

Siggen Seminar 2017

**Protected Areas for Sustainable Agriculture:
Sharing experiences from across Europe that
support agriculture in Protected Areas.**

Cinque terre

**The landscape of the cultivation
The culture of the landscape**

Matteo Perrone

Parco Nazionale delle Cinque Terre



Uscita Brugnato-Borghetto

Uscita Carrodano

Levanto
Montale
Pignone
Piana Battolla
Piano di Follo
Ricco del Golfo
Monterosso
Vernazza
Corniglia
Manarola
Riomaggiore
La Spezia
Fezzano
Le Grazie
Campiglia
Portovenere
Isola Palmaria



RIOMAGGIORE



MANAROLA



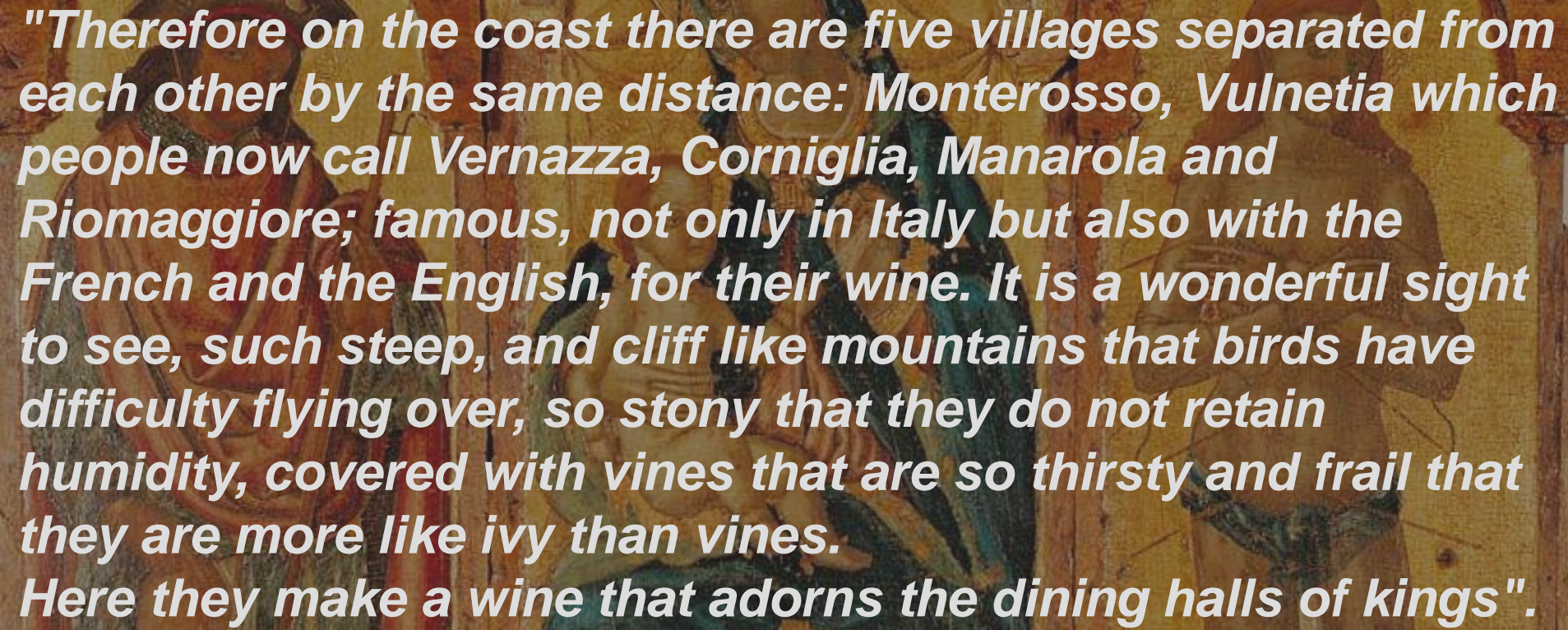
CORNIGLIA



VERNAZZA



MONTEROSSO



"Therefore on the coast there are five villages separated from each other by the same distance: Monterosso, Vernazza which people now call Vernazza, Corniglia, Manarola and Riomaggiore; famous, not only in Italy but also with the French and the English, for their wine. It is a wonderful sight to see, such steep, and cliff like mountains that birds have difficulty flying over, so stony that they do not retain humidity, covered with vines that are so thirsty and frail that they are more like ivy than vines. Here they make a wine that adorns the dining halls of kings".

Giacomo Bracelli, "De bello hispaniensi orae ligusticae descriptio", 1448 (Chancellor and senator of the Republic of Genoa)



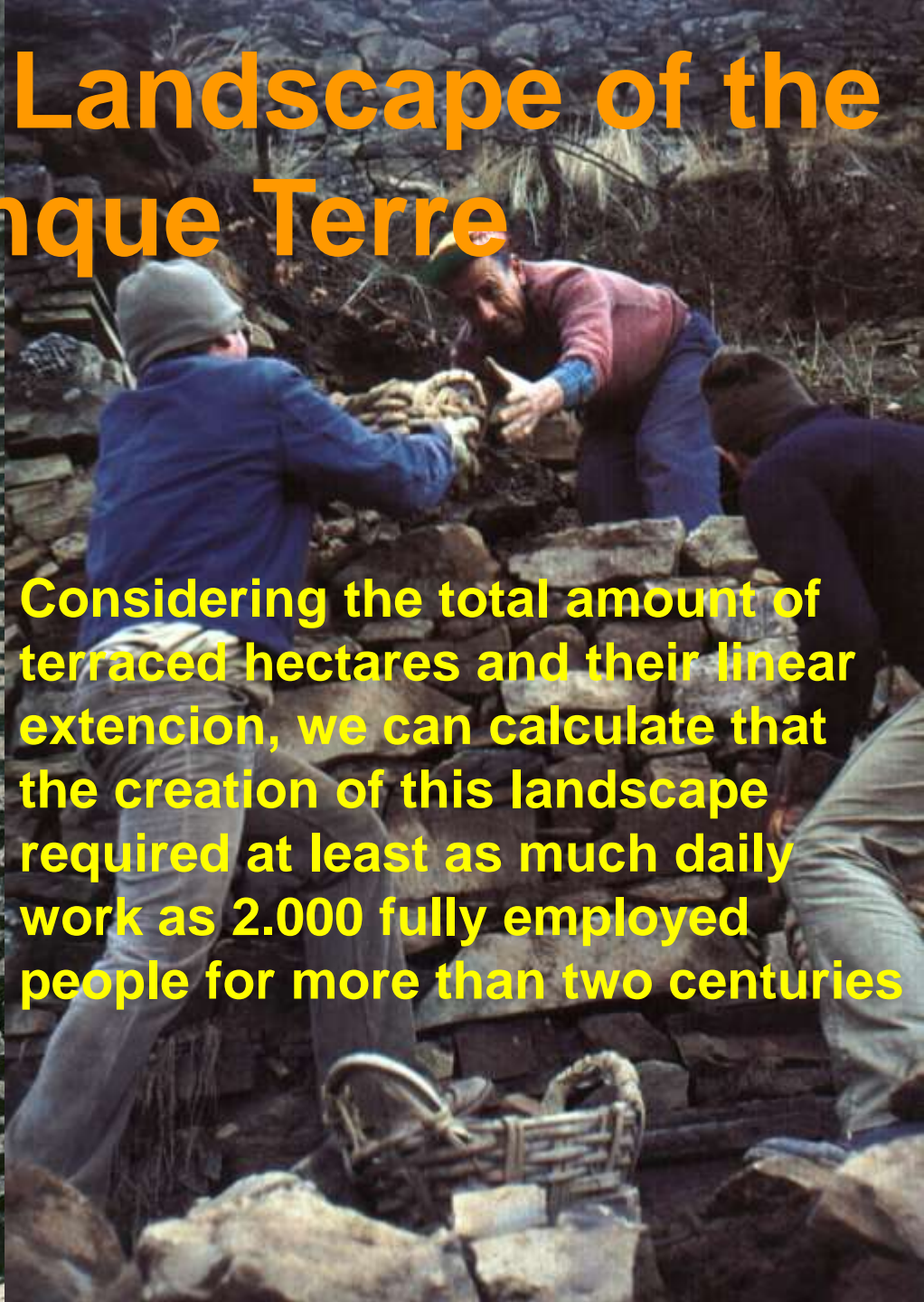
The Rural Landscape of the Cinque Terre

6.000 linear km of walls for a total amount of over 8 milion cubic meter of stones

