

LIFE TIB
Trans Insubria Bionet

Habitat connection and improvement along the Insubria ecological corridor between the Alps and the Ticino valley

14th May 2014
International workshop on Birdlife's EU Birds and Habitat Directives Task Force

The LIFE TIB Project in Lombardy on Natura 2000 connectivity

Sara Barbieri – Province of Varese

Coordinating beneficiary

Associated beneficiaries

Co-financer

The Insubria ecological corridor

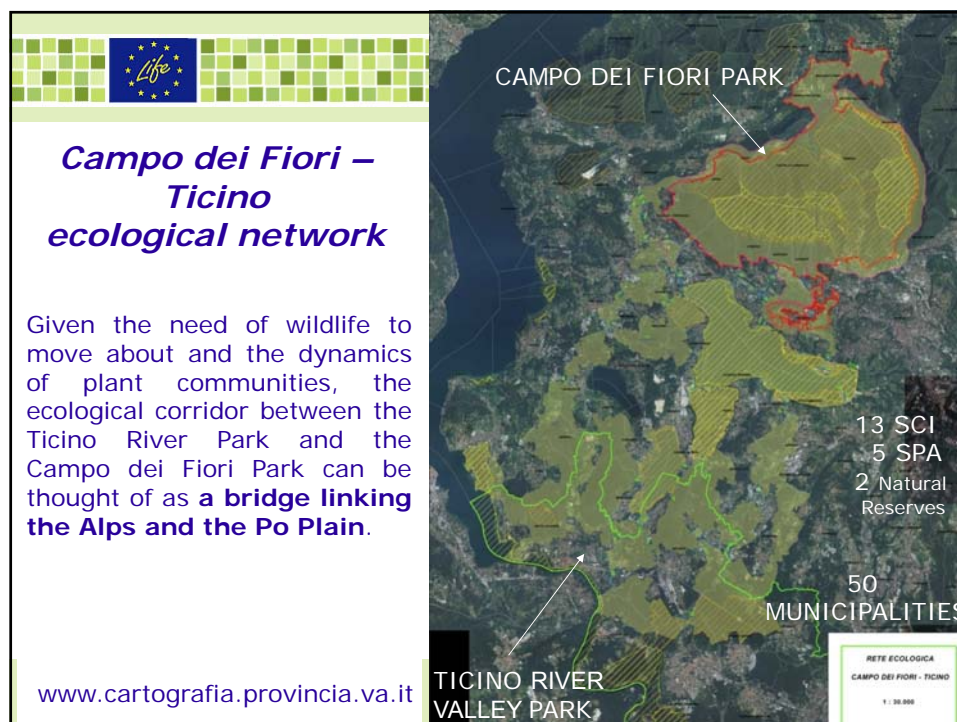
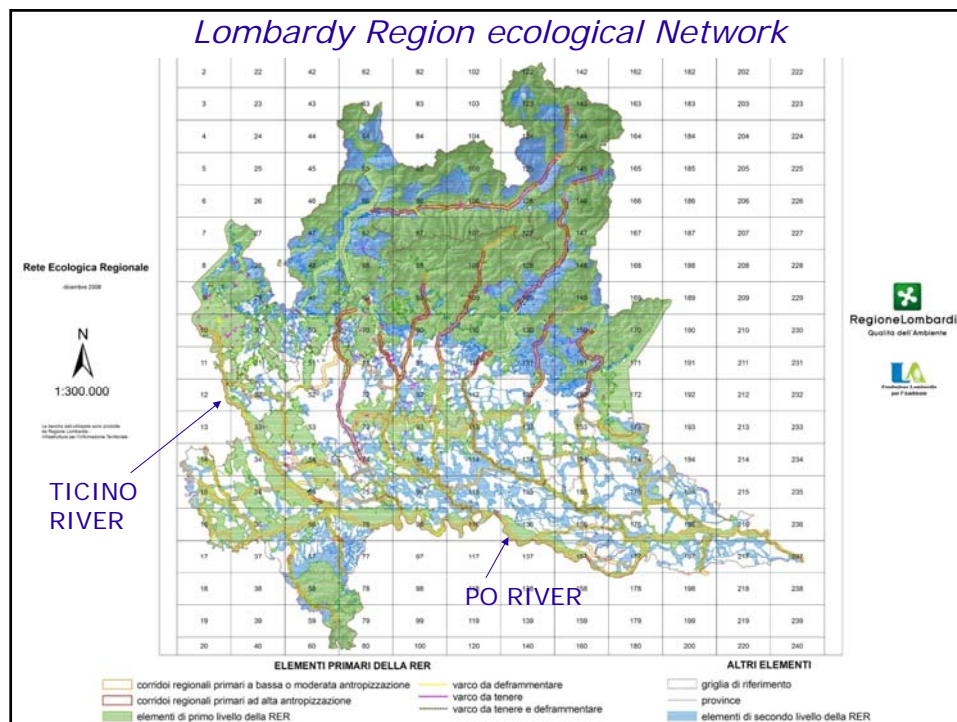
<http://natura2000.eea.europa.eu>

