

Project Proposal

Use Arial font size 10 throughout. Do not change the margins or modify the form. Explanatory notes (in *blue italics*) may be removed before submission.

Project Summary Information	
Project title (Max. 12 words)	Ticino Landscape Restoration Initiative: a new balance between people and nature
Project duration (up to 5 years)	5 years
Project location (Country, region)	Italy, Switzerland
Project budget (grant requested from the ELP in US\$)	4,460,600.00
Project summary (a concise description of your project. Max. 150 words)	The project contributes significantly to achieving the Objectives of the Ticino River Restoration Plan 2021-2031 developed under the ELP PPG, implementing 1/3 of the actions and thus placing the Swiss-Italian Ticino Landscape - macro-corridor between Alps, Apennines and Adriatic Sea - surely on the path to full restoration. Like the Plan, the project is organized around six themes, making progress on each: 1) Governance: strengthen internal coordination and create ties with wider processes; 2) Ecosystem services: improve those provided by forests and agricultural land; 3) Ecological connectivity: improve connectivity through wetlands, riparian habitats and river courses; 4) Species: achieve viable populations of two locally-extinct species and act on four threatened ones; 5) Climate resilience: reduce vulnerability of the secondary water network and the Prealpine forests; 6) Communication: prevent conflicts, ease communication, consolidate the sense of a common identity. Several stakeholders and twenty-three partners will work towards one functionally-coherent Landscape.

Lead Organisation Information

Organisation Legal Name (One organisation should be designated to lead the application)

Istituto Oikos Onlus

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Project Lead Contact – Provide the information below for the person responsible for correspondence with the ELP regarding this project.

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To submit your proposal please send it to s.sanders@jbs.cam.ac.uk.
Any questions should be sent to the same address.

Track record of lead organisation (Maximum 2 pages)

About your organisation

Istituto Oikos is an Italian non-profit organisation established in 1996 and operating in Europe, Africa and Asia to safeguard biodiversity and promote sustainable lifestyles (2020: total revenue € 4.5M, 102 staff worldwide, 62 projects underway, 201 partners from the public and private sectors; 2021 preliminary balance sheet € 5.69M). In 26 years, 444 projects managed on biodiversity and management of natural resources (256), water (22), climate and energy (35), sustainable communities (111), education for sustainability (20).

Experienced technical staff and long-term scientific partnerships with universities and research institutions ensure science-based activities and sound impact evaluation; stable alliance with public institutions and local governments ensures institutional sustainability.

Istituto Oikos has always applied an integrated approach, convinced that environmental protection is linked to community wellbeing, and that landscape restoration is only possible through multi-functionality, participation, spatial planning, economic diversification and the coexistence of local/traditional know-how and innovative technology. Istituto Oikos has proven experience in leading international multi-stakeholder projects related to sustainable livelihoods, biodiversity conservation, habitat restoration for the return of native species, reintroduction and restocking of autochthonous species (e.g., reintroduction of *Capra Ibex* in Lombardy Region, first steps for the return of *Capra nubiana* in Lebanon), control of invasive alien species, recovery of natural processes, climate change adaptation, capacity building and awareness raising.

In northern Italy and specifically Lombardy and Piedmont, Istituto Oikos has been working on habitat restoration and wildlife conservation to monitor and improve wildlife protection and management. In the Ticino Landscape (TL), Istituto Oikos has already implemented several projects on habitat restoration and ecological connectivity (wetlands between the Ticino and the Olona rivers, riparian habitat, wildlife underpasses, new technologies to avoid roadkills) and social innovation (fostering new nature-based enterprises). This has been done in collaboration with protected areas, communities and regional and local authorities, often with the same partners and co-funders as in the ELP proposal.

Istituto Oikos was the leader of the ELP-PPG project “Restoring the Ticino River Landscape: One River – Many Systems – One Landscape”. As such, it coordinated the preparation of the “Ticino Landscape Restoration Plan 2021-2031” by 30 Italian and Swiss partners and stakeholders, and the signing, in 2021, of a Cooperation Agreement that has committed key partners to implementing the Plan, establishing the Ticino Initiative (TI) and assigning the first Technical Secretariat to Istituto Oikos. Since the start of the project there has been active participation, with numerous players (cantonal, regional and provincial authorities, protected areas, civil society organizations, research institutions, technical consultants) participating in the discussions of five thematic working groups and in the construction of a Theory of Change for the Landscape. This led to the definition of specific objectives and actions, and to the drafting of a communication strategy and the broad Restoration Plan for the TI. The preparation of this ELP proposal saw the same multilateral involvement, thus converging on shared solutions for the restoration of the TL and further strengthening and widening the partnership.

Track record

1. Title	Sistema Olona - Biodiversity that flows
Value	1,304,486.25 EUR
Duration	01/04/16 – 31/03/22
Role of organisation in project	Coordinator
Summary of the project's aims and expected outcomes	Objective: Increase the functionality of the Olona River corridor (Italy, within the Ticino Landscape) Expected outcomes: 1) Wetland restored through pond excavation, water flow regulation, removal of exotic plants, planting of local vegetation; 2) road impact reduced through fauna underpasses; 3) increased awareness on freshwater ecosystems.
Project partners	4 local parks (Valle del Lanza, Bosco del Rugareto, Medio Olona, Rile Tenore)

	Olona); 2 municipalities (Vedano Olona, Locate Varesino); Legambiente NGO.
Donor/Client	Cariplo Foundation
2. Title	PHARO – Protection of the coastal and marine habitats of the Quirimbas National Park, for food safety and economic development
Value	3,398,000.00 EUR
Duration	05/05/2014 – 04/05/2018
Role of organisation in project	Coordinator
Project partners	Center for Technological Development, Mozambique National Fishing Institute, 21 local fishing associations, Mozambique Catholic University, Pemba Industrial and Commercial Institute, ECO-Mozambique NGO, State Universities of Insubria and Milan, Milan Politecnico University, Milan Catholic University, Architects without Borders, Engineers without Borders, OPES Impact Fund.
Summary of the project's aims and expected outcomes	Objective: Contribute to harmonizing socio-economic development and biodiversity conservation in the coastal area of the Quirimbas National Park in Mozambique, promoting fair, sustainable and innovative management of natural resources. Outcomes: 1) Ecosystem management improved (identification of key sites for biodiversity and tourism, increased staff capacity); 2) food security enhanced and vulnerability to climate change decreased (sustainable fishing practices, sustainability education); 3) local economy improved and diversified (support to small local businesses, training to entrepreneurs and local communities, built the Quirimbas Eco Centre “Casa das Garças” for hospitality and education).
Donor/Client	Italian Ministry of Foreign Affairs, Fondation Ensemble
3. Title	STONE – Conservation and enhancement of Traditional agricultural systems for the conservation development and the environmental conservation of the Shouf reserve
Value	1,752,057.00 EUR
Duration	16/04/2018 – 15/11/2021
Role of organisation in project	Coordinator
Project partners	Chico Mendes Social Cooperative, State Universities of Florence and Insubria, Cinque Terre National Park Italy, Manarola Foundation, Souk El Tayeb Lebanon social enterprise.
Summary of the project's aims and expected outcomes	Objectives: Contribute to the inclusive and sustainable development of rural communities bordering the Shouf Biosphere Reserve through enhancing economic opportunities and protecting local natural resources, with a focus on water saving and climate change adaptation and mitigation. Outcomes: Positive effects on local economy, biodiversity and ecosystem services from 1) restoration and improvement of mountain terracing and traditional farming systems; 2) supply chains of local agricultural products; 3) improvement of ecotourism skills and infrastructures; 4) increased awareness of the importance of traditional farming systems and of the Shouf Biosphere Reserve in the Lebanese environmental and socio-economic context.
Donor/Client	Italian Ministry of Foreign Affairs (Italian Agency for Cooperation and Development)

Project partners (Maximum 1 page)

Partner name & website:	
1. Ticino Valley Regional Park (Parco Lombardo della Valle del Ticino) - parcoticino.it	Government agency est. in 1974, the largest river park in Europe (91,800 ha), it includes natural, agricultural and urban areas and covers the entire Ticino River Basin in Lombardy between Lake Maggiore (N) and the Po River (S). With the adjacent Ticino Lago Maggiore Regional Park in Piedmont, it manages the UNESCO MAB Reserve Val Grande-Ticino-Verbano, which extends over the whole Italian portion of the Ticino River Basin. The park has extensive experience in conservation and restoration, has started the reintroduction of <i>Huso huso</i> , manages the LIFE Insubricus and Life BioSource projects. In the project it will: coordinate activities within its boundaries; restore two key wetlands; promote sustainable agricultural practices among farmers; manage the reintroduction of <i>H. huso</i> , strengthen the populations of the <i>Pelobates fuscus insubricus</i> ; participate in all governance actions and contribute to establishing a financial mechanism to support forest ecosystem services.
2. Bolle di Magadino Foundation – bolledimagadino.com	Non-profit organisation est. in 1975 to protect and manage the Bolle di Magadino Natural Reserve and Ramsar Site in Switzerland, which includes the Ticino River delta in Lake Maggiore. It is very active in habitat restoration, species conservation and research, with broad experience in transnational projects. It is managed by a Council with members from the Swiss Confederation, the Canton of Ticino, WWF and ProNatura. In the project it will: be the Swiss scientific coordinator; participate in governance actions in synergy with the Canton of Ticino; coordinate the transnational working groups on <i>Emys orbicularis</i> and alien crayfish; support Ficedula-BirdLife Switzerland for communication on the project's flagship species, the swallow.
3. Canton of Ticino - Department of Territory – www4.ti.ch	Government agency participating in the project through its Environment Division with tasks including research, observation and forecast of the local natural and environmental components and the development and implementation of strategies to prevent and restore environmental damage. The Canton of Ticino has a comprehensive and long-term strategy to restore the Upper Ticino River. In the project it will: play a key role in facilitating governance processes, coordinate and fund the restoration of 3 Ticino tributaries and 3 key wetlands.
4. State University of Insubria – Department of Theoretical and Applied Sciences – uninsubria.it	Research institution. The Department's focus is scientific research that combines analytical/theoretical studies with field implementation. It has extensive experience in the applied fields of biodiversity conservation, wildlife management and sustainable use of natural resources, addressing climate change, habitat loss and alien species. In the project, it will: coordinate the Project Scientific Committee facilitating the contribution of the other research and technical institutions, and provide guidelines to promote animal diversity in Prealpine forest restoration.

