Project description:

Background

The macrostigma trout (*Salmo trutta macrostigma*) [named *Salmo macrostigma* in Annex II of the Habitats Directive], is the endemic salmonid of the Mediterranean area and the only original trout of central/southern Italy. It is classified as a vulnerable species in Europe and critically endangered in Italy. The main threats for the species are: water abstraction and stocking of non-native trouts (resulting in hybridisation and competition).

The Atlantic brown trout (*Salmo trutta*) has been used for restocking purposes for many years, affecting the genetic integrity of most original macrostigma trout populations. However, a few residual macrostigma trout populations have recently been detected through specific nuclear and gene markers in some mainland areas of Italy. These relict populations were mainly found in places that are very difficult to reach. It therefore seems likely that more such populations may be present in other, difficult to access, watercourses.

Objectives

The LIFE+TROTA projects main objective was the recovery and the conservation of existing macrostigma trout populations in seven main watercourses in central Italy (Ambro-Tenna, Nera, Chienti, Metauro, Esino, Potenza e Cesano), where small native populations (i.e. less than 5% of the salmonid populations in the area) have been identified. Given that the macrostigma trout has been almost completely replaced in central/southern Italy by the Atlantic brown trout (with the exception of a few populations in Sicily and Sardinia), the populations targeted by the project represent as much as 30-35% of the total known populations in Italy.
The LIFE+TROTA succeeded in reaching its goal to improve the conservation status of the native Mediterranean trout in the Marche Region of central Italy, within 14 Natura 2000 network sites. In particular, over 20 000 young native macrostigma trout and embryonated eggs were released in several stretches of river where the eradication of the alien Atlantic trout had been carried out. The native species was released also in rivers where the alien species is still present, with the objective of mitigating the risk of genetic introgression. The beneficial effects of the interventions were already evident before the end of the project, as the genetic diversity of native trout was already increasing.

Other species of EU interest, namely the white-clawed crayfish (*Austropotamobius pallipes*), the Italian stream frog (*Rana italic*ca) and the bullhead (*Cottus gobio*), are expected to benefit from the removal of the alien trout species, although this was not assessed/quantified; with the exception of *Cottus gobio* for which the positive effects on the population dynamics relating to the removal of the alien trout species were the subject of a peer-reviewed paper authored by the project staff.

The project restored the Cantiano fish farming plant, which was recognised as a regional fish breeding centre. The active management of the Cantiano fish farming plant by the Province of Pesaro-Urbino will ensure the continuation of the project actions, particularly in relation to the breeding programme for native trout and their release into the wild. By the end of the project, the plant have hosted 500 mature trout, with over 71 000 eggs and thousands of young trout being produced in the final year. Actions aimed at the removal of the alien trout will also continue, to reinforce the results of the project within the After-LIFE programme.

Underpinning the work was the genetic analysis made on hundreds of trout found in the target area, which allowed the characterisation of the native populations. Trout with the desired genetic profile could then be bred at the Cantiano fish farming plant. The project elaborated a protocol for the sound management of genetically-pure native trout, which can be transferred to other projects.

The project beneficiaries contributed to some improvement in the relevant legislation, for example, by updating some management plans for the involved Natura 2000 sites (e.g. by introducing good practices and suggestions for enhancing native trout conservation). In addition to contributing directly to the implementation of the Habitats Directive, the project indirectly contributed to the implementation of both the Water Framework Directive and the EU Regulation on Invasive alien species.

The project did not foresee immediate direct socio-economic impacts in the target areas. However, overall an increased level of awareness about the importance of the target species and the biodiversity of the area was recorded. The ecological restoration of the area may increase its attractiveness for nature tourism, and in the future may provide renewed opportunities for the angling sector as well.

Further information on the project can be found in the project's layman report and After-LIFE Conservation Plan (see "Read more" section).
Environmental issues addressed:

Themes

Species - Fish

Keywords

population dynamics, endangered species

Target EU Legislation

- Nature protection and Biodiversity
- Directive 92/43 - Conservation of natural habitats and of wild fauna and flora- Habitats Directiv ... 
- Water

Target species

Salmo macrostigma

Natura 2000 sites

SCI IT5310017 Monte Nerone - Gola di Gorgo a Cerbara
SCI IT5310018 Serre del Burano
SCI IT5310019 Monte Catria, Monte Acuto
SCI IT5330002 Val di Fibbia - Valle dell'Acquasanta
SCI IT5330004 Monte Bove
SCI IT5330008 Valle Rapegna e Monte Cardosa
SCI IT5330009 Monte Giuoco del Pallone - Monte Cafaggio
SCI IT5330010 Piana di Pioraco
SCI IT5330017 Gola del Fiastrone
SCI IT5330018 Gola di Pioraco
SCI IT5330020 Monte Pennino - Scurosa
SCI IT5330023 Gola della Valnerina - Monte Fema
SCI IT5340019 Valle dell'Ambro
SCI IT5340020 Valle dell'Infernaccio - Monte Sibilla
Beneficiaries:

Coordinator
Amministrazione Provinciale di Pesaro e Urbino
Type of organisation
Local authority
Description
The “Amministrazione Provinciale di Pesaro e Urbino” (office for the management and protection of inland waters) is a local public body responsible for 350,000 inhabitants over an area of more than 2,500 km² in Marche region (central Italy).

Partners
Legambiente Onlus, Italy
Parco Nazionale dei Monti Sibillini, Italy
Amministrazione Provinciale di Fermo, Italy
Università degli Sudi di Perugia, Italy
Università Politecnica delle Marche, Italy

Administrative data:

Project reference
LIFE12 NAT/IT/000940
Duration
01-NOV-2013 to 31-JAN-2018
Total budget
1,557,187.00 €
EU contribution
778,592.00 €
Project location
Marche (Italia)

Read more:

Newsletter
Title: "Quinta newsletter del progetto Life+ Trota, gennaio 2017" Year: 2017 Editor: LIFE+ TROTA No of pages: 7
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