola Gullino; Silvia Novelli; Marco Devecchi; Federica Larcher

Land 2023, Volume 12, Issue 6, 1252



# Preservation through certification programs

## Italian national level

### National Register of the Historical Rural Landscapes, Agricultural Practices, and Traditional Knowledges

*Italian Ministry of Agriculture, since 2012*

**Aim:** Create a **network** of landscapes, agricultural practices, and traditional knowledge of particular **historical and cultural value** that characterize poorly mechanized agricultural systems (e.g., terraced) and that preserve **identity elements** strongly linked to the geomorphological conditions of the sites and the socioeconomic conditions of local communities, and preserve the **biocultural diversity**



#### Parameters to be evaluated:

- Significance
- Integrity
- Vulnerability

#### ELENCO DEI PAESAGGI E PRATICHE AGRICOLE



Pratica agricola tradizionale:  
Allevamento brado di bovini ed equini a conduzione buttera



Paesaggio rurale:  
Terre di Calenzano: ville fattoria, olivete tradizionali e boschi



Pratica agricola tradizionale:  
La "Tracciatura del solco dritto"



Paesaggio rurale:  
Il «bosco di mandorli e d'olivi» e i giardini d'agrumi della Valle dei Templi d'Agrigento



Paesaggio rurale:  
Uliveti pascolati del Comune di Oliena



Paesaggio rurale:  
Paesaggi Terrazzati Viticoli e Agricoli del Mombarone



Paesaggio rurale:  
Paesaggio dei terrazzamenti e della viticoltura delle Cinque Terre



Paesaggio rurale:  
I vigneti eroici di Meana Sardo



Pratica agricola tradizionale:  
Vite 'a raggiera' del Taburno



Paesaggio rurale:  
Marghine-Goceano e territori di Bolotana, Illorai e Lei



Pratica agricola tradizionale:  
Alberata di Asprinio



Pratica agricola tradizionale:  
Irrigazione tradizionale tramite sistema di rogge, "Waale"



# International level

## Globally Important Agricultural Heritage Systems (GIAHS)

FAO, since 2002

**Aim:** Identify and safeguard agricultural systems rich in biodiversity, resulting from the co-adaptation of farming communities with the surrounding environment and characterized by high aesthetic and historical-cultural values



### Selection criteria:

- Food and livelihood security
- Agro-biodiversity
- Local and Traditional Knowledge systems
- Cultures, Value systems and Social Organizations
- Landscapes and Seascapes Features



Keyword: **Dynamic conservation**

**Action plan for the sustainability of the system**

Globally Important Agricultural Heritage Systems (GIAHS)



Background Become a GIAHS GIAHS around the world News and Events Resources

Olive Groves of the Slopes between Assisi and Spoleto, Italy

GIAHS since 2018



Globally Important Agricultural Heritage Systems (GIAHS)



Background Become a GIAHS GIAHS around the world News and Events Resources

Soave Traditional Vineyards, Italy

GIAHS since 2018



Globally Important Agricultural Heritage Systems (GIAHS)



Background Become a GIAHS GIAHS around the world News and Events Resources

Lemon Orchards and the Terraced Agricultural System in Amalfi, Italy


GIAHS since 2025



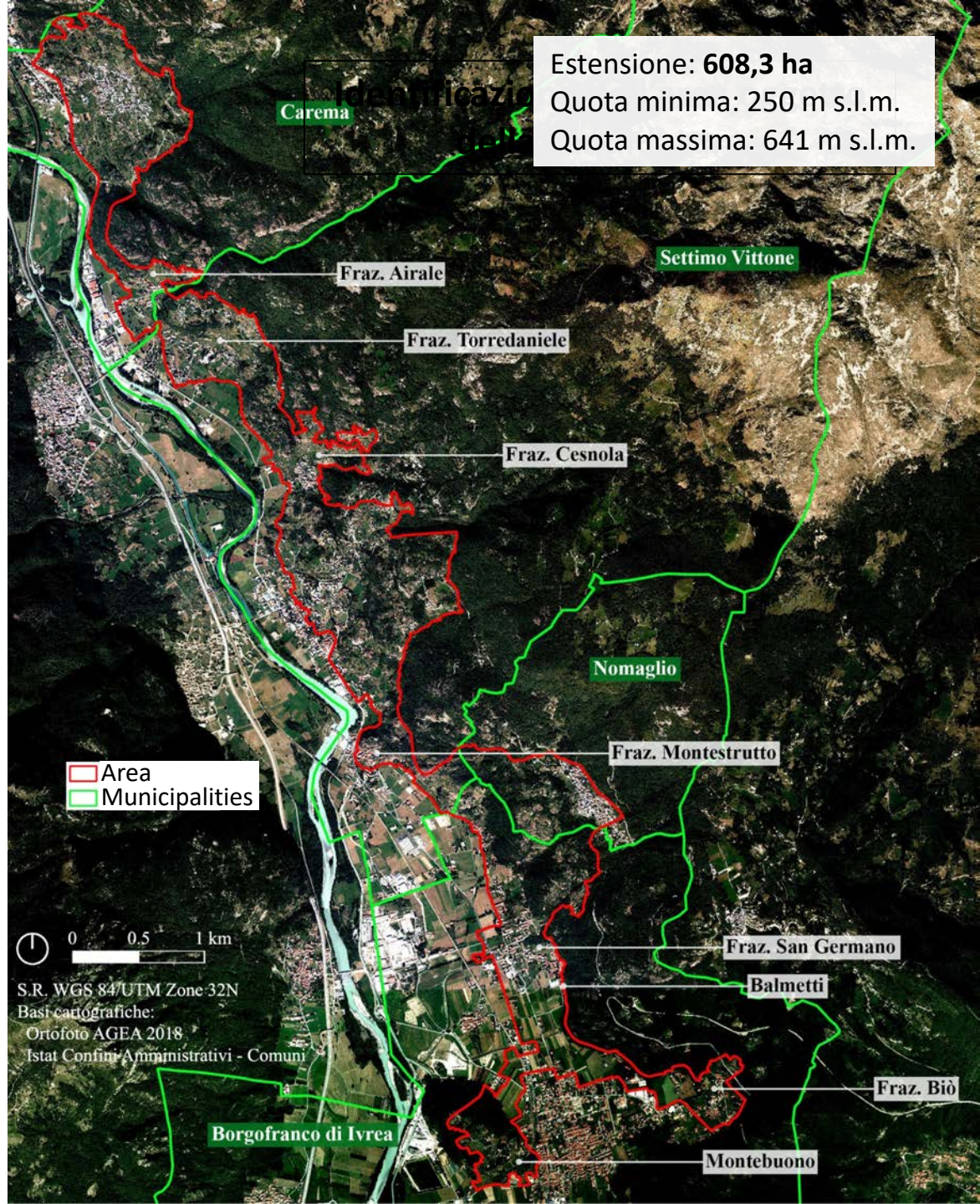
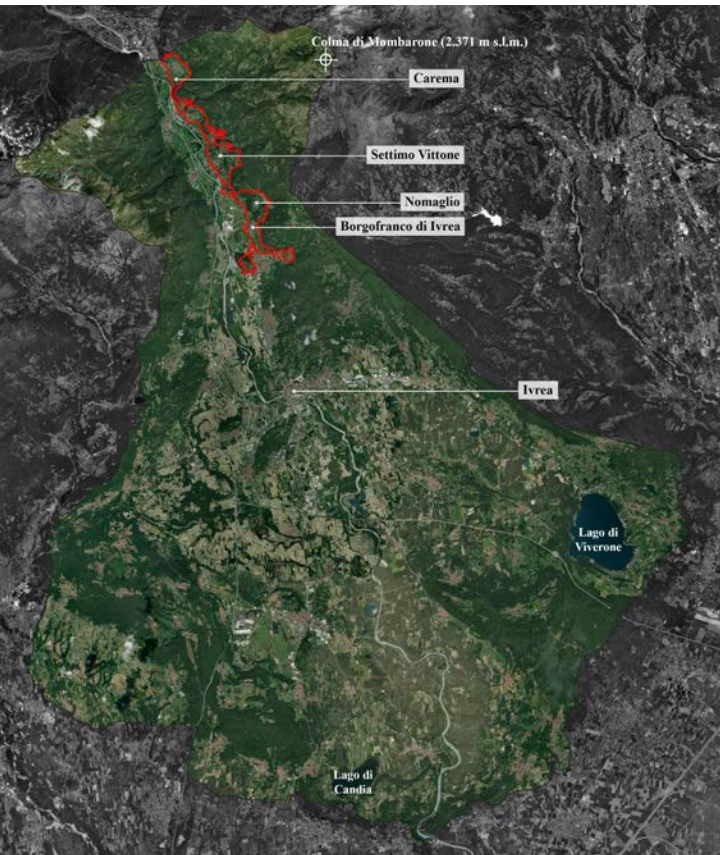
# The Case of the “Vineyard and Agricultural Terraced landscapes of Mombarone” (Piedmont, Italy)