Landscape made by man as a result of organising terraces in order to cultivate the land. These terraces are supported by dry-stone walls built without any cementing agent



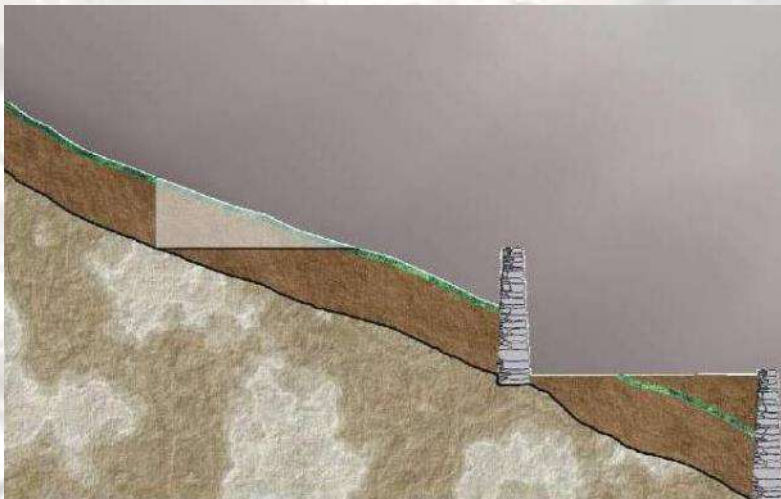
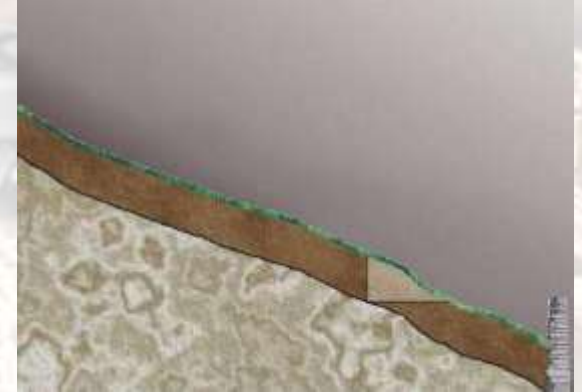
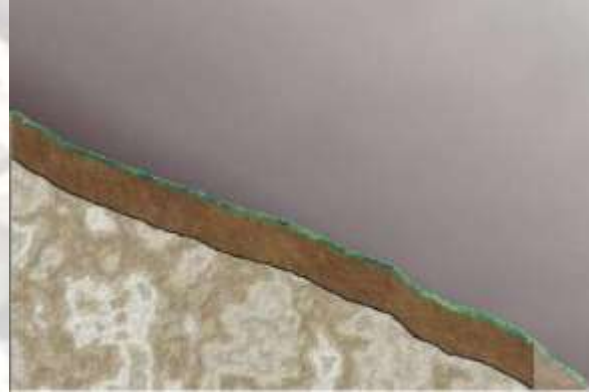
The Rural Landscape of the Cinque Terre



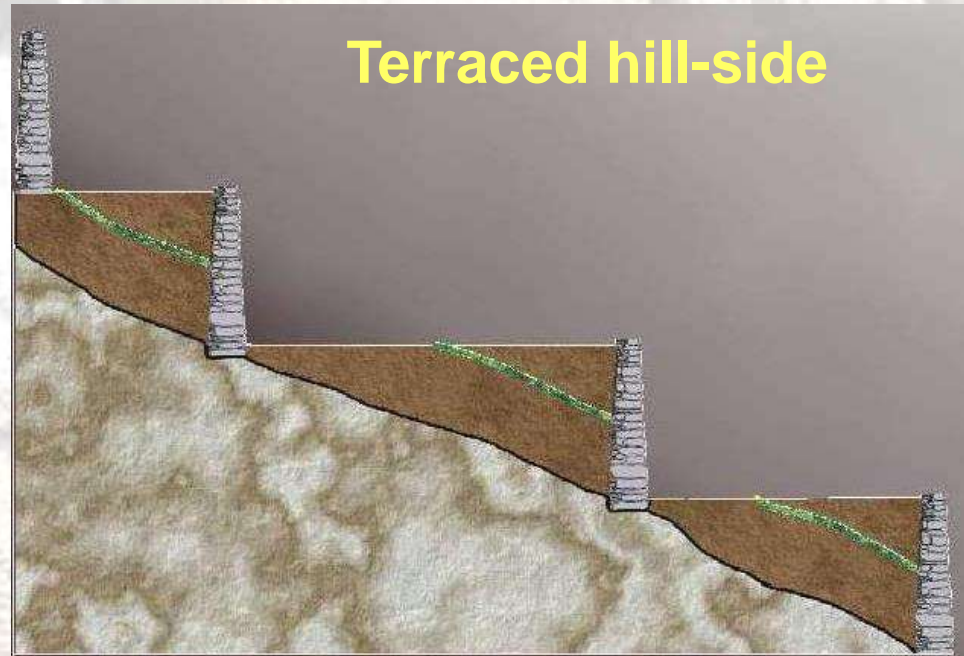
Considering the total amount of terraced hectares and their linear extension, we can calculate that the creation of this landscape required at least as much daily work as 2.000 fully employed people for more than two centuries