Other partners

Regional and local administrations. Varese and Pavia Provinces, Regional Parks Campo dei Fiori and Ticino Lago Maggiore, East Ticino Villoresi Land Reclamation Authority: will actively contribute to governance processes, restore habitat and secondary water network, reintroduce target species.

NGOs. LIPU-BirdLife Italy, Ficedula-BirdLife Switzerland, Italian Centre for River Restoration: will support governance, provide technical expertise on habitat restoration and nature-based solutions, and participate in communication.

Research institutions. State Universities of Turin, Milan and Pavia, Regional Agency for Agricultural and Forest Services of Lombardy, Italian National Rice Authority: will ensure innovative replicable science-based solutions for agroecosystems, species conservation, climate adaptation and mitigation.

SMEs. Idrogea Servizi, Graia, ETIFOR: will provide technical support to government agencies for species reintroduction, restoration planning and nature-based solutions, socio-economic aspects, and innovative financing.

Local communities and their associations. Valli del Verbano Mountain Community and East Sesia Irrigation Association, including almost 300 municipalities: the former will restore habitat, the latter will monitor the effect of new agricultural practices on the water table.

Project Proposal (Maximum 8 pages)

Project aims and justification

The project contributes significantly to the implementation of the Ticino Restoration Plan 2021-2031, advancing on its five General Objectives (Governance, Ecosystem services, Ecological connectivity, Species, Climate Resilience) and Communication by implementing about 1/3 of the actions foreseen in the Plan. The project relies on ELP funding as well as co-funding from several partner projects. The Plan is the first 10-year pathway towards the long-term goal of the Ticino Initiative (TI): restoring the functional ecological corridor of the Ticino River Landscape in balance with socio-economic well-being. The TI and the Restoration Plan were triggered by an ELP-PPG, thus their Objectives were framed according to the ELP vision. The aims of the project, which are closely interconnected, are:

1. **Governance** that reflects the context at local, landscape and international level and enables restoration of the Ticino Landscape (TL), thus spurring action and establishing significant synergies with other processes to ease the removal of barriers and amplify impact.
 2. Sustain the provision of **ecosystem services** from agricultural land and forests for people's benefit.
 3. Enhance **ecological connectivity** by creating new or restoring degraded wetlands, habitats and watercourses, easing the movement of species and encouraging fuller ecological processes.
 4. Improve the status of four native **species**, facilitated by enhanced ecological continuity.
 5. Increase **climate resilience** of the secondary water network of the lower Ticino Valley and of the forests of the Prealps.
 6. Internal and external **communication**, participation, networking and capacity building to ensure that decisions for the Landscape are made consensually and actions are implemented with competence.
- Outcomes 1 and 6 on Governance and Communication respectively are transversal to all others.

Landscape description

The 248km-long Ticino River originates in the Swiss Canton of Ticino, where its course has been deeply modified since the late XIX century through levees, dams, artificial channels and the drainage of the Bolle di Magadino swamps, to produce hydropower, prevent the flooding of agricultural land and increase production. The Upper Ticino River enters Lake Maggiore downstream of the historical city of Bellinzona, and its lake delta is a RAMSAR site protected by the Bolle di Magadino Nature Reserve and Cantonal Park. The Lower Ticino River exits the Italian portion of the lake, flowing through Piedmont and Lombardy towards the Po River, crossing major agricultural areas (the northernmost rice paddies in the world and the most productive in Europe) and the city of Pavia. The Lower Ticino River is altered by three dams and a vast secondary channel network, but it still flows freely along most of its course, creating river branches, isles and wetlands. In Italy, the river is protected by the Ticino Valley and Ticino Lago Maggiore Regional Parks and a MAB Reserve. Throughout the centuries, the TL has been an important agricultural area, with navigable waterways used to move people and goods between the Canton of Ticino and the Po Plain. Here Leonardo da Vinci studied hydraulics, designed an extensive canal system, explored natural history and made world-famous drawings. Since the XIX century, people have altered the original ecosystems and created a cultural landscape, rich in history and tradition, with different patterns in Switzerland and Italy but the same cultural heritage. Intensive agriculture and animal farming have greatly affected native mixed deciduous forests; urbanisation and industrialisation have destroyed 95% of the largest lowland heathland in the Po Plain, that once covered the middle portion of the basin. Environmental degradation and habitat fragmentation have led to loss of biodiversity and connectivity. The changes in the Upper Ticino River have generated deep hydro-morphological impacts and flow alterations, addressed by the Canton of Ticino through a comprehensive strategic river restoration plan started in 2016 and ending in 2035. This plan needs to be supported by actions leading to resolution of conflict and social acceptance of restoration measures. In Lake Maggiore and the Lower Ticino River, several interventions have defragmented the dams, now permeable to fish, and have contributed to restoring the habitats of endangered species and ecological continuity. Past and current projects have prepared the ground for this large-scale proposal: conditions are appropriate, both at the governance and field level.

Biodiversity importance

Species listed as Near Threatened or above at global scale in the IUCN Red List - **Mammals**: *Lutra lutra* NT (to be confirmed), *Myotis bechsteinii* NT, *M. capaccinii* NT, *Plecotus austriacus* NT. **Birds**: *Aythya ferina* VU, *A. nyroca* NT, *Falco vespertinus* VU, *Gypaetus barbatus* NT, *Haematopus ostralegus* NT, *Limosa limosa* NT, *Passer italiae* VU, *Streptopelia turtur* VU, *Sylvia undata* NT, *Vanellus vanellus* NT. **Reptiles**: *Emys orbicularis* NT. **Amphibians**: *Pelobates fuscus insubricus* EN in Italy, *Rana latastei* VU. **Fishes**: *Acipenser naccarii* CR, *Anguilla anguilla* CR, *Barbus caninus* EN, *Chondrostoma soetta* EN, *Huso huso* CR (reintroduction begun 2017), *Knipowitschia punctatissima* NT, *Romanogobio benacensis*

(EN), *Thymallus aeliani* CR. **Crustaceans:** *Austropotamobius pallipes* EN. **Insects:** *Ampedus brunnicornis* VU, *A. cardinali* NT, *A. coenobita* NT, *A. quadrisignatus* EN, *Anergates atrarukus* VU, *Anisarthron barbipes* VU, *Bombus alpinus* VU, *B. inexpectatus* EN, *B. mendax* NT, *B. mocsidus* NT, *Callicera macquarti* EN, *Carabus intricatus* NT, *Cerambyx cerdo* VU, *Ceruchus chrysomelinus* NT, *Cheilosia alpestris* EN, *C. laeviseta* EN, *C. marginata* NT, *C. montana* EN, *C. nivalis* EN, *C. pedemontana* EN, *Coenagrion mercuriale* NT, *Coenonympha oedippus* NT, *Colias phicomone* NT, *Cordulegaster bidentata* NT, *Corticeus versipellis* EN, *Cucujus cinnaberinus* NT, *Diodesma denticincta* NT, *Erebica flavofasciata* NT, *Eupeodes tirolensis* NT, *Formica lugubris* NT, *F. polycytena* NT, *F. pratensis* NT, *F. rufa* NT, *Gonodera metallica* NT, *Graphoderus bilineatus* VU, *Halictus carinthiacus* EN, *Hipparchia fagi* NT, *Hylaeus crassanus* NT, *H. friesei* NT, *Lasioglossum breviventre* EN, *L. minutulum* NT, *L. sabulosum* NT, *L. setulosum* NT, *Lycaena dispar* NT, *Lopinga achine* VU, *Merodon gallicus* VU, *Microdon myrmicae* VU, *Mycetochara thoracica* NT, *Nehalennia speciosa* VU, *Nomada argentata* NT, *N. armata* NT, *N. baccata* NT, *N. errans* NT, *Orthonevra plumbago* EN, *O. tristis* NT, *Osmoderma eremita* NT, *Pedostrangalia revestita* VU, *Pelecocera lusitana* NT, *Phengaris arion* NT, *Pipizella nigriana* EN, *Platycheirus fasciculatus* EN, *Pseudotriphyllus suturalis* NT, *Ropalopus insubricus* NT, *R. ungaricus* EN, *Rosalia alpina* VU, *Sphaerophoria fatarum* NT, *Sphegina cornifera* NT, *S. platychira* NT, *Strongylognathus alpinus* VU, *Trichopsomyia lucida* VU, *Xylophilus testaceus* NT. **Molluscs:** *Acicula vezzanii* NT, *Bythiospeum vallei* CR, *Chilostoma adelozona* VU, *Chondrina feneriensis* NT, *Drepanostoma nautiliforme* NT, *Eucobresia pegorarii* EN, *Graziana quadrifoglio* VU, *Microcondylaea bonellii* VU, *Oxychilus clarus* NT, *Pseudanodonta complanata* VU, *Pseudunio auricularius* CR, *Sphaerium rivicola* VU, *Vertigo angustior* NT, *V. moulinsiana* VU. **Plants:** *Anacamptis morio* NT, *Drosera intermedia* NT, *Elatine alsinastrium* NT, *Eriophorum gracile* NT, *Galanthus nivalis* NT, *Isöetes malinverniana* CR.

