



LIFE *Orchids*

Improving the conservation status of  
critically endangered orchid communities  
in selected habitats in Northwestern Italy

Sept. 2018 - Aug. 2023

Total budget €1.631.357



LIFEorchids LIFE17 NAT/IT/000596

# What and Who: Aim & Partnership

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## Aim

Counteract decline of wild orchids (highly biodiverse grasslands, habitat 6210\*), particularly threatened by change in land use and agricultural practices

## Project Partnership

### 3 *Research Institutions:*

- UNITO (CB)
- UNIGE
- CREA-OF



UNIVERSITÀ  
DI TORINO



UNIVERSITÀ DEGLI STUDI  
DI GENOVA



### 2 *Regional Natural Parks:*

- Po Piemontese (Piedmont)
- Portofino (Liguria)



REGIONE  
PIEMONTE



Aree protette  
Po piemontese



Parco di Portofino

### 2 *NGOs:*

- ČSOP
- Legambiente Lombardia



LEGAMBIENTE



# How: Main Actions

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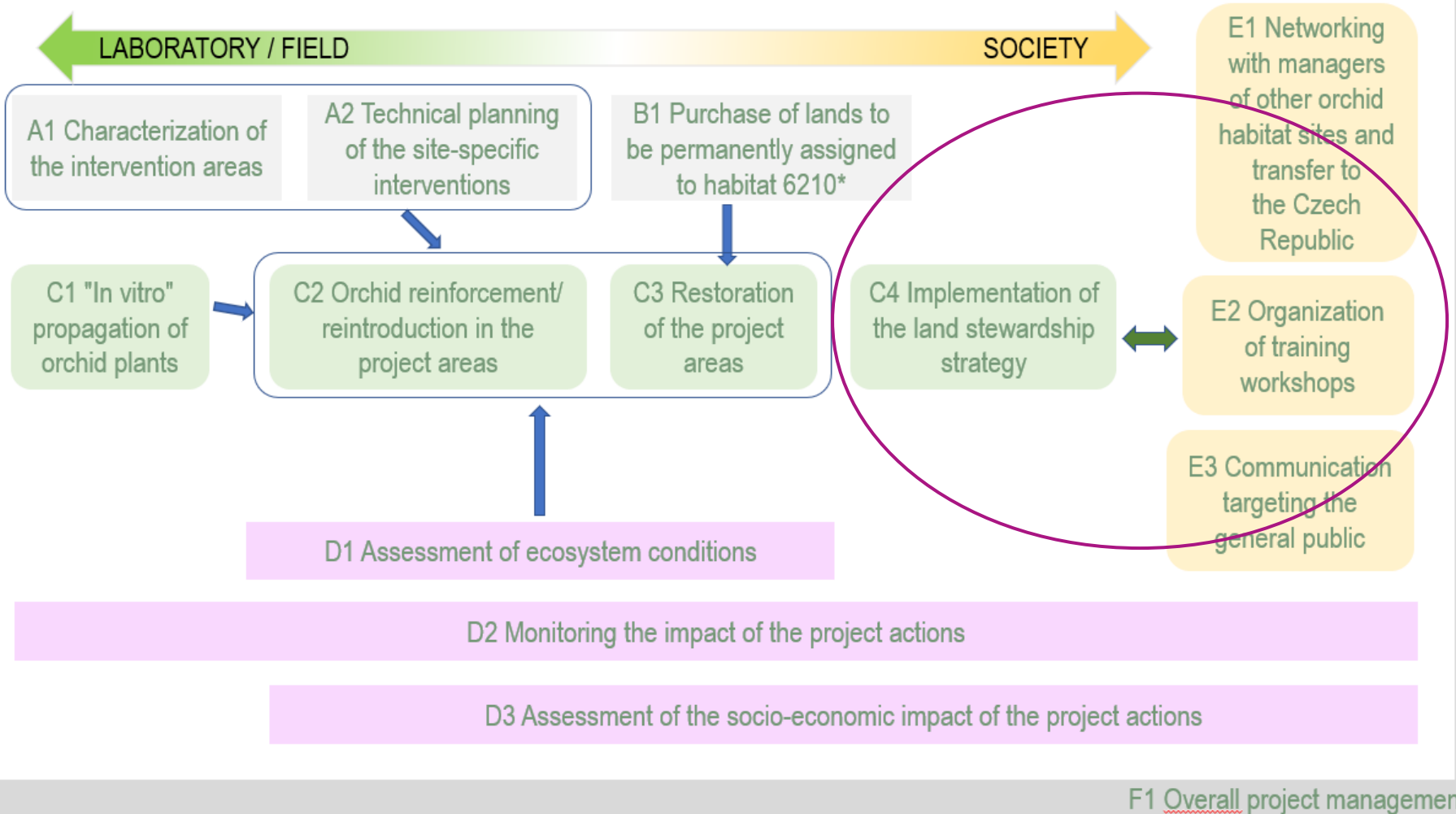
## 3 Lines of Concrete Action