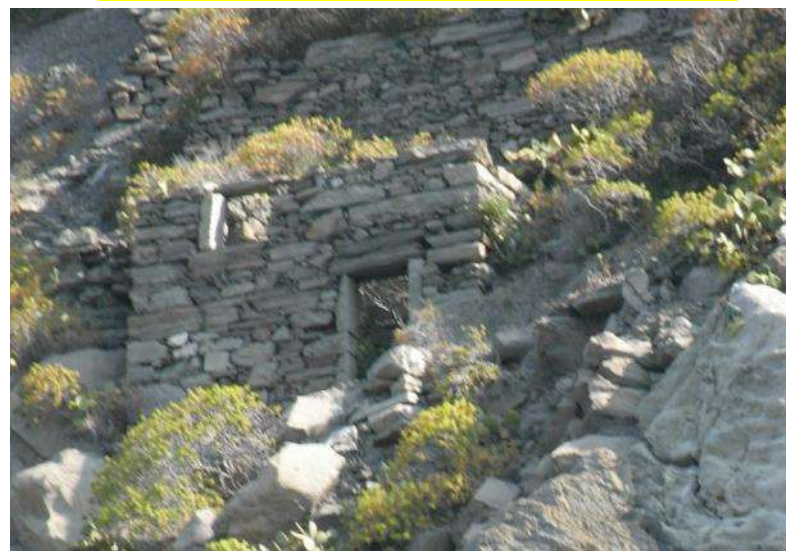
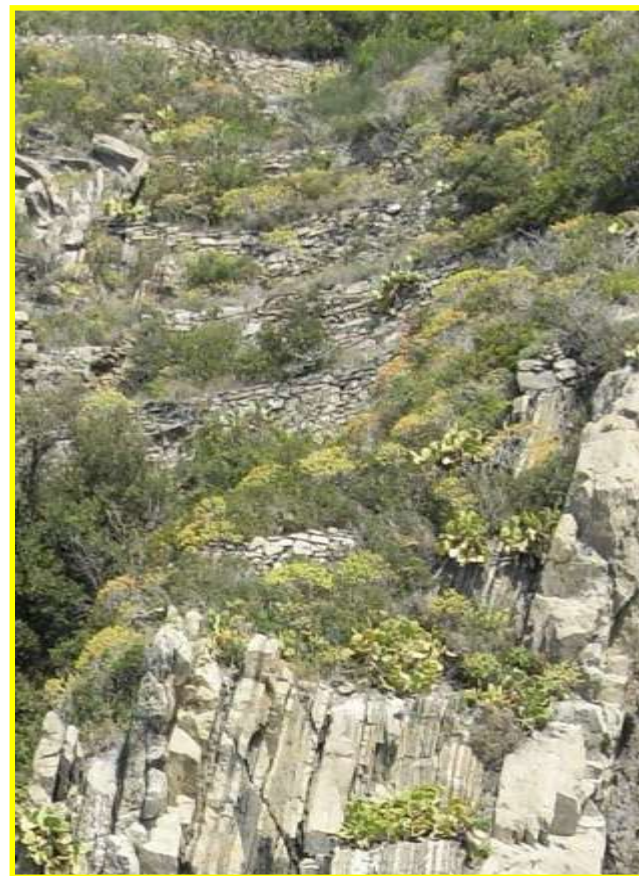
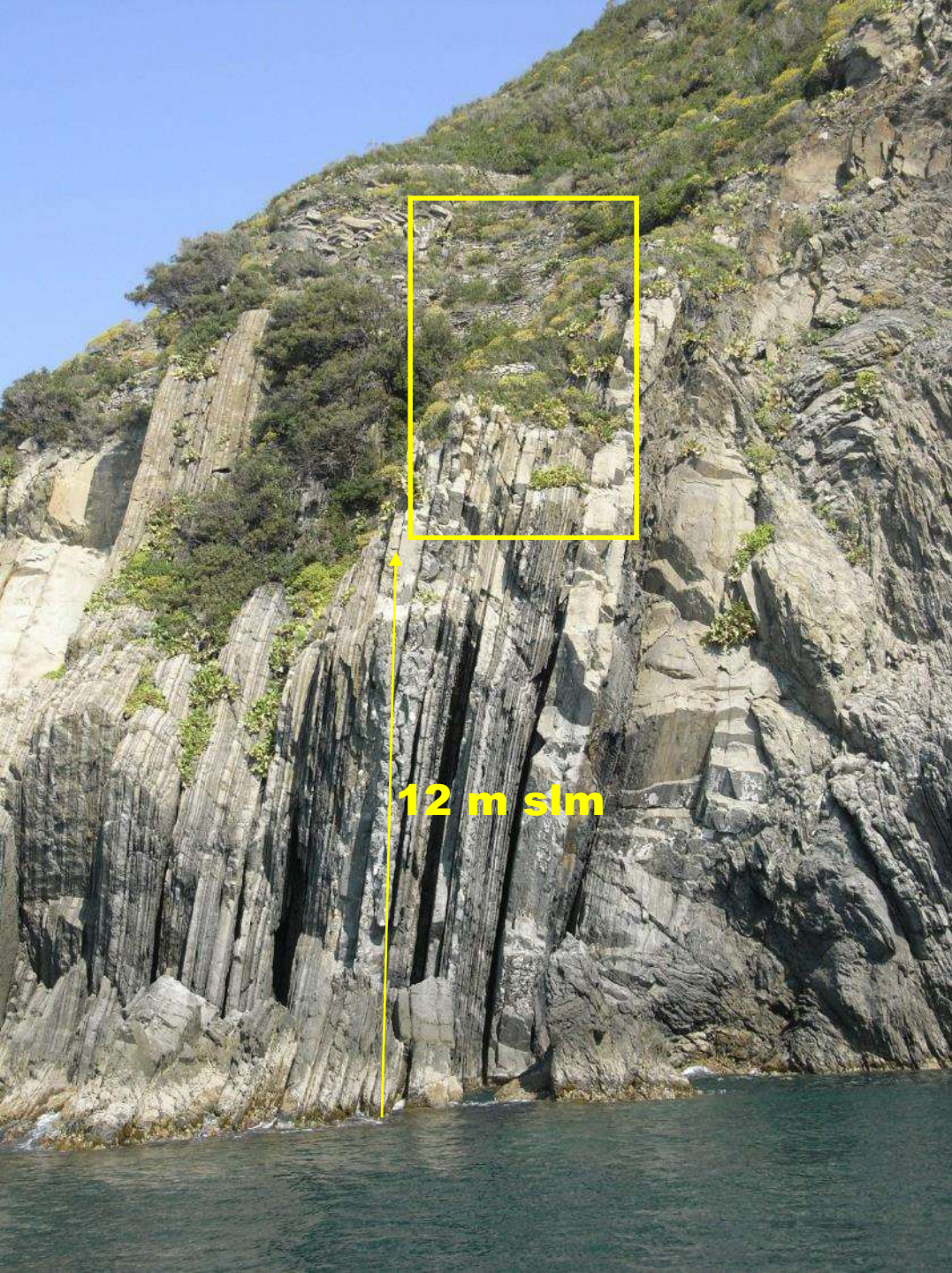
The Rural Landscape of the Cinque Terre

