Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) are a habitat of Community interest listed in the Annex I of the Habitats Directive 92/43/EEC. However, in the flat plains of the Friuli-Venezia Giulia region, they are under increasing pressure. Changes in the morphology and microdiversity of the plains, changes in irrigation systems and canalisation, sinking groundwater levels caused by industrial and agricultural activities, the substitution of natural woods with more productive exotic trees, and the transformation of land use from forest to agriculture have all had a negative impact on the natural environment. This has damaged the alluvial forests themselves and the highly diverse flora and fauna therein. The regional government has already taken measures to try to stop the continued loss of these natural habitats: it drafted the first regional urban plan in the period 1970-1978. This aimed to provide general guidelines for planning at a more local level and to characterise the habitats to be conserved. It created its own system of protected areas. All the remaining alluvial forests were identified as priority habitats.

Objectives

The overarching objective of the S.T.A.R. project was better conservation of the priority habitat 91E0* Alluvial forests with Alnus glutinosa and Fraxinus
excelsior (Alno-Padion, Alnion incanae, Salicion albae). The river fringe and scattered plots which made up this habitat in the area when the project was originally designed were to be extended and joined to enlarge the habitat and secure its continuance. Specifically, the project partners planned to purchase or lease 10 ha of agricultural land and convert it into woodland. The project team also planned to improve the structure of the existing hygrophilous woods. This was to be realised through hydraulic, morphological and silvicultural interventions. Finally, the project team aimed to maintain the good relationship and communication developed between the beneficiary and the local population, to collect scientific data through monitoring activities, and to widely disseminate all the knowledge and experience gained in the course of the project.

Results

The S.T.A.R. project fully achieved its main objectives. Following the purchase of 33.04 ha of land - 22.93 ha of agricultural land and 10.11 ha of woodland – a total of 20.20 ha was restored into habitat 91E0*, split into two main areas (Bosco Processione and Bosco Molinaz) and in some other minor sites. Restoration work consisted of modelling of the soil morphology (about 31 000 m³ of soil were excavated) and modification of the surface water network. The project set up an ex-situ plant nursery to produce seedlings of woody species characteristic of habitat 91E0*, such as Alnus glutinosa, Carpinus betulus, Quercus robur, Fraxinus angustifolia, Ulmus minor, Salix alba, Frangula alnus, and Cornus sanguinea, were planted. The nursery produced 27 900 seedlings, 25 100 of which were used for the new plantations, with some 2 800 delivered to private landowners, to further expand the wooded area and increase awareness of the threat to alluvial forests. Monitoring after one year showed that the seedlings' survival rate was very high, reaching about 95%. The remaining project area was transformed into 15.5 km of walking trails for visitors, 1.5 km of forest roads for the maintenance of the new plantations and a small car park close to the Bosco Processione. In order to improve the wooded area purchased, alien species such as Platanus and Acer negundo were removed to convert the coppice into high forest and to increase species diversity through sub-plantations of shrub species typical of habitat 91E0*. Silvicultural interventions, such as thinning and creation of dead wood, were also carried out. The S.T.A.R. project successfully increased public awareness of the existence of the 91E0* priority habitat in the SCI Risorgive dello Stella. Furthermore, the scientific inventory allowed to collect data for a qualitative classification of the habitat according to the phytosociological approach, so that the priority habitat could be divided into three facies, namely woodland belonging to the alliance Alno glutinosae (4.91 ha), woodland belonging to the alliance Alno glutinosae, nitrophilous facies (7.91 ha) and woodland belonging to the alliance Alno-ulmion (1.62 ha). In the longer term, the S.T.A.R. project partners are planning to continue to restore the sub-plantation and to work to eradicate alien species from the existing wooded habitat. They will also continue to raise awareness by distributing informative material and conducting guided tours. The partners plan to conduct a follow-up species inventory in 2020, in order to verify the effects of the silvicultural interventions carried out.

Further information on the project can be found in the project's layman report and After-LIFE Conservation Plan, included in the Final technical report (see
Environmental issues addressed:

Themes

Habitats - Forests
Habitats - Freshwater

Keywords

forest ecosystem, protected area, wetland

Target EU Legislation

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

Target species

Cottus gobio  Emys orbicularis  Rana latastei  Thymallus thymallus  Triturus carnifex

Target Habitat types

- 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
- 7210 - Calcareous fens with Cladium mariscus and species of the Caricion davallianae
- 7230 - Alkaline fens
- 91E0 - "Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)"
- 91F0 - "Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia, along the great rivers (Ulmenion minoris)"
- 3260 - Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation
- 6410 - "Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)"

Natura 2000 sites
Beneficiaries:

Coordinator: Comune di Rivignano
Type of organisation: Local authority
Description: The beneficiary is a local municipality located in the province of Udine, comprising the main town, Rivignano, and four hamlets. It covers an area of 38.76 km² and has some 4,500 inhabitants.

Partners: None

Administrative data:

Project reference: LIFE07 NAT/IT/000498
Duration: 01-JAN-2009 to 31-DEC-2012
Total budget: 2,464,279.00 €
EU contribution: 1,848,209.00 €
Project location: Friuli-Venezia Giulia (Italia)

Read more:

Project web site: Project's website
Publication: Layman report
Title: Layman report
No of pages: 2
Publication: Technical report
Title: Project's Final technical report
Year: 2013
No of pages: 75
Video link: Project's video