1. **Habitat restoration:** through removal of IAS, clearing of woodland and habitat recreation by sowing autochthonous species.
2. **In vitro propagation and reintroduction/reinforcement**, through: artificial pollination and seed collection, in vitro seed germination (symbiotic and asymbiotic), greenhouse plant acclimatization, mycorrhization of seedlings...  
Aim is to counteract genetic depletion and poverty of mycorrhizal fungi in soil.
3. **Involvement of private owners through Orchid Stewardship Agreements.** Target: 100 agreements, 500 ha.

## Public Awareness and Dissemination Actions

- + **Knowledge exchange** with Czech Republic: expertise on land stewardship; feasibility study for replication in CR, development of protocols on orchid reintroduction and management
- + **Training and dissemination** (orchids as a key to promoting awareness of biodiversity w.r.t. other environmental issues)

# An overview



## Where: Areas of field intervention

The regions involved in direct interventions are **Piedmont** and **Liguria**.

(But Orchid Stewards are recruited all over Italy)

Habitat restoration and reintroduction take place in 2 Parks: **Po Piemontese** and **Portofino**. Different context: size, land use and ownership, orchid species...

**Habitat restoration** mainly in **Po**: over 100 ha, also through **Land Stewardship**.

**Reintroduction/Reinforcement**: 8 **Orchid MicroReserves** (OMRs) established within the Parks

- 4 in **Po** - public land
- 4 in **Portofino** - private land

(≠ legal implications for management over time)

Target: overall 3600 plant transplanted, 400 per species, aiming at 190 successful ones for each species



# Which Species

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## Flag Species

- *Orchis patens* - Portofino  
“endangered” in IUCN Red List: very specific, occurring only in a few spots the area surrounding Genoa
- *Himantoglossum adriaticum* - Po  
included in Annex II of Habitats Directive

## Other Target Species

- *Ophrys apifera*
- *Ophrys bertolonii*
- *Ophrys fuciflora*
- *Orchis antropophora*
- *Himantoglossum robertianum* = *Barlia robertiana*
- *Serapias neglecta*
- *Anacamptis coriophora* subsp. *Fragrans*
- *Anacamptis morio*



LIFE *Orchids*

→ 4 targeted in Park of Po, 6 in Portofino

*Orchis patens*  
European Red List



*Orchis patens* Desf.

*Himantoglossum adriaticum*  
Annex II Habitats Directive



*Himantoglossum adriaticum* Baumann



*Ophrys fuciflora* (Burm.f.) Greuter



*Anacamptis morio* (L.) R.M. Bateman,  
Pridgeon & M.V. Chase



*Anacamptis coriophora* subsp. *fragrans*  
(Pollini) R. M. Bateman, Pridgeon



*Serapias neglecta* De Notaris



*Orchis antropophora* (L.) All



*Himantoglossum robertianum*  
Loisel. P. Delforge



*Ophrys apifera* Huds.



*Ophrys bertolonii* Moretti



# Strength & Weakness

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## Weakness:

- Relevance of project in its qualitative aspects, not quantitative: the impact of the field interventions is limited in size and scope

## Strength:

- Experimental relevance of micropropagation and reintroduction activities
- Quasi-pioneering in the Land Stewardship approach to the involvement of private owners in the Italian context

# Results - Habitat restoration:

## Satisfactory

- Different types of intervention in different contexts for habitat restoration or reclamation
- Increased species variety in restored habitats
- Increased number of orchids in managed 6210 habitat sites



# Results - In vitro propagation and reintroduction:

## Mixed results:

- Initial difficulties in germination and survival through developmental stages
- Longer time to reach a stage ready transplantation, but target almost reached (over 4000 plants to be transplanted next autumn)
- Different degrees of success for different species
- Species-specific germinations protocols
- Training workshop on orchid propagation and conservation