Valuable habitat types (Red List of European Habitats): Freshwater habitats: valuable wetlands (Bolle di Magadino is the only natural river mouth in a lake in the southern Alps and one of only a few in Europe); permanent oligotrophic water bodies with very-soft-water species NT; permanent dystrophic lakes, ponds and pools NT; calcareous springs and spring brooks VU; periodically exposed shore with stable, eutrophic & mesotrophic sediments with pioneer or ephemeral vegetation NT&VU. Mires and bogs: active raised bogs EN; non-calcareous quaking mires VU. Grasslands and scrubs: semi-dry perennial calcareous grasslands VU; lowland moist or wet tall-herb and fern fringe VU; residual lowland heathlands, one isolated and unique nucleus in the Po Plain (Dry heaths VU). Forests: well-preserved residual patches of mixed deciduous forests once covering the whole Po Plain (the largest of which covers 20,000 ha) comprising temperate and boreal hardwood & softwood riparian woodland EN&NT and *Carpinus* and *Quercus* mesic deciduous woodlands NT; broadleaved swamp woodlands on acid and non-acid peats VU. Agroecosystems: High Nature Value farmlands; rice paddies; flooded meadows (unique traditional agricultural areas).

The TL is an **important migration route for birds** crossing the Alps to reproduce in North and Central Europe, using lakes, wetlands, reed beds, sandy shores and rice fields as stopovers. Four **Important Bird and Biodiversity Areas** (IBAs) exist, totalling 70,665 ha, established for heronries in the south, for migratory birds, water birds and breeding species associated to reed beds in the centre and for species associated to semi-open habitats in the north. Radar surveys will confirm whether the Landscape is also used by migratory bat species.

Integration and landscape-scale approach

The TL is in the Alpine and the Continental biogeographical regions and is a mosaic of habitats in connection with four main wider intertwined landscapes: Alps, Apennines, Po River Basin, and agroecosystems of the Po Plain.

The TL is the only existing ecological corridor between the Alps and the Apennines and it is critical for wildlife dispersion and (re)colonization, e.g., wolves' dispersion from the Apennines to the Alps. This is particularly important in the global climate scenario, which pushes species' ranges. The Landscape is an important freshwater corridor, connecting the Upper Ticino with the Adriatic Sea via the Po River. The ecological continuity of this corridor from Lake Maggiore to the Adriatic Sea was restored in 2017 after nearly 60 years of fragmentation, while the Upper Ticino needs further restoration; now migratory fish can move freely from Lake Maggiore to the sea and back. This has paved the way for the reintroduction of the locally extinct *H. huso*, an initiative that started in the Lower Ticino in 2017 and is to be continued by the TI. Likewise, this corridor contributes to sustaining the recovery of migratory fish that use the Adriatic Sea. *Castor fiber* and *L. lutra* are also likely to naturally find their way downstream from Switzerland to Italy. The Ticino River is the most important tributary of the Po River in terms of water flow, thus it makes a major contribution to the hydrological cycle in the Po Basin and to the regional economy (agriculture accounts for 41% of land use in the Po Basin). Indeed, the waters of the Ticino supply a capillary water network irrigating half TL, about 500,000 ha. Unsustainable agricultural practices, especially rice farming,

have important implications on the water table in the TL, compromising the complex hydrological system that nourishes the Po Valley. The project will test and promote sustainable agricultural practices that can positively affect the ecological and productive value of cropping systems throughout the Po Plain.

The Covid-19 pandemic has triggered economic crises in Italy and Switzerland, especially in tourism, and widened the gap between high and low-income groups. Despite the TL being among the most productive regions of Europe, it has also been affected. Thanks to NextGenerationEU and parallel Swiss programmes, there will be huge investment in socio-economic and environmental issues. The project is thus developing in a favourable context, accompanied by increased attention to sustainable growth, which the TI supports.

Barriers and mechanism for change

In general, the main barriers to restoration are: uncoordinated transnational governance of the Landscape (Governance); unsustainable agricultural practices (Ecosystem services, Climate Resilience); fragmentation of habitats and ecological processes (Ecological connectivity, Species, Climate Resilience); limited awareness of the connectedness and importance of the Landscape to people's well-being (Communication). The project will address all of them, to a different extent, as described in Methods/Activities. This would be the first large project developed and implemented jointly by the TI, as opposed to the several projects individually run by partners (albeit in coordination). The most significant positive tipping point to be triggered by the ELP grant would be the massive progress on the implementation of the Restoration Plan, and thus in the actual on-the-ground restoration of the Landscape, addressing barriers one by one. After thorough preparation undertaken since 2019 (assembling the partnership, establishing its governance, developing the Restoration Plan), the Initiative has reached a stage mature enough for implementation. After the big push we expect a snowball effect, with species and processes making a comeback and, having concrete achievements to show, an increase in fundraising results.

Tenure

In **Switzerland**, rivers and lakes are public waters managed by the Cantons; the State Council grants the rights to use and alter them. Cantons are responsible for the conservation and management of biotopes of national, regional and local importance. All project activities taking place in Switzerland involve biotopes comprising public waters and private properties. By Federal Law, private owners must find an agreement with the Cantons to allow restoration activities and maintenance. If they can demonstrate that they have suffered economic loss they can be refunded. Cantons have the right to expropriate land, but this occurs very rarely. In **Italy**, waters of public interest are State property; Regions grant the right to use or modify them, the State regulates and imposes restrictions on their use. The natural secondary water network is regulated by the municipalities, while the artificial secondary water network is property of the State and is regulated and managed by Land Reclamation Authorities and Irrigation Associations, except for the last tracts of irrigation canals directly owned and managed by farmers. Forest areas are regulated by regional laws, uses and alterations are permitted by the Regions, or by regional and national parks if the forests are within their borders. Conservation of important landscape elements, like hedgerows and the ecological network, is delegated to the provinces. Stricter regulations may be set by protected areas and by municipalities through their land use and urban plans. Project activities on ecological connectivity in Italy will involve mainly public waters and the public properties of the Ticino Valley Regional Park and of municipalities, all of which support the project. The two southernmost areas involved are private farmlands partly within the Ticino Valley Regional Park and partly outside, in the province of Pavia. In these cases, specific agreements will be made with farmers, and the restored habitats will be protected and managed as new elements of the ecological network, according to the regulations of Park and Province.

All managing and regulating authorities of the Landscape responsible for the restoration activities foreseen in the project are partners or stakeholders who have been involved in the planning phase. These authorities are committed to protecting and maintaining the restored areas and upscaling their impact in the future. Activities on agricultural lands are mediated by farmers, and their commitment has to be developed during the project with specific foreseen activities. Farmers associations were involved in the planning phase and are keen to follow the testing activities and share their results.

Project management

Istituto Oikos, as the Ticino Initiative Technical Secretariat, will be responsible for the general project coordination, ensuring efficient technical, administrative and financial management; it will lead monitoring and evaluation, communication and project visibility as well as financial and technical reporting to ELP. The Governance Roundtable, made up of representatives of key Italian and Swiss partners, the Project Manager and Oikos experts on communication and the human dimension, will represent the **Project Management Unit (PMU)** in charge of the decisions and the definition and review of work plans. The PMU will meet on a quarterly basis and operate with the technical and strategic support of: (i) the

Scientific committee, composed of all partner research institutions and technical experts from partner SMEs and civil society organisations, coordinated by the State University of Insubria (**Scientific Coordinator**); and (ii) the **Administration Department of Istituto Oikos** which will provide guidance on budgetary control, resource allocation and consistency with the principles of transparency and financial accountability. **Six Working Groups (WGs)**, one for each Outcome, will include representatives of project partners and main stakeholders involved in the specific Outcome. The WGs will nominate a coordinator, chosen among partners, and will frame outcome activities, discuss approaches and advise the PMU according to the action plan defined. Sub-groups may be created if needed. Annual workshops, open to civil society, local communities, stakeholders and media, will be organized to show preliminary results, share lesson learnt and collect feedback.

Outcomes: Change expected by the end of the project (TP = Tipping Point)

Outcome 1 - The governance processes of relevant parties support the restoration of the Ticino Landscape. The governance of the TI has matured and the TL is the focus of an international high-level political structure (TP). Networking with relevant processes has become more streamlined, the TI is more widely known and the TL is considered in the strategies, work plans, projects and funding priorities of third parties (TP).

Outcome 2 - The benefits to people provided by the agricultural and forest ecosystems of the Ticino Landscape increase. Pro-biodiversity and carbon sink practices in farmlands are tested and promoted among farmers (TP) and public funding allocated (TP), with measured improvement in soil fauna and above-ground biodiversity (TP). Forests in the Ticino Valley Regional Park have been FSC-certified, a PES mechanism is in place which raises revenue to reinvest in responsible forest management and restoration (TP).

Outcome 3 - Ecological connectivity in the Ticino Landscape improves. Current fragmentation has been overcome to a large extent through the restoration and recreation of wetlands, riparian habitat and river stretches. Ecological continuity has been restored at 11 sites (TP) for which specific work plans already exist. Plans for bridging fragmentation at other sites are available as well as all preparatory studies for the sediment management plan of the Lower Ticino River.

Outcome 4 - The conservation status of 2 locally-extinct and 2 threatened target species in the Ticino Landscape improves. Action has begun on 6 of the 11 key species included in the Restoration Plan: new stable populations of *I. malinverniana* and *P. f. insubricus* are established (TP); the *H. huso* nursery produces a stable stock of individuals (TP) for restocking; favourable habitat and social conditions for a viable *L. lutra* population exist (TP); two transnational working groups are in place to restock *E. orbicularis* and conserve *A. pallipes*: action has begun to reduce IAS where they menace key species.

Outcome 5 - The resilience of the Ticino Landscape increases throughout the secondary water network and the forests of the Prealps. Fluctuations in water table levels are reduced locally, due to new irrigation practices (TP); the recovery of forests, degraded by fires and windstorms, begins through practices aimed at providing resilience to further extreme weather events (TP).

