

Progetto Life+T.E.N.  
Trentino Ecological Network  
- LIFE11/NAT/IT/000187 "T.E.N." -

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## ACTION F3

### Post-LIFE Conservation Plan

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*Final report*

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# 1. LIST OF ABBREVIATIONS

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AAPPSS – Servizio Sviluppo Sostenibile e Aree Protette, PAT  
 Ann. - annex  
 APPA – Agenzia provinciale protezione ambiente, PAT  
 APPAG – Agenzia provinciale pagamenti, PAT  
 APROFOD – Agenzia provinciale foreste demaniali, PAT  
 APRIE – Servizio gestione risorse idriche ed energetiche, PAT  
 APT – Azienda di promozione turistica  
 ASAT – Associazione Albergatori ed Imprese Turistiche della Provincia di Trento  
 ATO – Ambito territoriale omogeneo  
 CTB – Consorzio trentino di bonifica  
 CDI – Centro Duplicazioni interno, PAT  
 CEA – Centro di Ecologia Alpina  
 DTAAF – Dipartimento Territorio, Agricoltura Ambiente e Foreste , PAT  
 DGP – Deliberazione Giunta Provinciale  
 ECST – *European Charter for Sustainable Tourism*  
 FEM – Fondazione Edmund Mach  
 FPA – Federazione provinciale allevatori  
 FR – *Final Report*  
 GP – Giunta Provinciale, PAT  
 IDVRAP - Incarico Dirigenziale per la Valorizzazione della Rete Aree Protette  
 IR – *Inception Report*  
 LP – Legge provinciale  
 MATTM – Ministero dell'Ambiente e della Tutela del Territorio e del Mare  
 MCF – Magnifica comunità di Fiemme  
 MCR – Fondazione Museo Civico di Rovereto  
 MP – *Management Plan*  
 MR – *Midterm Report*  
 MUSE – Museo delle Scienze di Trento  
 NR – *Network of Reserves*  
 PAB – Provincia autonoma di Bolzano  
 PAF – *Prioritized action framework*  
 PAT – Provincia Autonoma di Trento  
 PTC – Progetto territoriale collettivo  
 PNAB – Parco Naturale Adamello Brenta  
 PNL – Parco Naturale Locale  
 PNLMB - Parco Naturale Locale Monte Baldo  
 PR – Progress Report  
 PSR – Piano di sviluppo rurale  
 PNPPSM – Parco Naturale Paneveggio Pale di San Martino  
 PNS – Parco Nazionale dello Stelvio  
 RL – Regione Lombardia  
 RV – Regione del Veneto  
 RAFVG – Regione autonoma Friuli Venezia Giulia  
 SA – Servizio agricoltura, PAT  
 SAC – *Special Area of Conservation*  
 SBM– Servizio bacini montani, PAT  
 SCI – *Site of Community Interest*  
 SCNVA – Servizio Conservazione della Natura e Valorizzazione Ambientale  
 SFF – Servizio Foreste e Fauna, PAT  
 SIAT - Sistema Informativo Ambientale e Territoriale  
 SIAP – Sistema Informativo Agricolo Provinciale  
 SRL – Società a Responsabilità Limitata  
 SET – SET Distribuzione Spa

SOVA – Servizio sostegno Occupazionale e Valorizzazione Ambientale

SPA – *Special Protection Area*

ST – Servizio turismo, Provincia Autonoma di Trento

SU - Servizio Urbanistica, PAT

TEN – *Trentino Ecological Network*

TSM – *Trentino School of Management*

UF – Ufficio Faunistico del Servizio Foreste e Fauna, PAT

UNAT – Unione Albergatori

UNITN – University of Trento

URFPZ - Unità Risorse Foraggiere e Produzioni Zootecniche

## **2. INTRODUCTION**

The LIFE11/NAT/IT/000187 "TEN" - Trentino Ecological Network project, approved and co-funded by the EU in 2012, had PAT as the lead partner (see: Servizio Sviluppo Sostenibile e Aree Protette), in partnership with the MUSE. The project lasted 63 months and had a total cost of € 1,728,522.00, with co-funding of € 862,014.00 from the EU and € 797,443.03 from the beneficiaries. The project began on 1 July 2012 and concluded on 30 September 2017, in accordance with amendment no. 2 of the project's Grant Agreement, forwarded with EC note of 16 August 2016.

The general objectives of the Life+TEN project were the creation of a management strategy for the Natura 2000 network (for which PAT is responsible) and implementation of a medium to long-term active conservation programme for this network at provincial level. The new innovative management approach for Natura 2000 at provincial level has been based on the principles of:

- responsible subsidiarity;
- participation (democratisation of conservation);
- integration of conservation and socioeconomic development policy.

The post-Life plan, understood as the document formalising the commitment made by the Coordinating Beneficiary (PAT) and the Associate Beneficiary (MUSE) to maintain and continue activities of a material and immaterial nature targeted at safeguarding and conserving habitats and at disseminating a culture of environmental sustainability and information on the existence and importance of the Natura 2000 network, was drawn up directly by the project staff during the last few months of the project.

