



LIFE SAMFIX - SAVING Mediterranean Forests from Invasions of *Xylosandrus* beetles and associated pathogenic fungi

LIFE17 NAT/IT/000609



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Project description:

Background

The first large European outbreak of Asian ambrosia beetle (*Xylosandrus*) and its associated symbiotic fungi in a natural ecosystem occurred in September 2016, in the Circeo National Park in Italy. The infested area included Natura 2000 network sites (7 SCIs) in an area of predominantly Mediterranean maquis - broad-leaved evergreen shrubs or small trees. Two Asian Ambrosia beetle species were discovered: *Xylosandrus compactus* (black twig borer) digs galleries in young branches and *Xylosandrus crassiusculus* (granulate ambrosia beetle) in trunks of trees hosting the symbiotic fungi. Infested trees can show wilting, branch dieback and shoot breakage, while death may occur in younger individuals. Among the tree and shrub species affected are *Quercus ilex*, *Viburnum tinus*, *Ruscus aculeatus*, *Pistacia lentiscus* and *Laurus nobilis*. The result is a general degradation of the Mediterranean maquis due to desiccation, as has occurred over 13 ha in the Circeo National Park.

Objectives

The overall aim of the LIFE SAMFIX project is to prevent the expansion of the area infested with Asian ambrosia beetle (*Xylosandrus*), an invasive alien species (IAS) in Europe.

Specific objectives are to:

- Establish six European detection sites in or close to Natura 2000 protected sites, where effective protocols can be implemented for prevention, early

warning and rapid response, and eradication or containment of existing infestations;

- Extend prevention and early warning protocols to eight Natura 2000 protected sites located in the surroundings of these detection sites to prevent further spread of the invasive alien species;
- Disseminate knowledge about Asian ambrosia beetles, including risks, identification and means of prevention; and
- Share early detection and rapid response protocols amongst stakeholders (e.g. Mediterranean and EU bodies, networks and experts engaged in IAS policies and Natura 2000 sites managers), to facilitate adoption of phytosanitary measures and replication of protocols to preserve Mediterranean forest and maquis landscapes.

The project's actions directly implement EU policy concerning invasive non-native species, particularly Target 5 of the Biodiversity Strategy.

Expected results:

- Around 42 000 ha of natural and semi-natural forest and scrub habitats protected by effective prevention and early warning systems for the invasive alien species (IAS), Asian ambrosia beetles, nearly all within Natura 2000 network sites;
- 80 % reduction of Asian ambrosia beetles in the project core areas (population/ha) and 0 % expansion to other areas after 2020;
- 120 local stakeholders (Natura 2000 site managers and rangers, plant nurseries, orchard and garden owners, public inspectors) in the project core areas made aware of the risks and how to prevent the spread of beetles, including the ability to recognise signs of *Xylosandrus* presence and/or to monitor traps;
- 40 Natura 2000 sites managers and rangers in parks where the methods are replicated trained;
- 80 % of Natura2000 sites visitors made aware of IAS and their risks for biodiversity conservation, with 10 % engaged in citizen science activities;
- 1 500 high-school students made aware on IAS;
- Over 1 000 citizens participating in inspection field visits, events organised in project areas; and
- 80 % of Natura 2000 sites around the Tyrrhenian Sea made aware of risks by direct mailing and via four project conferences or other conferences where the project results are presented.

Results

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Environmental issues addressed:

Target EU Legislation

- Nature protection and Biodiversity

- COM(2011) 244 final “Our life insurance, our natural capital: an EU biodiversity strategy to 2020 ...
- Regulation 1143/2014 - Prevention and management of the introduction and spread of invasive alien ...

Target Habitat types

- 2250 - Coastal dunes with *Juniperus* spp.
- 5330 - Thermo-Mediterranean and pre-desert scrub
- 9320 - *Olea* and *Ceratonia* forests
- 9340 - *Quercus ilex* and *Quercus rotundifolia* forests
- 9540 - Mediterranean pine forests with endemic Mesogeian pines

Natura 2000 sites

SPA	FR9310020	Iles d'Hyères
SPA	IT6040015	Parco Nazionale del Circeo
SCI	ES5233011	Sierras de Martés y el Ave
SCI	FR9301568	Corniches de la Rivièra
SCI	FR9301573	Baie et cap d'Antibes - îles de Lerins
SCI	FR9301613	Rade d'Hyères
SPA	ES0000212	Sierra de Martés-Muela de Cortes
SCI	ES5233040	Muela de Cortes y el Caroché

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Beneficiaries:

Coordinator	Ente Parco Nazionale del Circeo
Type of organisation	Park-Reserve authority
Description	Circeo National Park covers about 8 500 ha in the province of Latina, in the Lazio region of Italy. The Circeo National Park Authority is responsible for managing forest, wetland and dune ecosystems, and restoring degraded habitats in the park.
Partners	TERRASYSTEM SRL, Italy Regione Lazio - Direzione Regionale Capitale naturale, Parchi e Aree protette, Italy Institut National de la Recherche Agronomique, France Ville d'Antibes Juan-les-Pins, France UNIVERSIDAD DE ALICANTE, Spain Università degli Studi della Tuscia, Italy

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Administrative data:

Project reference	LIFE17 NAT/IT/000609
Duration	01-JUL-2018 to 28-FEB -2022
Total budget	2,844,675.00 €
EU contribution	1,706,805.00 €
Project location	Comunidad Valenciana(España) Pays de la Loire(France) Aquitaine(France) Provence-Alpes-Côte d' Azur(France) Lazio(Italia)

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