Outcome 6 - The vision of the Ticino Initiative is welcomed by key stakeholders and restoration of the Ticino Landscape advances effectively. The vision is generally welcomed by key stakeholders. Information flows smoothly, people's attitudes, which could potentially hinder restoration, have been addressed promptly and risks mitigated; there is fruitful collaboration with environmental, hunting, fishing associations and communities (TP). Restoration has advanced in a timely manner through decisions made jointly by relevant parties via working groups and roundtables. New networks for social innovation are established (TP).

Change expected in the medium-term (e.g. 15-20 years)

The Vision for the TL developed in 2019 appropriately describes the changes expected in the next 15-20 years and more, beyond the ELP funding (2027) and the current restoration plan (2031). By that time the TL is expected to have overcome most barriers and be a functional terrestrial and aquatic corridor connecting the Alps to the Po Plain, the Apennines, and – via the Po River – the Adriatic Sea. In this landscape, species are allowed to move and ecological processes to unfold as naturally as possible because existing physical barriers are permeable to wildlife and do not significantly impair hydro-morphological processes. River morphology is mostly natural. Invasive alien species are under control and key native species have good conservation status, with viable populations of at least two which were previously locally extinct. The status of non-key threatened species is also improved thanks to habitat restoration. Natural habitats and productive landscapes coexist and sustainable agricultural practices are widespread. Economic activities and local lifestyles are sustainable, and support biodiversity and the natural capital that provides ecosystem services, making habitats more resilient to climate change and extreme weather events through ad hoc restoration measures. In turn, restored ecosystem services

benefit communities in the Landscape and beyond through mitigation of floods and droughts, recreation and productivity. People take responsibility for the Landscape and adopt sustainable behaviours because they have become aware of the potential and recognize a common identity in the cross-border area. This, in turn, is an added value for the tourism sector that benefits from the international reputation of the Landscape as a thriving economic area in equilibrium with the environment. The Landscape is managed as a whole with a dedicated Italo-Swiss governing structure; authorities cooperate effectively across the border. The Landscape is embedded in national and international strategies and the Ticino experience feeds into international processes.

Methods/activities

Materials and equipment are detailed in the budget and in the Ticino Landscape Restoration Plan; methods and activities are summarized here.

Outcome 1 (Governance): Well supported by Communication (Outcome 6), we will create the political conditions at international and local level to restore the Landscape by pursuing: the recognition of the TI by Italian and Swiss authorities and the creation of a high-level international political structure for the management of the TL; synergies with the Alpine Convention, the EU Strategy for the Alpine Region (EUSALP), the Italian and Swiss national biodiversity strategies and the Plans of the Po River Basin Authority; common objectives with the Ticino Val Grande Verbano MAB Reserve covering the entire Italian portion of the Landscape; a working group on agricultural practices.

Outcome 2 (Ecosystem services from agricultural and forest land): Through testing and promotion of sustainable agricultural practices in collaboration with farmers (roundtable) we will focus on: green manuring instead of winter fallow in rice agroecosystems to improve soil fertility and biodiversity; conversion of annual fodder cropping into permanent grasslands or meadows forage systems; crop diversification at farm and landscape level and permanent soil cover to promote carbon farming. Besides improving the status of soil and above-ground biodiversity locally and restoring connectivity through farmland, these activities will also increase the soil organic carbon stock and soil fertility, thus improving productivity. Ecosystem services of selected forest habitats will be FSC-certified, and funds will be raised through WOWnature.eu involving private companies in financing forest restoration.

Outcome 3 (Ecological connectivity): Ecological connectivity will be restored through the already-planned creation or rehabilitation of wetlands, and restoration of riparian habitats and watercourses to complete the regional and local ecological networks. Restoration works will be site-specific including: excavation of new ponds; reshaping of riparian stretches; removal of longitudinal barriers in rivers; re-naturalisation of river stretches; planting of multi-species vegetation. In some locations structures for ecotourism will be built (birdwatching towers, bike lanes). In Italy, preliminary studies will be undertaken to prepare for the sediment management programme for the lower Ticino River, and feasibility studies will prepare for further restoration of the longitudinal connectivity of watercourses.

Outcome 4 (Species): *I. malinverniana*: a nursery will be created at the University of Pavia and specimens used for restocking and reintroduction; guidelines for the species' conservation will be developed. *H. huso*: breeding for release of about one thousand specimens/year will continue; measures against poaching, and to control the competing invasive alien *Silurus glanis* will be taken. *A. pallipes* and *E. orbicularis*: international working groups will be established to coordinate future activities; allochthonous crayfish species will be removed in the Bolle di Magadino Reserve. *L. lutra*: a feasibility study will be conducted, identifying and then implementing actions to re-establish a viable population. *P. f. insubricus*: key wetlands will be restored and restocking will take place.

Outcome 5 (Resilience): The secondary water network, supplied by the Ticino River and irrigating half a million ha of farmland in the Landscape, will be made more resilient by changing the flooding periods in the area of the East Sesia Irrigation Association (adopting early seasonal flooding of rice fields and winter flooding of meadows) and restoring the irrigation artifacts that regulate the water flows of the ETV Land Reclamation Authority through conservative hydraulic engineering works. Together, these measures will increase the availability of groundwater resources. The forests of the Prealps hit by extreme weather events will be made more resilient through restoration according to ad hoc guidelines that will be developed. These will be based on site-specific studies of fire risk, soil erosion, wind and drought vulnerability, forest dynamics in climate change scenarios, and the role of animal species in forest dynamics.

Outcome 6 (Communication, external and internal): At local level we will ensure that the vision of the TI is welcomed and that landscape restoration is co-designed with key stakeholders and communities through a participatory process aimed at preventing misunderstanding and complaints, especially regarding reintroductions and new agricultural practices. On a broader level, working relationships and exchanges will be established with other transnational river landscapes and restoration efforts and key Institutional stakeholders. A visual and narrative identity, featuring the swallow as a messenger species,

will be developed and adapted for PR purposes and external communication, providing tools, contents and guidelines for the partnership. The Communication working group will ensure consistency of messages and tone of voice. The Technical Secretariat will secure capacity building and smooth information flows within and between groups.

Climate change

Climate change projections have been considered in the Ticino Restoration Plan. Projections for the Landscape foresee longer drought periods and more frequent and severe extreme events (heat waves, heavy rainfall and windstorms). In fact, these have already occurred in the area: repeated forest fires, windstorms and landslides from heavy rains in the Campo dei Fiori Regional Park and Canton of Ticino, and severe and persistent heat waves in the Po Plain and the Prealps have caused great damage and are expected to continue and become worse in the future. Such extreme events and their consequences are among the main challenges faced by the Landscape, which the Restoration Plan and the project specifically address. It is precisely in the perspective of climate adaptation and mitigation that the TI has thoroughly analysed the future consequences of climate change, identifying the most appropriate actions to counteract them. One General Objective of the TI is: Foster the climate resilience of ecosystems and human communities and mitigate the impact of extreme climate events. It has two Specific Objectives, both addressed in the project: 1) Increase the resilience of the secondary water network of the lower Ticino River. The project aims at mitigating the impact of agricultural and irrigation practices on the secondary water network and on the water table, reducing their vulnerability to water shortages. This is also expected to have a positive effect on the main Ticino River course, mitigating thermal alteration and maintaining groundwater-fed habitats. In turn, agroecosystems and their water-related biodiversity will become more resilient as well; 2) Increase the resilience of forest ecosystems in the Prealpine area. This concerns forest habitat recently hit by extreme events like wildfires and windstorms. The project will work to understand what would make these habitats more resilient to new extreme events, and use this knowledge to restore damaged forests accordingly.

Local communities

Genuine engagement of local communities in the project requires vision, qualified staff and significant resources. We acknowledge that the Landscape is diverse in terms of values and perceptions and diverse strategies are needed to address them. Our approach is: 1. invest time in preparing for restoration, select target groups and evaluate conflicts and alliances; 2. create multiple occasions for target groups to exchange and co-develop activities; 3. facilitate dialogue and participation, foster new networks within the communities. All this already began while writing the Restoration Plan (mapping of stakeholders in the PPG) and preparing for this project, and will remain a major component in the future. Two associations of target local communities are project partners (see Other Partners). We developed a communication strategy to strengthen the sense of a common identity in the Landscape, promote social innovation and ensure participation. This will build broad consensus among stakeholders and citizens and secure the long-term sustainability of restoration.

Local authorities. They are responsible for the local ecological network, will manage it and possibly replicate practices tested elsewhere in the Landscape. They will constantly be informed and involved, including through existing networks. **Farmers' community.** The future of the Landscape's agroecosystems is in their hands. Selected committed farmers will test agricultural practices. After testing, many farmers will reasonably follow in their steps. Many project partners already work with farmers. We had two consultations with the three main farmers' associations to discuss the project and the creation of a future formal working group. Significant resources will be invested in the constant dialogue with farmers.

Anglers' community. They are allies and will continue to be the guardians of freshwater biodiversity. They have been cooperating with project partners for the reintroduction of *H. huso* in the lower Ticino. Their attitude towards the comeback of *L. lutra* will be evaluated in Italy and Switzerland, where participation will be fostered and communication tailored to prevent or mitigate conflicts that may arise on this. **Civil society and citizens at large including youth groups.** They care and advocate for the Landscape. We will work to maintain the consensus already expressed around Landscape restoration and further build on it, taking advantage of a network of allies and their endorsements.

Members of the above sub-communities are sending letters of support to the project.