# Site location

 Ivrea Morainic Amphitheatre

 Canavese



Estensione: **608,3 ha**  
Quota minima: 250 m s.l.m.  
Quota massima: 641 m s.l.m.

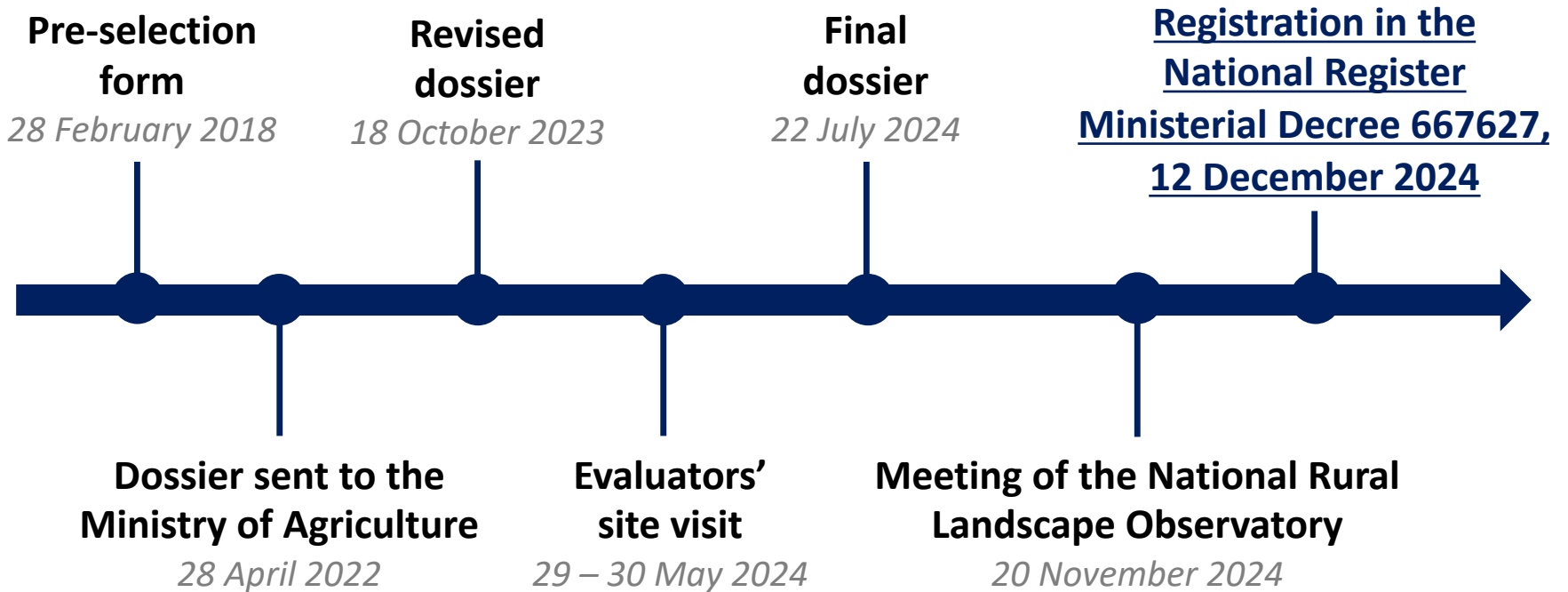
 Area  
 Municipalities

0 0.5 1 km

S.R. WGS 84/UTM Zone 32N  
Basii cartografiche:  
Ortofoto AGEA 2018  
Istat Confini Amministrativi - Comuni

Estensione: **608,3 ha**  
Quota minima: 250 m s.l.m.  
Quota massima: 641 m s.l.m.