Corine Land Cover 2006

Coordinating beneficiary

Associated beneficiaries

Co-financer



The pre-LIFE stage: assessing needs and feasibility of a LIFE project

TIB results from a number of previous projects carried out by the Province of Varese, Cariplo Foundation and LIPU since 2008 to:

- define the ecological network design at local scale and the target species
- identify the critical areas (passageways) and the needs (defragmentation/habitat improvement)
- verify technical and planning feasibility
- identify legislative and planning instruments available

LIFE TIB PROJECT

- Concrete actions, monitoring and communication
- NETWORK AGREEMENT Planning and protect

Coordinating beneficiary

Associated beneficiaries

Co-financer

LIFE TIB

Partner's contributions

Varese Province Coordinating beneficiary	€ 269.312	
Lombardy Region Associated beneficiary	€ 645.000	
LIPU Onlus Associated beneficiary	€ 150.000	
Cariplo Foundation Co-financer	€ 484.000	
European Commission	€ 1.545.425	
Project budget	€ 3.093.737	


Project objectives:

- Improving the functionality of core areas
- Preserving the functionality of corridors
- Re-establishing the connectivity in critical areas


Coordinating beneficiary

Associated beneficiaries



Co-financer




The governance challenge




Natura 2000 Network
1979 Birds Directive
1992 Habitat Directive

Protected Areas
1991 Framework Law n. 394
Natura 2000 Network
1997 DPR n. 357 Regulation
(now DPR n. 120/2003)




Protected Areas System
Regional Parks, Natural Reserves,
Local Parks, Natural Monuments
1983 R.Law n. 86 (covering
23,6% of regional land)



Province of Varese
Ecological Network
Coordinating Land Plan PV 2007


Regional Ecological Network 2008-2009
194 SCI, 66 SPA

Outside SCIs/SPAs and Protected Areas the ecological network hadn't got a prescriptive value over **local planning** and projects





The Network Agreement
A voluntary instrument for the protection of the network


Coordinating beneficiary



Associated beneficiaries

Co-financer







Towards the Network Agreement

Objectives:

- Inform stakeholders on the concepts of ecological connection and Natura 2000 network
- Describe the project and its aims
- Communicate the importance of local planning in the protection of biodiversity
- Discuss the crucial value of land use planning
- Define an agreement on the protection of ecological corridors



In February 2011 32 Municipalities, 2 Regional Parks, Province of Varese and the partners LIPU and Cariplo Foundation signed **Towards the Network Agreement**, a commitment to respect the **general principle** of protecting areas in the ecological network, avoiding decisions in land use planning that could damage ecological corridors and passageways... while working together to define a **specific regulation** for the ecological network.