This document has been designed as a working plan for maintaining the project activities (preparatory, concrete conservation, demonstrative, monitoring and dissemination actions) carried out during the project, and as a work programme for all the sites in the Natura 2000 network focusing on protecting the habitats and species present within the province, deriving mainly from PAT's general inventory of active protection measures (C2).

At methodological level, firstly actions concluding in the context of TEN (and thus not requiring post-Life activities) were identified following special internal consultation sessions, while for the remaining actions, initiatives directed at the maintenance/controls necessary to guarantee full ecological effectiveness over time were instead identified. These activities were then recorded in the general inventory (which considers a 12-year period) and assigned a relative budget and action schedule.

The post-Life plan thus represents a supplementary annex to the project's Final Report (December 2017).

### 3. DESCRIPTION OF THE PROJECT ACTIONS

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The structure of the LifeTEN project is as follows, and has been followed when drawing up this document:

#### Preparatory actions

- A.1 Creation of a specific database on species and habitats in the "Birds" and "Habitats" directives for the whole of the territory of the Provincia Autonoma di Trento
- A.2 Identification of conservation priorities for species and habitats in the "Birds" and "Habitats" directives in the territory of the Provincia Autonoma di Trento
- A.3 Identification of ecological connectivity and fragmentation at provincial level and in relation to neighbouring areas
- A.4 Drawing up of "provincial guidelines" for the creation of Management Plans for Networks of Reserves including Trentino sites in the Natura 2000 network
- A.5 Drawing up of "provincial guidelines" for carrying out monitoring of Trentino sites in the Natura 2000 network
- A.6 Drawing up of "provincial guidelines" for the management of habitats of community interest present in Trentino
- A.7 Drawing up of "provincial guidelines" for the management of alluvial forests (91E0) and watercourse vegetation in Trentino
- A.8 Drawing up of guidelines for the management of key species of community interest

#### Concrete conservation actions

- C.1 Planning of Trentino's Multifunctional Ecological Network
- C.2 Inventory of action for active protection and reconstruction of connectivity in homogeneous area environments
- C.3 Assisting local administrations with the setting up of Networks of Reserves to give concrete form to Trentino's Multifunctional Ecological Network
- C.4 Setting up of a "working group" to establish conservation measures for the future Piano di Sviluppo Rurale and the sustainable tourism policy of the Provincia Autonoma di Trento
- C.5 Setting up of institutional "working groups" with neighbouring regions on Trentino's Multifunctional Ecological Network
- C.19 Creation of integrated projects for the safeguarding of habitats and socioeconomic development
- C.20 Identification of sources of funding for conservation measures

#### Demonstrative actions

- C.6 Demonstrative action for the safeguarding of habitats: promotion of activities to recover dry grasslands (habitat 6210\*) and hay meadows (habitats 6510, 6520)
- C.7 Demonstrative action for the safeguarding of habitats: promotion of actions to recover alluvial forests (91E0) in lentic and lotic wetland areas
- C.8 Demonstrative action for the safeguarding of habitats: recovery of Molinia meadows (6410) and peat bogs (7XXX)
- C.9 Demonstrative action for the safeguarding of species: improvement of ecological corridors in the Adige Valley
- C.10 Demonstrative action for the safeguarding of species: safeguarding of autochthonous white-clawed crayfish populations
- C.11 Demonstrative action for the safeguarding of species: safeguarding of marble trout populations
- C.12 Demonstrative action for the safeguarding of species: safeguarding of yellow-bellied toad populations
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- C.14 Demonstrative action for the safeguarding of species: promotion of the safeguarding of corncrake populations
- C.15 Demonstrative action for the safeguarding of species: promotion of the safeguarding of lesser shrike populations
- C.16 Demonstrative action for the safeguarding of species: safeguarding of rock partridge populations
- C.17 Demonstrative action for the safeguarding of species: safeguarding of black grouse populations
- C.18 Demonstrative action for the control of an invasive species: eradication of Japanese knotweed

#### Monitoring actions

- D.1 Monitoring of concrete conservation actions
- D.2 Assessment of the socioeconomic impact of the project's concrete conservation actions on the economy and the local population and on the recovery of ecosystem functions

#### Communication and dissemination actions

- E.1 Creation of informative panels regarding concrete conservation actions
- E.2 Creation of a specific web site on the project
- E.3 Organisation of informative meetings directed at the population
- E.4 Creation of informative brochures directed at the population
- E.5 Drawing up of a Layman's Report on the project

### **3.1 PREPARATORY ACTIONS**

#### **A.1 Creation of a specific database on species and habitats in the "Birds" and "Habitats" directives for the whole of the territory of the Provincia Autonoma di Trento**

The action has led to the development and implementation of a database and corresponding WebGIS for the collection and display of data on species and habitats in the "Birds" and "Habitats" directives for the whole of the provincial territory. The database can be found at the following URL: <http://90.147.140.202/>. Concurrently with development of the database, two protocols ensuring the sharing of data and updating of the database by all the players were drawn up, agreed, signed and formally approved.