# The participatory process that accompanied the application procedure



# Materials and methods

## Parameters

### Qualitative

#### Significance

#### Vulnerability

- ✓ Historical archival analyses
- ✓ Documents analyzed dated from 1600s to 1900s (e.g Savoy family cadastral map 1789)
- ✓ Field inspections
- ✓ Participatory analysis (interviews and online questionnaires)



- **Historical organization of land use**
- **Historical agricultural practices**
- **Historical landscape elements**
- **State of conservation**
- **Elements of vulnerability**

### Quantitative

#### Integrity

- ✓ GIS-based analyses
- ✓ Photointerpretation of historical aerial images (1954, 1968) and recent orthophoto (2018)
- ✓ Land use class definition with high level of detail (minimum unit 100 m<sup>2</sup>)
- ✓ Application of landscape indicators

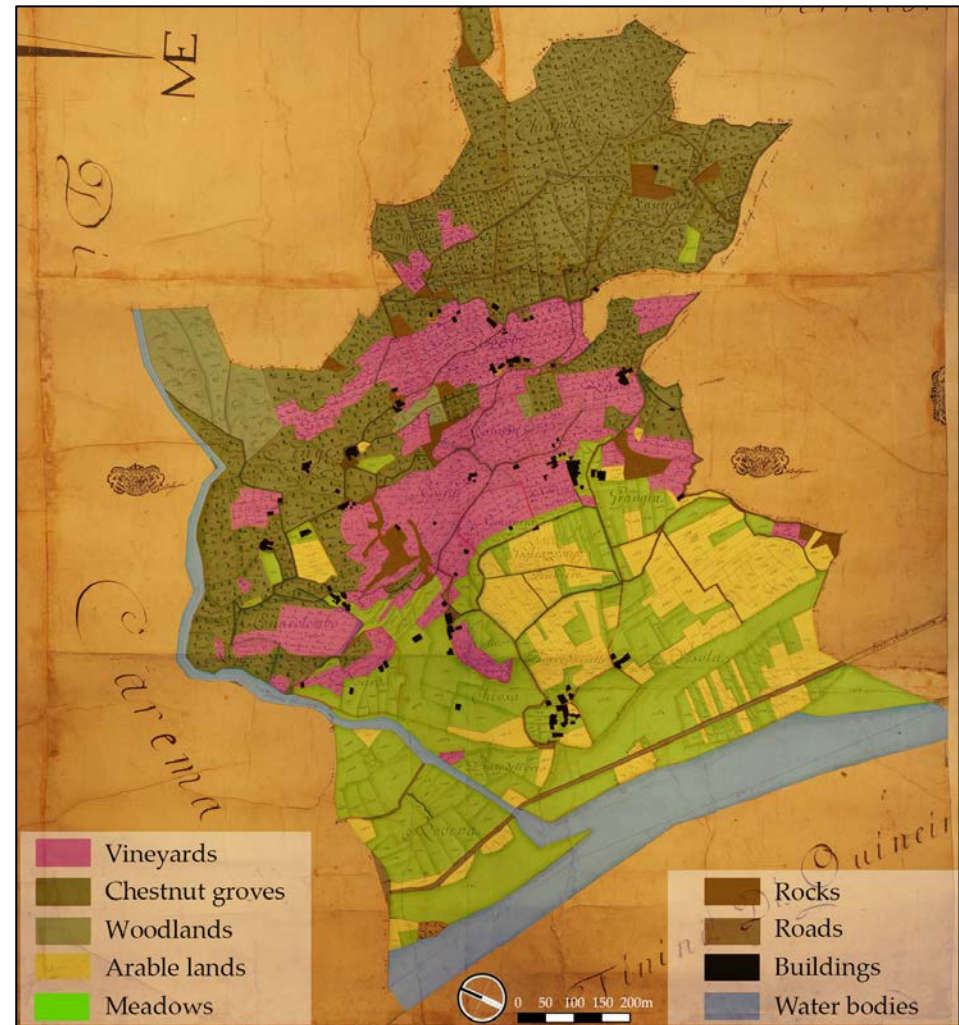


- **Historical land use map**
- **Current land use map**
- **Dynamics of transformation**
- **Level of integrity**
- **Measurement of critical issues**

# Results

## Significance

- **Historical organization of land use**
  - ✓ Traditional cultivation on terraces: vineyards (280-500 m a.s.l.)
  - ✓ Vine introduction: 3000 BC (Neolithic)
  - ✓ Viticulture origin: *Salassi* (Pre-Roman epoch)
  - ✓ Traditional vine variety: *Nebbiolo* (85.29% of the total vine surface, Piedmont Region data)
  - ✓ DOC Carema, and DOC Canavese Nebbiolo



- **Historical agricultural practices and historical landscape elements**

- ✓ *Nebbiolo* plant characteristics: vigorous, prone to break in the wind
- ✓ Maximization of solar interception



