

Name of the picture: Location and types of interventions at Arno settling basins (see also Annex III attached to the proposal).





Name of the picture: Cost computation of Action C2 intervention.

PROCESSES AND ACTIONS PLANNED		Total cost amount
ECOLOGICAL RESTORATION OF THE SETTLING BASINS OF ARNO STREAM, AS A SOURCE AREA FOR BIRDS OF CONSERVATION INTEREST		
A	Creation of floating isles	€ 150.311,15
	Bushes planting	€ 7.570,00
B	4 years maintenance: removal of invasive species, emergency irrigations, protection devices removal	€ 12.250,00
	Removal of alien, invasive species	€ 2.000,00
B intervention partial cost		€ 21.820,00
Total cost amount (IVA free)		€ 172.181,15
IVA total amount (22%) on performances		€ 37.869,85
Total cost amount (IVA included)		€ 210.051,00

**C2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Certificate of regular execution of works	06/2019

**C2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Intervention of Ecological restoration of the settling basins of Arno Stream completed	06/2019

### **C. Concrete conservation actions**

**ACTION C.3:** Enhancement of source areas for endemic fish species along springs, streams and secondary branches of Ticino River

#### **Description and methods employed (what, how, where, when and why):**

**What** - The objective of these interventions is to stop the lost and fragmentation of habitats of *Lethenteron zanandreal*, *Cottus gobio*, *Cobitis bilineata*, through interventions of restoration or creation of aquatic habitats not only suitable but rather necessary for the whole life-cycle of these species, and creating ponds suitable for *Rana latastei*, *Rana dalmatina*, *Hyla arborea*.

**How and where** - The feasibility studies for the interventions at the sites of interest are attached to the proposal:

Annex IV - Feasibility study for the intervention at Maresco di Villa Reale;

Annex V - Feasibility study for the intervention at R. Morto and R. Delizia;

Annex VI - Feasibility study for the intervention at C. Gravelone Vecchio.

The Action regards the realization of interventions of river restoration in 4 sites:

- Maresco di Villa Reale at Cassolnovo (PV). The Action includes: restoration of a spring and its related stream (about 0,5 km), with requalification of the riparian woodland till the confluence with Roggia Bredna; the intervention will concern also the creation of new pools (about 1.000 square metres, see feasibility study attached).

- Ramo Morto, at Turbigo (MI). The Action includes the realization of local interventions along this branch of Ticino river (about 2 km), moving the anoxic sediments and diversifying the riparian habitats through in-channel deflectors or similar interventions that could liven up the flowing of waters and revitalize the aquatic ecosystem (see the annexed feasibility study).

- Ramo Delizia at Magenta (MI). The Action includes interventions like the ones at Ramo Morto (see the annexed feasibility study) and involves about 2 km of stream.

- Canale Gravelone Vecchio at Travacò Siccomario (PV). The Action includes the diversification of riparian habitats and the defragmentation of the water course (about 2 km), permitting to fishes to move freely along the medium-final sectors of the channel.

**When** - Action will take place in the 2018, approximately from the beginning of Jan-18 till the end of Dec-18.

**Why** - The Action is necessary for consolidating and strengthen the network of secondary aquatic habitats linked to Ticino River, with interventions located in strategic areas along Ticino River, which are key habitats and source areas for the conservation of the target species of fish and amphibians. Only the preservation from degradation and fragmentation of lateral habitats, that includes the ones that were selected for the interventions, could save target from extinction inside the Park, that represents (as it is shown by the maps of distribution of target species) a very high value for the conservation of these species.

Restoration of these habitats will also give benefits to other fish species, many of which of high conservation interest.

**This is a "concrete conservation" action and it counts towards the 25% concrete conservation**



actions requirement, because it improves the conservation status of species of community interest and currently in decline in the Ticino River Valley, like *Lethenteron zanandreae*, *Cottus gobio*, *Cobitis bilineata*, through the requalification and creation of aquatic habitats suitable to these species for their entire life-cycle.

### **Beneficiary responsible for implementation:**

TicinoPark

Beneficiaries responsible:

- TicinoPark for administrative aspects
- GRAIA. for technical aspects

### **Assumptions related to major costs of the action:**

The most important cost is represented by the cost of restoration of aquatic habitats at Maresco di Villa Reale, Ramo Delizia, Ramo Morto and Canale Gravelone Vecchio.

The costs derives from the following feasibility studies that are annexed to the present project:

Annex IV - Feasibility study for the intervention at Maresco di Villa Reale;

Annex V - Feasibility study for the intervention at R. Morto and R. Delizia;

Annex VI - Feasibility study for the intervention at C. Gravelone Vecchio.

### Infrastructure:

TicinoPark - public tender - External firm in charge of the works of enhancement of source areas for endemic fish species along springs, streams and secondary branches of Ticino River - 110.000,00 €

### Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - 425 Daily rate x 2 N. person-days = 850 €

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior Environmental Engineer, Chief Designer Officer - 425 Daily rate x 10 N. person-days = 4250 €

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 43 N. person-days = 8600 €

TicinoPark: Permanent staff - C2 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 30 N. person-days = 3900 €

TicinoPark: Permanent staff - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 20 N. person-days = 4300 €

TicinoPark: Permanent staff - D2- SPECIALISTA TECNICO / Head of the Natura 2000 Network Park Office - 160 Daily rate x 20 N. person-days = 3200 €

### External assistance:

GRAIA - Direct treaty - 1 Environmental Engineer, for the assistance to the works direction: 10000 €

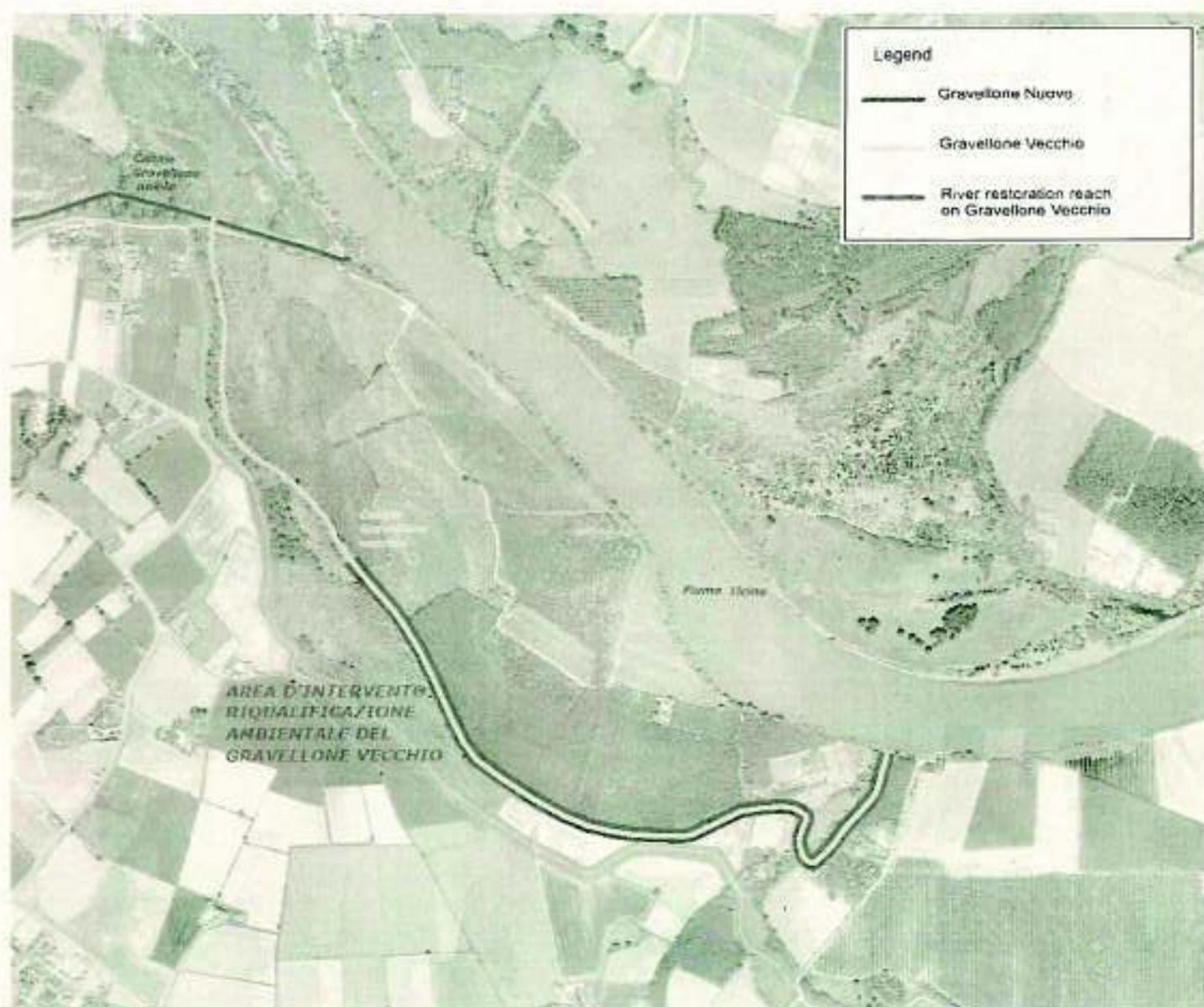


Name of the picture: Location of the interventions on Ramo Morto (see also Annex V)



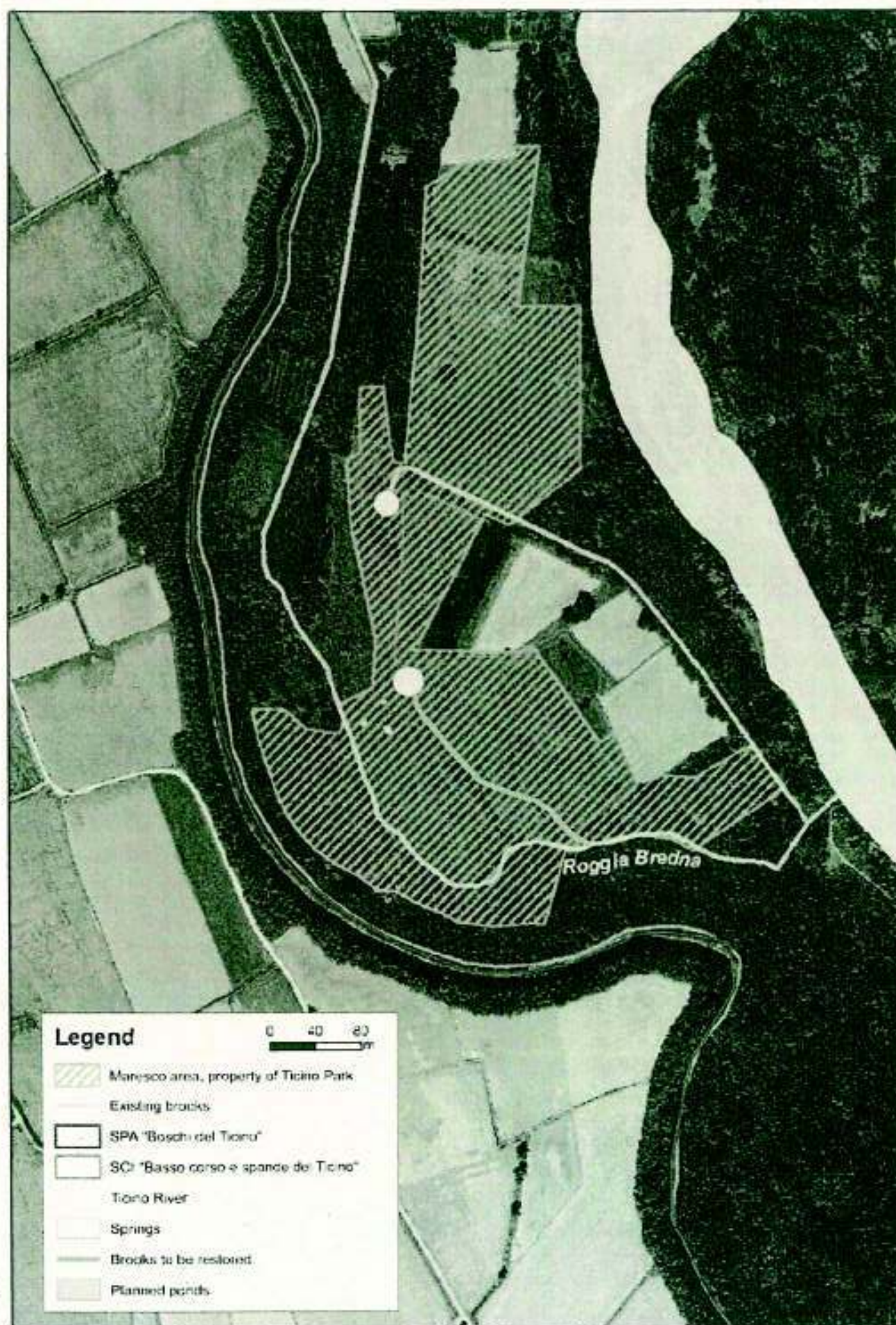


Name of the picture: Location of the interventions on Gravellone Vecchio (see also Annex VI)





Name of the picture: Location and types of interventions at Maresco di Villa Reale (see also Annex IV attached to the proposal).





Name of the picture: Cost computation of interventions on Ramo Morto and Ramo Delizia.

PROCESSES AND ACTIONS PLANNED		Partial cost amount
A	RAMO DELIZIA	
A1	Restoring of the Hydraulic and ecological functionality	€ 10.000,00
	<i>Ramo Delizia total cost amount</i>	€ 10.000,00
B	RAMO MORTO	
B1	Boulders positioning in the watercourse bed	€ 3.755,32
B2	Creation of fish refuges	€ 6.825,00
	<i>Ramo Morto total cost amount</i>	€ 10.580,33
	<i>Total cost amount (IVA free)</i>	€ 20.580,33
	<i>IVA total amount (22%) on performances</i>	€ 4.527,67
	<i>Total cost amount (IVA included)</i>	€ 25.108,00



Name of the picture: Cost computation of interventions on Gravellone Vecchio.

PROCESSES AND ACTIONS PLANNED		Total cost amount
A	ENVIRONMENTAL REHABILITATION OF GRAVELLONE VECCHIO	
A1	Watercourse banks revegetation (bushes and trees)	
A2	Realization of timber bridges in the watercourse	
A3	Realization of timber fish refuges in the watercourse	
A4	bed reshaping of the watercourse	
A5	Provision and positioning of the draining poles	
Total cost amount (IVA included)		50.000,00



Name of the picture: Location of the interventions on Ramo Delizia (see also Annex V)





Name of the picture: Cost computation of intervention at Maresco di Villa Reale.

PROCESSES AND ACTIONS PLANNED		U.M.	Quantity	Unit price	Total cost amount
A	ENVIRONMENTAL REHABILITATION OF MARESCO, VILLA REALE				
A1	Ponds excavation	Lump sum	-	€ 1.600,00	€ 1.600,00
A2	Restoring the functionality of the second spring: cleaning, setting and reshaping of the spring (which is functional but it needs some maintenance).	Lump sum	1	€ 5.000,00	€ 5.000,00
A3	Restoring the functionality of the first spring which is currently buried. Excavation of the head of the the entire brook stretch until its outlet in Roggia Bredna; habitat restoration	Lump sum	1	€ 22.000,00	€ 22.000,00
Total cost amount (IVA free)					€ 28.600,00
Total cost amount (IVA included)					€ 34.892,00



**C3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Certificate of regular execution of works	12/2018

**C3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Interventions of Enhancement of source areas for endemic fish species along springs, streams and secondary branches of Ticino River completed	12/2019



### **C. Concrete conservation actions**

**ACTION C.4:** Management of lowland wet meadows in favour of birds and butterflies of conservation interest

#### **Description and methods employed (what, how, where, when and why):**

**Personnel.** The action will be realized by technical personnel of the Park, in particular the Head of Agriculture Office and an external agronomist. For FLA, it is forecasted the involvement of the Head of the Biodiversity Office and an expert in biodiversity in agricultural habitats, as "inhouse" personnel.

**What** - The strategic objective is to manage these habitats in favour of species of conservation interest. It's expected to achieve about 60 hectares of lowland wet meadows flooded in winter (locally called "marcite") and about 15 hectares of lowland wet meadows flooded in autumn.

Target species are:

*Casmerodius albus* - wintering and migratory species

*Egretta garzetta* - wintering and migratory species, and foraging during breeding season

*Circus cyaneus* - wintering and migratory species

*Lullula arborea* - wintering and migratory species

*Lycaena dispar* - resident species.

Other bird species that are important at continental level (ERLB or SPEC) that use these habitats are: *Gallinago gallinago*, *Vanellus vanellus*, *Numenius arquata*, *Athene noctua*, *Alauda arvensis*, *Anthus pratensis*, *Carduelis cannabina*, *Emberiza calandra*.

**How** - Almost 60% of the surface of the Park is covered by agricultural areas cultivated by about 1250 farms. The ones that give more attention to environmental aspects are members of a Consortium of Farms of Ticino Park. One of the most common cultivations are hay meadows for the production of forage for cows. These are old meadows that are important for biodiversity, in particular for birds of conservation interest that use these habitats as foraging and breeding sites. Some of these meadows ("marcite") were created in the Middle Age, when local people invented a way of managing a meadow producing 7-9 cuts a year taking the meadow submerged in the cold season, avoiding it to freeze and allowing vegetation to grow.

**The project "Gestione e conservazione di agro ecosistemi e di ambienti forestali a favore dell'avifauna di interesse conservazionistico nel Parco del Ticino" will end on June 2016 and there will not be time overlapping between the two projects and not double-funding. Furthermore, the "marcite" that will be involved in the LIFE + project are not the ones involved in the previously mentioned project, so there will not be overlapping of surfaces.**

Regione Lombardia has always defined not to include the financing of "marcite" between the actions of Rural Development Funds, even in the last Programme 2014-2020.