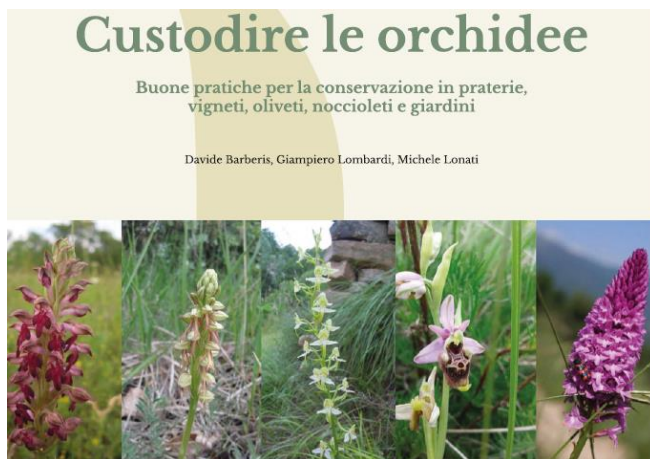


# Results - Land Stewardship approach:

1/3

## Undoubtedly a success:

- Very good response, generation of additional ideas (Handbook for Orchid Stewards, Land Stewardship Promoter, involvement of Municipalities)
- 111 Orchid Stewardship Agreements signed (both private landowners and municipalities)
- 17 Agreements for Promoters of Orchid Stewardship...



# Results - Land Stewardship approach:

2/3

- 750 contacts in the mailing list
- Orchid Stewards WhatsApp group
- Online training: 3 editions, 40 episodes, 26 speakers
- 6 Site visits
- <2000 participants...

A screenshot of a Zoom meeting. The main content is a slide titled "Le orchidee nella storia 'Dioscoride Neapolitanus'". The slide contains text about the genus Ophrys and a historical illustration of a plant. The Zoom interface shows a list of participants on the right, including "Ugo Imprescia", "LEGAMBENTE", "Utente Zoom", "Antonietta G...", "Giulia Casati", and "Mario". The bottom of the screen shows various Zoom controls like "Attiva audio", "Avvia video", "Sicurezza", "Partecipanti", "Chat", "Condividi schermo", "Sondaggi", "Metti in pausa/Arresta la registrazione", "Reazioni", "App", and "Termina".

Registrazione in corso... | Star visualizzando lo schermo di Ugo Imprescia | Opzioni della vista | Vista

### Le orchidee nella storia "Dioscoride Neapolitanus"

SATIREYON (Genere Ophrys)

- Alcuni lo chiamano orchis, altri Cynosorchis, altri pianta sacra, altri **pianta di Priapo**, i Romani membro di **satiro**.
- Ha [...] **radice bulbosa, duplice**, un bulbo è più grande e sodo, l'altro è più piccolo molle e grinzoso [...] si racconta che il bulbo più grande mangiato dagli uomini, **faccia generare maschi**, il più piccolo invece mangiato dalle donne, **faccia generare femmine**, si racconta che le donne di Tessaglia facciano bere il bulbo più tenero con poco latte perché susciterebbe il **desiderio sessuale**, quello secco invece per frenare e spegnere il desiderio, e che l'una bevuta dopo l'altra annulli gli effetti.

Dioscoride Neapolitanus VI sec. Tav. CXXXIII, part. 1

Ugo Imprescia  
LEGAMBENTE  
Progetti Legambiente

Utente Zoom  
Utente Zoom

Antonietta G...  
Antonietta Guerra  
LEGAMBENTE  
Progetti Legambiente

Giulia Casati  
Giulia Casati

Mario  
Mario

Attiva audio | Avvia video | Sicurezza | Partecipanti 47 | Chat | Condividi schermo | Sondaggi | Metti in pausa/Arresta la registrazione | Reazioni | App | Termina

- Photo contest September 2022
- Festival of Orchid Stewardship, April to June 2023: Orchid stewards will be involved organizing events in their land, with common communication tools



PHOTO CONTEST AMATORIALE  
**IL MONDO DELLE ORCHIDEE**  
Relazioni e interazioni in natura



*Festival della Custodia  
di orchidee spontanee*



# Some of our Orchid Stewards!



## In preparation...



- **Survey** among Land Stewards about
  - Motivations
  - Obstacles
  - Value perceived in the role of Land Steward
  - Usefulness of training offered
  - Interest in developing mechanisms to recognize the value of their stewardship
  
- **Networking meeting** on Land Stewardship (online) in preparation for the second half of June - stay tuned, you're all invited 😊