In the next 12 years, subject to the availability of resources, constant updating of the database is guaranteed, along with extension of the two protocols to any new Networks of Reserves, by including a suitable wording directly in the programme agreements.

#### **A.2 Identification of conservation priorities for species and habitats in the "Birds" and "Habitats" directives in the territory of the Provincia Autonoma di Trento**

The action has led to the identification of conservation priorities for species and habitats.

The action was concluded in the context of the project and does not require any post-Life activities. Should any new natural emergencies be identified (relating to habitats, flora or fauna), also following monitoring activities, action will be taken to update the document/classification.

#### **A.3 Identification of ecological connectivity and fragmentation at provincial level and in relation to neighbouring areas**

The action has led to identification of ecological connectivity and fragmentation at provincial level.

The action was concluded in the context of the project and does not require any post-Life activities.

#### **A.4 Drawing up of "provincial guidelines" for the creation of Management Plans for Networks of Reserves including Trentino sites in the Natura 2000 network**

The action led to the drawing up of finished guidelines for the creation of Management Plans for the Networks of Reserves. Respect for the directions contained in the deliverables is guaranteed in the context of Management Plans drawn up for established Networks of Reserves and those yet to be established.

The action was concluded in the context of the project and does not require any post-Life activities.

#### **A.5 Drawing up of "provincial guidelines" for the implementation of monitoring in Trentino sites in the Natura 2000 network**

The action led to the drawing up of guidelines for the implementation of monitoring of habitats, flora and fauna of relevance to the Natura 2000 network. Respect for the directions contained in the deliverables is guaranteed in the context of monitoring activities, in the light of monitoring plans identifying activities and work to implement them for all sites in the Natura 2000 network. Corrective measures are provided for should these be considered necessary following monitoring.

The action was concluded in the context of the project and does not require any post-Life activities.

A.6 Drawing up of “provincial guidelines” for the management of habitats of community interest present in Trentino

The action led to the drawing up of provincial guidelines for the management of habitats of community interest present in Trentino. Respect for the directions contained in the deliverables is guaranteed in the context of initiatives carried out by provincial technical units.

The action was concluded in the context of the project and does not require any post-Life activities.

A.7 Drawing up of “provincial guidelines” for the management of alluvial forests (91E0) and watercourse vegetation in Trentino

The action led to the drawing up of provincial guidelines for the management of alluvial forests (91E0) and watercourse vegetation in Trentino and to the drawing up of the Management Plan for the SAC IT3120053 “Foci dell’Avisio” and IT3120061 “La Rocchetta”. Respect for the directions contained in the deliverables is guaranteed in the context of initiatives carried out by provincial technical units for the management of watercourse vegetation.

The actions provided for by the two MPs will be carried out in the next few years, on the basis of the resources available and with the priorities for action identified in the general inventory (C2).

A.8 Drawing up of guidelines for the management of key species of community interest

The action led to the drawing up of guidelines for the management of the following key species: amphibians, bats, marble trout, bird species present at high altitude, grassland bird species, wetland bird species, forest bird species and white-clawed crayfish. Respect for the directions contained in the deliverables is guaranteed in the context of initiatives carried out by provincial technical units.

Any publications requiring reprinting will be dealt with by the CDI.

Furthermore, in winter 2018 it is expected to issue a publication of an informative nature on key habitats and species of provincial interest.

The action was concluded in the context of the project and does not require any post-Life activities.

## 3.2 CONCRETE CONSERVATION ACTIONS

### C.1 Planning of Trentino's Multifunctional Ecological Network

The action led to planning of Trentino's Multifunctional Ecological Network, with identification of 14 ATOs (homogeneous area environments).

The action was concluded in the context of the project and does not require any post-Life activities.

### C.2 Inventory of actions for active protection and the reconstruction of connectivity in homogeneous area systems

The action led to the creation of 14 inventories, one for each of the 14 ATOs, 3 inventories for the 3 parks in Trentino and neighbouring SACs, 2 inventories for SACs outside the ATOs and the drawing up of the general inventory of actions for active protection and the reconstruction of connectivity for the Provincia Autonoma di Trento. An online WebGIS was also implemented to allow access to geographical elements and alphanumeric content in the general inventory on a cartographic basis.

The general inventory represents the operational programme for medium to long-term management of the Natura 2000 network in Trentino, valid for 12 years, taking concrete form through collaboration between the Provincia Autonoma di Trento, Parks in Trentino and the Networks of Reserves. Thus the document ultimately represents a potential update of the PAF at provincial level, in line with the provisions of article 8 of "Habitat" directive 92/43/CE. The document contains details of priorities, costs and sources of funding, and the active protection measures that will be implemented, subject to the availability of resources, in order to best manage the habitats, species and more generally sites in the Natura 2000 network in Trentino.

For indications regarding methods, actions, costs, priorities and timescale, see the document drawn up in the context of action C2.