Natural hill-side



Terraced hill-side

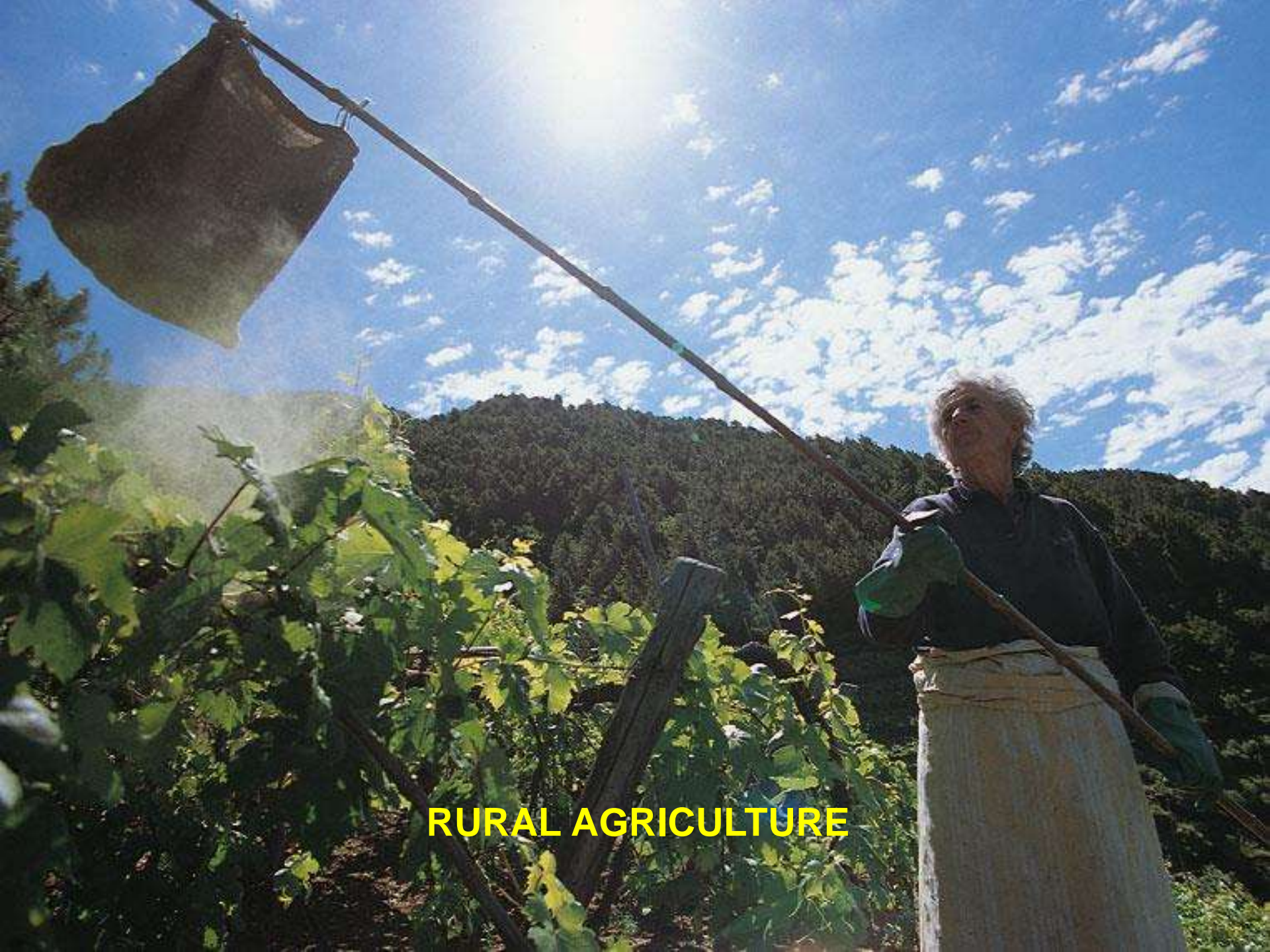












RURAL AGRICULTURE







Broom leaves

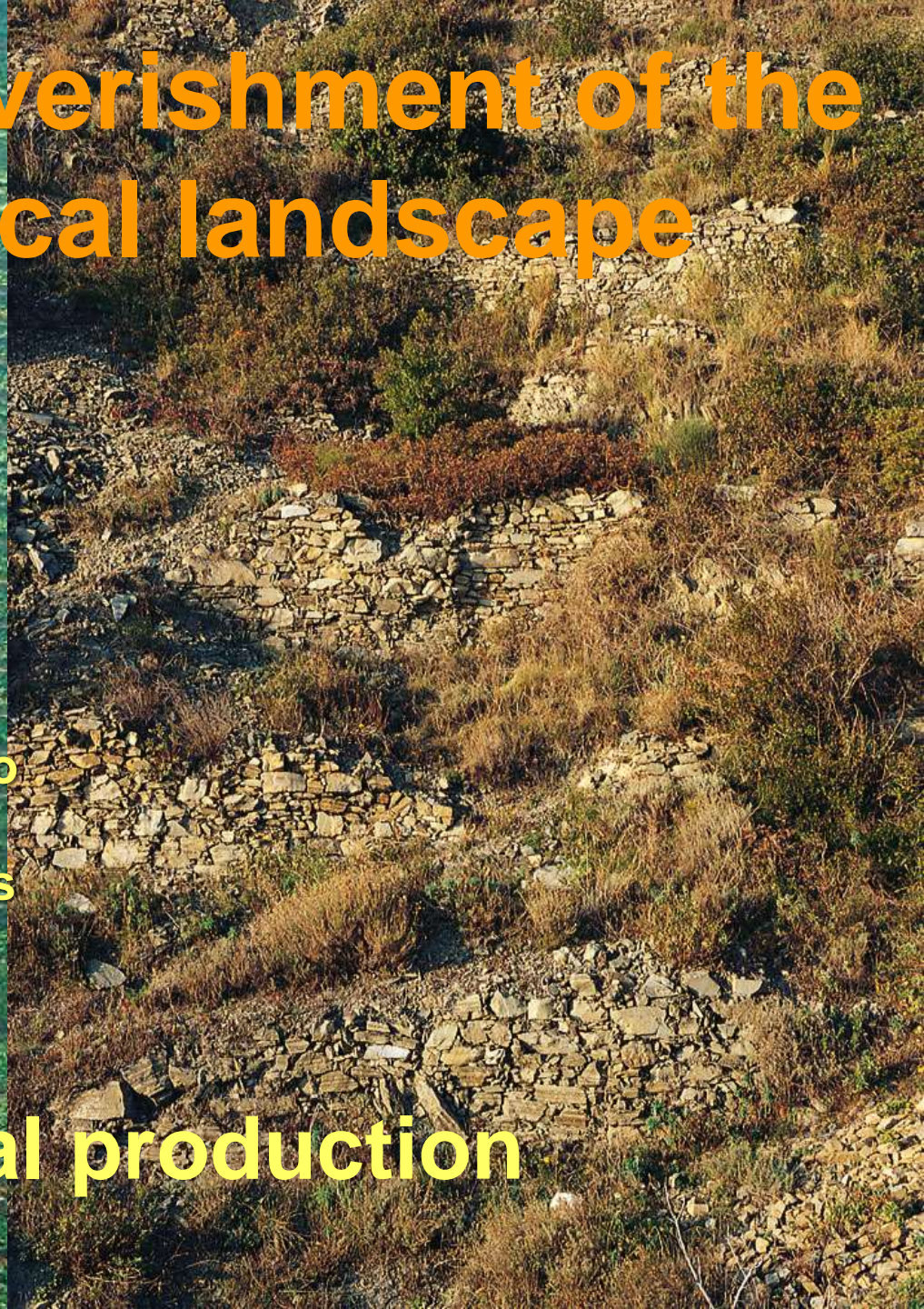


The impoverishment of the historical landscape



From the 1970s–80s, subsequent to changed social conditions, the abandonment of cultivated terraces began. Negative effects due to demographic decline were almost immediate:

- Loss of agricultural production



The impoverishment of the historical landscape



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- Hydrogeological instability



Cinque Terre National Park

- 1985 Cinque Terre were included in a Regional Natural Park





Cinque Terre National Park

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Cinque Terre National Park



- 1997 Cinque Terre were included in the **WORLD HERITAGE LIST**

DECISION OF THE WORLD HERITAGE COMMITTEE:

21st Session

Site name "Cinque Terre, Portovenere and the Islands Palmaria, Tino and Tinetto)

Date of inscription 06/12/1997

The Committee decided to inscribe this site on the basis of criteria (II), (IV) and (V), considering that the eastern Ligurian riviera between Cinque Terre and Portovenere is a CULTURAL site of outstanding value, representing the harmonious interaction between people and nature to produce a landscape of exceptional scenic quality that illustrates a traditional way of life that has existed for a thousand years and continues to play an important socio-economic role in the life of the community.



Cinque Terre National Park

- 1985 Cinque Terre were included in a regional natural park
- From the first half of the 1990's there was an exponential rise in tourism with a very high international component
- 1997 the Natural Marine Area was established
- 1997 The Cinque Terre were included in the UNESCO heritage list
- 1999 The Cinque Terre National Park was born and was also accorded the management of the Protected Marine Area
- 2002 World Monument Fund included the Cinque Terre in its list of 100 sites at risk in the world



Cinque Terre National Park

PARCO NAZIONALE DELLE CINQUE TERRE
Area Marina Protetta delle Cinque Terre

Territory covered by the park:

- All of the municipal territories of: Riomaggiore Vernazza
Monterosso
- Part of the municipal territories of: La Spezia (Tramonti di Biassa); Levanto (Punta Mesco).