Coordinating beneficiary



Associated beneficiaries

Co-financer





Art. 6.3 of Habitats Directive

In 2013 the 3 Managing Authorities of SCIs and SPAs Province of Varese, Campo dei Fiori Park, Ticino River Valley Park recognised that **Application of Art. 6.3 of Habitats Directive (Assessment of effects of plans/projects on sites)** is the appropriate legislative instrument to protect Campo dei Fiori – Ticino ecological network, because:

- Campo dei Fiori – Ticino ecological corridor connects 13 SCIs, 5 SPAs, 2 Natural Regional Parks, 2 Natural Reserves and has a key role in Natura 2000 network at european scale
- Art. 6.3 applies to new activities foreseen also **outside a Natura 2000 site but likely to affect it**
- allows a case by case analysis focused on maintaining ecological connections

Coordinating beneficiary



Associated beneficiaries



Co-financer



Lombardy Region EN

Important changes in Lombardy Region Ecological network concept:

- In 2008 the Lombardy Region Land Plan stated that the Ecological Network is a **priority infrastructure**
- In 2011 Ecological network became **prescriptive over local planning**, as stated by R.Law n. 12/2011000

Coordinating beneficiary



Associated beneficiaries



Co-financer




Network Agreement



On **12th may 2014** 41 Municipalities, together with the Province of Varese, Campo dei Fiori Park, Ticino River Park, and the partners LIPU and Cariplo Foundation, with the support of Lombardy Region, signed the **Network Agreement**, with the commitment to protect the ecological corridor through **local land planning** and the application of art. 6.3 of Habitat Directive.

Coordinating beneficiary


Associated beneficiaries



Co-financer



LIFE TIB Actions

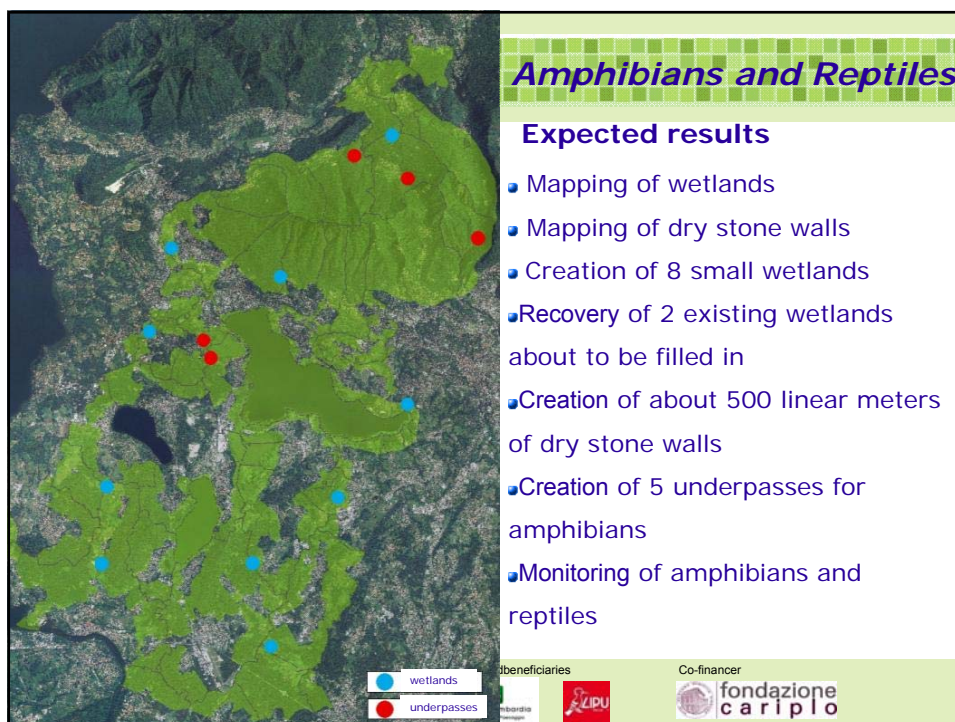
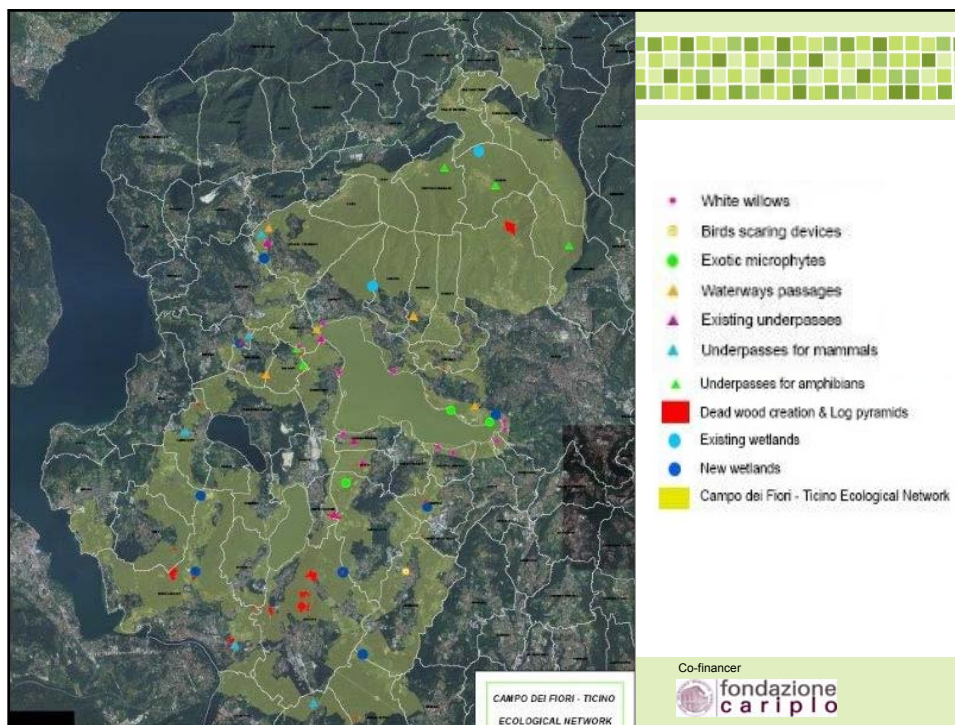
- **Defragmentation actions** to help animals cross man-made barriers (target species: animals with medium and high vagility): creation of Underpasses for amphibians and small/medium animals, interventions to improve animal passage in waterways.
- **Actions to improve environmental quality** (target species: animals with low vagility): small wetlands and dry stone walls, planting new Salix alba trees to be managed by pollarding, increase tree necromass in woodland, in order to increase suitable sites for saproxylic fauna
- **Actions to fight the spread of invasive exotic species:** experimentation with various techniques to remove invasive exotic water plants in the project area, such as Nelumbo nucifera and Ludwigia grandiflora
- **Awareness-raising actions and actions aiming to strengthen the integration between land use planning and biodiversity protection needs**