It is guaranteed that the document, but above all the management system for alphanumeric and geographical data (WebGIS), will be kept up to date in order to trace what has been done, while the overall plan will be subject to revision should new natural emergencies be identified in relation to the conservation of habitats and species.

The document will be approved with a Resolution of the Manager of the Servizio Sviluppo Sostenibile e Aree Protette and will represent the basis for updating of the Provincia Autonoma di Trento's PAF (already approved with DGP of 1 March 2013 no.350), to be formalised with a new resolution of the provincial government.

### C.3 Assisting local administrations with the setting up of Networks of Reserves to give concrete form to Trentino's Multifunctional Ecological Network

The action has led to the setting up of the Networks of Reserves: to date there are ten Networks of Reserves in Trentino. PAT's commitment to supporting existing NRs and encouraging processes leading to the setting up of new NRs starting from the ATOs over time is guaranteed. This commitment will take concrete form with technical-administrative and financial support in order to guarantee funding, suitably supplemented by resources made available by the other signatories of the Programme Agreement, and the PSR, which guarantees full and concrete operations to carry out actions for active protection and the promotion of sustainable local development in the area.

### C.4 Setting up of a "working group" to establish conservation measures for the future Piano di Sviluppo Rurale and the sustainable tourism policy of the Provincia Autonoma di Trento

In the agricultural sector, the action has led to the specifying of 5 operations in the new programme of the PSR 2014-2020 (4.4.3, 7.1.1, 7.5.1, 7.6.1 and 16.5.1). By the end of the current programme, PAT's commitment is to actively continue to stimulate and encourage the Parks and Networks of Reserves to propose initiatives and projects to be submitted for funding applications, by providing suitable technical and administrative support. In future PSR programmes, its commitment will be directed at guaranteeing the activation of PSR operations for the safeguarding of habitats and species, also benefiting from good practice such as the new collective projects (Operation 16.5.1 – Collective projects with an environmental scope).

In the context of tourism, the TURNAT strategy has been drawn up through this action, and following a demanding participatory process, ECST was awarded to the system of protected areas in Trentino. The commitment in this sector will be directed at putting into effect all the initiatives provided for during the ECST candidature and also to extending the TURNAT strategy and ECST certification to the PNS in Trentino and any other NRs that may be set up in the future.

#### C.5 Setting up of institutional "working groups" with neighbouring regions on Trentino's Multifunctional Ecological Network

The action led to the signing of a Memorandum of Understanding between PAT and the Veneto Region and between PAT and the Provincia Autonoma di Bolzano. Subject to the availability of resources, in the future collaboration will be started up with the two administrations in order to carry out initiatives to reach common and agreed objectives (the scope of the two corresponding Memorandums of Understanding). In this context, an interesting collaborative project between PAB and PAT has been started up to implement action directed at increasing biodiversity, with particular attention for woodland grouse in the territory of Trentino bordering on the Parco Naturale Monte Corno (which falls within the Provincia Autonoma di Bolzano). Likewise, a study to optimise the management of forest use in areas where the *Salamandra atra aurorae* is present (a single site in Trentino) has been started up by PAT and RV in the Passo Vezzena area (Municipality of Levico, but situated on the border between the two administrations).

#### C.19 Creation of integrated projects for the safeguarding of habitats and socioeconomic development

The action led to the implementation of two integrated projects within the Parco Naturale Locale "Monte Baldo" and the "Alpi Ledrensi" Network of Reserves.

The action was concluded in the context of the project and does not require any post-Life activities. Implementation of the actions provided for by the two integrated projects is nevertheless guaranteed through the two corresponding Networks of Reserves.

#### C.20 Identification of sources of funding for conservation measures

The action has led to the identification of businesses/foundations/consortia that could sponsor initiatives to actively protect and conserve habitats and species within the ATOs. A crowdfunding campaign was also begun (still underway) linked to the project started up in the context of action C16, to promote the wool of sheep acquired through the project, and a promotional video was made in order to support the campaign.

To assess the efficacy of crowdfunding campaigns in promoting and enhancing initiatives for active protection and local socioeconomic development, the initiative started up on buonacausa.org will also be continued after the conclusion of the project. The lessons learned will therefore be exploited for similar future initiatives.

The action was concluded in the context of the project and does not require any post-Life activities.

### 3.3 DEMONSTRATIVE ACTIONS

#### C.6 Demonstrative action for the safeguarding of habitats: promotion of activities to recover dry grasslands (habitat 6210\*) and hay meadows (habitats 6510, 6520)

With the action, 3.8 hectares of habitat 6210 dry grassland in scrubland and/or woodland in the SAC IT3120150 "Talpina – Brentonico" were recovered. Funding (€ 19,676.16) provided for by the PSR 2014-2020 (operation 16.5.1, Phase A) was granted to the Municipality of Brentonico following the drawing up of a collective area project. The area stretches out over 136 ha, of which 47 ha within Natura 2000 sites (SCI IT3120173 "Monte Baldo di Brentonico", IT3120150 "Talpina – Brentonico" and IT3120111 "Manzano") and 89 ha within the Ecological Integration Area (EIA). Funding (€ 10,513.50) provided for by the PSR 2014-2020 (operation 4.4.3) was granted to the Municipality of Brentonico, for recovery of a further 1.23 ha of land with habitat 6210 in the SAC IT3120150 "Talpina-Brentonico".

