

Bosco Limite

Location

Country: Italy
Scale: local
Region: Province of Padua

Compensated /improved ecosystem services

Setting up “Forested Infiltration Areas” (FIA) to replenish groundwater; The presence of plants near trenches provides an increase in biodiversity, filtering action by the root system, carbon fixation, education, recreation.

Management

Bosco Limite is located in the town of Carmignano di Brenta, Padua and is the largest Italian Forested Infiltration Area (FIA) (25,000 m²). An area where corn was previously grown was turned into a wood by planting 2,300 trees belonging to species typical of mesophilic lowland woods as part of the 2007-2013 Veneto Rural Development Programme. FIAs are newly planted woods, which can facilitate the deep infiltration of surface waters as well as allowing water phyto-purification. After identifying some land near underground water resources, a trench system is dug to channel the water during periods of heavy rainfall. This way, water will not be sent to the system of drains and canals that usually end up in water courses, but it will infiltrate deep into the ground and help replenish the groundwater. The canal system was built using European funds under the Life Aquor Project and is maintained by the local Waterboard. But the financial strategy goes beyond.

It is a PES model that can be replicated, giving agricultural landowners the opportunity to generate higher incomes than those normally achieved from conventional crops.

Stakeholders

Sellers or service providers:

- Veneto Agricoltura
- ETIFOR, a Padua University spin-off FSC Italia (Consulting company)
- Department for Territory and agro-forestry systems, University of Padua
- AQUOR project, Life Plus

Buyers and beneficiaries of services:

- Local companies that have adopted parts of the wood in exchange for visibility or to incorporate the value of the ecosystem services generated by their forest piece into their water footprint plan and follow a “Green economy”, on a voluntary basis
- Individual citizens all over the world that adopted more than 300 trees on 2,500 planted

Knowledge providers:

- The Municipalities of Carmignano di Brenta, Tezze sul Brenta, Pozzoleone finance the environmental education activities

Intermediaries:

- Province Administration - Provincia di Vicenza

Timeline

Establishment year: 2012

Time horizon: short term

Status of PES: active scheme

Availability of economic data

The innovative character of Bosco Limite is represented by the constant recording and calculation of the environmental services it produces, through ecological indicators: new animal species, carbon dioxide reduction, water saving, water added to groundwater, energy saving. Translating ecological benefits into economic ones is essential for connecting the forestry world with social and business needs with a view to a green economy.

Financing:

80% of implementation was financed by LIFE+ funds - PES schemes are in place to ensure that participating to the project is financially attractive for landowners (who made their land available for reforestation)

Socio-economic data:

Direct benefits information:

The expected benefits are of 4950 EUR in the period 2012-2042, with a net gain of 2850 EUR

Ancillary benefits information:

It is estimated a positive impact from the constitution of the forest for recreational and educational value of forest, but there is no economic evaluation of the benefits

Costs investment:

The planting costs were of 24 000 EUR with a contribution of 80% from LIFE+ funds

Costs operation maintenance:

Estimation of the costs for period 2012-2042 is 2100 EUR

Economic costs – income loss:

The area was previously maize-cultivated with a net gain of 4599 EUR in the period 2005-2010. Since the prevision for the net gains from forest is of 2850 EUR, the loss of income is 1749 EUR/ha/year

Information on improved biodiversity:

The constitution of a lowland forest provides habitat for 55 indigenous plant species, of which 15 are tree species. Moreover, the forest constitutes habitat for at least 20 bird species

Information on provisioning services:

The forest will produce about 40 tons/year of firewood and in 30 years it will provide high quality construction wood

Impact on climate regulation:

Bosco Limite will stock an average quantity of 50 tons of CO₂ per year, the equivalent emission of 7 Italian citizens

References / Source of information

www.boscolimite.it

<http://nwrn.eu/case-study/reforestation-veneto-italy>

http://www.lifeaquor.org/file/662-F2_MAR_eng.pdf