Other stakeholders

Key institutional stakeholders (not yet listed among the partners) participated in the planning phase and share the TI Vision: Departments of the Lombardy and Piedmont Regions, and the Po River Basin Authority responsible for drafting the management plan of the entire Po Basin in which the Ticino River is included. These stakeholders have high influence on the TL as they lead on policies and strategies that have implications for many sectors such as water, agriculture, forests, wildlife, natural hazards, energy. They will provide letters of support to the project and will engage in our actions on governance, ecosystem

services, threatened species and resilience to climate change. On governance, our first project aim is the official recognition of the TI by the Swiss State Council and the Italian Lombardy and Piedmont regional Councilorships. This would be the key to establishing an international high-level political entity for the Landscape's coordinated management. Prospective **international stakeholders** are: the International Commission for the protection of Italo-Swiss waters (CIPAI), which has been informed about the aims of the TI; the Regio Insubrica Working Community, which promotes cross-border cooperation in the Italian-Swiss Pre-Alpine Lake area and could help the TI to build strategic networks. **National stakeholders** are: the Italian Institute for Environmental Protection and Research (ISPRA), which provided guidelines for the feasibility study for *L. lutra* and will closely follow the process; the UNESCO MAB Reserve Ticino Val Grande Verbano, which includes the majority of the Italian portion of the Landscape, was involved in the planning phase and signed a support letter; one of the project activities ensures coherence in planning tools.

Livelihoods and wellbeing

Improvements in agricultural practices (annual fodder cropping converted to permanent grassland, green manuring in rice agroecosystems, crop diversification, permanent soil cover, more sustainable use of irrigation water) will provide benefits to farmers and residents of the TL and beyond. Limiting the risk of soil fertility loss will benefit livelihoods by sustaining crop productivity and reducing costs. Similarly, adopting agricultural practices that ensure groundwater recharge will reduce the vulnerability to drought of the entire secondary water network, while a more diverse landscape will reduce the risks of floods downstream. Increased diversity at farm and landscape level, and restored habitats, will enrich wildlife communities. Resilience-aware forest restoration and management will mitigate the impact of extreme weather events expected in the future. The revenue raised through the PES mechanism will be reinvested to enhance the resilience of existing forests, increasing carbon stock and biodiversity. People working in tourism will benefit from new opportunities arising from the appeal of the restored TL, which will be known locally and internationally; more visitors and residents will profit from the enhanced recreation options. The entire local community of the project area will experience a change, as it will be actively involved in co-planning and co-design: needs and points of view will be integrated into the actions, which will make them as suitable and as long lasting as possible.

Monitoring plans

Istituto Oikos will provide overall coordination of the monitoring plan. Each partner will nominate a Monitoring Focal Point for their activities and areas of competence. Technicians will be appointed by the partners or the PMU for data collection, in collaboration with the Focal Points and according to the logical framework. The **phases** of the monitoring processes are: a) Inception phase, to update the project monitoring system in light of any changes in the context; b) Development of the project Monitoring Plan: methodology (method of measurement, responsibilities, routine review and data control, frequency, targets) and tools (for data collection and analysis); c) Regular system review (monitoring the monitoring), to integrate changes and any issues which arise; d) Quarterly monitoring reports, which will support project management and decisions by PMU, partners, and working groups; e) Quarterly meetings of the Project Management Unit with the Working Groups to check progress, identify gaps and collect feedback from stakeholders. **Tools and methodology** will be finalized at the start of the project in cooperation with partners and will include: i) Logical Framework. We are aware that monitoring advice will be offered to approved projects and that the current logframe is a starting point to be improved on and completed later. We would also like to align our indicator system to those of the Multi-annual Action Programme 2023-2030 of the Alpine Convention and of other bilateral and international processes; ii) Monitoring Matrix of 11 elements: Indicator, Baseline, Target, Sources of verification, Data collection tools, Responsibilities/roles for data collection, Frequency of monitoring, Target reached (as of reference month), Critical issues identified, Deviations, Proposed solutions. The Matrix is to be aligned as much as possible to the internal monitoring procedures of project partners; iii) Quarterly report templates, to consolidate the data and information collected and then share them in bi-monthly PMU coordination meetings to assess progress, review operational planning and identify corrections.

Wider relevance

Considering that replication always requires adaptation to new contexts, numerous opportunities exist for replication of the TI approach elsewhere. The most suitable platforms to use to exchange and inspire replication pertain to the Alps and other mountain and freshwater regions of Europe – the TI can contribute to achieving their objectives, strategies and work plans:

- the Thematic Working Bodies (TWBs) of the Alpine Convention, especially the Alpine Biodiversity Board and the Alpine Climate Board. The latter produced the Climate Action Plan 2.0 and identified priority implementation pathways which include transnational model river basins. TWBs will receive new mandates for 2023-2024 and the Alpine Convention is developing its Multi-Annual Action

Programme 2023-2030, with priorities Climate change, Biodiversity and ecosystems, Quality of life.

- The Action Groups of the EU Strategy for the Alpine Region (EUSALP), especially AG6 on Natural resources and water and AG7 on ecological connectivity. The TI was already presented to AG7 members at their 15th meeting in November 2021.
- Direct exchanges with other Alpine transnational river landscapes where restoration has begun, such as the Inn, Rhine and Roya. The TI already reached out to them in 2020 and 2021.
- The community of practice of ELP projects.
- IUCN, especially IUCN Europe in its impact areas “Sustainable agricultural and food system”, “Restoration of European ecosystems to bend the curve of biodiversity loss”, “Protection and restoration of forest ecosystems” and “Minimise the impact of Invasive Alien Species” (European work plan 2021-2024). The TL could be a model region for governance and other components. The IUCN portal collects information on the implementation actions; the next IUCN WCC could further disseminate the Ticino experience.
- The website and community of practice of the UN Decade on Ecosystem Restoration 2021-2030. The Ticino Restoration Plan and the proposed project activities are in line with the Restoration Principles of the UN Decade and have been designed as a contribution to the Decade.

Risks

External risks posed to the project and → countermeasures that the TI will deploy:

- new economic crisis in Italy, with less investment in the environment → Possibly not a major risk, in fact expectations are of investment growth, given the pressure from the EU (e.g., EU Biodiversity Strategy, EU Nature Restoration Law).
- Serious USD devaluation, diminishing the value of the ELP grant → funding for the TI comes from multiple European, national, regional, public and private sources. The activities foreseen in the project would be on hold until new funding is secured, but the TI will not stop.
- Natural or man-made disasters seriously degrading habitats in the TL before the project can make them resilient → the timeline to reach restoration goals would extend; meanwhile some funds can be redirected to the most urgent interventions to mitigate and reverse the impact of disasters. In addition, the project aims at resilience, thus bracing the TL against future disasters in the long-term.

Internal risks within the project and → relative countermeasures that the TI will deploy:

- Discontent towards the project locally, impairing the social acceptance of restoration → if implemented thoroughly, the communication strategy will prevent this.
- Conflict between sectors in the TL, e.g., agriculture vs biodiversity → the Restoration Plan is built around the needs of the various sectors and conflicts are prevented at the outset.
- Conflict emerging between project partners → the extensive record of work between project partners, the shared pathway that has led to the TI and the preparation of the project make this a reassuringly low risk. Furthermore, the internal structure foreseen not only for project management but for the entire TI encourages communication, sharing and looking for joint solutions.

Sustainability and post-project plans

This is not a stand-alone project, but the component of a much broader process based on a shared Theory of Change: the TI, as it is. Sustainability is secured by: **Governance**. With significant effort in building the governance of the TI and pursuing synergies with the existing governance framework, we have built a solid foundation. The project will invest greatly in completing and strengthening the governance of the TI. Specific actions are planned to influence policy and funding, and nest the TL in the interests of broader national and Alpine processes. **Planning coordination**. The TI strategy is outlined in the Ticino Landscape Restoration Plan 2021-2031, which coordinates with other even longer plans (the Canton of Ticino's Plan for the Revitalization of Watercourses is to 2035); it can be updated and renewed for decades to come. **Cooperation and participation**, between the two countries and between entities within each country ensure that all issues, choices, and solutions are shared through continuous dialogue and coordination. **Co-responsibility**. The parties share responsibility for the Landscape. The objectives of the TI are aligned to their mandates. Restoration results and achievements will be embedded into land use and management plans by the entities responsible for the management of the Landscape, and therefore preserved over time. **Active stakeholder participation and extensive communication**. As foreseen in the communication strategy, the enlarged partnership of the TI will work through participatory processes and working groups involving key stakeholders responsible for, or affected by, the actions: the interests and needs of the Landscape are incorporated into the restoration and governance. **Sense of belonging**. A common identity will be promoted in the Landscape: the sense of belonging to the same cultural, historical and environmental Landscape will increase the desire to preserve it.

Common Programme Elements

Each project funded by the Endangered Landscapes Programme will be required to include components that are common to all projects. This is to encourage the application of good practice, to facilitate lesson learning and exchange of experience between projects, and to enable the demonstration of impact at programme level. Applicants should ensure that these activities are planned and adequately budgeted for. Information about these common programme elements can be found in Annex 1. If you have any questions, please email s.sanders@jbs.cam.ac.uk.

Logical framework

A logframe is a table that lists and shows the logic of how the activities will lead to the short-term outputs, which in turn lead to the medium-term outcomes, and ultimately the goal (or impact). Please get in touch with the ELP's Programme Manager if you need guidance on completing a Logical Framework.

Please complete the unshaded boxes in the table below (if your project is given in-principle approval you will be required to complete a full logical framework, including a breakdown of activities). If necessary add or delete rows on the form. Please refer to the [Landscape Restoration Monitoring Framework](#) before completing the indicators column.