For the next 5 years maintenance/repetition of mowing will be guaranteed by the collective area project initiated through operation 16.5.1.

Budget forecast: see table at page 20.

#### C.7 Demonstrative action for the safeguarding of habitats: promotion of actions to recover alluvial forests (91E0) in lentic and lotic wetland areas

With the action, 123 trees (linden, European hornbeam, sycamore and rowan) were planted in the SAC-SPA IT3120038 "Inghiaie", over a surface area of 1.47 hectares. At the SAC IT3120043 "Pizè", 500 English oak trees were planted over a surface area of 0.5 hectares. At the SAC-SPA IT3120039 "Canneto Levico" 30 mature black locust trees were girdled over a surface area of 0.84 hectares, with subsequent removal of the timber. At the SAC-SPA IT3120061 "La Rocchetta", 50 mature black locust trees were girdled over a surface area of 0.87 hectares: in the latter case vegetative growth was recorded on girdled black locust plants (young shoots) in May 2017, with cutting of the shoots and repetition of girdling operations.

In the next 12 years monitoring will be carried out periodically at the sites where work was carried out, subject to the availability of resources, to assess the state of the intervention. A budget of € 5,000 is provided for in relation to eventual action to replace, purchase and plant further plants and install shelters to protect plants from damage due to grazing by ungulates (at the SAC-SPA IT3120038 "Inghiaie", SAC IT3120043 "Pizè" and SAC-SPA IT3120039 "Canneto Levico"), along with an amount of € 3,000 to repeat girdling, using a team of 3 workers (at the SAC-SPA IT3120061 "La Rocchetta").

Budget forecast: see table at page 20.

#### C.8 Demonstrative action for the safeguarding of habitats: recovery of *Molinia* meadows (6410) and peat bogs (7XXX)

With the action, 0.08 ha of *Molinia* meadows were recovered and 200 *Molinia coerulea* and 100 *Filipendula ulmaria* plants were planted at the SAC-SPA IT3120038 "Inghiaie". A further 1.1 ha with the presence of *Molinia* meadows and peat bogs subject to invasion by the common reed were mowed. At the SAC IT3120043 "Pizè" an area of 1.6 ha subject to invasion by arboreal and bush vegetation was recovered by cutting down plants and exporting the biomass. At the SAC IT3120091 "Alberè di Tenna", a glade (0.54 ha) with *Molinia* meadows and peat bogs heavily affected by encroaching woodland was recovered. Furthermore, funding (€ 66,361.81) provided for by the PSR 2014-2020 (operation 16.5.1) was granted to the Municipality of Levico Terme, lead partner in the temporary association between the Municipalities of Levico Terme, Pergine Valsugana and Tenna, to carry out a collective area project with an environmental scope called "*Safeguarding of *Molinia* meadows and peat bogs*".

For other work included in the collective area project started up through operation 16.5.1, the costs associated with the initiative are already included within the general inventory and provided for/covered by PSR funding.

Budget forecast: see table at page 20.

#### C.9 Demonstrative action for the safeguarding of species: improvement of ecological corridors in the Adige Valley

With this action an ecological corridor was created and improved within the SAC IT3120053 "Foci dell'Avisio" by planting over 16,000 plants of around 35 different species.

In the next 12 years, six-monthly maintenance work is provided for in the first 6 years, with mowing of meadows and the possible planting of new vegetation, above all on the hills present on the right-hand bank of the River Avisio. Furthermore, in the first few years, it is expected to take action in the event of water stress (given that the area is characterised by loose, well-draining soil subject to high winds), if this should take place in particularly dry spring or summer periods.

Budget forecast: see table at page 20.

#### C.10 Demonstrative action for the safeguarding of species: safeguarding of autochthonous white-clawed crayfish populations

With the action the Management Plan for the white-clawed crayfish in Trentino was drawn up (non LIFE funds, euro 9,000), with the collaboration of FEM (non LIFE funds, € 6,000). 5,000 copies of a brochure on the white-clawed crayfish in Trentino were printed. Upgrading of water diversion took place (CTB), along with recovery of a filled in channel 106 m long (FEM), and genetic mapping of white-clawed crayfish populations in Trentino (non LIFE funds, € 7.000).

In the next 12 years, subject to the availability of resources, the MP will be implemented by carrying out the initiatives provided for therein. The brochures on the crayfish will also continue to be distributed (technical meetings, fairs, events etc.) and when they run out they will be reprinted by the CDI.

Budget forecast: € 450,000.00 (costs anticipated to carry out the actions included in the MP).

#### C.11 Demonstrative action for the safeguarding of species: safeguarding of marble trout populations

With this action 3 stream deflectors with stone weirs were constructed in the SAC IT3120053 "Foci dell'Avisio", along the left-hand bank of the River Adige, upstream of the point where the Avisio stream joins the river.