**There will not be a recurrent way of managing the sites, since:**

**- the sites will not be the same of the project "Gestione e conservazione di agroecosistemi e di ambienti forestali a favore dell'avifauna.."**



**- many "marcite" involved in the project were not managed in the last years**

**- the management was previously done directly by the farmers, while since now on it will be followed by people directly appointed by the Park (locally called "campari")**

**- flooding will be done for many sites also in autumn and not only in winter.**

With this Action the Park aims to improve the management of "marcite", increasing their importance as habitats for wildlife through the following innovative and experimental interventions:

- To restore winter flooding of "marcite" where this activity was abandoned in the last years
- To introduce the activity of flooding grasslands in autumn, never realized before in the Park
- To experiment a method of management involving "campari" that will be entrusted by the Park.

**This new way of managing "marcite" will permit:**

**- To define a new strategy of managing this habitat**

**- To go on with their management after the LIFE+ project.**

For the completion of this Action, two Actions are preparatory:

1. Action A3 - To realize consultation and achieve agreements with farmers
2. Action E2 sub-action E2.5 - Training course to teach to farmers the best practices of management of "marcite" in favour of biodiversity.

Action C4 will be carried out in three sub-Actions:

C4.1. Call for an external agronomist

C4.2. Call for identifying "campari" for managing "marcite"

The loss of the manual skill of managing a "marcita" has brought in the last years to the impoverishment of the quality of the habitat. We would like to experiment a "functional management external at the farm", through the involvement of about 3 people ("campari") that will be selected through a public call, entrusted and coordinated by the Park and appointed for the management of "marcite" participating to the project, with the agreement of the owners/managers of the sites. Farms will be selected between the ones that in the last years abandoned or limited the management of these habitats, reaching a new way of managing them, since the farmers in the last years were complaining for not having anymore the time to follow directly the management of "marcite". The "marcite" will be selected between the ones that are preserved by the "Regulation for the Maintenance of Marcite" of the Park, that presently include 300 hectares of "marcite" and about 60 farmers. Since it will be a total innovative intervention, we forecast to involve in this sub-Action about 60 hectares of "marcite", to implement the ecological connection along the Ticino Valley and the presence of different foraging sites for migratory and wintering birds. Since the areas are privately owned, the exact location of them will be identified during the project, starting from farmers that already signed a letter of interest (annexed).

C4.3. Call for farmers for autumn flooding (september - october) of meadows for creating a foraging habitat for migratory birds

We want to introduce in the Park a new method of managing grasslands, flooding them in autumn, so that will



be created suitable habitats for migratory bird species, such as *Casmerodius albus*, *Egretta garzetta*, *Pluvialis apricaria*, *Vanellus vanellus*, *Anthus pratensis*, *Fringilla montifringilla*.

**We expect that about 10 farmers (including "campari") will be involved in the implementation of Action C.4.**

**Where** - The Action will take place in rural areas in the central-southern part of the Park.

**When** - The Action will be done between 2017 and 2020 and will be completed before november 2020.

**Why** - The Action is of great importance for creating a system of wet meadows along the Ticino Valley, suitable for various bird species of conservation interest during autumn migration and winter, since often they cannot find elsewhere places for foraging.

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it improves the conservation status of many birds and a butterfly (*Lycaena dispar*) of conservation interest, contributing to the defragmentation of the ecological corridor of Ticino and to the environmental requalification of rural areas as agroecosystems functional to biodiversity, in particular in the unfavourable seasons for wildlife.**

Some farmers has already expressed their intention to participate to the action by letters attached to the proposal.

### ***Beneficiary responsible for implementation:***

TicinoPark

Beneficiaries responsible:

- TicinoPark, for the concrete execution of the action;
- FLA for scientific contents.

### ***Assumptions related to major costs of the action:***

TicinoPark has been working for more than 20 years with farmers operating inside the protected area.

The costs are evaluated on the basis of previous experiences for realizing similar interventions.

With regard to the personnel, both the Park and FLA have the necessary competences and in particular the Head of Agriculture Office of the Park is more than 20 years that is caring of the support to farmers that work inside the Park.

### **Personnel:**

FLA: Permanent staff or civil servant - "Inhouse" Personnel / Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 52 N. person-days = 13000 €

FLA: Permanent staff or civil servant - CCNL Commercio Impiegato Liv. Q - tempo pieno / Head of the Biodiversity and Protected Areas Office - FLA Project coordinator - 257 Daily rate x 8 N. person-days = 2056 €

TicinoPark: Permanent staff or civil servant - C2 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 45 N. person-days = 5850 €

TicinoPark: Permanent staff or civil servant - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 30 N. person-days = 6450 €

TicinoPark: Permanent staff or civil servant - C4 - ISTRUTTORE TECNICO / Head of Agriculture Office - 140  
Daily rate x 90 N. person-days = 12600 €

External assistance:

TicinoPark - public tender - Local farmers (at least 12 farmers) for managing of lowland wet meadows on the basis of C4 action recommendation: 120000 €

TicinoPark - public tender - Agronomist expert on the management of lowland wet meadows on the basis of ecological purpose, for agricultural consulting to farmers: 16000 €



**C4's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Map of the "marcite" managed in accordance with the rules established by the Project	10/2020

**C4's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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### **C. Concrete conservation actions**

**ACTION C.5:** Restoration and creation of forest habitats of conservation interest at Bernate Ticino

#### ***Description and methods employed (what, how, where, when and why):***

**What** - The action C5 includes the restoration of forest habitats in locality La Piarda, Bernate Ticino (MI), an area located in the flood plain of Ticino river, previously characterized by two major limiting factors:

- The old highway bridge: with its bank protection prevented the natural flooding of the Ticino during significant floods, representing one of the most significant interruption of the ecological connection along the river;
- Private ownership of almost all the area, mostly fenced with gardens and houses.

After construction works for high-speed rail, the Park requested and obtained, as compensation for the environmental impacts, to acquire the major part of these areas, destroying the houses and the fences, and giving back the riparian areas to the free flowing river.

Now there are the perfect conditions to realize an important project of requalification of the area as a whole and to reconnect it to the surrounding territory, through the restoration of artificial ponds, small lakes and wetlands (see Action C6) and to improve and create the habitat 91F0 "Forests riparian mixed large rivers *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia* (*Ulmion minoris*) and, for a few patches of more hygrophilous forest, the priority habitat \* 91E0 "Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*", in order to defragment one of the largest degraded site inside the Park, located close to the river, in a strategic position in particular for migratory bird species.

**How** - The final design will be carried out with particular care for flora and vegetation, in order to rebuild the original potential vegetation and therefore the habitats 91E0\* and 91F0.

The Action will include:

- reforestation of open areas (about 16 ha) of the existing gardens, with hygrophile species (black alder, black poplar and white poplar, gray willow and white willow) or mesophilic ones (English oak, elm, ash leaved, hornbeam white, maple, shrubs), including the implementation of cultural practices for the first few years (irrigation, mowing, replacing of failed areas);
- cutting of non-native and ornamental species, with eventual eradication if necessary (eg. cherry laurel, black cherry) and underplanting of trees and shrubs of native species (such as *Viburnum opulus*, *Carpinus betulus*, *Prunus avium*, *Prunus padus*, *Acer campestre*, *Cornus sanguinea*). Even in this case, cultural practices will be implemented for the first years (eg. to avoid alien species regrowth and to replace dead plants);
- silvicultural thinning where necessary;
- removal of fences, debris, artificial embankments;
- in areas under power lines (about 2 ha), removal of invasive alloctonous plants and replacing with a shrub layer of native ones.

To complete the process of restoration of the site, will be also realized a nature trail, with possible installation of walkways where necessary, and it will be realized with Action E1 sub-action E1.2. Part of the trail could be



realized restoring the existing forest roads.

The feasibility study of the intervention is attached to the proposal in Annex VII.

Where - "La Piarda" Locality, in the municipality of Bernate Ticino (MI), an area of about 18 ha is involved. Part of these areas have been recently acquired by the Park, the other will be acquired from the Park within the period of works for the high-velocity rail or immediately after and will remain property of the Park indefinitely. In any case, all the areas will be in the full availability of the Park in case the project will be funded. The restoration of forest habitats will affect an area of about 16 ha, while on other 2 ha will be planted with native shrubs under power lines.

When - The action will take place mostly in 2018, approximately from the beginning of Jan-18 till the end of Dec-18; on this last date the intervention will be completed. Afterwards, even if not indicated in timetable, the action will continue with little and specific interventions aimed to improve the forestry results.

Why - The action is necessary because it fill a gap in the Park ecological network, that was here interrupted by the presence of a huge infrastructure, today finally dismantled; fragmentation of the natural habitat will be interrupted with this action, restoring the ancient original forests, in favour of biodiversity and connectivity, and in particular of forest habitats of community interest, among which the priority habitat 91E0\*.

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it improves the conservation status of habitat of community interest, like 91F0 and 91E0\* (priority). It also strengthens the entire ecological network of Ticino River Valley, and in particular of the Natura 2000 network in the Park.**

**We believe that the restoration and creation of forest habitats at Bernate Ticino can be considered a "green infrastructure", for at least three major reasons, which correspond to those are described within "Answer RP 8". In this case among the benefits deriving from the intervention, we recognize at least:**

- Enhanced efficiency of natural resources, as maintenance of soil fertility;**
- Climate change mitigation and adaptation, with Carbon storage and sequestration, temperature control;**
- Disaster prevention, with erosion control and flood hazard reduction;**
- Water management, in particular water purification, enhancing soil's organic matter and improving land quality and making land more attractive;**
- Land and soil management, as reduction of soil erosion, enhancing soil's organic matter, increasing soil fertility and productivity, mitigating land take, fragmentation and soil sealing, improving land quality and making land more attractive, making higher property values;**
- Conservation benefits, enhancing the existence value of habitat, species and genetic diversity;**
- Agriculture and forestry, enhancing resilient forestry and enhancing pollination;**
- Tourism and recreation, making the destination more attractive, enhancing recreational opportunities;**
- Education, making it a teaching resource and a „natural laboratory“;**
- Resilience, enhancing the resilience of ecosystem services.**

**For all these reasons with believe that the cost of restoration and creation of forest habitats at Bernate Ticino foreseen in Action C.5 should be considered as infrastructure costs.**

**Beneficiary responsible for implementation:**

TicinoPark

The Action will be done by the Park, responsible for the concrete execution of the intervention, with the scientific support of FLA.

**Assumptions related to major costs of the action:**

Costs for the execution of works are estimated in a Feasibility study attached to the proposal in Annex VII.

Infrastructure:

TicinoPark - public tender - Restoration and creation of forest habitats of conservation interest at Bernate Ticino - 370.000,00 €

Personnel:

FLA: Permanent staff- "Inhouse" Personnel / Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 60 N. person-days = 15000 €

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 4 N. person-days = 800 €

TicinoPark: Permanent staff - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 12 N. person-days = 2580 €

TicinoPark: Permanent staff - D2- SPECIALISTA TECNICO / Head of the Natura 2000 Network Park Office - 160 Daily rate x 5 N. person-days = 800 €

TicinoPark: Permanent staff - C5 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 140 Daily rate x 10 N. person-days = 1400 €

External assistance:

TicinoPark - public tender -1 Senior Forestry-Agronomist for forestry works direction Action C5: 12000 €

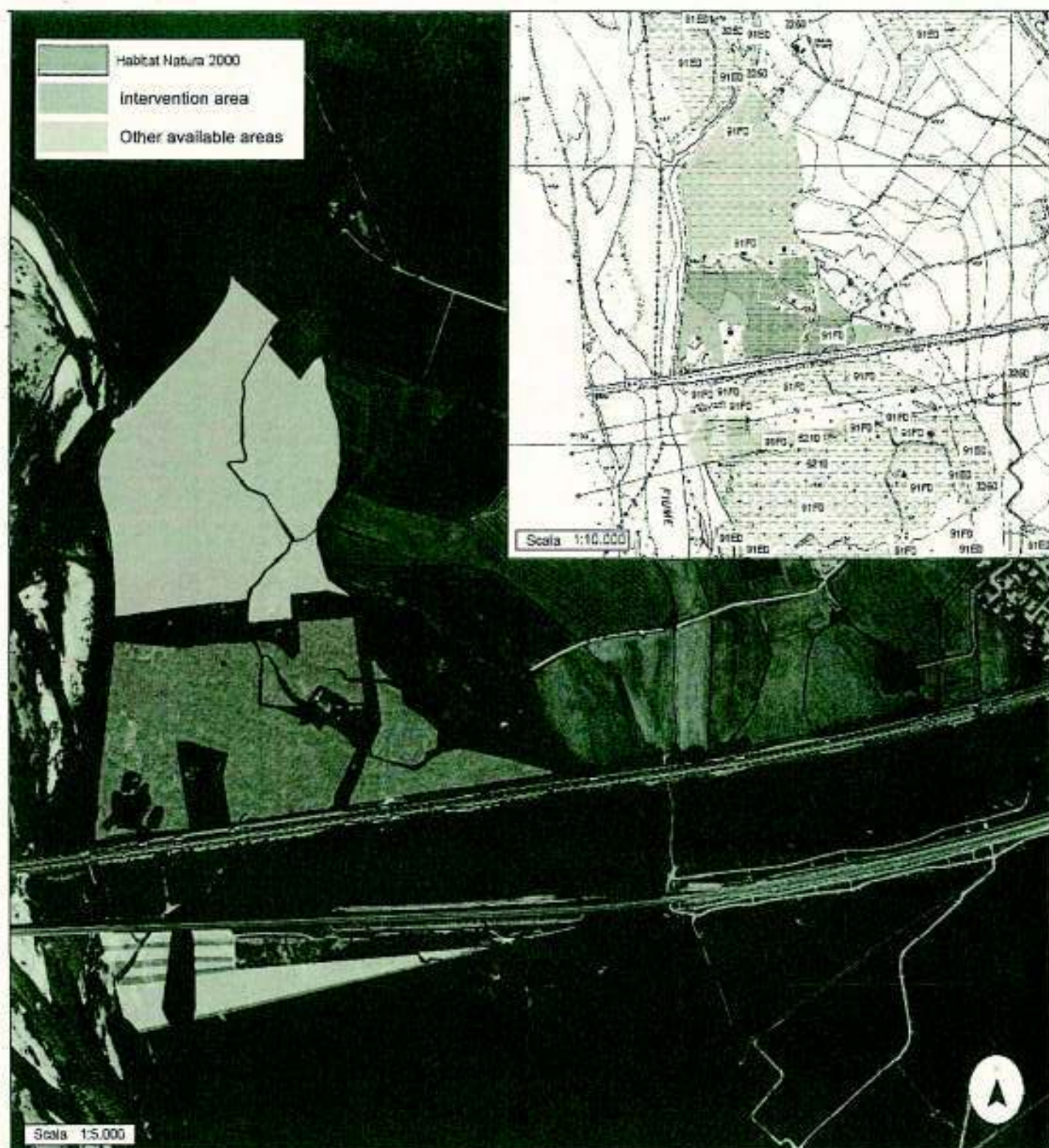


Name of the picture: Cost computation of forestry intervention at Bernate Ticino - Action C5.

INTERVENTI	Costo Unitario (in €)	Superficie (in ha)	COSTO TOTALE (in €) (IVA esclusa)
1) Taglio delle specie alloctone e diradamento del bosco	3.000,00	16.00	48.000,00
2) Sottopiantagione alberi e arbusti e rimboschimenti, comprensivo di pacciamatura, protezioni.	6.000,00	16.00	96.000,00
3) Cure colturali pluriennali: sfalcio infestanti, irrigazioni di soccorso, sostituzione fallanze.	4.000,00	16.00	64.000,00
4) Rimozione recinzioni e terrapieni.		A corpo	25.000,00
5) Creazione di arbusteti sotto elettrodotto	40.000,00	1.50	60.000,00
6) Sostituzione siepi di specie alloctone e rimozione recinzioni di privati confinanti.		A corpo	10.000,00
Totale lavorazioni			303.000,00

Costo delle opere	303.000,00
IVA (22 %)	66.660,00
arrotondamenti	340,00
<b>Totale quadro economico</b>	<b>370.000,00</b>

Name of the picture: Localization of intervention of Action C5 (see also Annex VII)





**C5's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Certificate of regular execution of works	12/2018

**C5's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Intervention of restoration and creation of forest habitats of conservation interest at Bernate Ticino completed	12/2018

### **C. Concrete conservation actions**

#### **ACTION C.6:** Restoration of wetlands at Bernate Ticino

##### ***Description and methods employed (what, how, where, when and why):***

**What** - The target species are represented by migratory aquatic birds that follow the flyway of Ticino river and that will find here new stop-over sites for resting and foraging, in a sector of the Park where they are actually not present. Through the Action, an area of 6.500 m<sup>2</sup> of high natural value, bordering the Ticino river, subjected to intensive urbanization in the past, will be restored. This area is characterized by the presence of two ponds of artificial origin (dugs for quarrying activities) which will be restored by creating the habitat 6510, suitable for migratory birds and for biodiversity in general. This intervention completes the intervention foreseen with Action C5, integrating the natural mosaic of habitats with aquatic ecosystems.

**How** - These proposed measures aim to restore the flood plain area of Ticino river, characterized by the presence of two phreatic ponds excavated for extraction purposes.

The interventions are detailed below:

- Reprofilling of the banks of the pond "A" (with removal of the existing cliff);
- Planting of the banks of the pond "A" (native mixed mesophilic shrubs, herbaceous hygrophilous plants, reeds along the shore in order to recreate different habitats);
- Laying of a double hedgerow in the southern portion of the pond "A";
- Creation of a ditch connecting ponds "A" and "B";
- Planting of riparian forest (native trees and shrubs mixed mesophilic), in the northern part of the area.

**Where** - The Action will take place in Bernate Ticino (MI), in proximity of the site of Action C5. The entire area of 6.500 m<sup>2</sup> is property of TicinoPark and it's completely within Natura 2000 sites: SCI IT2010014 "Turbigaccio, boschi di castelletto e lanca di Bernate" and SPA IT2080301 "Boschi del Ticino".

**When** - The Action will take place in 2018-2019, from the beginning of Jan-18 till the end of Mar-19.

**Why** - The Action is necessary to complete the ecological mosaic of habitats created with Action C.5, in one of the largest degraded areas of TicinoPark, also located in a strategic position for the Natura 2000 network, now property of the Park and ready to be requalified. It will then become a real "source area" for many migratory aquatic bird species.