Project summary		Measurable indicators	Means of verification	Important assumptions
Goal/Impact: <i>(The long-term vision of the Ticino Initiative)</i> The Ticino Landscape is a functional terrestrial and aquatic ecological corridor between the Alps, the Apennines, the Po Plain and the Adriatic Sea. Habitats and native species, including formerly extinct ones, exist in equilibrium and maintain a good conservation status. Water quality is good throughout the basin and river morphology is mostly natural. Existing physical barriers are permeable to wildlife and do not significantly impair natural river fluctuations and hydro-morphological processes. Economic activities and local communities are sustainable, support biodiversity and in turn benefit from ecosystem services such as recreation and the mitigation of floods and droughts. People recognize a common identity in the cross-border Ticino Landscape and take responsibility for their shared resources, adopting sustainable behaviour. Ecological connectivity is secured by authorities cooperating effectively with one another across the border. The Landscape is known to be a thriving economic area in harmonious balance with the environment.				
Outcome(s): <i>(The change you expect to have achieved by the end of the project)</i>				
1.	The governance processes of relevant parties support the restoration of the Ticino Landscape	N. of processes that have been influenced by the Ticino Initiative to support the restoration of the Ticino Landscape. Total amount of additional funds raised by project partners for the restoration of the Ticino Landscape. N. of new and existing structures involved in the transnational governance of the Ticino Landscape or the implementation of specific objectives of the Ticino Restoration Plan (incl. formal and informal working groups).	Third party documents (e.g., strategies, action plans, reports, minutes, meeting agendas). Partners' communications. Project documents.	The influence of the Ticino Initiative is clearly recognizable in processes that may have been influenced by several stakeholders and in a number of ways.

Project summary		Measurable indicators	Means of verification	Important assumptions
2.	The benefits to people provided by the agricultural and forest ecosystems of the Ticino Landscape increase	N. of applications by farmers for funding from public programmes to implement sustainable agricultural practices, after awareness raising. Change (ha) in permanent grassland surface. Soil carbon stocks. Area (ha) of rice fields adopting green manuring. Rice productivity. Global warming potential and eco-efficiency. Soil health indicators (labile and stable soil organic matter fractions, nutrient availabilities, soil enzyme activities). Soil biodiversity indicator (e.g., QBS-ar for microarthropods). Species richness in rice fields. Landscape/local diversity index. Area (ha) with at least 30% of permanent soil cover. N. of reproductive couples of herons. Trend of common and farmland birds. Amount of funds from the PES reinvested in the forests. Area (ha) of certified forests.	Official reports of applications to Rural Development Programmes or other public funds provided by the Regions or other proposing entities. GIS and remote sensing maps. Interviews to involved farmers. Project inspections and reports. Field data collection by University of Turin and University of Pavia. Official reports of the National Rice Authority. Analysis of local raw data coming from the Farmland Bird Index. Annual Etifor sales report and bank transfers.	Measures favouring the biodiversity of agricultural areas are included in agricultural support instruments, starting with the Rural Development Programmes (not a necessary condition, but one that can facilitate dialogue). Farmers are willing to cooperate. Private companies are interested in compensation measures.

Project summary		Measurable indicators	Means of verification	Important assumptions
3.	Ecological connectivity in the Ticino Landscape improves	Area (ha) of wetlands and riparian habitat created and/or restored. Linear extension (m, km) of planted/upgraded vegetation formations and restored riparian habitat and watercourses. Distance (m, km) between patches of target habitat. Arrival of species through a new or a restored corridor. Species richness in new or restored habitats (wetlands, river stretches, etc.). River eco-morphology index.	Project partners and stakeholders' reports. Official monitoring reports by the Canton of Ticino. Original field data. Web databases (citizen science data). GIS and remote sensing maps.	Landowners grant permission for the restoration activities. The management authorities in the Canton of Ticino and the City of Bellinzona continue their endorsement and financial support to the project.

Project summary		Measurable indicators	Means of verification	Important assumptions
4.	The conservation status of 2 locally-extinct and 2 threatened target species in the Ticino Landscape improves	N. of individuals of <i>Isoëtes malinverniana</i> surviving two years after reintroduction or restocking. N. of individuals of <i>Huso huso</i> released. N. of acoustic tracking stations for the monitoring of migrating fishes. N. of individuals of <i>Silurus glanis</i> captured/year. N. of individuals of allochthonous crayfish species captured/year. N. of tadpoles of <i>Pelobates fuscus insubricus</i> released. N. of newly metamorphosed spadefoots of <i>Pelobates fuscus insubricus</i> after restocking. N. of actions performed to re-establish a viable <i>Lutra lutra</i> population. N. of target species that improve their conservation status.	Field data. Project partners' reports. Official communications from the Italian Institute for Environmental Protection and Research (ISPRA). Report of the Italian-Swiss Working Group on <i>Lutra lutra</i> in the Ticino River. IUCN Red Lists and reports/communications of the IUCN Species Survival Commission Specialist Groups. Documents and maps of the Habitat Directive reporting 2019-2024, or of the subsequent reporting period (2025-2030).	Lack of significant extreme climate events on a large scale. Effective transnational cooperation. Availability of <i>Huso huso</i> specimens from international or national farms. Key institutional stakeholders continue to support reintroductions.

Project summary		Measurable indicators	Means of verification	Important assumptions
5.	The resilience of the Ticino Landscape increases throughout the secondary water network of the lower valley and the forests of the Prealps	Maximum and minimum monthly water table level. Area (ha) of forest habitat restored after extreme events, according to forest resilience guidelines. Forest resilience index (diversity & composition, structure, regeneration, site level risk). Probability of fire occurrence in the forests restored according to resilience principles. Intensity of a prospective fire if it occurred in the forests restored according to resilience principles. Wind speed required to overturn trees in the forests restored according to resilience principles.	Official records of the Land Reclamation Authorities. Field data. Project reports.	Extreme climate events do not undermine the stability of the water system and the forest habitats. Farmers adopt new agricultural practices. Availability of: seedlings of suitable tree species and provenance from local forest nurseries. Availability of dendrometric data from forest management plans including forest age and on topography, soil type, canopy cover and tree species, distribution. Authorization to increase core sampling of selected trees.

Project summary		Measurable indicators	Means of verification	Important assumptions
6.	The vision of the Ticino Initiative is welcomed by key stakeholders and restoration of the Ticino Landscape advances effectively	N. of actors implementing activities proposed by the Ticino Initiative or that are in line with the Ticino Initiative vision. N. of actors who share and promote the Ticino Landascape Vision through communication tools and active participation in project actions. N. of people (% of sample) who declare to be more aware of, and willing to adopt, a more responsible behaviour toward the Ticino Landascape. N. of participants (%) who are satisfied with the participation process (involvement, expectations, knowledge and consideration of their opinions). Level of participation and satisfaction in the new networks for social innovation (qualitative indicator).	Communication campaign report. Project reports, pictures and attendance sheets. Analytics shared by local actors. Focus groups. Questionnaires. Digital Analytics.	Communities are interested and reactive.

Project summary		Measurable indicators	Means of verification	Important assumptions
Outputs: <i>(Tangible results of the activities intended to bring about each Outcome)</i>				
Outputs for Outcome 1. The governance processes of relevant parties support the restoration of the Ticino Landscape				
1.1	A supporting political structure sustainable in the long term.			
1.2	Long-term links and synergies between the Ticino Initiative/Restoration Plan and other processes at international, Alpine, national and local level.			
1.3	Collaboration between different stakeholders in the Ticino Landscape.			
Outputs for Outcome 2. The benefits to humans provided by the agricultural and forest ecosystems of the Ticino Landscape increase				
2.1	Awareness of agricultural practices favouring biodiversity.			
2.2	New permanent grassland on former annual fodder cropping.			
2.3	Green manuring in rice agro-ecosystems.			

Project summary		Measurable indicators	Means of verification	Important assumptions
2.4	Crop diversification at farm and landscape level and permanent soil cover.			
2.5	Improved status of local populations of farmland birds, especially those linked to rice fields.			
2.6	New funding available for forest ecosystem services conservation and enhancement.			
Outputs for Outcome 3. The ecological connectivity in the Ticino Landscape improves				
3.1	New or restored wetlands.			
3.2	Restored riparian habitats.			
3.3	Restored watercourses.			

Project summary		Measurable indicators	Means of verification	Important assumptions
Outputs for Outcome 4. The conservation status of 2 locally-extinct and 2 threatened target species in the Ticino Landscape improves				
4.1	New stable populations of <i>Isoëtes malinverniana</i> .			
4.2	New stable populations of <i>Pelobates fuscus insubricus</i> .			
4.3	Stable stock of <i>Huso huso</i> available for restocking in natural habitat.			
4.4	Favourable habitat and social conditions for the re-establishment of a viable <i>Lutra lutra</i> population.			
4.5	Transnational coordination for the conservation of <i>Emys orbicularis</i> and <i>Austropotamobius pallipes</i> .			
4.6	Reduced density of <i>Silurus glanis</i> in areas critical for <i>Huso huso</i> .			

Project summary		Measurable indicators	Means of verification	Important assumptions
Outputs for Outcome 5. The resilience of the Ticino Landscape increases in the secondary water network of the lower valley and the forests of the Prealps				
5.1	Restored irrigation artifacts of the East Ticino Villoresi (ETV) Land Reclamation Authority.			
5.2	Early seasonal flooding of rice fields and winter flooding of meadows.			
5.3	Increased availability of groundwater resources.			
5.4	Restored Prealpine forests after extreme weather events.			
Outputs for Outcome 6. The vision of the Ticino Initiative is welcomed by key stakeholders and restoration of the Ticino Landscape advances effectively				
6.1	Awareness of a common narrative on the Ticino Landscape.			
6.2	Coordinated external communication of the Ticino Initiative.			
6.3	Stakeholders involved in participatory processes.			

Project summary		Measurable indicators	Means of verification	Important assumptions
6.4	Networking within and outside the Ticino Landscape.			