For a total of 3.800 hectares and of 2,780 hectares for the Marine Protected area

Population:

Approximately 5,000 residents living in the territory of the Park.

Tourist flows:

The Cinque Terre paths are walked on each year by 2.5 million visitors.

15 km of coastline
more than 200 km of footpaths
distributed on 3 main levels a.s.l.
linking each village



Hinking Cinque Terre





Other transports



Hiking\recreative tourism



Critical mass tourism



Tourism DIRECT IMPACTS



Tourism
INDIRECT IMPACTS



before



after

Tourism INDIRECT IMPACTS

before
1975-80



Tourism INDIRECT IMPACTS

After
2017





Parco Nazionale delle Cinque Terre

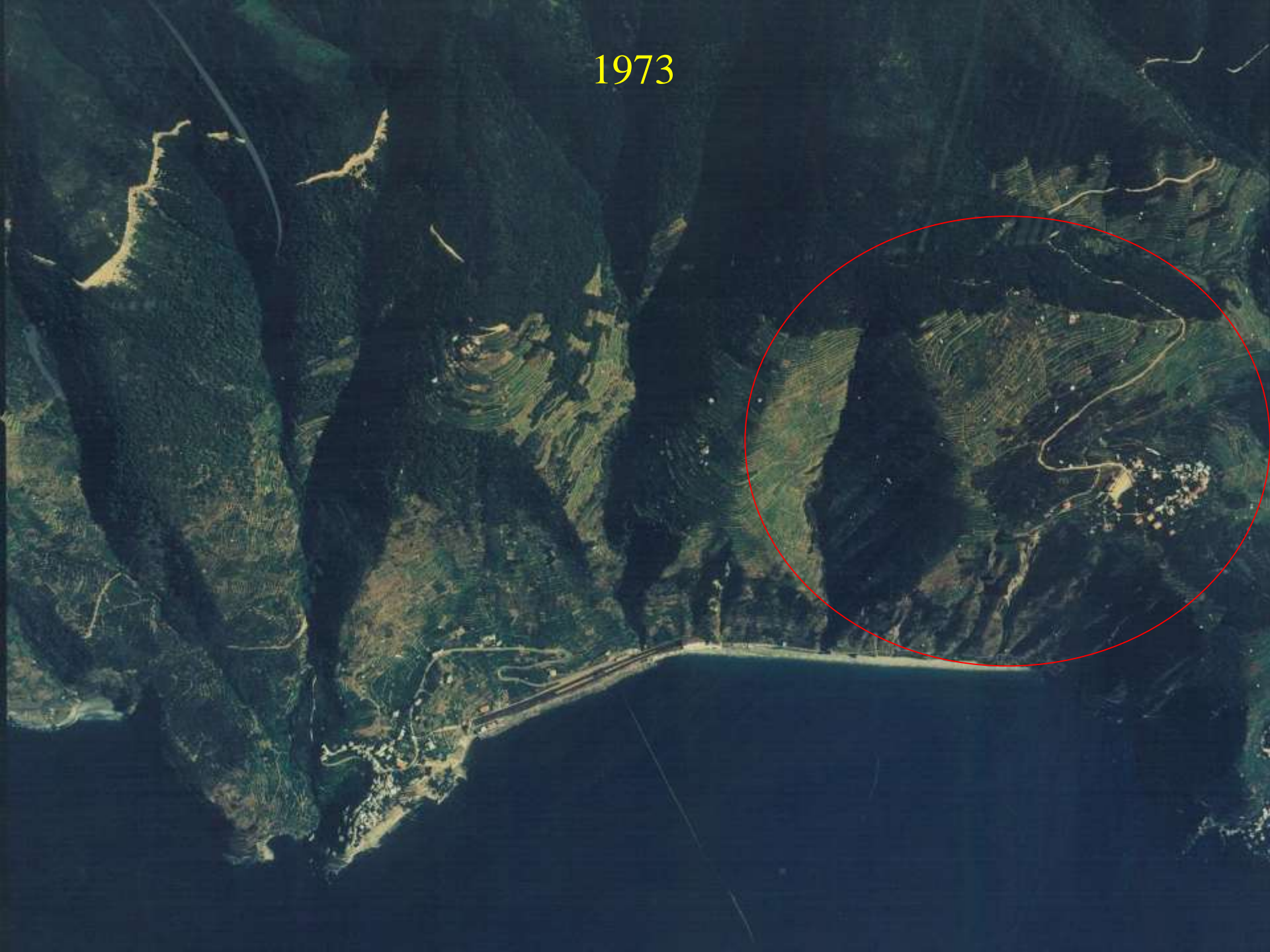
3 VARIETIES

- ALBAROLA
- VERMENTINO
- BOSCO

2 WINES

- CINQUE TERRE D.O.C.
- SCHIACHETRÀ D.O.C.

1973



1980



2015





Parco Nazionale delle Cinque Terre Wine industry production



1800/1900---productive wyneyards = 1800
1973----- productive wyneyards = 1200 ha
1999----- productive wyneyards = 110 ha
2005----- productive wyneyards = 82 ha
2017----- productive wyneyards = <90 ha **fragmented in**
about 3.600 small plot\properties

Now the situation is:

1 “big producer” Cooperativa Agricoltura 5 Terre - 160.000 bottles

21 “little producers” with an average production of < 4.000 bottles





- Touristic pressure impacts on environment and biodiversity
- Emergencies and first aid problems

FREQUENTAZIONE TURISTICA SENTIERI LIGURI

PARCHI REGIONALI

	TOTALE PASSAGGI ANNO
PARCO PORTOFINO Pietre strette	85,789
PARCO BEIGUA Curlo-Gava Arenzano	30,251
ALTA VIA MONTI LIGURI loc Pra Riondo Cogoleto GE	28,325
PARCO ANTOLA Monte Antola	14,177
TOTALE	158,542

PARCO NAZ. DELLE CINQUE TERRE 2016

Sentiero	MONTEROSSO - VERNAZZA	
Picco mensile	maggio	62.696
Picco Giornaliero	maggio ven. 06	4.407
Picco orario	06.05 h11-12	749
	06.05 h11-15	2890
Totale dal 01,03,2016		401.474

CTNP STRATEGIES and ACTIONS



SERVICES:
Transports – trains -bus
Pathways
Free thematic guided tours
Environmental edu





CTNP actions to support agriculture and environment protection

PLANNING TOOLS:

- Pilot projects
 - Research
 - Centro studi rischi geologici
- Action addressed to:
- UNESCO Management Plan
 - Park's Plan
 - SIC\ZPS management plans