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it improves the conservation status of habitat of community interest, like 6510 and it also strengthens the entire ecological network of Ticino River Valley, and in particular of the Natura 2000 network in the Park, and create suitable habitats for migratory aquatic birds.**

**We believe that the restoration of wetlands can be considered a "green infrastructure", for at least three major reasons. The first is because it will be realized through renaturalisation practices, therefore through "building with nature" techniques, in order to restore continuity and ecological functions of environmental matrices and to eliminate barriers and the use of natural**



resources centred on human activities. Like a "green infrastructure", in accordance with the Community definition (COM(2013) 249 final), the intervention will be planned and managed in a way that provides a broad spectrum of ecosystem services, ensuring benefits at different levels:

- Enhanced efficiency of natural resources, in particular the storage of freshwater resources;
- Climate change mitigation and adaptation, with Carbon storage and sequestration, temperature control;
- Water management, in particular water purification, enhancing soil's organic matter and improving land quality and making land more attractive;
- Land and soil management, enhancing property values;
- Conservation benefits, enhancing the existence value of habitat, species and genetic diversity;
- Tourism and recreation, making the destination more attractive, enhancing recreational opportunities;
- Education, making it a teaching resource and a „natural laboratory“;
- Resilience, enhancing the resilience of ecosystem services.

The second reason is that the structures we're going to realize will be preserved in the future even after the end of the project.

The third reason is because interventions like this are subject to environmental impact assessment procedure (known in Italy as VINCA), landscape authorisation procedure (in Italy: Autorizzazione Paesaggistica), and so on, as well as any other type of infrastructures.

For all these reasons we believe that the cost of the restoration work foreseen should be considered as infrastructure costs.

### **Beneficiary responsible for implementation:**

TicinoPark

All the beneficiaries will be involved in the action:

- TicinoPark, responsible for the concrete realization of the action;
- GRAIA, responsible for works direction;
- FLA, for faunistic consultancy.

### **Assumptions related to major costs of the action:**

The action costs have been estimated with through a Feasibility study attached to the proposal in Annex VIII.

#### Infrastructure:

TicinoPark - public tender - Restoration of wetlands at Bernate Ticino - 65.000,00 €

#### Personnel:

FLA: Permanent staff - "Inhouse" Personnel / Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 20 N. person-days = 5000 €

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - 425 Daily rate x 3 N. person-days = 1275 €

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior Environmental Engineer, Chief Designer Officer - 425 Daily rate x 12 N. person-days = 5100 €

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 10 N. person-days = 2000 €

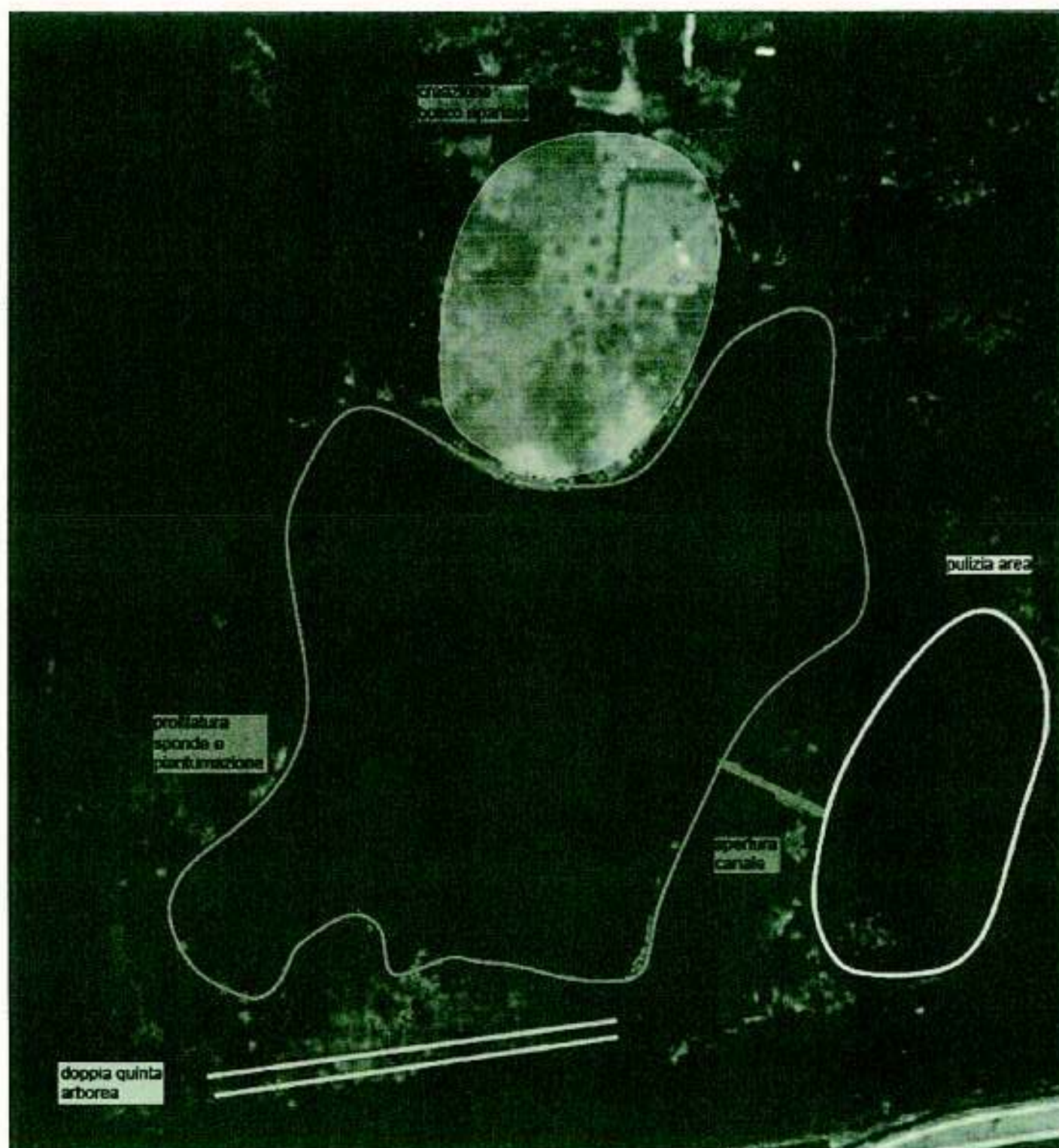
TicinoPark: Permanent staff - C2 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 12 N. person-days = 1560 €

TicinoPark: Permanent staff - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 4 N. person-days = 860 €

TicinoPark: Permanent staff - D2- SPECIALISTA TECNICO / Head of the Natura 2000 Network Park Office - 160 Daily rate x 4 N. person-days = 640 €



Name of the picture: Location and types of intervention foreseen at Bernate Ticino with Action C6 (see also Annex VIII).



Name of the picture: Cost computation of Action C6 intervention.

PROCESSES AND ACTIONS PLANNED	Wetlands restoration	Forestry restoration	Total cost amount
<b>ENVIRONMENTAL REHABILITATION IN BERNATE TICINO</b>			
Pond "A" reshaping, creation of a channel to join Pond "A" with Pond "B".	€ 34.400,00		
Banks reforestation; creation of natural habitats	€ 2.900,00		
Reforestation		€ 9.000,00	
Demolition and disposal of material	€ 5.000,00		
Cleaning of the area, restoring of places, unexpected events	€ 6.378,69		
Total cost amount (IVA free)	€ 48.278,69	€ 9.000,00	€ 53.278,69
Total cost amount (IVA included)	€ 58.900,00	€ 6.500,00	€ 65.000,00



**C6's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Certificate of regular execution of works	03/2019

**C6's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Intervention of restoration of wetlands at Bernate Ticino completed	03/2019

### **C. Concrete conservation actions**

**ACTION C.7:** Active defense of *A. naccarii* spawning sites

#### ***Description and methods employed (what, how, where, when and why):***

**What** - The target species is *A. naccarii* (CRitically endangered, HAB-92 All.2). The strategic objective is the protection of the only known European spawning bed of *A. naccarii*, threatened by poaching and by the presence of invasive species (such as *Silurus glanis*). The action will also be functional to the protection of *Huso huso* re-introduced in the river when the reintroduction will start.

**How** - The strategy management will take into consideration the needs related to the seasonality and the periodicity of the threats. Weekly patrols will be organized all year round in order to discourage poaching. These patrols will be more intensive in spring and summer (around the spawning area) and they will not follow any predictable schedule, in order to maximize their effectiveness.

This threat will also be tackled, indicatively and only in the presence of appropriate and favorable conditions (suitability of good places to functionally record the strategic areas, which are at the center of the river, away from the shore and in the depth), by placing camera traps near the spawning area: the video clips produced this way will be checked by the task force, with the assistance of TicinoPark and the technical counseling of GRAIA.

The pre-spawning period will be characterized annually by electrofishing sessions, which should reduce the presence of *Silurus glanis* (and other alien invasive species) in the spawning area. The main aspects and strategies of the electrofishing activity (paths, timing, frequency) will be defined in the Action A2 and will be taught to the volunteers with Action E2 (sub-action E2.1: Training of the task force involved in action C7). All the fish captured this way will be recorded and disposed of under the current regulations. The electrofishing activity will be managed by the task force coordinated by TicinoPark and with an initial 2 years period of scientific and practical collaboration of GRAIA.

TicinoPark will periodically organize meetings with the task force and GRAIA to evaluate and calibrate the activities presented above.

Action C.7 will be organized in 2 different targets, providing for 2-3 main strategies:

#### **- Target 1. Poaching:**

- strategy A: weekly patrols (more intensive in spring and summer; located around the spawning area; unpredictable timing and frequency); a surveillance group will be formed, made up of at least 10 volunteers; a minimum of 90 patrolling operations (all year round) will be organized. This patrol activity will be useful not only for concret protection of *A. naccarii* but of *Huso huso* reintroduced in the river with Action C8.

- strategy B: (if possible) camera traps placing (video clips watching; reporting to policy authorities)

#### **- Target 2. *Silurus glanis*:**

- strategy C: species control by electrofishing sessions (possibly done by boat); a minimum of 40 electrofishing campaign will be performed.

**Where** - The Action will focus on the river reach flowing from Pavia, at Ponte Coperto, to the Ticino River outlet in Po River; particular care will be paid to the known spawning bed, located in a meander upstream the outlet.



**When** - The Action will begin in April 2017 and it will continue until the end of the project.

**Why** - The Action is necessary to discourage poaching and to reduce the population of *Silurus glanis* and its negative effect on the reproduction and growth of *A. naccarii* in Ticino River.

It's important to highlight that the complete eradication of *Silurus glanis* is an unrealistic task, but it is possible to reduce its negative impact on the spawning area with intensive electrofishing sessions (non-spawning period). Involving and motivating the volunteer personnel is the best strategy to ensure an after-LIFE continuity of the action: the strong localized nature of the action implies that local volunteers would take it up.

Taking into account the target of the action (Ticino River *A. naccarii* population) it is necessary to consider it is the only known population with an active reproduction worldwide (2015); the only known Italian spawning site is indeed the one mentioned above. The uniqueness and the scarce extension of the known spawning area make C.7 Action crucial for the survival of *A. Naccarii* Ticino River population.

TicinoPark will have the hard task to create, motivate and maintain an adequate trained group of volunteers: it is worth noting that the surveillance and electrofishing sessions should be frequent and prolonged in time to be effective. TicinoPark has already undertaken collaborations with local fishing associations in the past, and this has proved to be a key factor in the creation of a strongly motivated task force. The support of the project has already been expressed by FIPSAS Pavia, the greatest Association of anglers present in the project area (see Form A8 attached to the proposal).

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it improves the conservation status of the *A. naccarii*, being necessary to prevent and contrast all the major threats that could severely affect the spawning habitat or the species.**

**For the purposes of the Action, thanks to the skills reached all over these years of tough fight against *S. glanis*, and to the deepening activity provided with Action A.3, we can set our goal to improve the capturing effort in order to at least double the yield during the first year of the action, from 50 kg/campaign (the yield registered in the most recent experience conducted by TicinoPark) to 100 kg/campaign. Then, in the following two years considering the effect of the first year control campaigns, the yield will probably decrease. The results of the yield during the control campaign will show the efficacy of the action, in quantitative terms, keeping the same electro-fishing effort.**

**Of course, the connectivity with the Po River system will allow the *Silurus* to keep on colonizing the low Ticino river. The action is necessary to help the undisturbed spawning activity of *A. naccarii* and will not be able to reduce the *Silurus glanis* population as a whole. The action will be of course continued after Life.**

### **Beneficiary responsible for implementation:**

TicinoPark

TicinoPark and GRAIA will be the beneficiaries involved in the action:

- TicinoPark responsible for the concrete execution of the action;
- GRAIA responsible for the scientific contents.

### **Assumptions related to major costs of the action:**

Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - GRAIA Project leader and coordinator for technical and financial aspects Chief Executive Officer, part-time employee / senior ichth - 425 Daily rate x 20 N. person-days = 8500 €

GRAIA: Permanent staff - CCNL Commercio Dipendente III livello / Senior Environmental graduate, expert on Aquatic Biodiversity Conservation and on the management of Natura 2000 sites - 180 Daily rate x 64 N. person-days = 11520 €

TicinoPark: Permanent staff - C2 - GUARDIAPARCO / Ranger - 140 Daily rate x 24 N. person-days = 3360 €

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 22 N. person-days = 4400 €

TicinoPark: Permanent staff - C2 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 6 N. person-days = 780 €

TicinoPark: Permanent staff - C2 - GUARDIAPARCO / Ranger - 140 Daily rate x 24 N. person-days = 3360 €

TicinoPark: Permanent staff - C2 - GUARDIAPARCO / Ranger - 135 Daily rate x 25 N. person-days = 3375 €

TicinoPark: Permanent staff - C2- ISTRUTTORE TECNICO / Fauna expert - 140 Daily rate x 80 N. person-days = 11200 €

External assistance:

TicinoPark - framework contract - Local anglers associations for the participation to the task-force: 8000 €

GRAIA- Direct treaty - 1 Biologist, expert on sturgeons, for the assistance to the task force (about 50 person/day): 10000 €

Consumables:

TicinoPark - Direct treaty - boat fuel: 3000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**





**C7's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Task force mission report	10/2020

**C7's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Reduction of <i>Silurus glanis</i> presence (in terms of biomass) in the sturgeon spawning area of 50%.	10/2020



## **C. Concrete conservation actions**

### **ACTION C.8:** Reintroduction of *Huso huso* in Ticino River

#### ***Description and methods employed (what, how, where, when and why):***

**What** - The target species is *Huso huso*, today extinct from the Adriatic basin but native in the sea and in the Po river basin as well as in the middle and lower course of Ticino River, where it was in the past (until about 1970) the greatest predator freshwater fish inhabiting the river, today replaced by *Silurus glanis*.

The action consists in the re-introduction of the species in the Ticino River.

**How** - The feasibility study for the reintroduction of *Huso huso* is attached to the proposal at the Annex IX.

The reintroduction will take place according to the following steps:

1. PREPARATORY PHASE. The first year of activity will be necessary to find the potential suppliers of the species stocks for reintroduction. TicinoPark has already started in the year 2015 collaborations with an Italian farm that produces *H. huso* (because of the complete extinction of the Adriatic populations) acquiring about 60 specimens 1-2 years old (Cofinanced by Fondazione Cariplo), with the specific aim to reach the necessary experience for breeding the species and create the first group of potential founders. At least other 2-3 farms (national and/or international, in the EU) will be contacted, among farms with all the permissions and the sanitary and other necessary certificates regularly renewed. All the potential suppliers will be invited to firstly provide tissue samples of their *H. huso* breeders; these will be obtained in order to realize the genetic analysis of their genetic diversity and fitness, and thus to choose the founders stock on the genetic basis. TicinoPark will then make agreements with suppliers for the coming years of the project. The same genetic analysis will be performed on the stock already existing in the Cassolnovo seminatural raceways to assess the opportunity of using it as founder.

2. RE-INTRODUCTION PHASE - The stock of *Huso huso* will be purchased in the second year, at 1 year old of the specimens coming from the founders selected, and the same will be done the second and the third year of the action. It's foreseen to acquire 1-2 years old specimens (3-4 kg weight), in a number of about 140 specimens/year (for 3 years, to a total number of at least 420 specimens bought during the project); depending on the availability of other sizes, like 0+ juveniles or even embryonated eggs the acquiring of those sizes would be considered and, if carried out, the number of units acquired would be clearly greater. All the 1-2 years old specimens purchased will be transferred to natural tanks at Cassolnovo (facilities property of TicinoPark) where they will be left in extensive breeding for almost 3 months, to ensure their best adaptation to natural life and thus their best fitness for survival. The first experience with the stock purchased in 2015 suggests some works of adaptation of the raceways to the new guest (*H. huso*); for this reason a firm specialized in aquatic rehabilitation works will be charged of the requalification of the Cassolnovo raceways in favour of *H. huso*. After the period of 2-3 months breeding, the specimens will be released in the river, especially in the middle-lower course of the river and in some natural streams connected to the river, characterized by local natural good conditions for sturgeons. Not all individuals will be released: some of them will be retained at the breeding tanks to grow a breeders stock and start a semi-closed breeding cycle of the species, to be continued after the end of the LIFE project.

The specimens released in the river will be monitored with Action D7.

It's important to highlight that the species *H. huso* reproduces for the first time at 15-16 years old; this is the reason why during the LIFE project it won't be possible to reproduce in captivity the species at the TicinoPark facilities. On the other hand, the purchase and breeding of specimens starting from different sizes (also from embryonated eggs, if possible) will make TicinoPark expert on the breeding of all growth phases of the life-cycle of the species. Furthermore, its experience in the close breeding cycle of *Acipenser naccarii*, which



TicinoPark has been carrying out for more than 10 years, will help it in the breeding and reproduction in captivity of *H. huso*.