Budget

Budget category	Year 1	Year 2	Year 3	Year 4	Year 5	Total US\$
1. Staff	188,425	168,493	159,291	152,000	129,315	797,525
2. Professional services	124,746	232,224	197,579	139,130	71,185	764,865
3. Project office running costs	-	-	-	-	-	-
4. Travel and transport	24,783	29,038	27,485	23,000	21,950	126,255
5. Capital equipment and infrastructure	13,800	20,700	575	2,300	2,300	39,675
6. Operating costs (activities/fieldwork)	246,963	513,047	881,648	394,303	218,400	2,254,360.00
6.1 Common programme activities:	69,230	93,840	105,455	117,530	95,680	481,735
• <i>Monitoring (coordination and consolidation - data collection is under 1, 2 and 6.2)</i>	17,250	11,500	11,500	11,500	17,250	69,000
• <i>Programme workshops and exchange visits</i>	5,750	5,750	5,750	5,750	5,750	28,750
• <i>Testing intervention 1 - Isoëtes malinverniana reintroduction</i>	-	-	11,500	17,250	17,250	46,000
• <i>Testing intervention 2 - Promote sustainable annual cropping systems by incorporating green manure of catch crops into rice farming</i>	46,230	76,590	76,705	83,030	55,430	337,985
6.2 Project specific activities:	177,733	419,207	776,193	276,773	122,720	1,772,625
Room renting for workshops and meetings	1,150	1,725	1,725	4,600	1,725	10,925
Promote the conversion of arable land and other degraded or infertile areas to permanent grassland	6,095	17,480	20,125	17,825	6,325	67,850
Promote crop diversification and permanent soil cover	11,500	23,000	23,000	24,495	8,855	90,850
Create and promote a financial mechanism to support ecosystem services from forests	13,771	22,943	13,196	4,025	-	53,935
Create a backdunal pond in the SPA "Reedbeds of Lago Maggiore"/SAC "Sabbie d'Oro"	9,775	20,042	106,720	47,463	-	184,000
Restore ecological continuity between the Vernavola Canal and Special Protection Areas "Porta Chiossa Heronry" and "Carola Heronry"	4,226	33,925	4,922	3,450	3,450	49,973
Restore the Scuropasso Stream	5,175	11,500	24,725	8,970	8,740	59,110
Restore the Tresa River banks	16,100	32,603	297,614	-	-	346,317

Strengthen the populations of <i>Isoëtes malinverniana</i>	8,050	16,100	16,100	16,100	16,100	72,450
Proceed with the reintroduction of <i>Huso huso</i> in the Ticino basin	53,590	56,465	53,590	37,490	37,490	238,625
<i>Lutra lutra</i> genetic monitoring in IT and CH (from museum samples and possibly spraints)	2,300	2,875	4,025	4,025	4,025	17,250
Feasibility study, human dimension and communication action plan for the re-establishment of <i>Lutra lutra</i> viable population	32,200	34,500	28,750	-	-	95,450
Transnational coordination and management of alien crayfish species	1,150	2,300	1,150	1,150	1,150	6,900
Restore and enhance the irrigation artifacts of the East Ticino Villoresi Land Reclamation Authority	-	23,000	23,000	23,000	-	69,000
Promote flooding of rice fields in spring and winter in the area of the East Sesia Irrigation Association	-	-	17,250	23,000	-	40,250
Promote winter flooding of permanent and water meadows	-	11,500	11,500	-	-	23,000
Guide the restoration of Prealpine forests prone to extreme weather events	1,150	55,200	72,450	27,600	11,400	167,800
Take into account the contribution of animal species to forest restoration in the Prealpine area following extreme weather events	11,500	25,300	25,300	25,300	11,500	98,900
Activate the networking of existing local communities of interest	-	28,750	28,750	8,280	8,280	74,060
Audit	-	-	2,300	-	3,680	5,980
7. Land acquisition	-	-	-	-	-	-
8. Indirect costs (Overheads) – max. 15%	71,846	115,620	151,989	85,288	53,176	477,920
TOTAL	670,562	1,079,122	1,418,567	796,021	496,328	4,460,600

Co-funding and funding leverage

Total funds (co-funding and funding leverage): 6.72 mln USD

Co-funding secured: (in brackets, the Outcomes of this project proposal the co-funding contributes to):

- Canton of Ticino (own funds, secured): 3.8 mln USD for river and wetland restorations (Outcome 3). 2022-2027.
- European Union - LIFE 19-NAT/IT/000883 Insubricus: 1,231,500 USD (secured; lead Ticino Valley Regional Park); (a sub-set of actions of the whole project) to strengthen populations of *Pelobates fuscus insubricus* and restore favorable habitats in the Ticino Valley Park, (Outcomes 4, 6). 2020 -2026.
- Fondation Audemars–Watkins: 292,500 USD (secured; lead Istituto Oikos); to restore two wetlands, strengthen populations of *Pelobates fuscus insubricus* and promote the role of

freshwater habitats in the conservation of biodiversity in the Ticino Landscape (Outcomes 3, 4, 6). 2021 -2023.

- European Union – Interreg IT-CH *Parchi Verbano Ticino*: 184,000 USD (secured; lead Ticino Lago Maggiore Regional Park); (a subset of actions of the whole project, managed by the Ticino Valley Regional Park) to share tools for the sustainable management of Lake Maggiore (Outcomes 1, 6). 2019-2023.
- Cariplo Foundation: Rec project: 23,000 USD (secured; lead Ca' Granda Foundation); (a subset of actions of the whole project, managed by the Ticino Valley Regional Park) to ameliorate water circulation in the secondary water network in the Ticino Valley Regional Park (Outcomes 5, 6). 2020-2030.
- Cariplo Foundation - Areté project: 97,750 USD (secured: lead Ticino Valley Regional Park); (a subset of actions of the whole project, managed by the Ticino Valley Regional Park) to ameliorate water circulation in the secondary water network (Outcomes 5, 6). 2019-2023.
- Lombardy Region: 182,850 USD (secured: lead Pavia Province); to strengthen the connectivity between heronries in the Pavia Province (Outcomes 3, 6). 2022
- Ticino Lago Maggiore Regional Park - SATAP Highway Society compensation funds: 338,000 USD (secured) to create favorable habitat and social conditions for *Lutra lutra* (Outcome 4). 2022-2027
- Ticino Valley Park and Valli del Verbano Mountain Community (own funds, secured): 69,000 USD to restore riparian habitats (Outcome 3). 2022-2027
- East Ticino Villorresi Land Reclamation Authority (own funds, secured): 11,500 USD to restore the irrigation artifacts of its secondary water network (Outcome 5). 2022-2027
- Bolle di Magadino Foundation (own funds): 30,500 USD (secured) and 50,000 USD (planned for period 2024-2027) to control alien crayfishes (Outcome 4) and create synergies with the National Biodiversity Strategies of Italy and Switzerland (Outcome 1). 2022-2027

Total co-funding secured: 6.26 mln USD

Funding leverage:

- Segré Foundation (CH): 230,000 USD (contingent on the approval of the ELP project) to reinforce actions under Outcomes 2, 3, 4, 5, 6.
- Cariplo Foundation (IT): 230,000 USD (contingent on the approval of the ELP project) to reinforce project management and actions under Outcomes 2, 4, 6.

Total funding leverage: 460,000 USD

In addition, Istituto Oikos and the partners of the Ticino Initiative:

- are committed to applying for an *Interreg IT-CH* grant to promote a transnational River Contract for the Ticino River (Outcome 1). High-level institutional partners (Lombardy and Piedmont Regions in Italy and Canton of Ticino in Switzerland) are keen. The Interreg IT-CH Programme 2021-2027 is expected to open its first call in 2022 and the first approved projects are expected to begin in 2023. Probability to secure the grant: very high. Estimated amount: 1 mln EUR;
- are discussing the participation in the 2022 call of the *Climate Adaptation Grant* of the LIFE Programme to further develop activities for the promotion of carbon farming (Outcome 2) and for the resilience of the secondary water network of the Lower Ticino River (Outcome 5). Probability to secure the grant: 30%. Estimated amount: 2 mln EUR;
- are discussing the participation in the 2022 call of "Climate and Biodiversity" of Lombardy Region, within the LIFE Gestire 2020 Integrated Project, to further invest in forest restoration and biodiversity conservation within the Ticino Valley Regional Park. Probability to secure the grant: 70%. Estimated amount: 500,000 EUR;
- have passed the first phase of the 2022 call of the Strategic *Nature Project (SNAP)* of the LIFE Programme to further implement the Natura 2000 Prioritized Action Framework and the regional ecological network of 5 regions of northern Italy, including Piedmont and Lombardy Region. Probability to secure the grant: 60%. Estimated amount: 750.000 EUR for a subset of actions directed to improve the sustainability of riparian management of the secondary water network of the Lower Ticino River.