***Pergola caremiese***

supported by

***Stone columns***

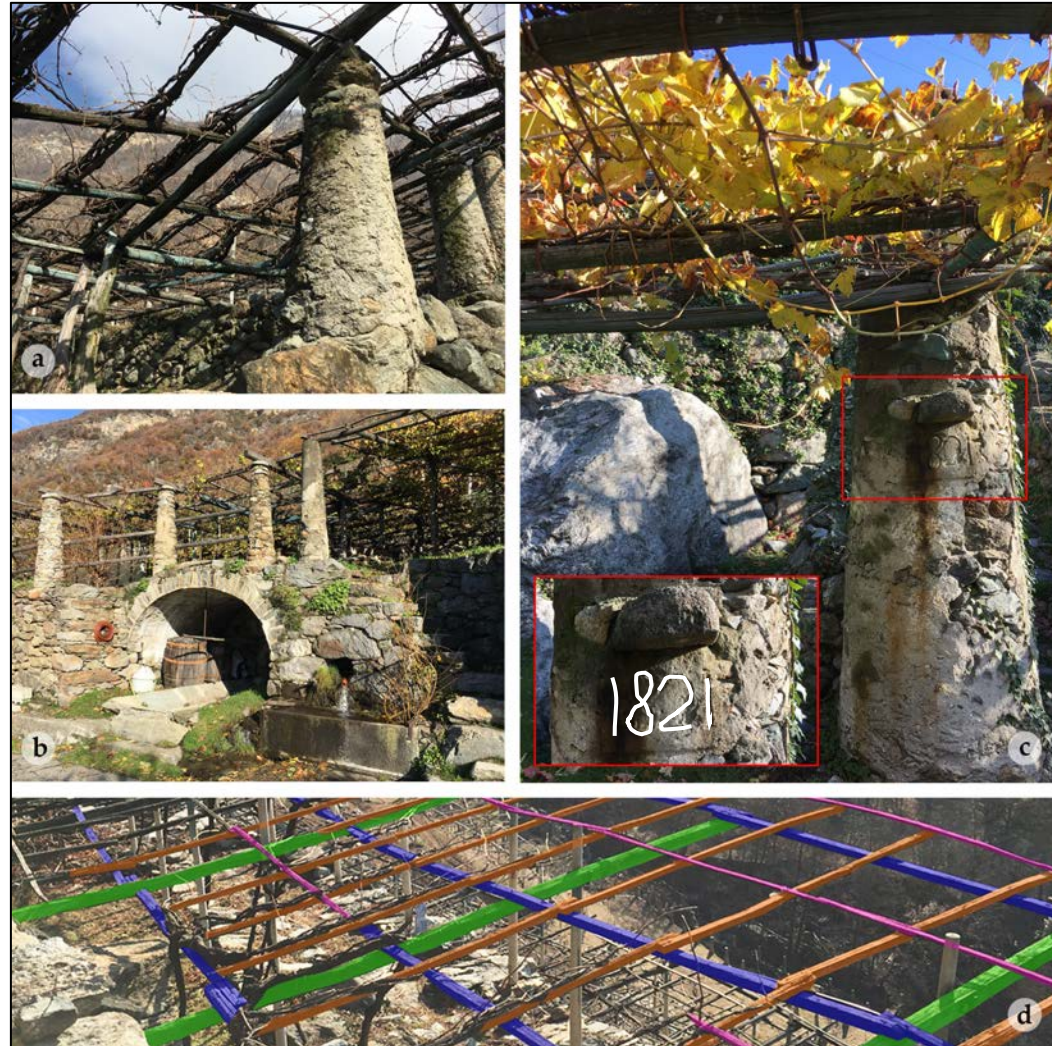


Primary function:

Support the  
breeding  
technique

Secondary function:

Reduce temperature  
range between day  
and night  
**(stove columns)**



(a) Historical vine-breeding technique: pergola made of chestnut poles supported by stone columns. (b) Pergolas integrated with other important historical landscape elements of rural architecture. (c) Dated stone columns for pergola support (1821). (d) Detail of four orders of chestnut poles perpendicularly overlapped that make up pergolas (shown in green, blue, orange, and pink).

- ✓ Origin: Roman time

- **Other historical landscape elements**

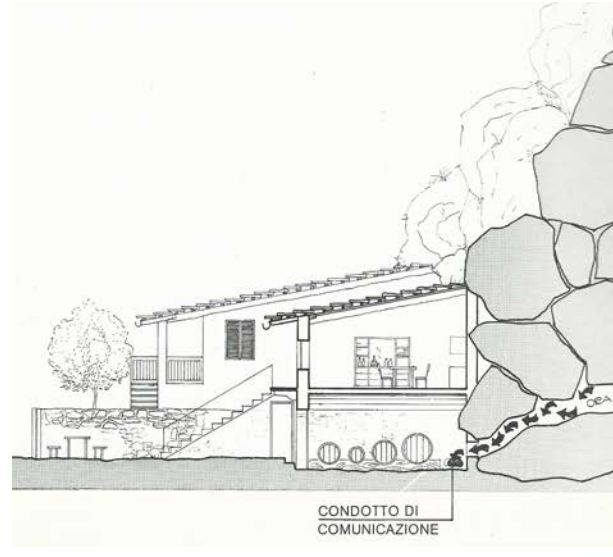
- ✓ **Olive trees** (in a religious Romanic complex)



- ✓ Rural architecture (e.g. **Balmetti of Borgofranco d'Ivrea**)



- ✓ **Chestnut woodlands**



# Vulnerability

## Transformations



Vine-breeding techniques

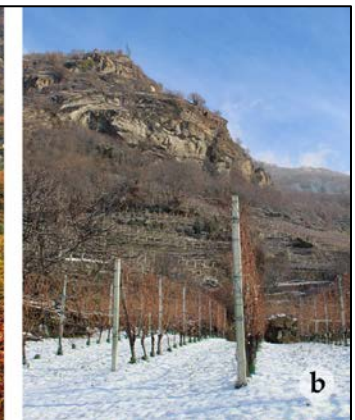
Land uses

*Modified pergolas*

*Espaliers*



*Modified pergolas in (a) summer and (b) winter, where (c) some orders of chestnut poles were replaced with metal wires and vines were planted in the middle of terraces.*



*(a) Use of espalier vine-breeding technique on lower part of slope and its impact on landscape. (b) Detail of espalier technique.*

High pergola:  
1200–1300 h of work/ha per year  
(Mazzarino, 2006)