According to the biology of the species the project can only face 1) the preparatory phase and 2) the re-introduction phase. In the preparatory phase (first year of activity), some genetic analysis will be carried out to evaluate and to choose the founders which will be reintroduced in Ticino River. The reintroduction phase will be represented by 3 reintroduction campaigns: it will be continued even after the end of the project. Ticino Park will detail the reintroduction phase and the FOLLOW-UP PHASE in the After-LIFE Plan, submitting it to EC, with a formal commitment made of concrete perspectives of continuity.

**The overall number of sturgeons released in the River in the SCI "Basso corso e sponde del Ticino" will consist of not less than 3900 juveniles (0+) and 300 young specimens (1-2+). Reintroduction will be realized during spring for juveniles and summer for the bigger ones.**

**Where** - The breeding will take place at Cassolnovo seminatural raceways (PV) and La Fagiana Reserve, all property of TicinoPark. The reintroduction will be performed in the middle-lower course of Ticino River, **within SCI IT2080002.**

**When** - The action will be carried out during the project from Jan-17 till the end of the project.

**Why** - *Huso huso* is extinct from Italy since 1980s. The species is critically endangered (IUCN red list) in the entire distribution area. Ticino River and Po River can still offer environmental condition not only suitable but also optimal to the species. The species is protected from fishing in the entire Italian territory (Bern Convention). It's a key species for the ichthyofaunistic Italian heritage as a whole, because it represents one of the most ancient freshwater native species, it's a migratory species, it's the most charismatic for the considerable sizes it can reach in its life and because it can represent the unique real successful competitor of *Silurus glanis* in these rivers, where *S. glanis* has been greatly diffused among Italian waters. Regione Lombardia is the competent authority for the *Huso huso* reintroduction, and declared its support to this action in the form A8.

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it reintroduces the species *H. huso* in the Po basin, where it's extinct since 1980s.**

**It's foreseen that "VInCA" procedure, for at least the "screening" phase, will be required for the reintroduction in SCI TicinoPark, with the contribution of GRAIA, will redact and submit the Incidence Study to Lombardy Region (LR), as Competent Authority, which by 60 days have to issue its binding opinion. We don't foresee any risk in this procedure because LR has already expressed its support to the project.**

### **Beneficiary responsible for implementation:**

TicinoPark

TicinoPark and GRAIA will be the beneficiaries involved in the Action. TicinoPark will be responsible and coordinate the purchase of the fish stocks and the management of the breeding process. GRAIA will ensure scientific support to the whole activity and will coordinate the re-introduction operations.

### **Assumptions related to major costs of the action:**

#### **Personnel:**

GRAIA: Permanent staff (ps) - Chief Executive Officer, part-time employee / senior ichthyologist - 425 Daily rate x 32 N. person-days = 13600 €



GRAIA: ps - CCNL Commercio Dipendente III livello / Environmental graduate, expert on Hydrobiology and biomonitoring - 120 Daily rate x 90 N. person-days = 10800 €

GRAIA: ps- CCNL Commercio Dipendente III livello / Senior Environmental graduate, expert on Aquatic Biodiversity Conservation and on the management of Natura 2000 sites - 180 Daily rate x 60 N. person-days = 10800 €

TicinoPark: ps - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 10 N. person-days = 2000 €

TicinoPark: ps - C2 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 5 N. person-days = 650 €

TicinoPark: ps - C2- ISTRUTTORE TECNICO / Fauna expert - 140 Daily rate x 52 N. person-days = 7280 €

External assistance:

TicinoPark - public tender - 1 Senior Ichthyologist, for the full-time management of the breeding of *Huso huso*: 100000 €

TicinoPark - public tender - External firm for the execution of the Cassolnovo basins adaptation works: 20000 €

TicinoPark - framework contract - Local anglers association for the management of Cassolnovo basins: 10000 €

TicinoPark - public tender - Farms for the provision of *Huso huso* specimens (approximately n. 400 3-4 kg specimens, or more on the basis of the animals size): 48000 €

TicinoPark - Direct treaty - 1 Molecular Genetics laboratory for the analysis of genetic diversity of broodstocks: 5000 €

GRAIA - Direct treaty - 1 Biologist, expert on sturgeons, for the assistance to the reintroduction phases 15000€

Consumables:

TicinoPark - Direct treaty - Fodder provision for *Huso huso* breeding: 10000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**

Name of the picture: synoptic view of how all the conditions listed in LIFE2015 Application Guide have been met - 4 of 4

Section	Condition to be met	Compliance with the dictated conditions
10	<i>(x) the proposal must include a preparatory phase, a re-introduction phase and a followup phase, as well as of an exit strategy, in case the translocation/reintroduction does not proceed according to plan</i>	According to the biology of the species (first reproduction age 15 - 17 years) the project can face only 1) the preparatory phase and 2) the reintroduction phase. In the preparatory phase (first year of activity), some genetic analysis will be carried out to evaluate and to choose the founders which will be reintroduced in Ticino River. The reintroduction phase will be represented by 3 reintroduction campaigns: it will be continued even after the end of the project. Ticino Park will detail the reintroduction phase and the follow up phase in the After-LIFE Plan, submitting it to EC, with a formal commitment made of concrete perspectives of continuity.
11	<i>(xi) It includes a commitment from the competent authority for Natura 2000 site designation to designate the core reproductive and feeding areas of the (re)introduced/translocated population as Natura 2000 sites before the end of the project (provided the (re)introduction/translocation has been successful);</i>	The <i>Huso huso</i> reintroduction area is almost completely within the territories of the SCI "IT2080002" - "Basso corso e sponde del Ticino" and in the SCI "IT2080014" - "Boschi Siro Negri e Moriano", and the remaining part will be included in the new SCI which the establishing will be promoted and expected in this Life project. This conditions can be considered met. The Ticino Park is a regional park, acting as a management public body of the Lombardy Region, that is the competent authority for the SCI designation and for the modifications of the formularies lists. Lombardy Region has already given a favorable opinion on the reintroduction of <i>Huso huso</i> as mentioned in the Form A8 attached to the proposal.
12	<i>(xii) it ensures that the competent authority for Natura 2000 site designation is a beneficiary of the project (coordinating or associated beneficiary). A specific action, implemented by the competent authority for the designation must be included in the proposal.</i>	



Name of the picture: synoptic view of how all the conditions listed in LIFE2015 Application Guide have been met - 3 of 4

Section	Condition to be met	Compliance with the dictated conditions
5	<i>(v) the removal of individuals from their present habitat for re-introduction is only considered if it does not endanger the wild source populations;</i>	The reintroduction material comes from intensive livestock farming and for this reason there are not any kind of risks for the wild populations.
6	<i>(vi) the actions target areas whose habitats and climate meet, the foreseeable future, the conditions necessary for the survival of a viable population of the species;</i>	See section 4 and 6
7	<i>(vii) a prior agreement between all parties involved (e.g. between the competent authority for the donor population and the manager of the area of reintroduction) has been concluded and documented;</i>	The founders nucleus will come from commercial intensive livestock farming: this agreement is not necessary since all the intervention will not affect wild populations.
8	<i>(viii) the actions target only areas where the attitude of the local population towards the planned reintroduction is favourable or where there is a reasonable expectation that local acceptance can be achieved during the project;</i>	The reintroduction action will be realized within a Protected Area, the Ticino Park one. The Ticino Park has been strongly active for decades on the information and on the awareness theme; particularly on the fish biodiversity conservation subject, thanks to the Life projects already done. The Park started and maintains intercourses of great active partnership, with interested local realities: the anglers and a continuative partnership with the Varese and Pavia FIPSAS (the last one involved in the project proposal too) and with the Cassolnovo anglers associations (involved in the project). The Life project proposal for the sturgeons safety included the activation of an anglers task-force, as well as the realization of events and products aimed at sensitizing, and the educational actions in the schools.
9	<i>(ix) either</i>  <i>- organisms are only reintroduced in areas where they previously occurred</i>  <i>or</i>  <i>- organisms are deliberately introduced/translocated outside their indigenous ranges</i>  <i>....</i>	The current project proposes a reintroduction (" <i>organisms are only reintroduced in areas where they previously occurred</i> "), according to that there is no need of further risk analysis.



Name of the picture: synoptic view of how all the conditions listed in LIFE2015 Application Guide have been met - 1 of 4

Section	Condition to be met	Compliance with the dictated conditions
1	<i>(i) the actions are justified, expected to yield quantitative conservation benefit based on a cost/benefit analysis, and have a high chance of success based on a thorough risk and feasibility analysis</i>	<p>First of all <i>Huso huso</i> is a species that accomplishes its biological life cycle in more than 15 years, it will not be possible to evaluate the result of the reintroduction based on the reproduction activity in nature and therefore the implant of a population (much less vital) within the project timing. Nevertheless, it is necessary to stress that the reintroduction procedure of the species in the Ticino River currently benefits of optimal fulfillment and successful conditions. The Ticino River today lends itself as source area of <i>Huso huso</i>, exactly how has already been proved with <i>Acipenser naccarii</i>. In fact <i>A. naccarii</i> has survived until nowadays thanks to suitable conditions available found, letting the species able to spawn in nature. This species of sturgeon is, biologically talking, the more connected to the freshwater environment and it is clear how the high nature and ecologic value of the Ticino River allowed to keep this source function. <b>It is essential for the reaffirmation of <i>Huso huso</i> in the River the restoring of the Po River connectivity expected within the 2018 (finalization of the fish passage at Isola Serafini Dam, See section 4).</b></p> <p>In a cost benefit analysis it is necessary to take into account the following points:</p> <ol style="list-style-type: none"> <li><b>1. the reintroduction does not need any kind of additional costs</b> and efforts to make the environment suitable to the species. The Ticino River, in its vocational tract, is already appropriate to host <i>H. huso</i> (environmental, chemical-physical, morphological, biological and ecological conditions); the river connectivity is already guaranteed, it is not necessary to deplete the water, to create suitable spawning substrates. The species lives in the East European areas with <i>Silurus glanis</i> and other species non-native in Italy, so the presence of those fish does not have a significant impact on the offspring (the most vulnerable life stage).</li> <li><b>2. The Ticino Park already has the availability of an hatchery and of a semi-natural Sturgeon extensive livestock farming structures</b> (following the fitness for survival model), this guarantees to have no costs for the structures realization and for the beginning of the production.</li> <li><b>3. The experience has already been achieved from the Park personnel since 2004 until nowadays</b> (with the first <i>A. naccarii</i> Life project), it offers the more promising benefits for the success of the <i>H. huso</i> future production. The Ticino Park is already autonomous with the artificial reproduction and the production of juvenile fish of <i>A. naccarii</i>.</li> <li><b>4. The scheduled reintroduction action of this project is strategically organized to make the Ticino Park autonomous in the <i>H. huso</i> livestock farming with the conservation and the re-introduction goals.</b> The initial purchasing cost to buy the founders, use for the re-introduction and for fill the closed-cycle livestock (or semi-closed), will be paid off considering the cost benefit from the production by itself from the Park. Note that the Park is determined to continue this activity even after the expire of the Life project (exactly how it has already done for more than 10 years with <i>A. naccarii</i>) and as demonstrated obtaining a financial support from Fondazione Cariplo in 2014 with the firsts specimens of <i>Huso huso</i> with whom started the livestock farming experimentation.</li> </ol>



Name of the picture: synoptic view of how all the conditions listed in LIFE2015 Application Guide have been met - 2 of 4

Section	Condition to be met	Compliance with the dictated conditions
2	<i>(ii) the reintroduced/translocated organisms are likely to be able to cope with new pathogen and stresses encountered at the destination site and the risk of reintroducing new pathogens in the destination area are minimised</i>	Concerning this statement we highlight two main aspects: <ol style="list-style-type: none"> <li>1. The specimens reintroduced will come from certified aquaculture farms: there will be released the proper animal health certificates. Hence the risk of reintroducing new pathogens and parasites in the destination area are minimized.</li> <li>2. The possibility that the reintroduced specimens of <i>Huso huso</i> would be killed by parasites infestation is negligible: it is indeed known that a similar event is possible if the specimens are stressed, suffering and hence more vulnerable. Following the best practices of reintroduction the specimens will be relayed in semi-natural basins for a minimum of 2-3 months, to get them used to the natural habitat in which they will live. The habitat of release will be as suitable as possible, taking into account the needs of the species: these measures provide not to stress the specimens, ensuring the "fitness for survival".</li> </ol>
3	<i>(iii) alternatives to reintroduction/translocation have been assessed as less effective or infeasible as a means to reach the specific and clearly defined conservation objectives of the reintroduction/translocation</i>	The species has been extinct in the Mediterranean Area: the re-introduction has to be necessarily the first step for its conservation. The start of a livestock of the species from a founders nucleus is the first and unique successful choice, considering the preconditions made.
4 and 6	<p><i>(iv) the actions target areas where the causes of extinction of the species have been Eliminated</i></p> <p><i>(vi) the actions target areas whose habitats and climate meet, the foreseeable future, the conditions necessary for the survival of a viable population of the species;</i></p>	<p>As mentioned in the study of feasibility for the reintroduction of the species, the main causes of <i>Huso huso</i> extinction in the '80 are twofold:</p> <ol style="list-style-type: none"> <li>1. <b>River connectivity loss:</b> since 1952 Po River is dammed at Isola Serafini dam (Monticelli d'Ongina); the fishes (among which <i>Huso huso</i>) can't then go upstream. The building of a fish passage (with the ongoing Life Project Con.Flu.Po) will restore the river connectivity, allowing <i>Huso huso</i> (and each fish species) to reach Ticino River and this part of its spawning area. This threaten will be solved in 2018.</li> <li>2. <b>Overfishing:</b> in the past century, tons of <i>Huso huso</i> were captured by the professional fishermen (especially in the Delta area); this activity has reduced the natural population until its extinction in the Adriatic Sea. Today this threaten is not present anymore, since the species (Mediterranean population) is "strictly protected" (Bern Convention, 19 September 1979 and subsequent updates, GU Serie Generale n.122 del 28-5-1998) as it is for <i>A. naccarii</i> and <i>A. sturio</i>. It is worth to note that professional fishing is disposed of in Ticino River and Po River main stretch; we consider hence negligible the risk of the bycatch.</li> </ol> <p>An additional threaten, not included in the ones responsible for <i>Huso huso</i> extinction in the past, is represented by the climate exchange, which could lead to a variation of temperature and dissolved oxygen). The available data (chemical, physical, discharge) does not show any significant trend nor variation, if related to the biological needs of the species (well defined in the feasibility study). The annual range of temperatures of Ticino River lies totally within <i>Huso huso</i> temperature tolerance range and the latitude of Po River basin lies completely within the species latitudinal distribution worldwide (Caspian Sea and Black Sea). There is no reasons to state that climate change could affect the outcome of the reintroduction.</p>

**C8's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Invoices of the Huso huso specimens aquired	10/2020
Animal health/genetical certificate for the Huso huso specimens aquired	10/2020

**C8's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Not less than 3.900 juveniles (0+) and 300 young specimens of H. huso reintroduced in SCI IT2080002	10/2020



## **D. Monitoring of the impact of the project actions (obligatory)**

**ACTION D.1:** Monitoring the efficacy of actions C1 (faunistic aspects) and C6

### **Description and methods employed (what, how, where, when and why):**

**What** - This action aims to assess the impact of interventions realized with Actions C1 and C6 on the fauna target species.

The "Regional monitoring plan for terrestrial species of community interest (Ann. II of Habitat Directive and Annex I of Birds Directive)" was realized in 2012 by FLA on behalf of Regione Lombardia and through the presently running LIFE "Gestire", coordinated by Regione Lombardia, FLA is updating the plan with the missing species of community interest (e.g. invertebrates, fishes).

**How** - The methodologies indicated by this regional monitoring plan will be applied during the present project.

In particular, at the start of the projects will be done all the administrative activities for identifying who will realize these activities.

The monitored areas will be all the sites of interventions inside the properties of the Park called "I Geraci" at Motta Visconti (Action C1) and at Bernate Ticino (Action C6).

Target species will be species of community interest (Ann. I BD) or listed in ERLB or as SPEC: *Casmerodius albus*, *Egretta garzetta*, *Ardea purpurea*, *Ixobrychus minutus*, *Nycticorax nycticorax*, *Circus aeruginosus*, *Gallinago gallinago*, *Alcedo atthis*, *Picoides minor*, *Picus viridis*, *Poecile palustris*, *Anthus pratensis*, *Lycaena dispar*.

The standardized monitoring methods (Bibby et al. 2002) will be the following ones:

- breeding birds: standard linear transects in forest habitats, mapping of breeding birds in other habitats (at least one survey every two weeks, from February to July, all along the 4 years of the project);
- migratory birds: standard linear transects in forest habitats, periodical census (at least one survey every 2 weeks, from March to May and from August to November, all along the 4 years of the project) of the individuals of all the present species in other habitats, ringing in wetlands;
- wintering birds: standard linear transects in forest habitats, periodical census (at least one survey every 2 weeks, from December to February, all along the 4 years of the project) of the individuals of all the present species in other habitats;
- butterflies: census of individuals (through individual photos), once every two weeks, from March to October, all along the 4 years of the project.

With regard to bird ringing, it will be activated in the area "I Geraci" to monitor species living in reed beds and dense bushes, such as *Luscinia svecica*, *Porzana parva*, *Porzana porzana*, that usually are difficult to detect in ordinary field surveys. In the site Geraci will be realized a strategic ringing station, aimed at compare and evaluate, through the analysis of data collected, the effects on bird migration induced by the environmental improvement and restoration activities (action C1). A ringing period of two years will be conducted at the end of the interventions, involving the whole year, with regular sessions of 1 day carried out every ten days. Longer sessions are foreseen during migration (3 days sessions), nesting and wintering periods (2 days). Data collected at Geraci ringing station will be comparable with data from another ringing station localized near Vizzola Ticino and operating since 2005 with the aim of monitoring the migration of birds in the northern part of the Park. The latter ringing station is placed in a patchwork of highly different environments (dry meadows,



bushes, mature woods, wetlands, riverbed), with high biodiversity: in ten years of ringing more than 15.000 birds have been captured belonging to 101 different species, 9 of which included in Annex I of Birds Directive.

The most relevant type of data achieved through this action will be:

- Number of individuals of bird species that are migratory, breeding or wintering, of community interest (Ann. I BD) or of interest at continental scale (ERLB or SPEC);
- Number of individuals of butterflies of community interest (Ann. II and IV HD).