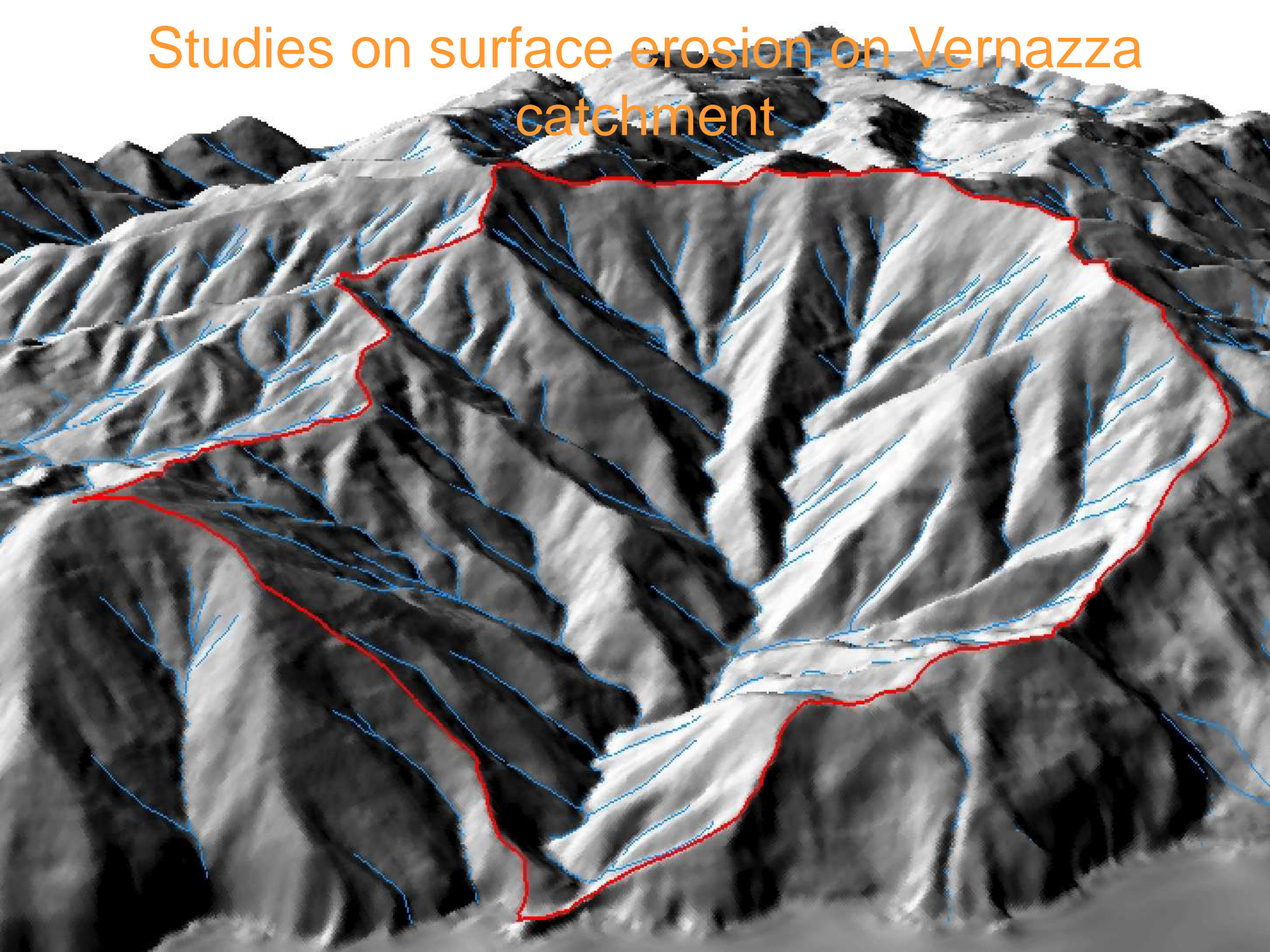
DIRECT

- Uncultivated land project
- Ordinary and extra ordinary maintenance of trails and pathways
- Free vines rootstocks to farmer and land owner
- Free stones (and transport) to farmer and land owner for restauration
- Financial support to the maintenance of monorails
- Banca del lavoro
- Direct and un direct control plan of wild boars

MONITORING IMPACTS OF WILDBOARS ON BIODIVERSITY PLAN FOR THE CONTROL OF WILD BOARS



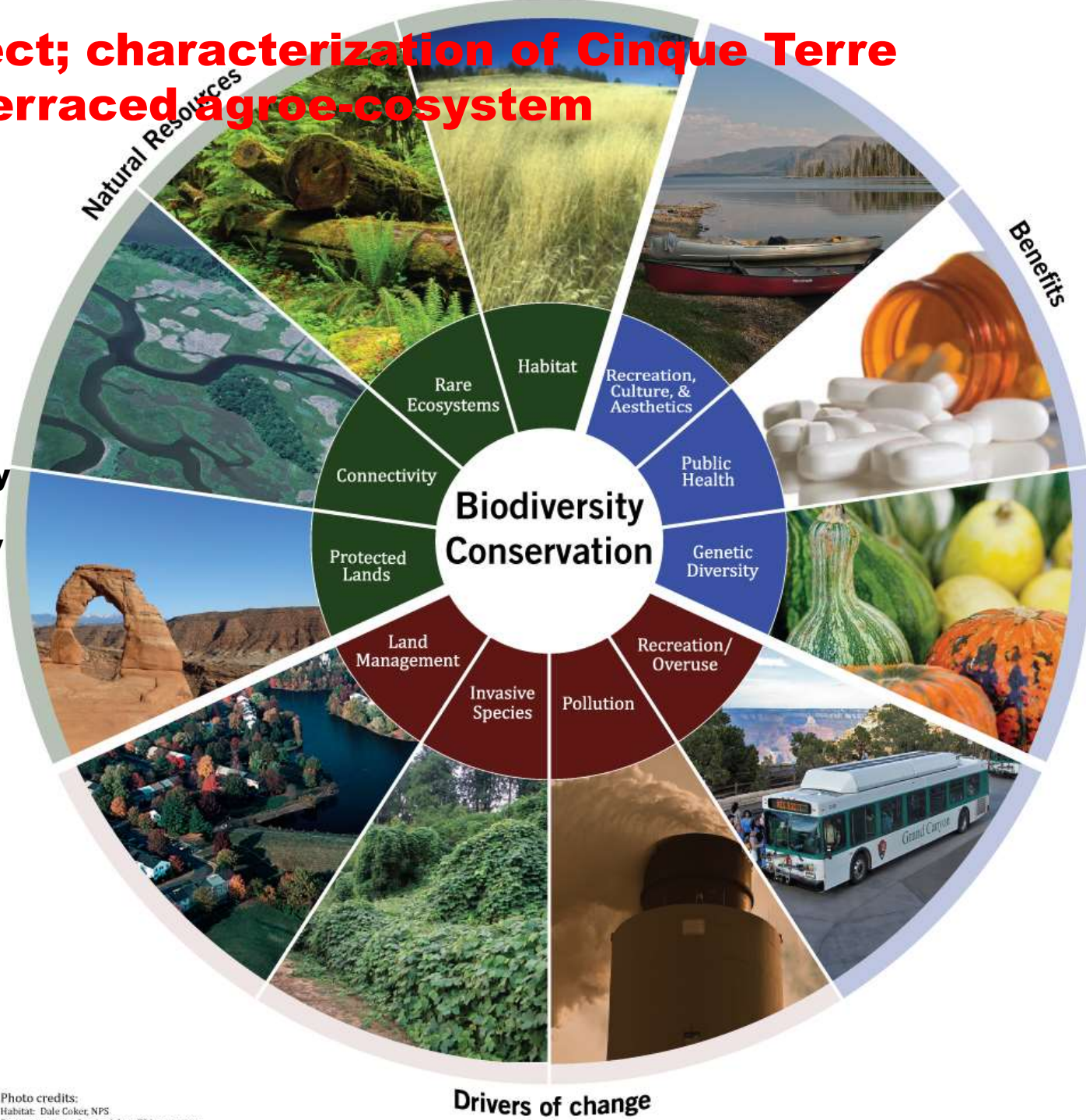
Studies on surface erosion on Vernazza catchment





LABTER project; characterization of Cinque Terre terraced agro-ecosystem

Viticulture in terraced coastal zone with particular climatic conditions can provide high levels of biodiversity, both at soil and plant levels, with benefit for ecosystem services and the aim at producing high quality products rather than at producing. Crucial study lines are finalized to analyze ecosystem services for growth and health of the grapevine such as soil fertility and stability, pest and weed control as well as grape quality in relation to biodiversity.