In the next 12 years, subject to the availability of resources, there will be periodic checks to ensure that the structures built are still intact.

#### C.12 Demonstrative action for the safeguarding of species: safeguarding of yellow-bellied toad populations

In the context of this action, 2 former quarry zones were recovered, 18 reproduction sites were created in these former quarry zones and 17 PVC tanks were installed in former quarry zones. Furthermore, 51 cavities were made in agricultural contexts, with associated maintenance plan and the creation of ponds (surface area of around 50 square metres and an average depth of 120 cm).

In the next 12 years, subject to the availability of resources, it is planned to periodically verify the effectiveness of the cavities in terms of ecology/fauna and see to their maintenance through mowing and the removal of weeds. For cavities in the hydrographic network, both PAT's forestry

workers (APROFOD) and private owners will participate in maintenance. Maintenance work to be carried out every two years has already been agreed with the latter (cost € 1,200), see maintenance plan (Ann. C12\_2 PR2017). In the case of cavities present in former quarry areas, annual maintenance of the tanks by provincial forestry workers will instead be provided for, with eventual substitution and reinstallation in the event of damage to existing tanks (amount budgeted € 1,500 / year, for a total of € 18,000 over the 12 years).

Budget forecast: see table at page 20.

#### C.13 Demonstrative action for the safeguarding of species: protecting birds of prey from electrocution

With the action 2 linear km of MV and LV power supply lines were made safe using 4 different types of intervention in the area between Zambana Vecchia (Municipality of Zambana) and Vela, in the Municipality of Trento.

In the next 12 years, subject to the availability of resources, there will be periodic checks to ensure that the structures are intact through recording of any reports/occasional observations.

#### C.14 Demonstrative action for the safeguarding of species: promoting the safeguarding of corncrake populations

The action took place in two different geographical contexts in order to protect corncrake populations.

In the upper Val di Non, a collective area project was started up involving 8 farms (implementing bodies), a total of 20 ha of grassland was subjected to restrictions linked to late mowing (after 31 July) for 5 years, and funding of € 89,471.76 (PSR 2014-2020, operation 16.5.1) was issued. For the next 5 years, thanks to the financial coverage provided for by the PSR funding granted, the activity/maintenance will be guaranteed. Subject to the collaboration of local administrations and farms, the forthcoming commitment will involve continuation of the initiative in the next PSR programme, through a new operation 16.5.1.

In Tesino, an operation 4.4.3 procedure (2016 call) has begun for recovery of 7.7 ha of surface area potentially suitable for the corncrake and currently degraded/abandoned and reforested, and funding of € 35.838,03 has been issued. Subject to the collaboration of the local administration, the owners and farms operating in the area, the subsequent commitment will involve starting up a collective area project for the safeguarding of the corncrake, through operation 16.5.1 of the PSR phase A and subsequently phase B.

Budget forecast: see table at page 20.

#### C.15 Demonstrative action for the safeguarding of species: promoting the safeguarding of lesser shrike populations

In the Val di Fiemme, a collective area project was started up involving 8 farms for a total of c. 5,800 m of hedges to be recuperated and maintained in order to conserve the lesser shrike during the 5 years of the project, and funding of € 81,968.06 was issued. In the next 5 years, thanks to the financial coverage provided for by the PSR funding granted, the activity/maintenance will be guaranteed. The subsequent commitment will involve continuing the initiative in the next PSR programme, through a new operation 16.5.1.

Budget forecast: see table at page 20.

#### C.16 Demonstrative action for the safeguarding of species: safeguarding of rock partridge populations

With this action, through collaboration with the Parco Naturale Paneveggio – Pale di San Martino, a flock of 66 sheep was purchased (Tingola and Lamon breed), along with 4 donkeys and a trailer for transporting sheep. Thanks to grazing, an area of habitat suitable for the rock partridge covering 182 hectares was recovered. A trekking project using donkeys was also planned, leading to the development of tourist initiatives in collaboration with the PPPSM in the summer. A project to promote local wool entitled "Closing a production chain to open up an opportunity" was also implemented.

In the next 12 years renewal of the free loan of the flock is provided for to ensure the continuation of grazing and consequently safeguarding of the rock partridge's habitat. The PPPSM will also continue the donkey trekking initiative as a summer activity for visitors.

#### C.17 Demonstrative action for the safeguarding of species: safeguarding of black grouse populations

With this action, through collaboration with APROFD, an area of habitat suitable for the black grouse covering 2 hectares was recovered, divided into long corridors of varying width (c. 3-6 m) in the SAC IT3120015 "Tre Cime del Monte Bondone". Furthermore, an external assignment led to the issuing of the handbook "*Miglioramenti ambientali degli ambienti riproduttivi del Fagiano di monte (Tetrao tetrix) sulle Alpi*", edited by Luca Rotelli.

In the next 12 years, subject to the availability of resources, the need to re-open the wildlife corridors created will be assessed following checks. As required, the handbook, which will continue to be distributed during meetings, conferences etc. will be reprinted through the CDI.