Where - The monitoring will take place in the sites of interventions realized with Actions C1 and C6.

When - The action will take place during the project. Field surveys will be realized all along the project; ringing activities only in the last two years.

Why - The Action is of fundamental importance for evaluating the efficacy of the management interventions of Actions C1 and C6, in particular in favour of birds and butterflies of conservation interest.

### **Bibliography**

Bibby C. J. et al. 2002. Bird Census Techniques. Academic Press, London.

### ***Beneficiary responsible for implementation:***

FLA

The Action will be mainly realized by FLA, responsible for the standardized monitoring. TicinoPark will be responsible of birds ringing.

### ***Assumptions related to major costs of the action:***

With regard to the personnel, the costs are the ones of the contracts of each person.

Other costs are evaluated on the basis of previous experiences for realizing similar interventions.

#### **Personnel:**

FLA: Additional staff - term-contract worker / Senior Environmental graduate (Biologist, Naturalist or other similar degree), GIS expert - 200 Daily rate x 150 N. person-days = 30.000 €

FLA: Permanent staff - "Inhouse" Personnel / Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 280 N. person-days = 70.000 €

#### **External assistance:**

TicinoPark - public tender -1 Ornithologist or Naturalists' agency for the implementation of the birds ringing surveys: 60.000 €

FLA - public tender - 1 Lepidopterologist for the execution of the butterflies surveys: 30.000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**



**D1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

### **ACTION D.2:** Monitoring the efficacy of action C2

#### **Description and methods employed (what, how, where, when and why):**

**What** - The target species of the monitoring activities will be bird species of community interest or of conservation interest at European scale (ERLB and/or SPEC):

- *Aythya nyroca* (Annex I, BD): the species nests with 2-5 pairs (2014-2015) in the basins of constructed wetlands for wastewater treatment of Arno stream, one of the few known breeding sites in Italy. It then uses the close by settling basins as a site for post-breeding, as stop over site during migration and as wintering site;
- *Aythya ferina* (ERLB, VU; SPEC 2): the species nests with 3-6 pairs (2014-2015) in the basins of constructed wetlands for wastewater treatment of Arno stream, one of the few known breeding sites in Italy. It then uses the close by settling basins as a site for post-breeding, as stop over site during migration and as wintering site;
- *Aythya fuligula* (SPEC 2): the species nests with 1-2 pairs (2014-2015) in the basins of constructed wetlands for wastewater treatment of Arno stream, one of the few known breeding sites in Italy. It then uses the close by settling basins as a site for post-breeding, as stop over site during migration and as wintering site;
- *Himantopus himantopus* (Annex I, BD): the species nests with 5-10 pairs (2014-2015) in the basins of constructed wetlands for wastewater treatment of Arno stream;
- *Fulica atra atra* (Mediterranean and Black Sea populations) (ERLB, NT): the species nests with about 20 pairs (2015) in the basins of constructed wetlands for wastewater treatment of Arno stream and in the close by settling basins;
- Species of community interest for which the new habitat is suitable for foraging during migration or winter season: *Casmerodius albus*, *Egretta garzetta*, *Nycticorax nycticorax*, *Ardea purpurea*, *Circus aeruginosus*, *Milvus migrans*, *Porzana porzana*, *Porzana parva*, *Luscinia svecica*;
- Other species of conservation interest at European scale (ERLB e SPEC) for which the new habitat is suitable for foraging during migration or winter season: *Gallinago gallinago*, *Anas strepera*, *Anas querquedula*, *Actitis hypoleucos*, *Tringa glareola*, *Anthus pratensis*.

**How** - At the start of the project the personnel involved will be encharged according to their specific rules.

The monitoring methods that will be applied are the following ones (Bibby et al. 2002):

- breeding birds: mapping of breeding pairs (at least 10 surveys from March to July for all the duration of the project);
- migratory birds: periodical census (at least one census every two week from March to May and from August to November for all the duration of the project) of all the present individuals;
- wintering birds: periodical census (at least one census every two week from December to February for all the duration of the project) of all the present individuals.



The most relevant data achieved through this action will be:

- number of breeding pairs of bird species of conservation interest at European scale (Ann. I BD, ERBL, SPEC);
- number of individuals of migratory or wintering birds of conservation interest at European scale (Ann. I BD, ERBL, SPEC).

Where - The action will take place at the site of the intervention realized with Action C2, at the settling basins of Arno Stream.

When - The Action will be done between 2017 and 2020 and will be completed at november 2020.

Why - The Action is of great importance for evaluating the efficacy of the interventions of Action C2, in particular in favour of birds of conservation interest.

### **Bibliography**

Bibby C. J. et al. 2002. Bird Census Techniques. Academic Press, London.

BirdLife International 2004. Birds in Europe. BirdLife International, Cambridge.

BirdLife International 2015. European Red List of Birds. European Commission. & BirdLife International

### ***Beneficiary responsible for implementation:***

FLA

Not applicable.

### ***Assumptions related to major costs of the action:***

The costs are evaluated on the basis of previous experiences for realizing similar monitoring activities.

### **Personnel:**

FLA: Additional staff - term-contract worker / Senior Environmental graduate (Biologist, Naturalist or other similar degree), GIS expert - 200 Daily rate x 50 N. person-days = 10000 €

FLA: Permanent staff - "Inhouse" Personnel / Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 120 N. person-days = 30000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**

**D2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

### **ACTION D.3:** Monitoring the efficacy of action C3

#### ***Description and methods employed (what, how, where, when and why):***

**What** - The target species are fish (or lamprey) species (*Lethenteron zanandreal*, *Cottus gobio*, *Sabanejewia larvata*) and amphibian species (*Rana latastei*, *Rana dalmatina*, *Hyla arborea*). The objective of the Action D.3 is to verify the effectiveness of the Action C.3.

**How** - The monitoring action will begin before the starting of the Action C.3 activities, in order to evaluate the main "ante-operam" indicators. An initial monitoring evaluation will be useful to define and to standardize a sampling protocol (which will be available even during the following stages of the monitoring). The use of a unique sampling protocol minimizes the effects of variables and at the same time increases the efficiency and the significance of the monitoring activity.

The scheduled activities are electrofishing (in order to examine the status of the fish community) and the determination of:

- the physical and chemical status of water;
- the environmental status of the sites;
- the status of riparian vegetation;
- the availability of macrobenthos.

The most relevant type of data achieved through this action refer not only to fishfauna but also to their aquatic environment, in order to evaluate their suitability for the target species. Indicators of environmental status: the main chemical and physical parameters of water; the availability of macrobenthos. the status of environment (IFF).

Indicators of the status of target species populations: number of specimens; health conditions (by visual census); morphometric and biometric data (total length and total weigh); life stages.

Indicators of fish community status: number of identified species; number (at least abundance) of specimens of each identified species; list of the identified species; number (and %) of allochthonous species; number (and %) of invasive species; number (and %) of native species (IUCN community interest and priority species); number (and %) of endemic or sub-endemic species; number (and %) of high environmental valence species;

Indicators of reproductive activity (target fish species): number of spawning beds; dimension and localization of the spawning beds (mapping).

Indicators of amphibian species status: list of existing species; number of larvae per species; number of adults per species; biometric data (total length and total weigh,



whereas possible).

Indicators of ponds status: main chemical and physical parameters of water; morphometry of the ponds.

Where - The action will take place in the same 4 sites restored by Action C3:

- Maresco di Villa Reale; Roggia Bredna Stream and its tributary (a restored artificial spring): moreover the action will focus on the ex novo ponds created to become habitat for amphibians.
- Ramo Morto, in Turbigo (MI), the whole watercourse stretch.
- Ramo Delizia in Pontevecchio di Magenta (MI), the whole watercourse stretch.
- Canale Gravellone Vecchio in Travacò Siccomario (PV), the medium-low watercourse stretch.

When - The activities will start during the first trimester of 2017 and it will continue until the end of the project. There will be undertaken an ante-operam monitoring campaign and 2 post-operam monitoring campaigns for each of the 4 sites mentioned. The sites will be monitored during the spawning periods of each species in order to identify and count the spawning beds. A standardized survey will be conducted in spring and late-spring to identify and count *R. latastei*, *R. dalmatina*, *H. arborea* larval and adult specimens.

Why - D.3 Action is necessary to verify the effectiveness of C.3 Action (Restoring lateral water courses of Ticino River).

### **Beneficiary responsible for implementation:**

GRAIA

Not applicable.

### **Assumptions related to major costs of the action:**

The costs refer to the personnel and to the expert involved on the monitoring activities, and they are based on past experiences achieved from GRAIA.

#### Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - 425 Daily rate x 24 N. person-days = 10200 €

GRAIA: Permanent staff - CCNL Commercio Dipendente III livello / Environmental graduate, expert on Hydrobiology and biomonitoring - 120 Daily rate x 90 N. person-days = 10800 €

GRAIA: Permanent staff - CCNL Commercio Dipendente III livello / Senior Environmental graduate, expert on Aquatic Biodiversity Conservation and on the management of Natura 2000 sites - 180 Daily rate x 65 N. person-days = 11700 €

GRAIA: Permanent staff - CCNL Commercio Dipendente II livello / Senior Environmental graduate, expert on Biodiversity Conservation and Environmental Education and dissemination - 200 Daily rate x 36 N. person-



days = 7200 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**

**D3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

**ACTION D.4:** Monitoring the efficacy of action C4

### **Description and methods employed (what, how, where, when and why):**

**What** - Monitoring will have the following target species:

- *Ciconia ciconia* (Ann. I BD) - present during breeding season and migration;
- *Casmerodius albus* (Ann. I BD) - present in winter and during migration;
- *Egretta garzetta* (Ann. I BD) - present in winter and during migration and breeding season;
- *Circus cyaneus* (Ann. I BD) - present in winter and during migration;
- *Lullula arborea* (Ann. I BD) - present in winter and during migration;
- *Lycaena dispar* (Ann. I BD) - resident species.

Other species of conservation interest at continental scale (ERLB e SPEC) that regularly use these habitats during migration or in winter are: *Gallinago gallinago*, *Vanellus vanellus*, *Numenius arquata*, *Athene noctua*, *Alauda arvensis*, *Turdus iliacus*, *Anthus pratensis*, *Carduelis cannabina*, *Fringilla montifringilla*, *Emberiza calandra* (BirdLife International 2004, 2015, Casale et al. 2014, Casale 2015).

**How** - At the start of the project FLA will identify an expert in butterfly monitoring.

The monitoring methods that will be applied are the following ones (Bibby et al. 2002):

- breeding birds: mapping of breeding pairs (at least 10 surveys from March to July for all the duration of the project);
- migratory birds: periodical census (at least one census every two week from March to May and from August to November for all the duration of the project) of all the present individuals;
- wintering birds: periodical census (at least one census every two week from December to February for all the duration of the project) of all the present individuals.

The most relevant data achieved through this action will include:

- number of breeding pairs of bird species of conservation interest at European scale (Ann. I BD, ERLB, SPEC);
- number of individuals of migratory or wintering birds of conservation interest at European scale (Ann. I BD, ERLB, SPEC).

**Where** - This action will take place in the middle - southern part of Ticino Regional Park, around and inside the lowland wet meadows involved in Action C4, of which the precise location will be determined at the end during A3 and C4 Actions.

**When** - The Action will be done between 2017 and 2020 and will be completed at november

2020.

Why - The Action is of great importance for evaluating the efficacy of the interventions of Action C4, in particular in favour of birds and butterflies of conservation interest at European scale (Ann. I BD, Ann. II HD, ERLB, SPEC).

### **Bibliography**

Bibby C. J. et al. 2002. Bird Census Techniques. Academic Press, London.

BirdLife International 2004. Birds in Europe. BirdLife International, Cambridge.

BirdLife International 2015. European Red List of Birds. European Commission & BirdLife International

Casale F., 2015. Atlante degli Uccelli del Parco lombardo della Valle del Ticino. Parco Ticino e Fondazione Lombardia per l'Ambiente.

Casale F., Bellani A., Sala D., 2014. Il patrimonio faunistico del Parco del Ticino. Parco Ticino e Fondazione Lombardia Ambiente.

### ***Beneficiary responsible for implementation:***

FLA

Not applicable.

### ***Assumptions related to major costs of the action:***

The costs are evaluated on the basis of previous experiences for realizing similar monitoring activities.

#### Personnel:

FLA: Additional staff - term-contract worker / Senior Environmental graduate (Biologist, Naturalist or other similar degree), GIS expert - 200 Daily rate x 25 N. person-days = 5000 €

FLA: Permanent staff - "Inhouse" Personnel / Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 140 N. person-days = 35000 €

#### External assistance:

FLA - public tender - 1 Lepidopterologist for the execution of the butterflies surveys: 10.000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**



**D4's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D4's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

**ACTION D.5:** Monitoring the efficacy of actions C1 (vegetational and floristic aspects) and C5

### ***Description and methods employed (what, how, where, when and why):***

**What** - The objective of the monitoring in this case is to verify the success of the creation and/or restoration of habitat of community interest realized with actions C1 and C5:

- habitat 91F0 - Riparian mixed forest of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia* along the great rivers (*Ulmion minoris*);

- 91E0\* - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*).

**How** - At the start of the project TicinoPark will identify the expert botanist who will have in charge the vegetational and floristic surveys.

The floristic census will be performed through campaigns concentrated in spring-summer and repeated during the other seasons of the year.

During the good season it will be carried out the vegetational survey, about the structural and phytosociological aspects, to define vegetation and forests assets. The vegetational phytosociologic survey will be performed according to the methods described in Giacanelli (2005) and Biondi e Blasi (2004).

To assess the status of the habitats, the monitoring activity will have to derive information functional to define:

- If the area covered by the target habitats is stable or not;
- If the specific structure and functions necessary for the long-term maintenance of the target habitats are present and if they have the chance to be present in the future.

In order to answer to these questions, the following indicative list of types of data will be achieved:

#### 1. indicators of complexity and organization of the territorial mosaic:

- List of habitats on the site;
- Overall extension of the target habitat (Wilson, 1988; Saunders et al., 1991);
- Size of the largest portion ("tessera") of the habitat;
- Degree of aggregation of habitats (Min. Amb., 2008);
- Perimeter / surface of the habitat ratio;
- Average minimum distances between the portions of habitat (Min. Amb., 2008).

#### 2. Indicators floristic and vegetational asset:

- List of plant species;



- Presence of plant species of high conservation and biogeographic value;
- Presence of non-native plant species;
- Phytosociologic analysis .

### 3. Forestry asset:

- Structure of forest habitats;
- Vertical structure (Corona et al., 2001);
- Distribution of size classes in the habitat;
- Foliage coverage;
- Efficiency of the regeneration processes and state of vitality of typical species;
- Efficiency of the processes of decomposition of organic matter.

Where - This action will take place at the sites of interventions realized with Actions C1, C5, at Motta Visconti and Bernate Ticino.

When - The Action will be done between 2017 and 2020 and will be completed at november 2020. The monitoring will include three campaigns: one completed before the realization of the interventions foreseen with actions C1 and C5, and two realized after the interventions, for two consecutive years.

Why - The Action is of great importance for evaluating the efficacy of forestry interventions of Action C1 and C5, in particular in favor of the habitat of community interest 91F0 and 91E0\* priority. It will be useful to guide executors in adjustments and interventions potentially eventually necessary to optimize the results and enhance the efficacy of actions C1 and C5.

### Bibliography:

Ministry for the Environment, Land and Sea-General Directorate for the Protection of Nature, 2008. Manual for the management of Natura 2000 sites.

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it 's directly necessary to re-direct the course of Actions C1 and C5, during the project's lifetime, as both the actions forecast possible adjustments to improve the success of the forestry interventions, that could be indicated by the results of monitoring.**

### ***Beneficiary responsible for implementation:***

TicinoPark

Not applicable.

### ***Assumptions related to major costs of the action:***

Personnel:

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 3 N. person-days = 600 €

TicinoPark: Permanent staff - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 56 N. person-days = 12040 €

TicinoPark: Permanent staff - D2- SPECIALISTA TECNICO / Head of the Natura 2000 Network Park Office - 160 Daily rate x 6 N. person-days = 960 €

TicinoPark: Permanent staff - C5 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 140 Daily rate x 10 N. person-days = 1400 €

External assistance:

TicinoPark - public tender -1 Senior Botanist, expert on Habitats, for the floristic and phytosociological surveys: 20.000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**



**D5's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D5's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

### **ACTION D.6:** Monitoring the efficacy of action C7

#### **Description and methods employed (what, how, where, when and why):**

**What** - The target species is *A. naccarii* (CRitically endangered, HAB-92 All.2).

The goal of D.6 Action is to verify the success of C.7. Action.

**How** - The monitoring action will begin before the starting of C.7 Action activities, in order to evaluate the main "ante-operam" indicators. A first monitoring evaluation will be useful to define and to standardize a sampling protocol (which will be available even in the following steps of monitoring). The use of a unique sampling protocol minimizes the effects of variables and at the same time increases the efficiency and the significance of the monitoring activity. Some seasonal monitoring campaigns will be undertaken for the 3 years project period: the scheduled activities are electrofishing, nightly direct observations and diving visual census sessions (for any action it will be available a boat).

It's important to highlight that GRAIA has worked for more than 20 years in the environmental monitoring field. The project responsible has conducted some ichthyologic researches in the whole stretch of Ticino River since 1995. The experience of the teamwork involved in the project grants efficiency and effectiveness in reaching the objectives mentioned.

The planning of an "ante-operam" monitoring campaign and the following step by step calibration of the monitoring activities, ensure high reliability of the data collected.

Moreover, GRAIA will cooperate (as it happened before) with some volunteers expert in Ticino River navigation and fishing.