Coordinating beneficiary


Associated beneficiaries



Co-financer



Amphibians and Reptiles


Creation of 8 small wetlands for amphibians reproduction
and 500 m dry stone walls as shelter for amphibians,
 reptiles, small mammals




Action completed

19/05/2014

Coordinating beneficiary



Associated beneficiaries




Co-financer





Amphibians and Reptiles



**Recovery of 2 existing wetlands
about to be filled in**

- Motta d'Oro
- Pau' Majur - Cavalitt

Action completed





Amphibians and Reptiles



Creation of 5 underpasses
for amphibians

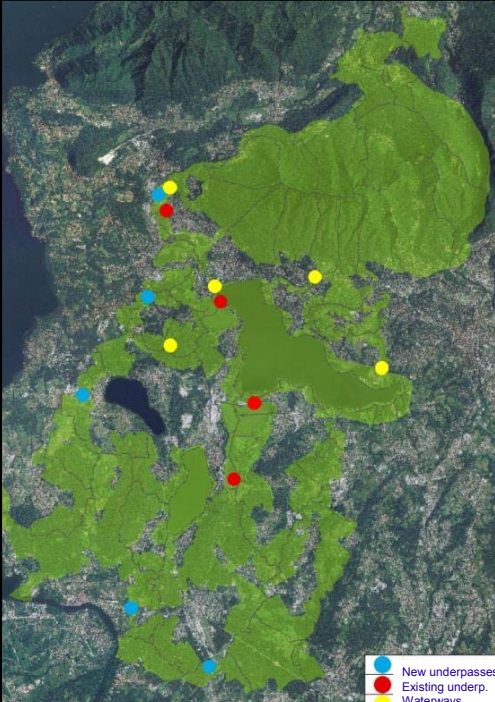


Amphibians and Reptiles

First results of
monitoring 2013:

- 9 Amphibian species (8 in 2012)
- 6 Reptile species (4 in 2012)
- 29 sites monitored (egg masses, adult presence, strike)








● New underpasses
● Existing underp.
● Waterways

Mammals

Expected results:

- Creation of 5 underpasses for small/medium-sized animals
- Interventions to improve 4 existing underpasses
- Interventions to improve 5 waterways flowing in culverts
- Monitoring of medium-sized mammals using photo-traps

Beneficiaries


Co-financer





Mammals



Creation of 5 underpasses under main roads




Beneficiaries



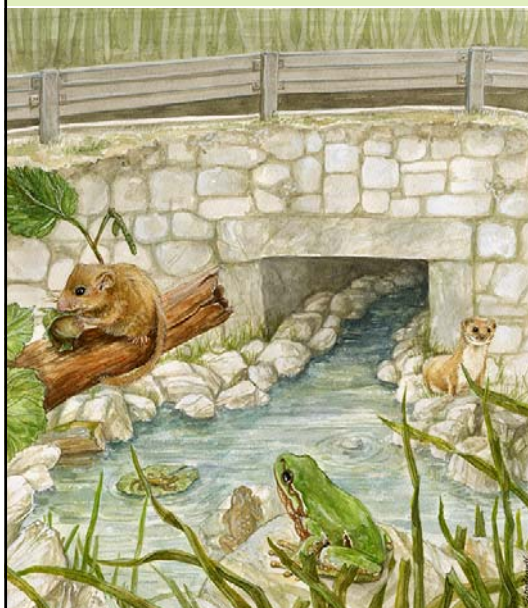

Mammals

Improving 4 existing underpasses



Mammals

Improving 5 waterways flowing in culverts



Acquanegra torrent



Bardello river



Mammals

First results of monitoring 2013:

- 14 sites monitored
- 240 hours of monitoring x 2 session (spring and autumn)

9 species:

- *Erinaceus europaeus*
- *Oryctolagus cuniculus*
- *Sciurus vulgaris*
- *Apodemus sylvaticus*
- *Vulpes vulpes*
- *Martes foina*
- *Meles meles*
- *Capreolus capreolus*
- *Sus scrofa*



Coordinating beneficiary
PROVINCIA di VARESE

Associated beneficiaries
Regione Lombardia
Ente Valle e Poissoglio



Co-financer
fondazione cariplo



Mammals



Lti Acorn

059°F 015°C

09.24.2012 21:04:27


Coordinating beneficiary
PROVINCIA di VARESE

Associated beneficiaries
Regione Lombardia
Ente Valle e Poissoglio



Co-financer
fondazione cariplo

Mammals




IRPLUS

04.26.2012 01:03:48



06 008°C 046°F

✕

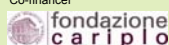
Coordinating beneficiary

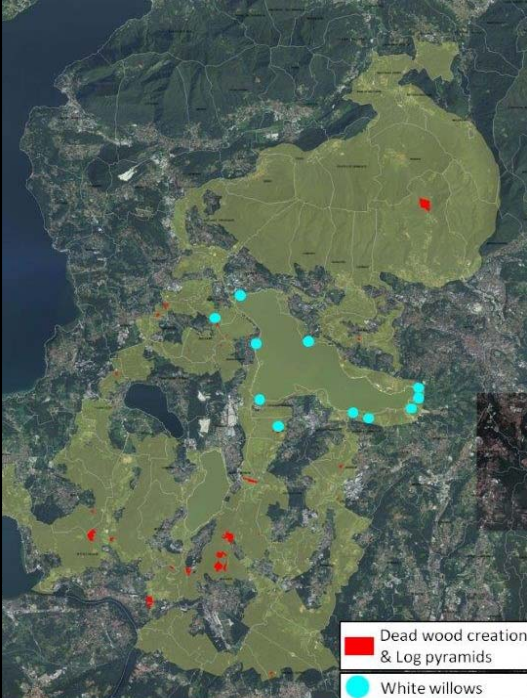


Associated beneficiaries

Co-financer






Saproxilic fauna


Expected results:

- Mapping of pollarded willows
- **2500** interventions targeting exotic tree species to hasten their senescence and increase tree necromass
- **Creation** of 150 log pyramids
- **Planting** of 350 white willows to be managed by pollarding
- **Monitoring** of the presence and diffusion of exotic species
- **Monitoring** of saproxilic invertebrates
- **Monitoring** of bird species tied to dead wood


Dead wood creation & Log pyramids



White willows



Co-financer





Saproxilic fauna

350 white willows to be managed by pollarding
For larval development of *Osmoderma eremita*



Coordinating beneficiary



Associated beneficiaries



Co-financer



- **2500 interventions to hasten exotic trees senescence**
- **150 log pyramids**
(*Lucanus cervus*)

- Artificially uprooted trees
- Basal slits
- Manual ring harking
- Nesting holes
- Artificial nests



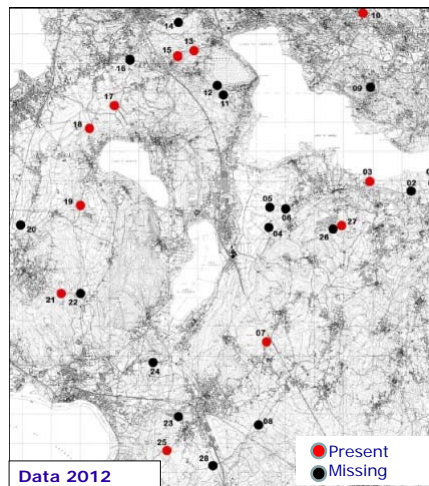


Saproxilic fauna

Monitoring of *Lucanus cervus* 2013



- Presence: **15** out of 28 sites
(12 in 2012)



Coordinating beneficiary
**PROVINCIA
di VARESE**

Associated beneficiaries
Regione Lombardia
Ente Parco & Piacenza



Co-financer
**fondazione
cariplo**



Saproxilic fauna

Monitoring of *Osmoderma eremita* 2013



Monitored through:

- Inspections of willow hollows
- Pheromone traps
- 2 sites of presence out of 8



Coordinating beneficiary
**PROVINCIA
di VARESE**

Associated beneficiaries
Regione Lombardia
Ente Parco & Piacenza



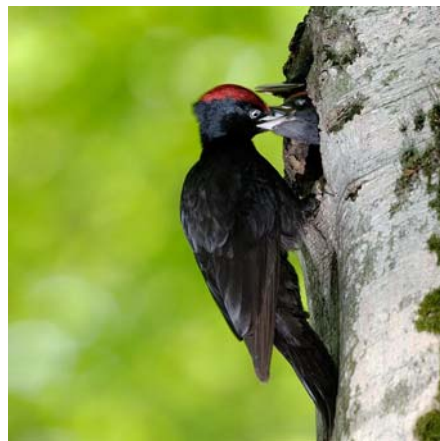
Co-financer
**fondazione
cariplo**



Saproxilic fauna

Monitoring of bird species tied to dead wood

- Monitored through point counts (25 sites)
- **67** species (3 in annex I BD)
- Focus on species tied to dead wood:
Woodpeckers, *Certhia brachydactyla*, *Poecile palustris*...



Saproxilic fauna

Monitoring of the presence and diffusion of exotic species

■ Living trees

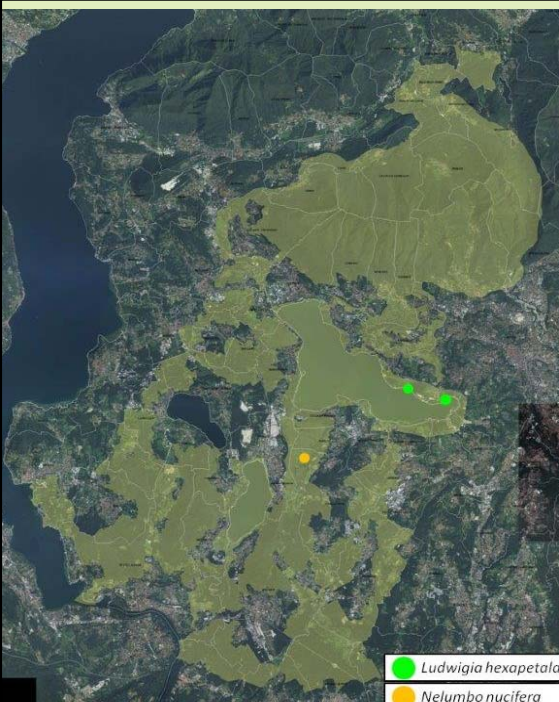
- floral composition
- canopy closure
- diameter and height of trees and shrubs
- total number of plants;
- number of plants per species
- total basal area;
- basal area of target species.