# Transformations



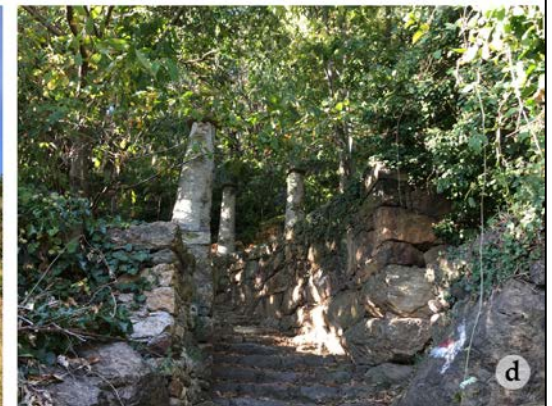
Vine-breeding techniques

## Land uses

*Olive groves*

*Shrublands*

*Mowed meadows*

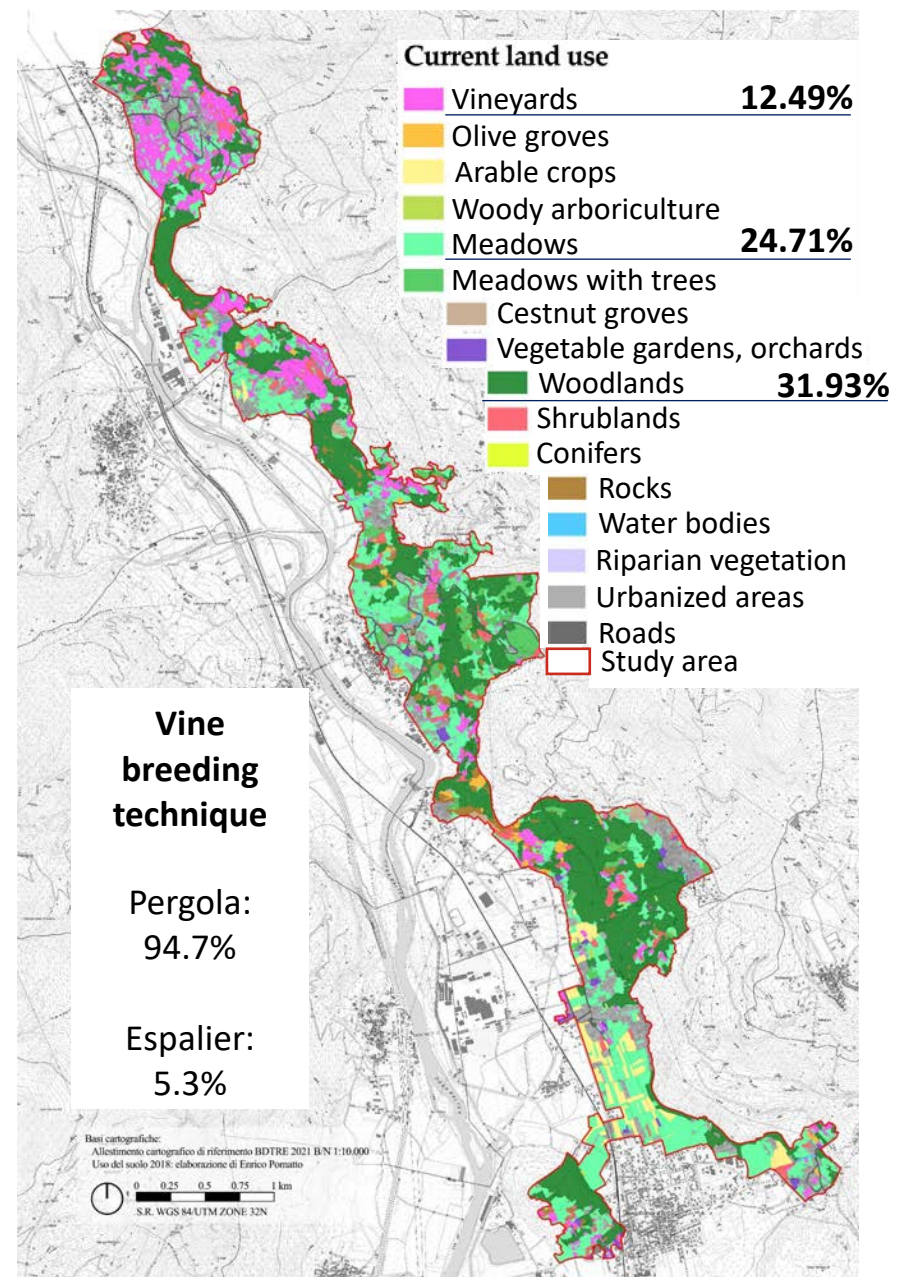
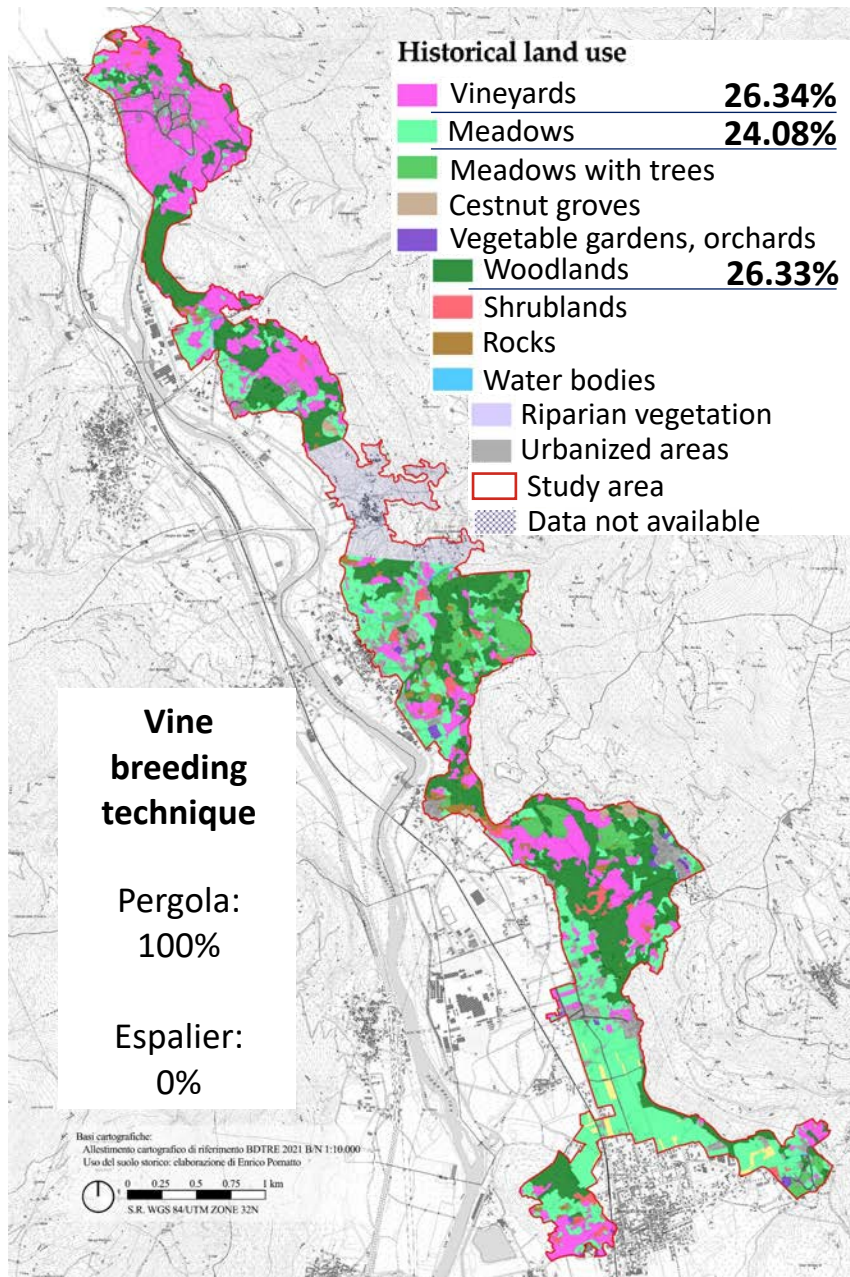