There will be undertaken a minimum of 4 electrofishing sessions per year and 4 nightly direct observations or diving visual census sessions per year, for a minimum of 24 monitoring sessions during the project period. the types of data achieved with this action include:

1. indicators of *A. naccarii* populations status: number of specimens; health conditions (by visual census); morphometric and biometric data (total length and total weigh); life stages.
2. indicators of fish community status: number of identified species; number (at least abundance) of specimens of each identified species; list of the identified species; number (and %) of allochthonous species; number (and %) of invasive species; number (and %) of native species (IUCN community interest and priority species); number (and %) of endemic or sub-endemic species; number (and %) of high environmental valence species;
3. indicators of *Acipenser naccarii* reproductive activity: number of spawning beds; dimension and localization of the spawning beds (mapping).
4. ethological indicators (referring to *A. naccarii* e *S. glanis*): mapping every single specimen monitored by visual census; defining behavior, habitat occupied (position related to the river section, depth, illumination, presence of refuges, presence of other species etc...).

**Where** - The action will be focused on the 9 km river stretch flowing from Ponte Coperto di Pavia to the Ticino River outlet in the Po River.

**When** - The activities will begin in the first trimester of 2017 and it will continue until the end of the project.



Why - D.6 Action is necessary to verify the effectiveness of C.7 Action.

This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it 's directly necessary to re-direct the course of Action C7, during the project's lifetime, indicating adjustments to improve the success of the active defence of *A. naccarii* and its spawning site: those adjustments could include indications of places and timing of patrols, better locations for video-traps and so on.

***Beneficiary responsible for implementation:***

GRAIA

Not applicable.

***Assumptions related to major costs of the action:***

The costs refer to the personnel and to the expert involved on the monitoring activities, and they are based on past experiences achieved from GRAIA.

Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - GRAIA Project leader and coordinator for technical and financial aspects Chief Executive Officer, part-time employee / senior ichth - 425 Daily rate x 20 N. person-days = 8500 €

GRAIA: Permanent staff - CCNL Commercio Dipendente III livello / Senior Environmental graduate, expert on Aquatic Biodiversity Conservation and on the management of Natura 2000 sites - 180 Daily rate x 64 N. person-days = 11520 €

External assistance:

GRAIA - Direct treaty - 1 Naturalistic diver who makes sturgeons visual census underwater (at least 20 campaigns of census: 10.000 €

**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**

**D6's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D6's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

### **ACTION D.7:** Monitoring the efficacy of action C8

#### ***Description and methods employed (what, how, where, when and why):***

**What** - The target species is *Huso huso*: the specimens present in the Cassolnovo seminatural raceways and the specimens released in the natural environment through Action C8. The objective of the action is to assess the efficiency of the breeding and to assess the fate and movements of sturgeons released in the river until their descent towards the sea and verify any critical aspect in the release mode so that it will be possible to re-direct the ongoing Action C8. The policy for this reintroduction - exactly as the Park does since 10 years for *Acipenser naccarii* - is the "fitness for survival", and the action will monitor this policy for *Huso*.

**How** - The monitoring will be performed in two ways:

1. Passive tagging. All the specimens purchased by TicinoPark will be tagged at their arrival to the Park facilities with PITtags (only the 1-2 years old ones, not certainly the eggs or the fries, because of their dimensions), so that to assign an identification code to each specimen, also measured in weight and length. This marking code will allow to identify the individual and monitoring its growth in the tanks before the release in nature. This tagging will also permit to recognize specimens eventually captured in the periodic electrofishing campaigns foreseen during the project with other actions (eg. Action C4), and to register the fish position in the river and its wellness. Also specimens eventually purchased as fries or embryonated eggs, grown in captivity till 1-2 years old size will be tagged, for the same reasons.
2. Biotelemetry. A sub-sample of about 60 sturgeons (depending on the costs of the transmitters achieved during the deals with the suppliers) will be tagged with transmitters for the consequent biotelemetry monitoring after their release in the river. Approximately we can foresee a release of 20 individuals tagged with transmitters for each year of reintroduction. Biotelemetry will be performed daily during the first month of the release, along the river reach colonized from the specimens through portable hydrophones managed from boat; than this monitoring will gradually become rarefied, also in dependence of the behavior of the sturgeons. Biotelemetry will also be performed through fixed hydrophones positioned in strategic location, such as Ponte Coperto in Pavia, where there are favourable conditions to the secure fixing of the equipment (hydrophone and data logger) and for the recording of all passages of sturgeons in the entire section of the river bed. Approximately we can now foresee one or two teams moving with portable equipment, and one or two places where to locate the fixed equipment for registering the passages of sturgeons towards the sea or towards the upper course of the river.

Regarding this activity, it should be noted that the instruments of tagging fishes (both PITtags and Transmitters) will be bought also in order to be compatible to the ones concurrently used within another Life Project (Con.Flu.Po, code: Life11nat/it/188); in this way it would be possible to achieve the data of movements of sturgeons also at Isola Serafini Dam, positioned along the Po River about 50 km downstream the Ticino outlet, where the new fish passage to be completed by 2018 will host a fixed receiver for transmitter implanted in the sturgeons. Actually the possibility that a sturgeon could downswim through the fish passage is remote, because it's more probable that they will pass the dam during the floods of the river, but not impossible. As well as it's possible but not really probable that they could be intercepted from the receivers positioned at the delta of the Po River, within the same project, for the huge extension of the Po delta. In any case, GRAIA and also TicinoPark are beneficiaries associated to Regione Lombardia, coordinator beneficiary of Con.Flu.Po; this fact ensures the availability of data at real time.

**Where** - The action will be performed in the middle-lower course of Ticino River.

**When** - The action will be carried out during the project from Jan-17 till the end of the project.



Why - This action is necessary to verify the success of C.8 Action, to deepen the understanding of the behavior of this species absent from Italian basins for a too long time; the data and information achieved will be useful to redirect the Action C.8 of reintroduction of the species in order to optimize and standardize the methods and ways for achieving the best results from reintroduction.

**This is a "concrete conservation" action, therefore it counts towards the 25% concrete conservation actions requirement, because it 's directly necessary to re-direct the course of Action C.8, during the project's lifetime, indicating adjustments to improve the success of the reintroduction of *Huso huso*.**

### ***Beneficiary responsible for implementation:***

TicinoPark

TicinoPark and GRAIA share responsibility of this action.

### ***Assumptions related to major costs of the action:***

#### Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - GRAIA Project leader and coordinator for technical and financial aspects Chief Executive Officer, part-time employee / senior ichth - 425 Daily rate x 21 N. person-days = 8925 €

GRAIA: Permanent staff - CCNL Commercio Dipendente III livello / Environmental graduate, expert on Hydrobiology and biomonitoring - 120 Daily rate x 100 N. person-days = 12000 €

GRAIA: Permanent staff - CCNL Commercio Dipendente II livello / Senior Environmental graduate, expert on Biodiversity Conservation and Environmental Education and dissemination - 200 Daily rate x 45 N. person-days = 9000 €

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 24 N. person-days = 4800 €

TicinoPark: Permanent staff - C2 - ISTRUTTORE AMMINISTRATIVO CONTABILE / Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 14 N. person-days = 1820 €

TicinoPark: Permanent staff - C2- ISTRUTTORE TECNICO / Fauna expert - 140 Daily rate x 60 N. person-days = 8400 €

#### External assistance:

GRAIA - Direct treaty - 1 Biologist, expert on sturgeons and biotelemetry, for the execution of the biotelemetry surveys - 45.000 €

#### Equipment:

TicinoPark - Direct treaty - Acoustic receivers, data loggers and hydrophones for biotelemetry (approximately 2 fixed systems and 2 portables systems): 15.000 €

#### Consumables:

TicinoPark - Direct treaty - Acoustic Transmitter for biotelemetry (approximately 60 units): 24000 €



**All travel costs incurred during the action will be covered with own sources by the project beneficiaries.**

**D7's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring progress and final reports	10/2020

**D7's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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#### **D. Monitoring of the impact of the project actions (obligatory)**

**ACTION D.8:** Evaluation of the socio-economic impact of conservation actions

##### ***Description and methods employed (what, how, where, when and why):***

**What** - The objective is to verify the effects of C actions on the local socio-economic sector.

For the economic aspects we believe that the positive economic impact of the project will be evaluated considering:

**- the increasing of visitors to the Park in sites that will be involved in Actions of the project, and consequent positive economic impacts on local activities (restaurants, shops, etc):**

**- the value of the hay produced with Action C.4.**

**How** - The monitoring action will be performed in two ways:

1. by verifying the opinions and the behaviours of the people involved in the project as target audience or as stakeholders;
2. by interviewing the visitors of "I Geraci" Visitor Center on the quality of the project actions (we expect to submit/receive a minimum of 1.000 questionnaires). The expected target audience will be represented by:

· Students involved on the educational programme (Sub-action E1.3: about 1.000 young students, approximately 8-12 years old). The educator will submit the questionnaires at the end of the educational programme (Sub-action E1.3);

· the farmers involved in A3, C4 and E2 actions (approximately 200 units); everyone will be asked to complete the questionnaire on project approval and on his will to perpetrate the best practices, even in the after-Life project. There will be taken into account even possible doubts, difficulties, disagreements shown. Every farmer involved will be asked to elaborate a balance with his expectations (even the economic ones) and the goals achieved. This activity will be performed in the meetings well-defined in A3, C4 and E2 (sub-action E2.5) actions.

3. By recording the number of the visitors of the website; and by analyzing the comments left on it;

Data will be elaborated and interpreted even by comparing it with the general trends on local socio-economic sector: so it will be possible to draw conclusions on the project impacts and perspectives.

**Where** - The action will be undertaken within the whole area of the project and via internet too.

**When** - The action will be undertaken in the first trimester of 2019 and it will last since the end of the project.

**Why** - The action is assumed to be necessary in order to evaluate the transposition and the integration of the project's contents in the local socio-economic sector.

##### ***Beneficiary responsible for implementation:***

TicinoPark

The action will be undertaken by Parco del Ticino, with the support of GRAIA.

**Assumptions related to major costs of the action:**

Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - 425 Daily rate x 12 N. person-days = 5100 €

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior Environmental Engineer, Chief Designer Officer - 425 Daily rate x 14 N. person-days = 5950 €

GRAIA: Permanent staff - CCNL Commercio Dipendente II livello / Senior Environmental graduate, expert on Biodiversity Conservation and Environmental Education and dissemination - 200 Daily rate x 20 N. person-days = 4000 €

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 20 N. person-days = 4000 €

TicinoPark: Permanent staff - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 20 N. person-days = 4300 €

TicinoPark: Permanent staff - C4 - ISTRUTTORE TECNICO / Head of Agriculture Office - 140 Daily rate x 25 N. person-days = 3500 €

TicinoPark: Permanent staff - D2- SPECIALISTA TECNICO / Head of the Natura 2000 Network Park Office - 160 Daily rate x 20 N. person-days = 3200 €

External assistance:

TicinoPark - Direct treaty - 1 Economic consultant for the assessment of the economic impact of the project: 5.000 €



**D8's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring report	10/2020
Monitoring report	06/2017

**D8's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **D. Monitoring of the impact of the project actions (obligatory)**

**ACTION D.9:** Evaluation of the actions impact on ecosystem services

### ***Description and methods employed (what, how, where, when and why):***

**What** - The objective is to verify the effects of C actions on the ecosystem services.

**How** - This action is focused on the analysis and interpretation of the data resulting from C actions accomplishment. The information will be obtained from each working group and from each report project and it will be enriched and completed by information received

1. from the involved stakeholders;
2. from scientific literature;
3. from national statistical authorities (e.g. ISTAT).

The action will entail a detailed reading of scientific literature. Some of the ecological services which could analyze are:

- **Carbon sequestration** - The carbon sequestration service will be quantified as stored carbon and as annual carbon sequestration; it will be hence calculated the effects related to:

1. the creation of wetlands (C1, C2, C3 and C6 actions);
2. the winter growing of plants, granted by the creation of a lowland wet meadows ecosystem ("marcite", C4 Action);
3. the restoration and the partial reforestation of forests (C1, C5, C6 Actions).

- **Forage** - The value of this ecological service is formally equivalent to the average amounting cost of the forage produced. To determine the impact of C4 Action the farmers involved on the project could be interviewed.

- **Protection against hydrogeological instability (flooding)** - The analysis on this ecological service performed is based on evaluating the contribute of riparian vegetation to the drainage of river flood/outflows. To distinguish this contribute there will be evaluated two different scenarios:

1. a simulation with the current vegetation;
2. a simulation without any vegetation (bare ground).

The simulation will be applied to assess the impact of C1, C2, C3 and C6 actions (creation of wetlands) and C1, C5, C6 actions (forestry restoration).

- **Inspiration for culture, arts, educational and spiritual values** - Identification of the significant elements in term of history, nature, cultural identity. The farmers involved on C4 Action could be interviewed about the importance of historical lowland wet meadows that are flooded in winter ("marcite"), for their landscape, cultural and historical importance.

**Referring to the specific topic of the Project (creation of wetlands, creation of lowland wet meadows ecosystems, restoration and creation of forests), it will be done an extended literature**



review to find out data on carbon storage as volume per unit area. Such data will be applied to estimate the carbon storage in this specific case, depending upon wetland type and size, vegetation, the depth of wetland soils, groundwater and nutrient levels, pH, and other factors. In this respect it will be of crucial importance the consultation with the Life+ MGN (LIFE11 ENV/IT/000168) "Making public Goods provision the core business of Natura 2000" working team, which has shown its interest to collaborate (the documentation is attached on the proposal). They'll be able to indicate measures and ways for estimating ecological services, also referring to the deliverables of the Life project MGN.

Where - The action will take place within the project area.

When - The activity will be performed in the last year of project.

Why - The action is assumed to be necessary in order to evaluate the effects of C actions on the ecological services.

### **Beneficiary responsible for implementation:**

TicinoPark

The action will be undertaken by Parco del Ticino, with the support of GRAIA.

### **Assumptions related to major costs of the action:**

#### Personnel:

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior ichthyologist - 425 Daily rate x 20 N. person-days = 8500 €

GRAIA: Permanent staff - Chief Executive Officer, part-time employee / senior Environmental Engineer, Chief Designer Officer - 425 Daily rate x 12 N. person-days = 5100 €

GRAIA: Permanent staff - CCNL Commercio Dipendente II livello / Senior Environmental graduate, expert on Biodiversity Conservation and Environmental Education and dissemination - 200 Daily rate x 32 N. person-days = 6400 €

#### External assistance:

D.9 - TicinoPark - public tender - 1 Consultant expert on the assessment of the ecosystem services: 20.000 €

**D9's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Monitoring report	10/2020

**D9's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **E. Public awareness and dissemination of results (obligatory)**

### **ACTION E.1:** Dissemination and awareness raising activities

#### ***Description and methods employed (what, how, where, when and why):***

**What** - The aim of this Action is to disseminate the results of the project and raise awareness on the project topics in local population and all the people (visitors of the Park Centers, website visitors,...) at all ages, in particular young students.

**How** - The Action will be structured in three sub-Actions, each one with specific targets, locations and timing. **All the deliverables produced will show LIFE and Natura2000 Logos and, for the more structured products (website and booklet), with description of the mission of Life Programme and Natura2000 Network. All paper products will be printed with recycled paper (or FSC-certified papers) and EuPia ink.**

**Sub-action E1.1 - Dissemination of the project.** The target of this sub-Action are all the people achieved by different ways of dissemination:

- **Notice boards:** Panels describing the project will be displayed at 5 strategic sites, located in the most popular and accessible Park Centres and in the most significant sites for the LIFE project: Park headquarters, Park Centre "Dogana", Park Centre "Geraci", Park Centre "La Fagiana" and Bernate Ticino site. They'll be printed and located in the first 2 months of the project, than they will be updated at the beginning of 2019 to inform the people on the actions progress. Target: a potential number of 4-5 million persons/year might be achieved; 5 copies x 2 series of notice boards (10 external panels) will be printed and positioned.
- **Project website:** a new website (Italian and English language) will be created at the beginning of the project and will be updated during the development of the project (about every 6 months). Targets: working team, EC referees, students, naturalists, conservationists, visitors of the Park, web navigators (potential visitors of the website reach almost 340 million people/month; 2015 Tripadvisor Excellence Certificate for 340 million visitors/month and more than 225 mln/month reviews or opinions). It will allow to broadcast worldwide the project. The website will show each project content, allowing to download digital versions of the technical and dissemination products.
- **Layman's report:** during the last trimester of the project a short educational report will be edited (5-10 pages; Italian and English language). It will include a summary of the project; information about difficulties faced, measures taken against them and results obtained; continuation of the activities after-Life. It will be published in the project website to reduce the carbon footprint; a little amount of copies (1000) will be printed.
- **Project booklet:** at the end of the project, a booklet of about 100 pages A5 (or similar format), will be published in a digital version on the project website (to reduce carbon footprint) and will be printed (3.000 copies at least) to disseminate the project results in the numerous meetings that continually involve the Park. LIFE and Rete Natura2000 logos will be clearly visible with also a description of their irreplaceable role for EU biodiversity conservation. Target: millions of visitors of the project and Park website and other 3.000 persons receiving the printed version.
- **Press conferences:** at least 4 press conferences (one per year) and related press releases will be made, which will illustrate goals and will report on the project progress. Target: all the audience of local TV channels and all the million readers of national newspapers like "La Stampa" or other more local newspapers or magazines.
- **Documentary:** target audience is represented by millions of Italian citizens of each age and education level



reached through the website, where the documentary will be visible, and also through specific TV programs (in dependence on their disposability). The clip (10-15 minutes duration) will present the project (objectives, targets, actions and results), with a focus on Life Programme and Natura2000 network, following a standard TV format. It will be produced and disseminated in 2019.

#### Sub-action E1.2 - New facilities for visitors:

- Creation of a nature trail at "I Geraci" and at Bernate Ticino. In 2018-2019, at the sites of Actions C1 and C5-C6, nature trails will be realized to improve access to the sites for visitors and to implement their fruition in order to understand their importance for biodiversity. Target of these trails are thousands of visitors/year of these sites (2.000/3.000 visitors a year). At both the sites the nature trails will be equipped with information panels and walkways that allow people to visit the different natural habitats (grasslands, wetlands, forests, dry habitats).
- New facilities for birdwatching at "I Geraci". Targets are the visitors of "I Geraci" Park Centre: thousands of people a year. A wooden bird hide will be built for observing birds without creating disturbance, especially during the delicate periods of breeding, migration and overwintering; this will include shelves, benches, narrow windows. On the inside wall will be put posters showing the easiest birds to be observed in the area; about 800 meters of barriers will be made by reeds, with holes from where doing bird watching without disturbing wildlife. This facility will be built by the end of 2019.