■ Dead wood:

- diameter and height of dead trees and shrubs;
- diameter and length of branches on the ground;
- estimate of deadwood;





Alien macrophytes


Nelumbo nucifera and *Ludwigia hexapetala*

are included in the blacklist of non-native plant species subject to monitoring, containment or eradication, Regional Law 10/2008.


In the last decade they spread out in Brabbia Marsh and Varese Lake.

● *Ludwigia hexapetala*

● *Nelumbo nucifera*



Co-financer



fondazione cariplo



Alien macrophytes

Nelumbo nucifera (Lotus) in Brabbia Marsh









Coordinating beneficiary



Associated beneficiaries




Co-financer



19/05/2014



Alien macrophytes

Expected results:

- Experimentation with different techniques for the removal of the invasive plant *Nelumbo nucifera* and *Ludwigia grandiflora*
- Bathymetric and topographic monitoring of interventions carried out in wetlands
- Monitoring of experimental control/removal efforts targeting *Nelumbo nucifera* in the Brabbia Marsh Reserve (action C.4a) and *Ludwigia grandiflora* in the Varese Lake SPA

Ludwigia hexapetala in Varese Lake



Alien macrophytes

- 1 – Monitoring of species before actions
- 2 – Browsing the bibliography



Experimental schedule 2013-2014



Removal techniques:

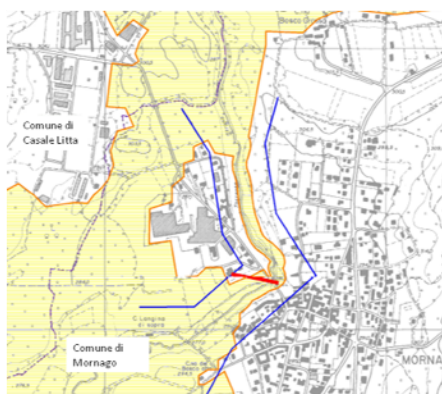
- Periodic mowing
- Mechanical dredging
- Manual hand-pulling





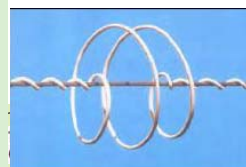
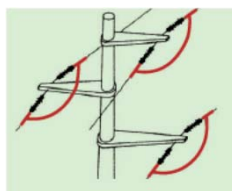
Birds: impacts of power lines

Placement of bird-scaring devices on power lines



Solutions:

- Spirals on the power lines act as a visual and auditory warning (they vibrate with the wind) of the presence of power lines
- Insulated cross-arms avoid electrocution



Communication plan

Web site: www.lifetib.it

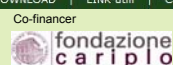
Video production



Connessione e miglioramento di habitat lungo
il corridoio ecologico insubrico Alpi - Valle del Ticino



[galleria VIDEO](#) | [galleria FOTO](#) | [archivio NOTIZIE](#) | [area DOWNLOAD](#) | [LINK utili](#) | [CONTATTI](#) | [IT](#) | [EN](#)




Communication plan

Leaflet

Poster

Stikers album



Coordinating beneficiary



Associated beneficiaries



Co-financer




Communication plan

Networking for training

Local Conservation Group

School programs

Technical and scientific articles

Meetings of technicians staff



Coordinating beneficiary



Associated beneficiaries



Co-financer





Thank you for your attention

Visit www.lifetib.it


sara.barbieri@provincia.va.it



19/05/2014

Coordinating beneficiary
 **PROVINCIA
di VARESE**

Associated beneficiaries
 **REGIONE LOMBARDIA**
 **ZIDU**

Co-financer
 **fondazione
cariplo**