#### C.18 Demonstrative action for the control of an invasive species: eradication of Japanese knotweed

In the area of the Parco Naturale Adamello Brenta, work was carried out to eliminate Japanese knotweed (using the staff of the park for a total of 32 days' work). The handbook "*Atlante di 50 specie floristiche esotiche del Trentino*", edited by Filippo Prosser and Alessio Bertolli was instead drawn up following an external assignment entrusted to the Fondazione Museo Civico in Rovereto.

In the next 12 years, subject to the availability of resources and should new stations characterised by the presence of the invasive plant within the park be identified, it is expected to repeat operations for the eradication of the plant and disposal of the waste collected. Budget forecast: see table at page 20.

### 3.4 MONITORING ACTIONS

#### D.1 Monitoring of concrete conservation actions

The action was put into effect with monitoring before, during and after project demonstrative actions C6-C19.

As described in previous sections, the sites that were the object of the demonstrative actions (with particular reference to actions C6, C8, C12, C14 and C15) will be monitored, subject to the availability of resources, in order to assess the eventual need for intervention to guarantee the continuity/recovery of the effectiveness of the initiatives put into effect by the project.

Budget forecast: see table at page 20.

#### D.2 Assessment of the socioeconomic impact of the project's concrete conservation actions on the economy and the local population and on the recovery of ecosystem functions

With the action the social impact, importance for the area and an estimate of the economic impact of the Networks of Reserves were assessed through a study carried out by UNITN. Furthermore, an opinion survey was carried out through ISPAT (using PAT resources).

Subject to the availability of resources, in 10 years it would be interesting to repeat the initiative in order to assess the change in the level of knowledge and perception of biodiversity, Natura 2000 and the system of protected areas in Trentino and thus to have available analytical data quantifying the efficacy of the communication and dissemination activities.

The action was concluded in the context of the project and does not require any post-Life activities.

### 3.5 COMMUNICATION AND DISSEMINATION ACTIONS

#### E.1 Creation of informative panels regarding concrete conservation actions

During the project, 16 informative panels were created and installed in the areas where action was taken, in order to illustrate the demonstrative actions. It is guaranteed that for the next 5 years the panels will be maintained and if necessary (e.g. in the case of irrecoverable damage), they will be replaced using the administration's resources.

Budget forecast: see table at page 20.

#### E.2 Creation of a specific web site on the project

A specially created web site was created for the project, active since December 2012. This can be found at the following url: <http://www.lifeten.tn.it/>

In order to guarantee the maximum diffusion of the products and content achieved during the project, the web site will remain active for the next 5 years and will be used as an information channel for aspects linked to the project (ecological connectivity, Networks of Reserves etc.). The "Google Analytics" statistical service will also be maintained to periodically monitor access to the site.

Budget forecast: not quantifiable.

#### E.3 Organisation of informative meetings directed at the population

During the project dozens of meetings directed at the population were organised (above all in the context of participatory phases for the C2 inventories and integrated projects (C19), including annual conferences to present the progress of the project, with the involvement of around 2,000 participants overall.

The action was concluded in the context of the project and does not require any post-Life activities.

#### E.4 Creation of informative brochures directed at the population

During the project numerous products of an informative nature were created, such as the initial informative brochure about the project (ITA and ENG), the informative brochure on sustainable tourism (ITA), the informative brochure on the white-clawed crayfish in Trentino (ITA) and the final informative brochure about the project, with presentation of the new strategy for the management of Natura 2000 sites (ITA). These deliverables, which were used extensively throughout the project, will also be distributed at meetings and conferences in the future and new brochures will be printed through the CDI as required, using the administration's resources.

The action was concluded in the context of the project and does not require any post-Life activities.

#### E.5 Drawing up of a Layman's Report on the project

With this action the Layman's Report was produced and printed (1,000 copies in ITA and 2,000 copies in ENG). The document will be distributed at meetings and conferences at which Life+TEN is discussed, and new copies will be printed through the CDI using the administration's resources as required.

The action was concluded in the context of the project and does not require any post-Life activities.

## 4. SUMMARY OF THE GENERAL INVENTORY OF THE PROVINCIA AUTONOMA DI TRENTO

The Provincia Autonoma di Trento's general inventory of measures for active protection and the reconstruction of connectivity is intended to bring together in a single document a summary of the information and data contained in the various inventories, along with technical material developed by the MUSE science museum and the Fondazione Museo Civico in Rovereto in the context of the LIFE+ T.E.N. project. The general inventory thus presents a classification of priorities for the conservation of habitats and species of community interest and/or of local conservation interest, along with identification of threats and their critical level.

The general inventory is based on the inventories prepared for each of the Ambiti Territoriali Omogenei (homogeneous area environments) identified by LIFE+ T.E.N. within the Provincia Autonoma di Trento, to which it is necessary to add the inventories for Natura 2000 sites inside and neighbouring on the three parks in Trentino and the inventory for SACs outside the ATOs, whose management is supervised by PAT. Further information regarding the presence and distribution of species and habitats of community interest present in Trentino can be obtained by consulting the specific web-GIS created for LIFE+ T.E.N. (<http://webgis.muse.it>). A second web-GIS has also been created, to visualise alphanumeric and geographical data regarding the active protection measures provided for in the general inventory, useful for consultation, programming work and monitoring management controls.