Progetto LABTER



Progetto LABTER



Progetto LABTER

STUDY WAS FOCUSED ON THE ACAROFUNA AS KEY GROUP FOR ENVIRONMENTAL QUALITY ASSESSMENT IN VINEYARD ECOSYSTEM.

MESOFAUNA COMPRISES THE MIDDLE LINKS OF SOIL FOOD WEBS AFFECTING NUTRIENT CYCLING AND SOIL FERTILITY

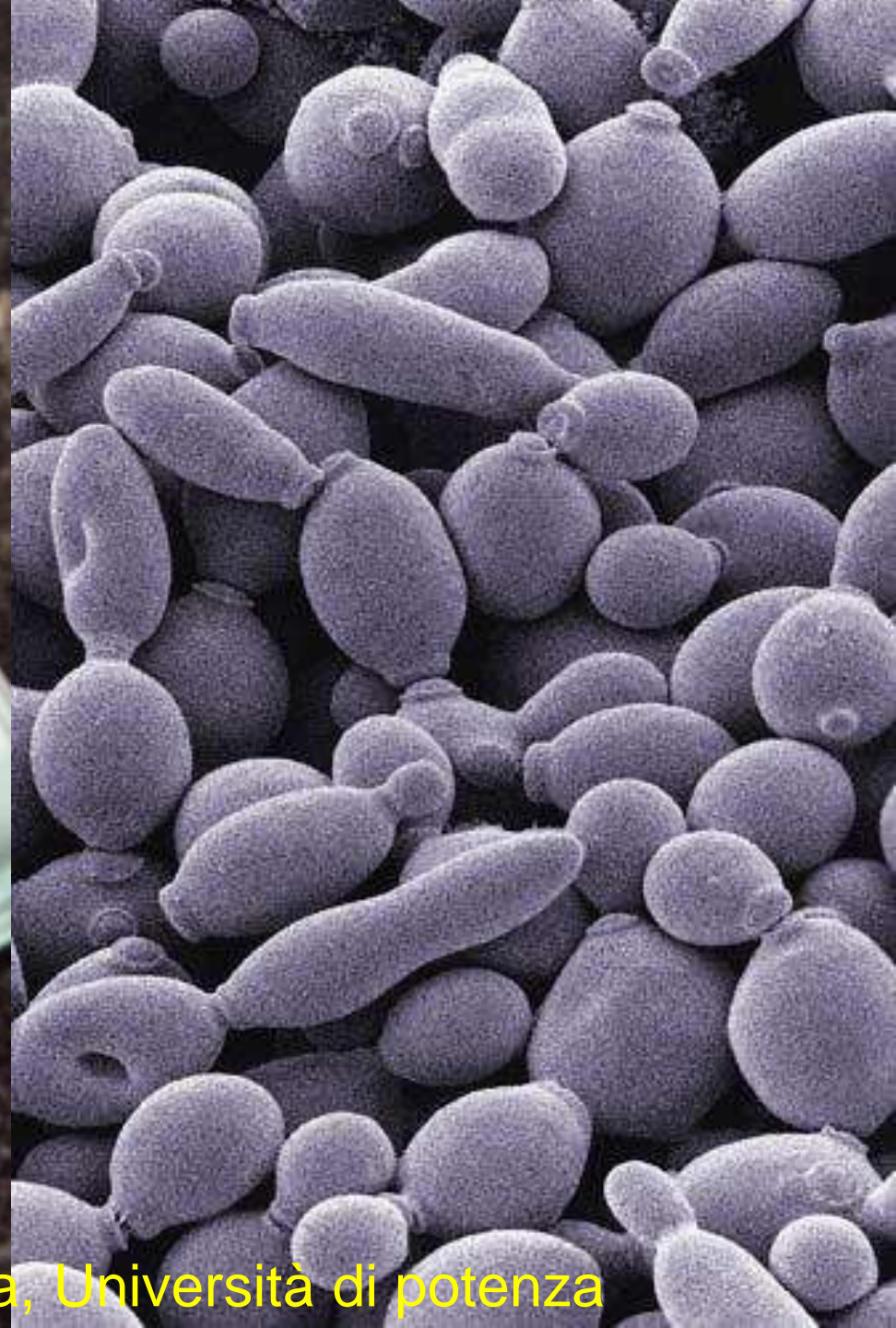
MITES IS THE MOST ABUNDANT GROUPS OF MICROARTHROPODS IN SOIL

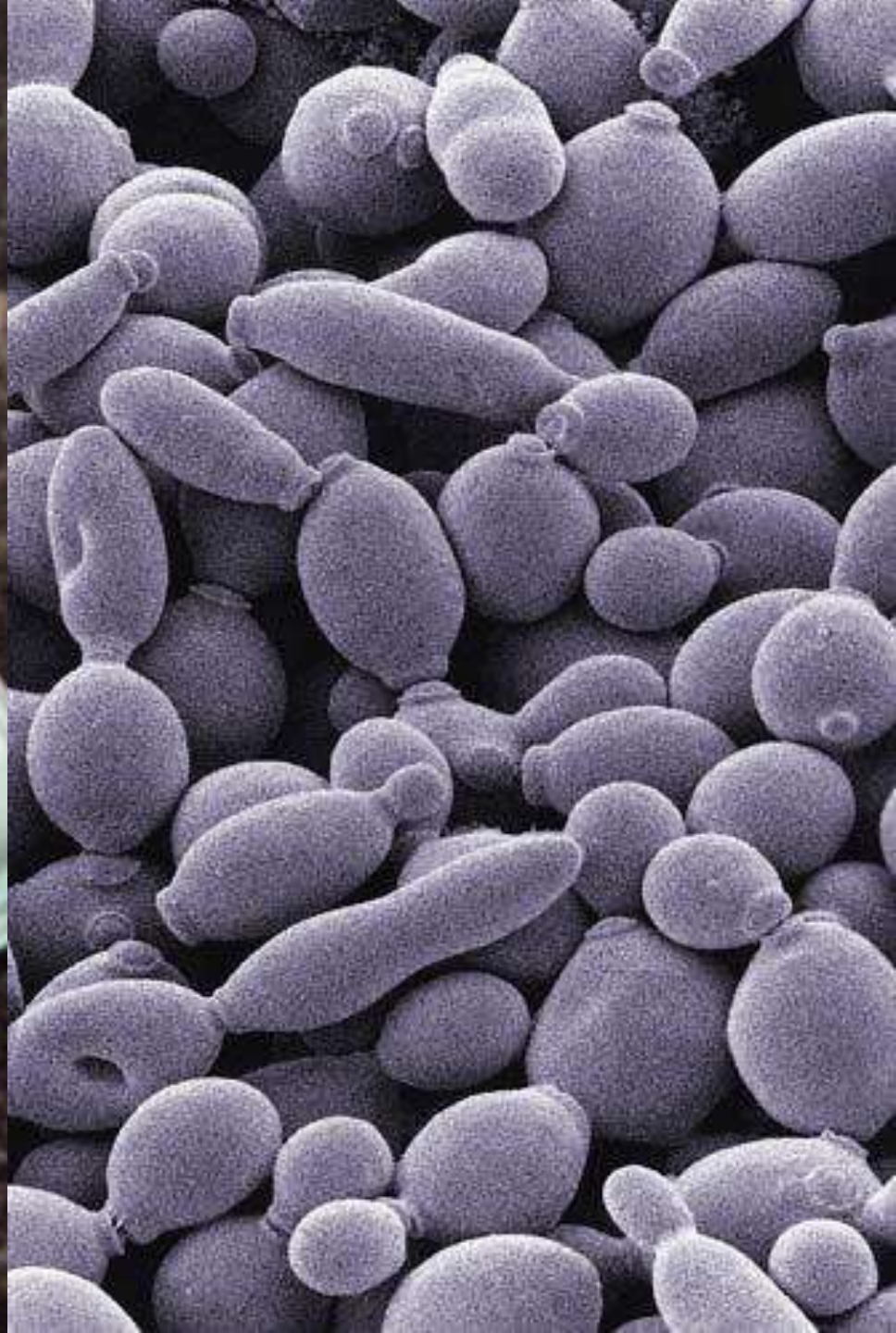
PREDATOR MITES (*extremely sensitive to agrochemicals*), MAINLY PHYTOSEIIDS, WAS REGISTERED: THEY REPRESENTED ABOUT 95% OF THE ACAROFUNA.