#### Sub-action E1.3 - Educational activities:

- butterfly-watching training course and Butterfly Atlas. The course aims to train volunteers so they could participate, in a context of citizen science, to the realization of an Atlas of butterflies distribution and to surveys even after-Life project. The attendees to the course will contribute to the Atlas, applying their knowledge. It represents a great occasion not only to incentivate naturalistic socializing but also to give a faunistic service to biodiversity research in the Park, because it would be the first butterfly Atlas for this area (actually one of the first examples in Italy as we can know).
- Environmental education at primary school. A Biodiversity School-Book will be realized and printed (approximately A4 format, 50-60 pages, at least 5.000 copies) about the following principal topics, described through a mix of texts, images and proposed activities: the most representative ecosystems and agro-ecosystems of Ticino Park (e.g. river, gravel beds, wetlands, forests, rural areas); the most important and representative species in the Ticino Park, also of community interest (not only the target species of the project). The course will include approximately one lesson at school and one visit in the Park environments. This activity will last all the project long. **An external assistance is needed, in particular an expert on environmental education, who can work in the project as a teacher at the course for schools and write and edit the school-book.**

#### He/she will take care of:

- contacts and agreements with schools
- presentation of the initiative to school teachers
- teaching at the course
- organize logistics for the school groups
- writing and editing of the School-Book.

**A number of at least 40 courses will be implemented.**



**Beneficiary responsible for implementation:**

TicinoPark

All the beneficiaries will be involved in this Action:

- TicinoPark responsible for: Sub-action E1.1 - Dissemination of the project; Sub-action E1.2 - New facilities for visitors; Sub-action E1.3 - Educational activities;
- FLA and GRAIA responsible of scientific and technical contents of the deliverables, and, only in some cases indicated by the costs estimations, for editing and graphics.

**Assumptions related to major costs of the action:**

Personnel:

FLA: Additional staff / expert on Environmental Education - 200 Daily rate x 55 N. person-days = 11000 €

Permanent staff (ps)-Expert on biodiversity conservation - 250 x 34 = 8500 €

ps-Chief Officer Graphics and Publishing" - 183x 10 = 1830 €

GRAIA: ps- senior ichthyologist - 425 x 6 = 2550 €

ps- expert on Biodiversity Conservation - 200x 130 = 26000 €

TicinoPark: ps-Head of Fauna Office - 200 x 13 = 2600 €

ps-AdministrativeOfficer- 130 x 5 = 650 €

ps-Head of Forests Office - Project leader - 215 x 39 = 8385 €

ps- expert on Environmental Education - 150 x 82 = 12300 €

ps- Head of Agriculture Office - 140 x 2 = 280 €

ps- Head of the Natura 2000 Network Park Office - 160 x 8 = 1280 €

ps- AdministrativeOfficer - 130 x 15 = 1950 €

ps- AdministrativeOfficer - 140 x 18 = 2520 €

External assistance, TicinoPark public tenders:

E1.1: 1 web designer for setting up and managing the website - 8.000 €

E1.1: Editor for the editing and publishing of the Project Booklet (approximately 3.000 copies) - 12.000 €

E1.1: 1 Documentarist, for the realization of the Project documentary - 15.000 €

E1.2: External firm for the execution of the works of creation of the natural trail at Geraci - 40.000 €

E1.3: 1 Senior Lepidopterologist, consultant as teacher at the butterfly course and for the realization of the Butterfly Atlas (approximately 1.000 copies) - 30.000 €

E1.3: 1 Expert on Environmental Education as teacher at the course for schools - 45.000 €

E1.2: External firm for the execution of the works of creation of the natural trail at Bernate Ticino - 40.000 €

Infrastructure:

TicinoPark - public tender - Sub-action 1.2: New facilities for birdwatching at the restored wetlands - 26.000,00 €

Consumables, TicinoPark - Direct treaty:

E1.1: printing of noticeboards (approximately n. 10, 70x100 cm): 2000 €

E1.1: printing of layman's report (approximately 1.000 copies, eight A4 pages): 1000 €

E1.3: printing of the school-book (approximately 4.000 copies, 50-70 A4-A5 pages): 8000 €



**E1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Layman's report	10/2020
Press release	10/2020
Documentary	12/2019
Butterfly Atlas	10/2020
School book	06/2017
Notice boards	10/2020
Project website	10/2020
Project booklet	10/2020

**E1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
New birdwatching site at "I Geraci" realized	12/2019
nature trail at "Geraci" completed	12/2019
Project website published for the first time	01/2017
nature trail at Bernate Ticino completed	12/2019

## **E. Public awareness and dissemination of results (obligatory)**

**ACTION E.2:** Know-how and information transfer and exchange

### **Description and methods employed (what, how, where, when and why):**

What and Why - In this Action are grouped all the sub-Actions aimed to ensure the replicability and/or transferability of the project objectives and results.

They have a role both in the context of the project both in other contexts. In particular:

- sub-Actions E2.1 and E2.5 do not have the only task to train the involved stakeholders (A Actions), but even to make them a good information vehicle, to aware and to involve other stakeholders. The range of the project get wider this way; reaching areas/stakeholder not targeted directly by the project.
- sub-Actions E2.2, E2.3 and E2.4 will be useful to state how the methods proposed could be applied in other geographic areas on similar cases.

How - Sub-Action E2.1 -Training of the task force involved in action C7- The target audience is the volunteer task force group. The task force is likely to represent the stakeholder too, because it will be probably formed by anglers very confident with the area of interest. A training course will be organized: dates and times will be scheduled in agreement with the parts. The course will be structured in 4 theoretical lessons and 4 practical demonstrations. Among the main topics:

- native sturgeons of Po River (special attention paid to *A. naccarii*);
- reproductive biology and growth of *A. naccarii*;
- river ecology and native fish community;
- alien species effects on the native fish community;
- biology and ecology of *Silurus glanis*;
- *Silurus glanis* eradication and control
- international, national and local regulations related to the task force activity;
- camera traps monitoring technique

The course will be performed in the first 6 months of 2017. The sub-Action is necessary for the implementation of Action C7.

Sub-Action E2.2 -Networking with other LIFE and/or other non-LIFE projects- The target is the whole scientific community and managers/operators of the protected areas. Once they start to share information with the working team of the project, they will become formally members of the technical consultation group.

Strategy. A network of contacts in mailing list will be created to share information. There will be considered projects dealing with conservation or similar experiences, with special attention to those focused on *Acipenser naccarii*, *Aythya nyroca*, *Huso huso*, lowland wet grasslands, waste water treatment plants,



riparian wetlands.

The Park has analyzed the Life Project database, identifying some related projects, and it has started some networking relationships: the following list concerns the projects that were contacted and accepted the networking activity (see annexed letters):

- Life Project "LIVEDRAVA - Riparian Ecosystem Restoration of the Lower Drava River in Slovenia" (Slovenia); beneficiary: DOPPS - BirdLife Slovenia; on riparian habitats and their birds.
- Life project "MigratoEbre" (Spain); beneficiary: CERM - Center for the Study of Mediterranean Rivers. The project deals with *Acipenser naccarii*.
- Project "Rhine River grassland restoration" (Netherland); beneficiary: FREE Nature; the project deals with riparian wetlands and grasslands and their birds.
- Life project "Lakenheath Fen Reserve" (Great Britain); beneficiary: RSPB - The Royal Society for the Protection of Birds; the project is on restored wetlands and their birds.
- Life+ MGN - LIFE11 ENV/IT/000168 "Making public Goods provision the core business of Natura 2000" (Italy); beneficiary: ERSAL Lombardia, that will support this sub-Action (annexed Form A8).

Three representatives of the current project (1 person for every beneficiary) will visit the 4 project sites. The meeting with the beneficiaries of Life+ MGN will be easier to organize and it will be particularly precious to deepen the socio-economic and ecosystem services aspects. The occasions of know-how transfer will be documented and described in the website; an appropriate section will be indeed structured: there will be visible the links to each project involved. The representatives of the networking projects will be able to download the deliverables, and they will be easily updated by a specific "e-mail alert" service. To perform this action and to reduce the carbon footprint it has been chosen the specific use of the website and the e-mail communication; it appears however necessary to forecast a minimum of 6 visits within the EU area, to be aware of the networking projects, and to LIFE worldwide.

At the final conference the representatives of the networking projects will be invited to talk about their experiences.

Timing. The Action will be undertaken in 2017 and it will last until the end of the project.

Sub-Action E2.3 -LifeTicinoBiosource best practices technical volume- A technical/descriptive volume will be published and printed (a minimum of 2000 copies; approximately 200 pages A4 format): it will present the experiences and the best practices learned (enhancement of the status of target species; restoring of the habitat connectivity, lowland wet meadows preservation and managing, sturgeon artificial reproduction/reintroduction). The volume will briefly describe the other networking projects, and the main aspects raised thanks to the knowledge exchanges.

Sub-Action E2.4 -Final technical conference- The final conference will represent an additional opportunity to transfer the know-how, to activate some collaborations on existing or planned projects, to involve the stakeholders, to aware the audience of the best practices. The conference will be scheduled in the last 3 months of project: each representative of the group of stakeholders involved (and each representative of the



networking projects) will be invited to participate as rapporteur. A specific space and attention will be paid to the proposals of collaboration among authorities and stakeholders: the results will be described in the Final Report of the project.

Sub-Action E2.5 - Training course for farmers - The training course "The lowland wet meadow ("marcita"): techniques of management, the use of shovel, agronomic and wildlife efficiency" will take place during the first year of the project. The disappearing of old farmers is causing the loss of the traditional technique of hand management of the lowland wet meadows habitat. We will organize a training course for farmers (especially young farmers) to transfer the know how to manage this habitat, according to traditional methods (at least 100 farmers will be invited to participate); the main topics faced in the course (2-3 lessons) are:

- how to manage a lowland wet meadow;
- why doing it in the way explained and promoted;
- which are the main economic and biodiversity outcomes related to the traditional management.

The lessons will be filmed and the resulting video will be published on the project website, to aware and teach every interested farmer on how to traditionally manage a lowland wet meadow, promoting biodiversity, gaining money and improving the own image.

### ***Beneficiary responsible for implementation:***

TicinoPark

All the beneficiaries are involved in the action, each one responsible for its competences.

### ***Assumptions related to major costs of the action:***

#### Personnel:

FLA: Expert on biodiversity conservation, management and monitoring - 250 Daily rate x 46 N. person-days = 11500 €

FLA: Chief Officer Graphics and Publishing" - 183 Daily rate x 45 N. person-days = 8235 €

GRAIA: senior ichthyologist - 425 Daily rate x 26 N. person-days = 11050 €

GRAIA:expert on Biodiversity Conservation and Environmental Education and dissemination - 200 Daily rate x 21 N. person-days = 4200 €

TicinoPark: Head of Fauna Office - 200 Daily rate x 22 N. person-days = 4400 €

TicinoPark: Administrative-Accounting Officer for contracts and agreements - 130 Daily rate x 33 N. person-days = 4290 €

TicinoPark: Head of Forests Office - Project leader - 215 Daily rate x 38 N. person-days = 8170 €

TicinoPark: Head of Agriculture Office - 140 Daily rate x 21 N. person-days = 2940 €

TicinoPark: Head of the Natura 2000 Network Park Office - 160 Daily rate x 7 N. person-days = 1120 €

External assistance, TicinoPark - public tender:



Sub-action E2.4: 1 Event Organizer for the organization of the final technical conference (brochure of the event, catering and ) - 6300

Sub-action E2.5: 1 Catering firm for the organization of a coffee-break at the Training course for farmers - 2000

Sub-action E2.5: Editor for the editing and publishing of a leaflet (500 copies) and of the signaling flags of the wet lowland meadows subject to C4 action - 3000

**Consumables:**

TicinoPark - public tender - Sub-action E2.3: printing of TicinoLifeBiosource Best Practices Technical Volume (approximately 2.000 copies, 200 A4 pages): 10000 €

**Travels:**

TicinoPark; 1 person x 1 visit for networking with another Life Project x 2 days; 2500€

TicinoPark; representatives of other 4 Life Projects in the EU, invited to participate to the project final technical conference x 2 days; 3200€

FLA; 1 person x 4 visit for networking with other Life Projects x 2 days; 1500€

GRAIA; 1 person x 4 visit for networking with other Life Projects x 2 days; 1700€

**E2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Video of the training course for farmers	12/2017
Project's Best practices technical volume	10/2020
Mailing-list of contacts of networking	10/2020
Pages of the project website hosting the networking exchanges	10/2020

**E2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **F. Project management (obligatory)**

**ACTION F.1:** Technical and financial project management

### ***Description and methods employed (what, how, where, when and why):***

**Beneficiaries** - All the three bodies: Park, GRAIA and FLA. With regard to the monitoring of the development of the results of the project, this activity will be done by the Park.

**Personnel** - This Action will involve all the administrative and technical personnel of the three beneficiaries. TicinoPark and FLA will both involve an external figure for the monitoring of the financial aspects of the project.

**The variety of activities to be undertaken require the involvement of various staff related to financial management of the project. For this reason TicinoPark will involve 4 different persons with different roles and competencies: 1 Project Financial Coordinator, 2 Administrative-Accounting Officers, one with specific competencies on all administrative practices and the other with specific competencies on the establishment of contracts and agreements. The estimated workload for each of the questioned positions is <2.5 workdays per month which is acceptable.**

**What** - This Action aims to a punctual and coordinate development of the project, according to the Grant Agreement.

**How** - The Park will be the referee for contracts and duties towards the EC, as coordinator of the project, and towards the Monitor assigned to the project by the EC.

The Park will appoint an external contract for a **full time Project Manager** who will have in charge the technical coordination of the project and also the contacts with the EU monitor and the Commission. The project manager will be supported in the project management by the **Steering Committee (SC)**, including representatives of all the beneficiaries, that will be established with Action A1. The SC will have the role to ensure that the project will respect objectives and timetable and according to LIFE rules; the **Project Leader**, nominated among the personnel of TicinoPark, head of the SC, will have in charge to remember to each participant its constraints, if necessary.

The Project Manager, during official and informal meetings of the SC will update every member about the state of the art and will propose solutions for solving criticalities as soon as possible.

The Grant Agreement and LIFE regulations will be continuous landmarks for the Project Manager and the SC, and as well the LIFE web site, with its documentation (Model technical report; Financial and Administrative Guidelines; Guidelines for applicants; Monitoring indicators; Timesheets; Evaluation report templates).

For any question or doubt the Project Manager will always refer to the Monitor of the project.

The SC will be composed by:

- all the figures that are responsible of the offices of the Park that are involved into the project. They will be the responsible of the following offices: Wildlife, Natura 2000, Agriculture, Forests, Planning and Landscape, Administration (the last one as Financial Coordinator of the project);
- The project coordinators of FLA and GRAIA.
- The Financial Coordinator will have the task of financial control of the coherent use of the resources of the project and the supervision of all the administrative procedures.



Each beneficiary will have an internal financial coordinator that will care about the correct filling up of the time-sheets for the involved personnel and will have external assistance for specific competences.

There will be official meetings at least every 3 months for all the duration of the project, for a total of at least 16 official meetings; many more will be the telematic and informal meetings between the partners and other involved bodies, that will see the presence of the Project Manager and/or of the specific responsible of the Action.

In the framework of this Action will be realized: Inception Report, Midterm Report and Final Report.

It's important to notice that all the three beneficiaries have experience of LIFE projects, as they were and they still are involved in other LIFE projects as beneficiaries. Ticino Park, in particular, has already covered the role of Coordinating Beneficiary in other Life Projects, with success, as it can be checked, moreover employing the part of the same staff, employed in this case. We cite only some of the most significant examples:

- The designed Project leader (Fulvio Caronni) has already carried out the completion and expenditure accounting of the Life Project: LIFE Natura 97 NAT/IT/ B4-3200/97/265 Conservazione di foreste alluvionali nel Parco del Ticino. During his employing in Regione Lombardia DG Agricoltura he contributed to the realization of the projects: LIFE+ Making Good Natura - Making public Good provision the core business of Natura 2000 - codice LIFE11 ENV/IT/000168; LIFE11NAT/IT/044 GESTIRE Development of the strategy to manage the Natura 2000 network in the Lombardia Region.

- the head of Ticino Park Wildlife Office (Adriano Bellani) has already executed three Life projects focused on fishes and other species of community interest: LIFE00 NAT/IT/007268 - "Salmo Ticino - Conservation of Salmo marmoratus and Rutilus pigus in the River Ticino"; LIFE00 NAT/IT/007159 - "Conservazione di Austropotamobius pallipes in due SIC della Lombardia"; LIFE03 NAT/IT/000113 - "Conservazione di Acipenser naccarii nel fiume Ticino e nel medio corso del Po"; and at present he's involved in LIFE11 NAT/IT/000188 - "CON.FLU.PO. - Restoring connectivity in Po River basin opening migratory route for Acipenser naccarii\* and 10 fish species in Annex II".

- the head of Ticino Park Natura 2000 Network office (Valentina Parco) has contributed to LIFE10 NAT IT 241 TIB - TRANS INSUBRIA BIONET. CONNESSIONE E MIGLIORAMENTO DI HABITAT LUNGO IL CORRIDOIO ECOLOGICO INSUBRICO ALPI - VALLE DEL TICINO - LIFE+ Nature & Biodiversity.

**When** - The Action will go on for all the project duration. **In the first weeks of October 2016, two persons from the project will attend the kick off meeting with representatives of the Contracting Authority which will take place in Brussels.**

**Where** - Project area.

**Why** - The clear definition of internal and external relations in between partners and with the external assistance is essential for the good execution of the Actions. It is also important to have regular meetings to face eventual criticalities and try to find a way to solve them as soon as possible.

### **Beneficiary responsible for implementation:**

TicinoPark

All the beneficiaries are involved in the action, each one responsible on the basis of the rules defined by the Gran agreements between all parties.