Thus all the conservation actions in favour of habitats and species proposed by the different inventories, to which a descriptive sheet is dedicated, have been gathered together in a provincial programme that represents a long-term provincial strategy for the conservation of biodiversity, also in financial terms. Alongside the actions, the monitoring strategies studied by the MUSE science museum and the Fondazione Museo Civico in Rovereto are described.

The general inventory also cites sources of funding available to carry out actions for conservation and the reconstruction of ecological connectivity, identifying the operations in the Programma di Sviluppo Rurale 2014-2020, which can support them financially, along with other sources of financial aid: article 96 of L.P. 11/2007, environmental fees, B.I.M. funds etc.

The actions making up the general inventory can be classified in macrocategories, as shown in the following table:

GENERAL INVENTORY	
MACROCATEGORY	AMOUNT (over 12 years)
Hay meadows	€ 13,180,107.99
Large carnivores	€ 7,200,000.00
Aquatic environments	€ 5,065,803.10
Forests	€ 4,637,209.74
Pasture	€ 4,440,161.75
Dry grasslands	€ 4,169,373.91
Networks of Reserves	€ 3,600,000.00
Connectivity	€ 3,459,789.40
Research and raising awareness	€ 2,671,427.00
Wetlands	€ 1,860,099.38
Riparian vegetation	€ 1,437,486.82
Post Life plan	€ 1,279,048.00
Landscape elements	€ 975,090.76
Chestnut woods/olive groves	€ 823,473.16
Exotic vegetation	€ 736,320.30

Environmental improvement	€	625,800.00
Aquatic fauna	€	509,300.00
Bats	€	179,200.00
<b>TOTAL</b>	<b>€</b>	<b>56,849,691.31</b>

The resulting overall total is around 56.8 million euro over a period of twelve years.

Bearing in mind that the Multifunctional Ecological Network created with LIFE+ T.E.N. cannot be limited solely to the provincial territory, but must also interact with neighbouring provinces and regions, the general inventory summarises the management partnerships that it has stipulated in the context of LIFE+ T.E.N. with protected areas neighbouring on Trentino.

One important scope of the general inventory is represented by its contribution to possible updating of the provincial P.A.F. (*Prioritized Action Framework*), the programme for the active conservation of biodiversity in the long-term at provincial level.

Finally, the general inventory presents the information sheets for the Ambiti Territoriali Omogenei (ATOs) established with LIFE+ T.E.N, Natura 2000 sites outside the ATOs and Natura 2000 sites near parks.

This document is thus central for Life+TEN, having the role both of summarising other material produced and of analysing and processing the data. With reference to the importance of this role, the drawing up of this document has been supervised by a working group including staff of the Servizio Sviluppo Sostenibile e Aree Protette, researchers at the MUSE science museum and the Fondazione Museo Civico in Rovereto, and professionals with specific experience regarding the project and more generally in relation to the management of natural resources and biodiversity.

The Provincia Autonoma di Trento's general inventory of measures for active protection and the reconstruction of connectivity has been designed for consultation by a wide range of players: firstly by all the staff of the provincial administration responsible for the provincial ecological network and the application of national and European Community regulations regarding nature conservation within the province; the managers of protected provincial areas (= Parks and Networks of Reserves); the administrators and officials of local authorities concerned by the presence of protected provincial areas, but also more generally by all those, including "laymen", who wish to understand the provincial policy on nature conservation.

## 5. CONCLUSIONS

From the data provided in previous sections, it is thus estimated that in the next 12 years an overall budget of around 1.3 million euro will be provided for to maintain the actions implemented during the Life+TEN project, subject to the availability of resources to the provincial administration. Details are provided in the following table:

POST LIFE ACTIONS	PROVISIONS OF THE GENERAL INVENTORY	IMPLEMENTING BODY								AMOUNT (12 years)
		PNAB	AAPSS	LOCAL MUNICIPALITIES	NRs	APROFOD	PROGETTONE	SBM	MUSE	
A7	NO							X		
C6	NO				X					€ 120.000,00
C7	NO					X	X			€ 8.000,00
C8	NO			X		X				€ 158.400,00
C9	NO						X			€ 27.648,00
C12	NO		X			X				€ 19.200,00
C14	NO			X						€ 553.400,00
C15	NO				X					€ 259.200,00
C18	NO	X								€ 12.000,00
D1	NO								X	€ 120.000,00
E1	NO		X							€ 1.200,00
TOTAL										€ 1.279.048,00

All the initiatives above have been suitably estimated and included within PAT's general inventory. This makes it possible to provide solid reassurances that they will be carried out, as they are part of a complex programme of work on which the new strategy for the management of the Natura 2000 network (and hence the new PAF) in Trentino is based and which will be implemented in the next 12 years.