*Invasive woodland*

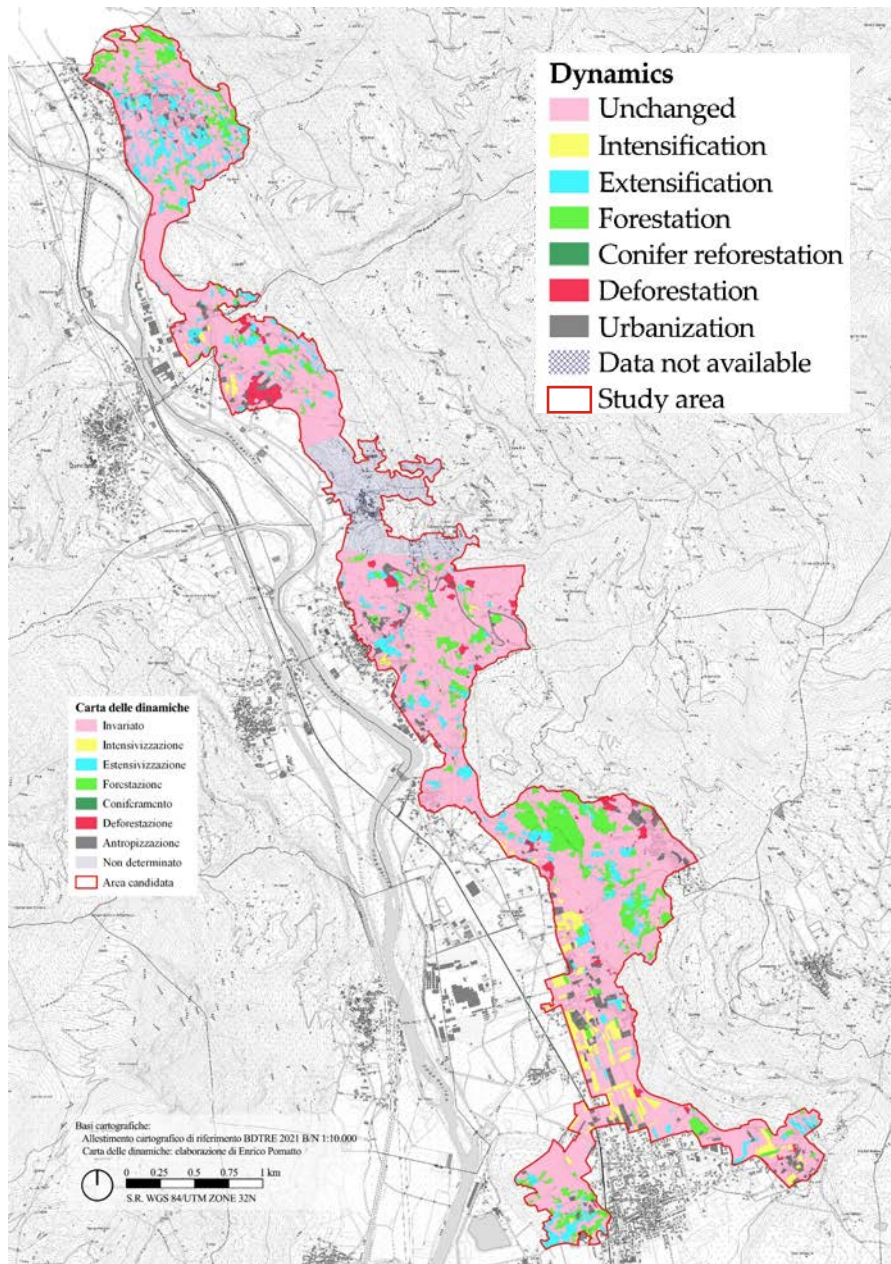
*Consequences of vineyard abandonment: (a) introduction of olive groves; (b) abandonment of cultivation but continuous terrace management (mowed); (c) recent terrace abandonment with the presence of invasive shrubs; (d) total terrace abandonment with the presence of invasive woodland.*