Distribution of ELP funds between partners.	
Organisation	Percentage of total budget
Istituto Oikos Onlus	36.2%
Ticino Valley Regional Park	8.0%
Valli del Verbano Mountain Community	6.8%
State University of Pavia	5.3%
State University of Turin	5.1%
State University of Milan	4.8%
Graia Srl (SME)	4.8%
National Rice Authority	3.6%
Varese Province	3.6%
Regional Agency for Agricultural and Forest Services of Lombardy	3.0%
Idrogea Srl (SME)	3.0%
Etifor Srl (SME)	2.8%
State University of Insubria	2.7%
Campo dei Fiori Regional Park	1.9%
Pavia Province	1.8%
East Ticino Villoresi Land Reclamation Authority	1.6%
Bolle di Magadino Foundation	1.4%
Italian Centre for River Restoration - CIRF	1.2%
Ficedula - BirdLife Switzerland	1.2%
East Sesia Irrigation Association	0.7%
Lipu - BirdLife Italy	0.6%

Exchange rates.																				
To prepare the budget we have used 1.15 EUR/USD exchange rate, equivalent to the average of inforEuro exchange rate of the last 5 months: <table><tr><td>01/01/2022</td><td>31/01/2022</td><td>EUR/USD</td><td>1,1334</td></tr><tr><td>01/12/2021</td><td>31/12/2021</td><td>EUR/USD</td><td>1,1276</td></tr><tr><td>01/11/2021</td><td>30/11/2021</td><td>EUR/USD</td><td>1,1593</td></tr><tr><td>01/10/2021</td><td>31/10/2021</td><td>EUR/USD</td><td>1,1654</td></tr><tr><td>01/09/2021</td><td>30/09/2021</td><td>EUR/USD</td><td>1,1801</td></tr></table> During the course of the project, we are planning to adopt FIFO method (first in first out) using the real exchange rate obtained by the bank.	01/01/2022	31/01/2022	EUR/USD	1,1334	01/12/2021	31/12/2021	EUR/USD	1,1276	01/11/2021	30/11/2021	EUR/USD	1,1593	01/10/2021	31/10/2021	EUR/USD	1,1654	01/09/2021	30/09/2021	EUR/USD	1,1801
01/01/2022	31/01/2022	EUR/USD	1,1334																	
01/12/2021	31/12/2021	EUR/USD	1,1276																	
01/11/2021	30/11/2021	EUR/USD	1,1593																	
01/10/2021	31/10/2021	EUR/USD	1,1654																	
01/09/2021	30/09/2021	EUR/USD	1,1801																	

Budget notes

Staff	This is for staff employed by your organisation or other organisation(s) in the team submitting this application. It should only cover costs of staff time related to this project.
Professional services	This is for external services you will pay for, such as consultants, workshop presenters, printing services, external auditors etc. You will be required to follow the ELP's financial guidelines when procuring these services.
Project office running costs	Only include these costs if a separate, dedicated office is required by the project. General organisational office costs should be covered by Indirect Costs. If you do have a dedicated project office its existence will need to be justified in your proposal. We would also expect its existence and function to be reflected in reduced Indirect Costs (significantly below the maximum allowable 15%)

Indirect costs (max. 15%)	Indirect costs are general office management costs for the organisation(s) implementing the project including: electricity bills, rent, heating, phone, postage, stationery and costs of 'core' services including human resources and financial management etc. <i>Note that if your budget includes the cost of a dedicated project office we would expect these central Indirect Costs to be significantly less than the maximum allowable 15%.</i>
Common programme activities	These are activities which all funded projects will be expected to carry out as part of the conditions of receiving a grant. See Annex 1 for further information.
Project specific activities	These are clusters of activities specific to your project. It is up to you how you present them, but the breakdown should relate to your project proposal and logical framework matrix (outcomes and outputs), and it should be possible to clearly see the connection between your budget and the methods/activities described in your proposal.
Land acquisition	If you plan to buy land please show the cost of this separately.
Audit costs	Grantees will be required to provide an independently verified audit certificate for the project accounts at the end of year 3, and on project completion. The maximum which can be charged to the ELP grant for both these audits is US\$6,000.

Certification

I certify that, to the best of my knowledge and belief, the statements made in this application are true and the information provided is correct and that I have the authority to submit an application on behalf of my organisation.

Name (block capitals):

ROSSELLA ROSSI

Position in organisation:

PRESIDENT

Signed:



Dated: 17th February 2022

Documents and information to include with your application:

Please include the following information with your application:

- A map or maps showing the location of the project, the location of significant areas of intervention and places mentioned in the proposal, and the relationship between the project landscape and surrounding areas.

Please note that applicants that are given in-principle approval will be required to provide the following documents to the satisfaction of the Oversight and Selection Panel before funding is approved, **but they are not needed at this stage.**

- Applicant organisation's signed and audited or independently verified accounts for the last 2 years.
- Letters of support and commitment or partnership agreements/MoUs with all named project partners.
- Demonstration, to the satisfaction of the OSP, that the project has engaged local/national stakeholders (*especially local communities*) and that it has the required level of support. Stakeholders might include national and local government agencies, affected landowners, local communities, and local businesses. Demonstration of their engagement and support might include minutes of meetings, partnership agreements, Memoranda of Understanding, discussions on social media, letters of support.
- Applicants will be required to provide letters of support from all those whose land is included in areas to be managed by the project, including private, community and government landowners and tenants.

Do you have audited accounts available for the last 2 years?	YES
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Video presentation

Please prepare a short video that introduces the landscape and your plans for restoration.

The video will be shown at the start of the Oversight and Selection Panel meeting when the project is discussed.

This does not need to be 'professional quality'. Video taken on a mobile phone will be adequate. If you prefer to record the delivery of a short PowerPoint presentation that is also fine.

Length must not exceed 5 minutes.

Annex 1: Common programme elements

1. Collection of data on Key Performance Indicators

The impact of the Endangered Landscapes Programme is being assessed with reference to a set of Key Performance Indicators. Several of these programme-level indicators are derived by summing information gathered by individual projects. Where relevant to their project, grantees are required to measure and provide information on the indicators below. For the 'Impact' indicators grantees will be provided with guidance on standardised methodologies, and provided with technical support by CCI. However, an allowance of staff time should be made to collect and analyse data. We suggest approximately 10 days in Year 1 and 3 days p.a. thereafter.

KPIs - Impact

- Area of degraded land or sea (hectares) where key barriers to ecosystem recovery have been removed, and restoration of biodiversity and ecosystem processes is underway or achieved.
- Area of newly designated protected areas (hectares)
- Number of IUCN Red List species for which actions are being taken that will improve their conservation status
- Amount of additional funding raised by projects (US\$) and number of new donors giving funds to projects
- Amount of carbon sequestered and/or emissions avoided (tCO₂e)/year
- Number of communities (groups of people living in the same place) within or closely associated with the landscape that are benefitting from landscape restoration

KPIs - Process

- Number of institutions (including local government, NGO, private sector, community-based organisations) participating in projects supported through the programme
- Number of open-access case studies, technical reports, evidence reviews, tools, guidelines, manuals etc. published (e.g. describing approaches taken, impacts based on monitoring results, lessons learned, good practice etc.)
- Number of published studies in peer review literature
- Number of contributions made to knowledge fairs, conferences, workshops, databases, publications etc.
- Number of institutions collaborated with to advance knowledge on landscape restoration
- Number of people communicated with directly about the project/programme and landscape restoration (e.g. at conferences, workshops, talks and events, organised
- Number of people communicated with indirectly about the project/programme and landscape restoration (e.g. via TV and radio programmes where projects are mentioned; Twitter; visits to stories on websites etc.)
- Number of people participating in a 'community of practice' on landscape restoration
- Number of people that have participated in exchange visits, study tours, mentoring programmes, etc.

2. Project monitoring using the common Landscape Restoration Monitoring Framework

In addition to the Key Performance Indicators, each project will need to identify a set of monitoring indicators to measure and demonstrate its social, economic and ecosystem impacts at outcome level. These indicators will be selected using the ELP's Landscape

Restoration Monitoring Framework and should be integrated into your logframe. Although you don't need to provide full details of your monitoring plans at this stage, you should refer to the [Landscape Restoration Monitoring Framework](#) when completing the 'indicators' column of the logframe, and ensure (and demonstrate) that you have allocated sufficient resources for the time, expertise, equipment and other resources needed to monitor and report across the range of indicators, and to the level of scientific rigour, that is required. Projects given in-principle approval will work with the ELP's Science Manager to develop a detailed monitoring plan describing their monitoring indicators and methods.

3. Advancing knowledge - testing interventions

The Endangered Landscapes Programme seeks to support the projects that it funds to generate new evidence via testing interventions. These new learnings can be used to inform ongoing restoration practice via adaptive management and also added to the wider evidence base. Projects therefore need to include at least one experimental trial that helps advance understanding of what does and doesn't work in landscape restoration. Interventions can be in any area of landscape restoration, including ecological or social aspects, but should be of high relevance to the project (i.e. the results will be used in future management decisions). We encourage the testing of single interventions using simple tests, where possible integrated into planned management work, and often at little additional cost. Learning from interventions can be greatly enhanced by simple measures such as including control sites where the intervention measure doesn't take place or is done differently, carrying out before-and-after comparisons, or allocating different treatments at random to allow robust statistical analysis. (for further details and examples please see [the ELP webpage](#) and [Ockendon et al. 2021](#)). Although you are not required to provide details at this Project Proposal stage, you need to make a budget allocation for the work involved. If you aren't ready to budget for this activity in detail now, we suggest an allocation of \$25,000, although you can request more or less than this if you have a specific experimental component already in mind. Advice is available upon request. Projects given in-principle approval will co-develop these 'project-based experiments' with the ELP Science Manager.

4. Participation in the ELP Knowledge Network

The network of projects funded by the ELP (the 'ELP Knowledge Network') comprises a significant depth and breadth of knowledge and experience on landscape restoration. To benefit from this the programme aims to organise regular workshops, exchange visits and study tours for grantees, and moderate an online community platform, for the purpose of lesson-sharing and training. Grantees should build participation in such activities into project staff time to enable their teams to develop their capacity and share their experience. If circumstances allow, regular in-person workshops will be hosted by ELP-funded projects for lesson-learning and sharing of experience. Grantees should budget for their participation in these events (travel, accommodation and subsistence). It is recommended that a budget allocation of \$5000 p.a. is included to fund participation.

Each Restoration Landscape should also expect to host at least one visit/training course. However, delivery and management costs of hosting events will be recouped through charges to participating projects and therefore **no budget allocation is required**.

5. Reintroductions and translocations.

Any project that involves reintroductions or translocations will need to submit a report that demonstrates that they have followed, and are fully compliant with, [IUCN guidelines](#) before approval and funding of such activities. It is not necessary to have completed such reports at this stage, and their production can be included as a project activity/cost.