BOTH DENSITY, DIVERSITY AND FUNCTIONAL DIVERSITY OF ACARI HERE REGISTERED WERE HIGHER THAN IN SIMILARLY MANAGED AGROECOSYSTEMS.

CONSIDERING BOTH AERIAL AND EDAPHIC LEVELS, THE ANALYSIS OF FUNCTIONAL MITE GROUPS PERFORMED IN CINQUE TERRE PARK, CAN BE CONSIDERED AN EFFICIENT TOOL IN THE EVALUATION OF QUALITY AND MANAGEMENT OF THE ECOSYSTEM.

Progetto LABTER

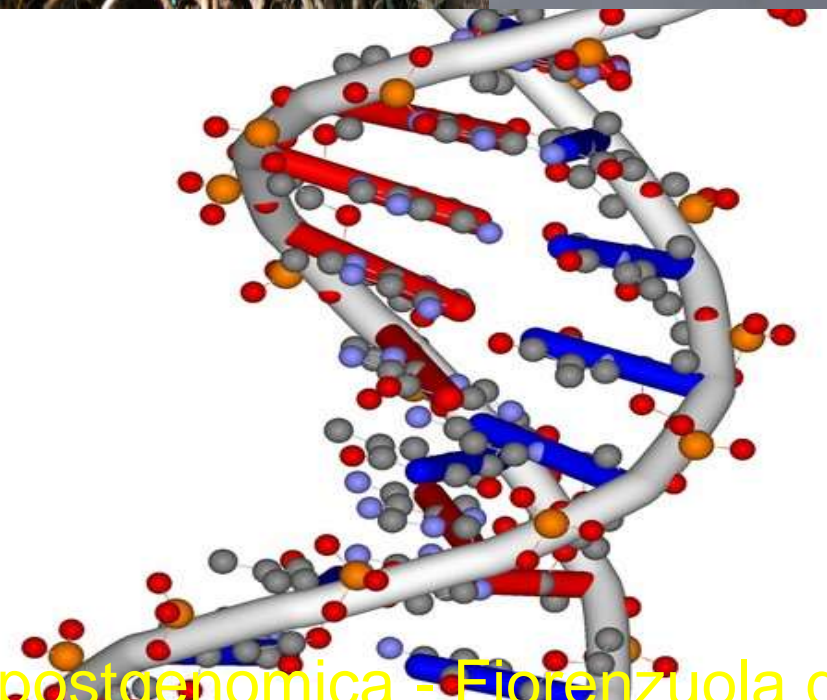
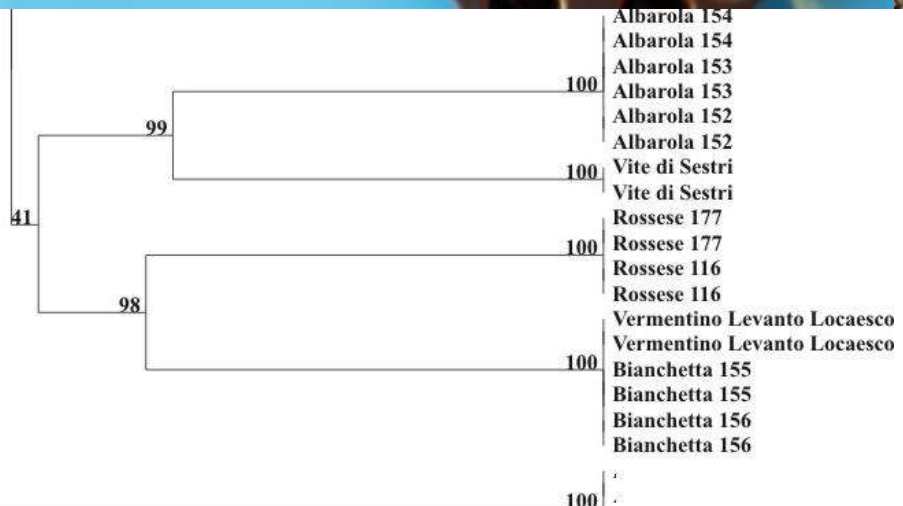




Progetto LABTER



Italia	Toscana	Vernaccia di S. G.
Italia	Toscana	Uva del Cavaliere
Italia	Toscana	Brunello
Italia	Toscana	Riminese
Italia	Trentino	Lagrein
Italia	Trentino	Marzemino
Italia	Trentino	Teroldego
Italia	Umbria	Sagrantino
Italia	Umbria	Vaiano
Italia	Umbria	Negretto
Italia	Umbria	Magnaguerra
Italia	Umbria	Galletto rosa
Italia	Umbria	Barbarossa
Italia	Umbria	Raviso nero
Italia	Val d'Aosta	Petit rouge
Italia	Val d'Aosta	Fumin
Italia	Veneto	Corvina
Italia	Veneto	Corvinone
Italia	Veneto	Rondinella
Italia	Veneto	Molinara
Mar nero	Bulgaria	Mavrud
Mar nero	Bulgaria	Pamid
Mar nero	Georgia	Alexandrouli
Mar nero	Georgia	Muguretuli
Mar nero	Georgia	Saperavi
Mar nero	Georgia	Ogialesci
Mar nero	Romania	Fetoasca Neagra
Mediterraneo	Francia	Maibec
Mediterraneo	Francia	Mourvedre
Mediterraneo	Francia	Tannat
Mediterraneo	Grecia	Agiorgitiko
Mediterraneo	Grecia	Xinomavro
Mediterraneo	Grecia	Vertzami



• U.O. 4 – Centro per la genomica e postgenomica - Fiorenzuola d'

JOB BANK

PARTNERSHIP

Parco delle Cinque Terre

Fondazione Carispe – Credit Agricole

Caritas Diocesana

CIA

Confagricoltura

Cooperativa Agricoltura Cinque Terre

Fondazione Manarola Onlus

Az. Agricola Nesci Giuseppe

Arrigoni Vini

AIMS:

- **Creating job opportunities**
- **Restoration of abandoned areas**
- **Providing help and facilities to old (and new) farmer**

ACTIONS:

- **Professional education and trainings**
- **Field camps and activities**
- **Support to research – self learning system**





**GOAL:
«SOCIAL
LABEL»**





**MONITORING OF WET AREAS \ WATER SPECIES LIVING IN
AGRICULTURAL RELATED STRUCTURES**



**MONITORAGGIO DELLE SPECIE DI AMBIENTE UMIDO
ACQUATICO**



**MONITORING OF THE DIFFUSION OF AMPHIBIAN
*CHYTRIDIOMYCOSIS***



GRAZIE

Tantetantebellecose ®