# Integrity

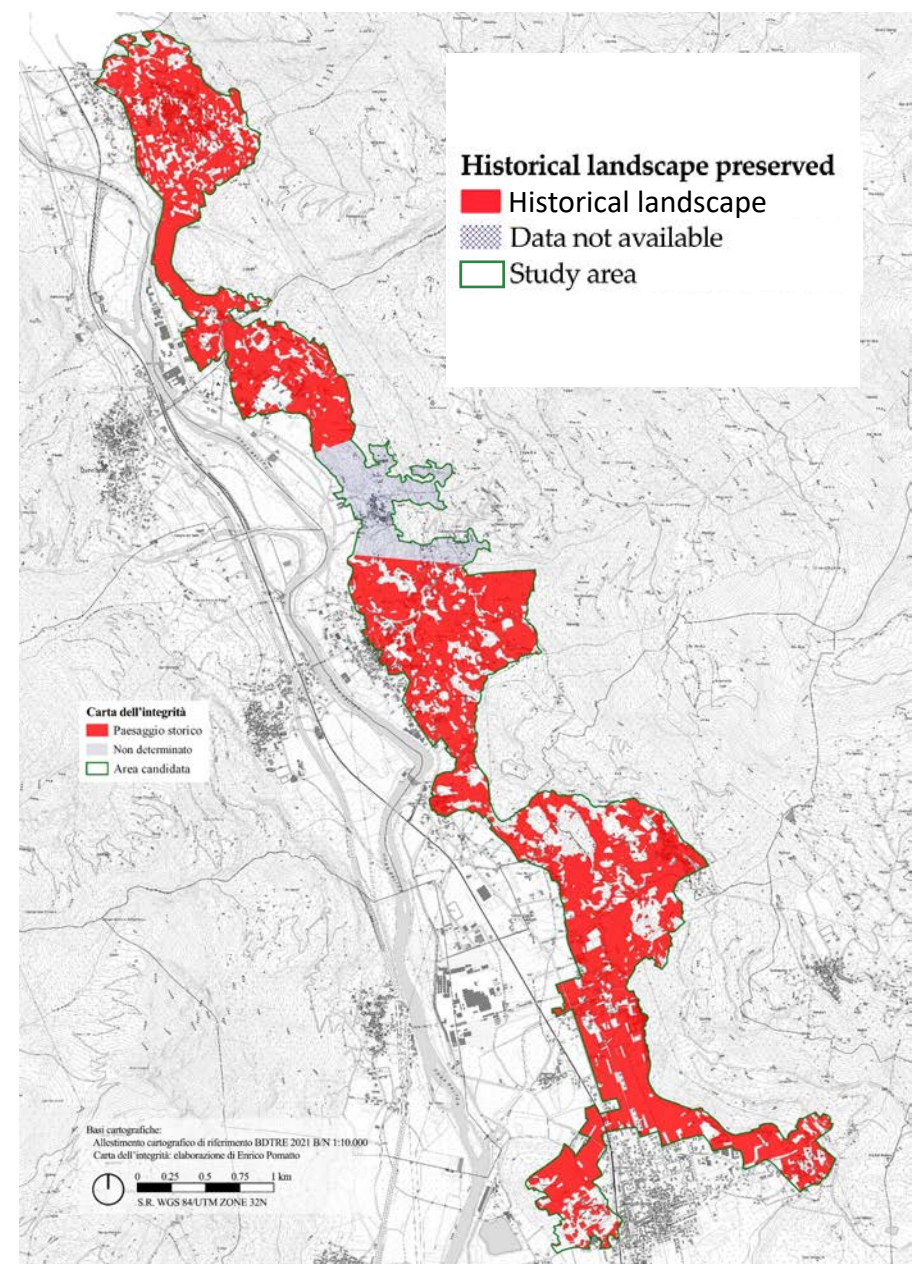
## • Land use maps



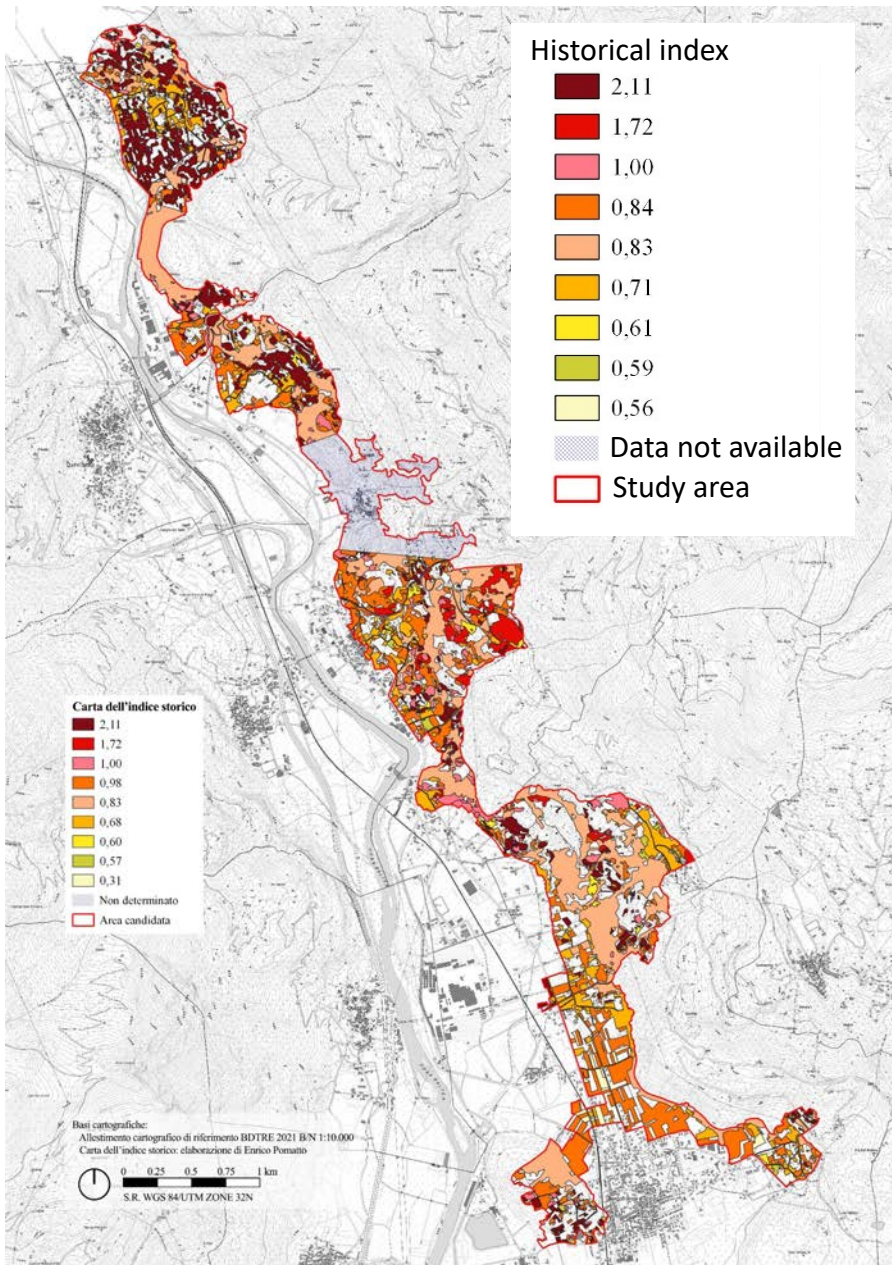
- Dynamics



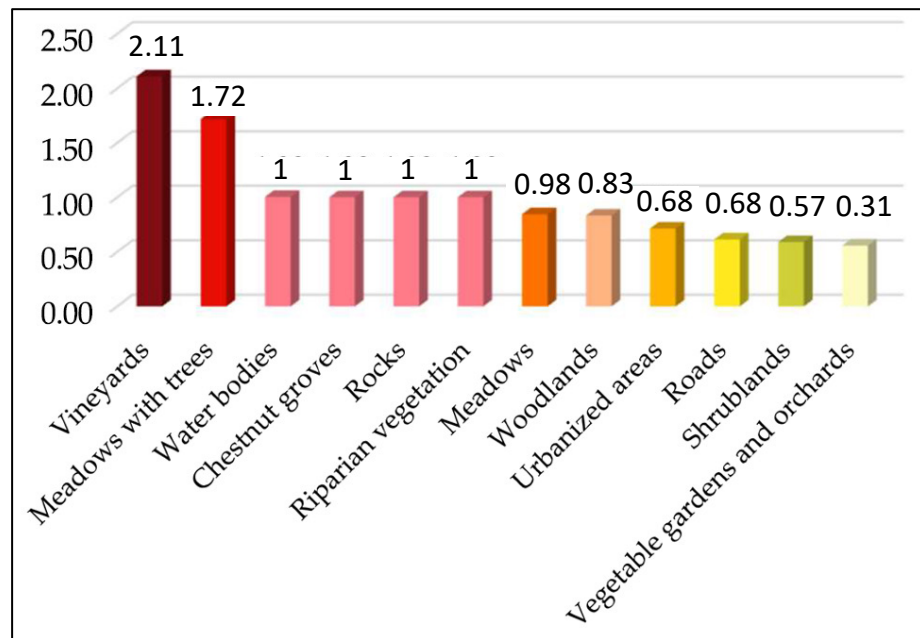
- Level of integrity: 67,8%



- **Landscape indicators**



✓ Historical index (>1 = decrease over time)



✓ Edge Density (**fragmentation**)

- Vineyards: from 606 m/ha to 1210 m/ha
- Woodlands: from 516 m/ha to 480 m/ha
- ...
- Landscape: from 745 m/ha to 948 m/ha



*sustainability*



an Open Access Journal by MDPI

## **Coevolution between Terraced Landscapes and Rural Communities: An Integrated Approach Using Expert-Based Assessment and Evaluation of Winegrowers' Perceptions (Northwest Piedmont, Italy)**

Enrico Pomatto; Marco Devecchi; Federica Larcher

*Sustainability* **2022**, Volume 14, Issue 14, 8624



*land*



an Open Access Journal by MDPI

## **Assessment of the Terraced Landscapes' Integrity: A GIS-Based Approach in a Potential GIAHS-FAO Site (Northwest Piedmont, Italy)**

Enrico Pomatto; Marco Devecchi; Federica Larcher

*Land* **2022**, Volume 11, Issue 12, 2269

# Dissemination of the recognition as a national heritage site



Chamber of Deputies, 5 February 2025



# Inclusion in the national network of historic rural landscapes

Chamber of Deputies, Italian Parliament  
28 October 2025

Evento promosso dall'On. Alessandro Giglio Vigna

 **CSC**  
Centro Studi per lo Sviluppo Rurale della Collina

 **DISAFA**  
Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali

 **Accademia di Agricoltura di Torino**  
1785

 **IRIS**  
ASSOCIAZIONE PAESAGGI RURALI DI INTERESSE SPORICO

**CONVEGNO**

**Prospettive di valorizzazione delle aree interne: i paesaggi rurali storici d'Italia patrimonio nazionale**



**CAMERA DEI DEPUTATI**  
**Sala della Lupa**  
**Martedì 28 ottobre 2025**  
**10.00 - 18.30**

L'accesso alla sala (Palazzo Montecitorio, Piazza di Monte Citorio 1, Roma) è consentito fino al raggiungimento della capienza massima e con abbigliamento adeguato con obbligo di giacca e cravatta per gli uomini. Per accrediti inviare una mail a [enrico.pomatto@gmail.com](mailto:enrico.pomatto@gmail.com) entro sabato 25 ottobre 2025 corredata di nome e cognome completi di ogni partecipante e qualifica.