### **Assumptions related to major costs of the action:**



Personnel:

FLA: Administrative Secretariat - Officer for contracts and agreements - 116 Daily rate x 87 N. person-days = 10092 €

FLA: Senior graduate, expert on financial reporting of European projects - 200 Daily rate x 88 N. person-days = 17600 €

FLA: Director-General - FLA Project Leader - 508 Daily rate (***his current daily rate***) x 20 N. person-days = 10160 €

FLA: Administrative/Accounting Officer - FLA project financial coordinator - 183 Daily rate x 54 N. person-days = 9882 €

FLA: Head of the Biodiversity and Protected Areas Office - FLA Project coordinator - 257 Daily rate x 19 N. person-days = 4883 €

GRAIA: Project leader and coordinator for technical and financial aspects - 425 Daily rate x 112 N. person-days = 47600 €. ***The daily rate is the gross salary as CEO of GRAIA with more of 20 years of experience as project manager as ichthyologist and species conservation expert.***

TicinoPark:

Head of Fauna Office - 200 Daily rate x 24 N. person-days = 4800 €

Head of Forests Office - Project leader - 215 Daily rate x 40 N. person-days = 8600 €

Head of Agriculture Office - 140 Daily rate x 24 N. person-days = 3360 €

Head of the Natura 2000 Network Park Office - 160 Daily rate x 24 N. person-days = 3840 €

Project Financial Coordinator - 210 Daily rate x 100 N. person-days = 21000 €

Administrative-Accounting Officer - Assistant to Financial Coordinator - 130 Daily rate x 180 N. person-days = 23400 €

Administrative-Accounting Officer for contracts and agreements - 140 Daily rate x 180 N. person-days = 25200 €

External assistance, TicinoPark - public tenders:

1 Senior Environmental Graduate, expert on biodiversity conservation, as full-time project manager - 180000

1 Economist consultant, expert on financial managing of european projects - 2500

Travels:

National-Project leader and Head of TicinoPark Fauna Office attendance to a kick-off meeting with the contracting Authority representatives: 200 €

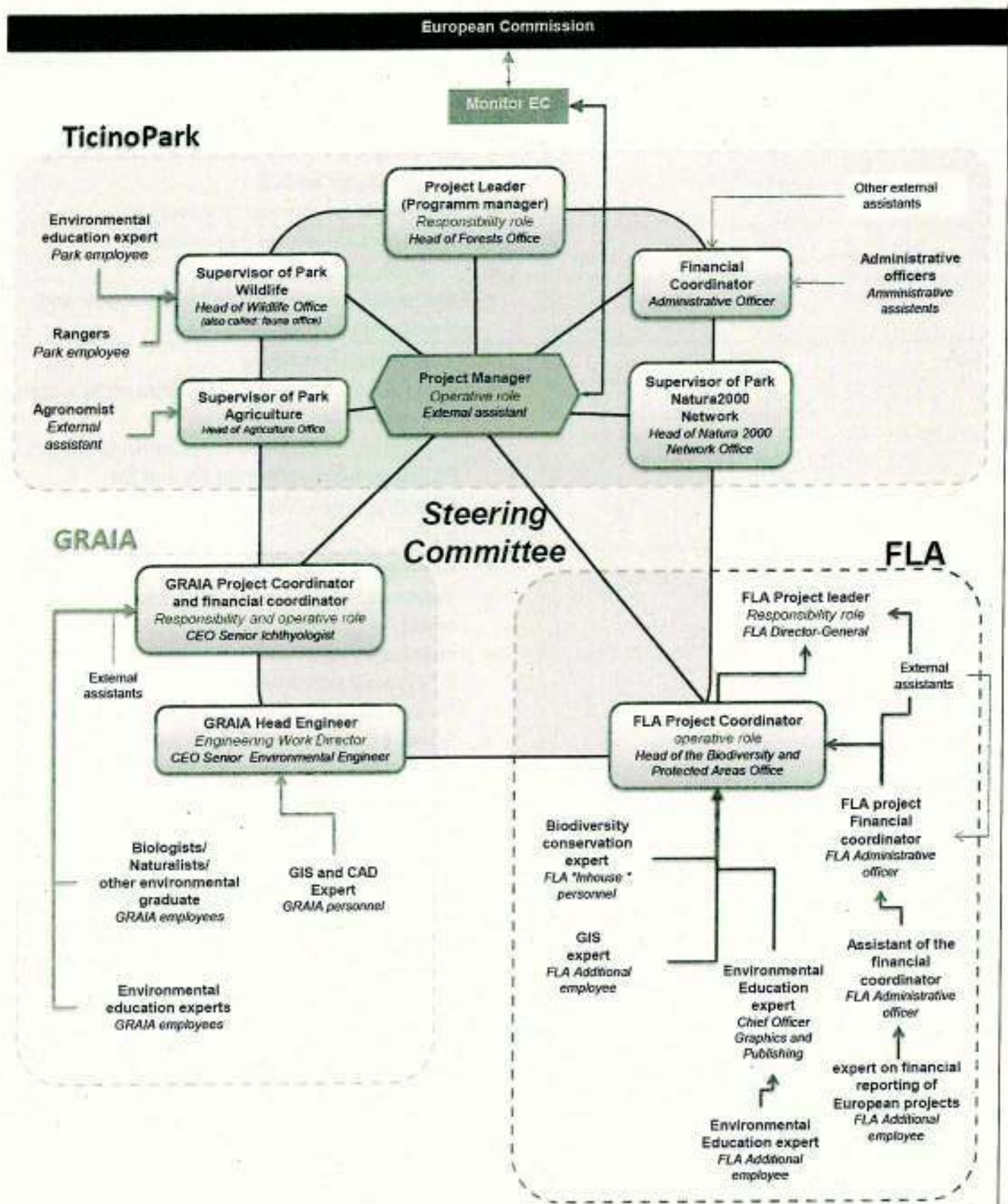
National-1 person x 1 technical or financial meeting in the project area x 1 day: 1740 €

Name of the picture: Rationale of the project consortium

Beneficiary	Country	Role in the project
TicinoPark	Italy	<ul style="list-style-type: none"> <li>• <b>Coordinating beneficiary</b></li> <li>• Project management</li> <li>• Competent Authority for SCI management</li> <li>• Owner of part of the project areas of Actions C1, C3, C5, C6 and C8</li> <li>• Action C5 Forestry works direction</li> <li>• URP of the structural interventions</li> <li>• Co-executor of all the CCAs</li> <li>• Beneficiary responsible for vegetational and floristic monitoring</li> </ul>
FLA	Italy	<ul style="list-style-type: none"> <li>• <b>Associated beneficiary</b></li> <li>• Supervisor and referent for biodiversity issues (except for fishfauna)</li> <li>• Beneficiary responsible of monitoring actions D1 (standard monitoring) D2 and D4</li> <li>• Scientific supervisor of all the CCAs involving birds</li> </ul>
GRAIA	Italy	<ul style="list-style-type: none"> <li>• <b>Associated beneficiary</b></li> <li>• Supervisor and referent for fish biodiversity issues</li> <li>• Beneficiary responsible of monitoring actions D3 (standard monitoring) and D6; D7, D8 and D9 sharing the responsibility with TicinoPark</li> <li>• Scientific supervisor and technical co-executor of all the CCAs involving fishes</li> </ul>



Name of the picture: Management chart



**F1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Formal project reports	10/2020
Project Green Procurement Policy reports	10/2020

**F1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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**F. Project management (obligatory)****ACTION F.2:** Monitoring of the project progress**Description and methods employed (what, how, where, when and why):**

**What** - The action is aimed to monitor the progress of the project so that to be able to apport on time adjustments and activate alternative solutions, if necessary, to ensure the final success of the project in the maximum respect of the project timetable.

**How** - This action provides the periodic (every six months) review of the results obtained from the project, according to the system of indicators provided for each share, as reported in Form C, and according to the model tables of indicators provided by LIFE and, starting from the one attached to the proposal, which will be implemented and as precise as possible fulfilled.

The results of the periodic checks of the project will be showed to all the project workgroup, so that to aware everyone to do his best to achieve the goals of the project. In addition, the completed table of indicators will be included in the first Progress Report to the EC and in the Final Report.

**Where** - Project area.

**When** - The action will start in the first 6 months of the project and will last till the end of the project.

**Beneficiary responsible for implementation:**

TicinoPark

Not applicable.

**Assumptions related to major costs of the action:****Personnel:**

TicinoPark: Permanent staff - D3-SPECIALISTA TECNICO / Head of Fauna Office - 200 Daily rate x 20 N.  
person-days = 4000 €

TicinoPark: Permanent staff - D6 - SPECIALISTA TECNICO/ Head of Forests Office - Project leader - 215 Daily rate x 28 N. person-days = 6020 €

TicinoPark: Permanent staff - C4 - ISTRUTTORE TECNICO / Head of Agriculture Office - 140 Daily rate x 20 N.  
person-days = 2800 €

TicinoPark: Permanent staff - D2- SPECIALISTA TECNICO / Head of the Natura 2000 Network Park Office - 160 Daily rate x 20 N. person-days = 3200 €

**F2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Tables of the indicators filled	10/2020

**F2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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**F. Project management (obligatory)****ACTION F.3:** Independent project audit**Description and methods employed (what, how, where, when and why):**What - External independent audit.How - Following what is stated in Life regulations and in the Financial and Administrative Guidelines, an external auditor will examine the Final Financial Report to certificate that it is in compliance with Italian legislation, and that all costs incurred respect the General Conditions of the Model Life Grant Agreement.**An audit certificate will be provided by each beneficiary, in order to agree to the change of the threshold for the requirement of a certificate on the financial statements from 300.000 EUR on project level to 325.000 EUR on beneficiary level.**At the end of the Action a Final financial report of audit will be realized **by each auditor.**When - The Action will be performed during the last semester of the project period.Why - An external audit is necessary (and compulsory) to evaluate the administrative procedures and financial control compliance with Life regulation and Italian regulation. The audit will be undertaken by external auditors which represent the best professional role to follow this procedure.

The Action has not predictable constraints and obstacles. It appears possible that the procedure will be accomplished after the project official conclusion: the occurrence has been foreseen and faced in the Life Guidelines and it does not modify any related cost.

**Beneficiary responsible for implementation:**

TicinoPark

Not applicable.

**Assumptions related to major costs of the action:**

The action will be performed by an external auditor.

**Other costs:**

TicinoPark - public tender - 1 Consultant for the independent project auditing: 10.000,00 €

**FLA - public tender - 1 Consultant for the independent project auditing: 2.000,00 €****GRAIA - direct treaty - 1 Consultant for the independent project auditing: 2.000,00 €**

**F3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Copy of the Financial Audit Report	10/2020

**F3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **F. Project management (obligatory)**

### **ACTION F.4:** After-LIFE Plan

#### ***Description and methods employed (what, how, where, when and why):***

What - An "after-Life" plan will be produced as a separate chapter of the Final report of the project.

How - The plan will be presented both in Italian and in English, in paper and electronic format.

It will describe how the Actions C4, C7, C8 will be continued and developed in the years after the end of the project and how the longer term management of the habitat restored and created, of the target species and of the new Natura2000 site created will be assured.

It will give details regarding what Actions will be carried out, when and by whom, and using what sources of finance.

When - The Action will take place in the final 6 months of the project.

Why - The Action is necessary to assure the continuation of the mission and concrete conservation actions of the projects in the future.

#### ***Beneficiary responsible for implementation:***

TicinoPark

TicinoPark is responsible of the action. FLA and GRAIA will give their scientific and technical support.

#### ***Assumptions related to major costs of the action:***

The action is without costs.

**F4's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
After-LIFE Plan	10/2020

**F4's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## DELIVERABLE PRODUCTS OF THE PROJECT

Name of the Deliverable	Number of the associated action	Deadline
Monitoring report	D 8	30/06/2017
School book	E 1	30/06/2017
Task Force establishment formal act	A 5	30/06/2017
Acts of tasks assignation to the external assistances starting in the first year of project (e.g. Project Manager)	A 1	31/12/2017
Copies of the conventions between TicinoPark and the local farmers	A 2	31/12/2017
Copies of the executive/definitive project of each intervention within C1, C2, C3, C5 and C6 actions	A 4	31/12/2017
Formal acts of nomination of each partner's working team	A 1	31/12/2017
The Grants Agreements	A 1	31/12/2017
Video of the training course for farmers	E 2	31/12/2017
All the formal acts tracing the iter of approval faced	A 3	31/12/2018
Certificate of regular execution of works	C 3	31/12/2018
Certificate of regular execution of works	C 5	31/12/2018
Standard form of the proposed SAC	A 3	31/12/2018
Certificate of regular execution of works	C 1	31/03/2019
Certificate of regular execution of works	C 6	31/03/2019
Certificate of regular execution of works	C 2	30/06/2019
Documentary	E 1	31/12/2019
After-LIFE Plan	F 4	31/10/2020
Animal health/genetical certificate for the Huso huso specimens aquired	C 8	31/10/2020
Butterfly Atlas	E 1	31/10/2020
Copy of the Financial Audit Report	F 3	31/10/2020
Formal project reports	F 1	31/10/2020

Invoices of the Huso huso specimens aquired	C 8	31/10/2020
Layman's report	E 1	31/10/2020
Mailing-list of contacts of networking	E 2	31/10/2020
Map of the "marcite" managed in accordance with the rules established by the Project	C 4	31/10/2020
Monitoring progress and final reports	D 1	31/10/2020
Monitoring progress and final reports	D 2	31/10/2020
Monitoring progress and final reports	D 3	31/10/2020
Monitoring progress and final reports	D 4	31/10/2020
Monitoring progress and final reports	D 5	31/10/2020
Monitoring progress and final reports	D 6	31/10/2020
Monitoring progress and final reports	D 7	31/10/2020
Monitoring report	D 8	31/10/2020
Monitoring report	D 9	31/10/2020
Notice boards	E 1	31/10/2020
Pages of the project website hosting the networking exchanges	E 2	31/10/2020
Press release	E 1	31/10/2020
Project Green Procurement Policy reports	F 1	31/10/2020
Project booklet	E 1	31/10/2020
Project website	E 1	31/10/2020
Project's Best practices technical volume	E 2	31/10/2020
Tables of the indicators filled	F 2	31/10/2020
Task force mission report	C 7	31/10/2020



## MILESTONES OF THE PROJECT

Name of the Milestone	Number of the associated action	Deadline
Grant agreement signed by the partners	A 1	15/12/2016
Working team formalized	A 1	15/12/2016
Entrusted the task to the Project Manager	A 1	31/01/2017
Project website published for the first time	E 1	31/01/2017
Steering Committee formalized	A 1	31/01/2017
Plannings of structural interventions of C actions approved	A 4	31/12/2017
Institution of the new proposed SAC "Adriatic Sturgeon spawning site" approved by Regione Lombardia and presented to MATTM	A 3	31/12/2018
Intervention of restoration and creation of forest habitats of conservation interest at Bernate Ticino completed	C 5	31/12/2018
Intervention of creation and restoration of wetlands and other aquatic habitats at Geraci completed	C 1	31/03/2019
Intervention of restoration of wetlands at Bernate Ticino completed	C 6	31/03/2019
Intervention of Ecological restoration of the settling basins of Arno Stream completed	C 2	30/06/2019
Interventions of Enhancement of source areas for endemic fish species along springs, streams and secondary branches of Ticino River completed	C 3	31/12/2019
New birdwatching site at "I Geraci" realized	E 1	31/12/2019
nature trail at "Geraci" completed	E 1	31/12/2019
nature trail at Bernate Ticino completed	E 1	31/12/2019
Not less than 3.900 juveniles (0+) and 300 young specimens of H. huso reintroduced in SCI IT2080002	C 8	31/10/2020
Proposal of institution of the new SAC submitted by the MATTM to European Commission	A 3	31/10/2020
Reduction of Silurus glanis presence (in terms of biomass) in the sturgeon spawning area of 50%.	C 7	31/10/2020

**ACTIVITY REPORTS FORESEEN**

Please indicate the deadlines for the following reports:

- Progress Reports n°1, n°2 etc. (if any; to ensure that the delay between consecutive reports does not exceed 18 months)
- Mid term report payment request (for project longer than 24 months or with Eu contribution of more than EUR300,000)
- Final Report with payment request (to be delivered within 3 months after the end of the project)

Type of report	Deadline
Progress report	30/06/2017
Progress report	31/10/2018
Midterm report	31/10/2019
Final report	31/01/2021



## TIMETABLE

Action		2016		2017		2018		2019		2020		2021	
Action number	Name of the action	I	II	III	IV	I	II	III	IV	I	II	III	IV
<b>A. Preparatory actions, elaboration of management plans and/or of action plans</b>													
A.1	Administrative procedures for the project start												
A.2	Territorial analysis, consultation and agreements with local farmers												
A.3	Proposal for establishing a new SAC for the protection of "Adriatic Sturgeon spawning sites"												
A.4	Planning of the creation and restoration of wetlands, wet forests and other aquatic habitats												
A.5	Consultations for the creation of a task force to protect <i>Acipenser naccarii</i> spawning site												
<b>B. Purchase/lease of land and/or compensation payments for use rights</b>													
<b>C. Concrete conservation actions</b>													
C.1	Creation and restoration of wetlands and other aquatic habitats at "I Geraci", in favour of birds and butterflies of conservation interest												
C.2	Ecological restoration of the settling basins of Arno Stream, as a source area for birds of conservation interest												
C.3	Enhancement of source areas for endemic fish species along springs, streams and secondary branches of Ticino River												
C.4	Management of lowland wet meadows in favour of birds and butterflies of conservation interest												
C.5	Restoration and creation of forest habitats of conservation interest at Bernate Ticino												
C.6	Restoration of wetlands at Bernate Ticino												
C.7	Active defense of <i>A. naccarii</i> spawning sites												
C.8	Reintroduction of <i>Huso huso</i> in Ticino River												
<b>D. Monitoring of the impact of the project actions (obligatory)</b>													
D.1	Monitoring the efficacy of actions C1 (faunistic aspects) and C6												
D.2	Monitoring the efficacy of action C2												
D.3	Monitoring the efficacy of action C3												
D.4	Monitoring the efficacy of action C4												