Col patrocinio istituzionale di:

 **MINISTERO DELL'AGRICOLTURA DELLA SOVRANITÀ ALIMENTARE E DELLE FORESTE**

 **UGIVI**  
UNIONE GIUCCHI DELLA VITE E DEL VINO

 **Associazione Nazionale Città dell'Olio**

 **Slow Food Italia**

 **unesco**

 **UNIVERSITÀ DEGLI STUDI FIRENZE**

 **Accademia delle Scienze di Torino**  
1785

 **CONAF**  
CONSIGLIO NAZIONALE DEI DOTTORI AGRONOMI E DEI DOTTORI FORESTALI

 **Ministero delle Politiche Agricole**

La partecipazione è presente di diritto al riconoscimento di 0,893 CFP per gli iscritti all'Ordine dei Dottori Agronomi e dei Dottori Forestali, ai sensi del Regolamento per la Formazione Professionale Continua CONAF approvato con delibera del Consiglio n. 182 del 27 aprile 2022.

*Diretta online disponibile all'indirizzo [webtv.camera.it](http://webtv.camera.it)*



# Involvement in international meetings: visibility

## INTERNATIONAL CONFERENCE

*RURAL HERITAGE LANDSCAPE: STUDY, OBSERVATION AND DEVELOPMENT*

AND GENERAL ASSEMBLY OF UNISCAPE

TURIN, ITALY, 25-26 JUNE 2026



*First announcement*

The International Conference “*Rural Heritage Landscape: Study, Observation and Development*” will take place in Turin, Italy, on 25–26 June 2026, organized by *Università degli Studi di Torino and Politecnico di Torino* and in collaboration with UNISCAPE. The conference will also host the annual meeting of the UNISCAPE General Assembly.

**Program and  
registration form:  
[www.csc.unito.it](http://www.csc.unito.it)**

## Conclusions and future perspectives

- ✓ The study supported the historical and heroic viticultural landscapes of Mombarone preservation process through the involvement in a **national certification program**
- ✓ Creation of **virtuous networks** among rural landscapes of national heritage
- ✓ Promotion of landscape **enhancement policies** and allocation of dedicated **funding** to farmers
- ✓ Opportunity to continue the process of recognizing the value of the landscape through participation in the **FAO/GIAHS programme**





Thank

[enrico.pomatto@unito.it](mailto:enrico.pomatto@unito.it)