

Forest conversion from coniferous to deciduous stands - an eco-account case

The environmental restoration of a private forest in Krailling, Bavaria is undertaken as an eco-account offsetting scheme under the German Impact Mitigation Regulation. Hundred hectares of forest are ecologically upgraded while maintaining the subsurface industrial use. Nature enhancement of forest aisles complements this measure.



Summary

The main focus of this initiative is to increase the percentage of deciduous trees through reforestation, forest restructuring and a targeted promotion of native trees in view of enhanced species and habitat protection. Ecological forest conversion takes place in a damaged coniferous forest of 252 hectares in the municipality Krailling in Bavaria. A mainly subterranean industrial use is combined with the creation, upgrading and enlargement of important habitats for wild plants and animals. Thanks to the recognition of the enhancement activities on approximately 100 hectares as private eco-account scheme, the forest conversion is eligible as anticipated offsetting measure. An entry into the land register at the moment when developers make use of the already implemented eco-accounts measures to offset impacts arising from their projects secures the long-term preservation of the forest. The creation of an oak and hornbeam forest associated with wild fruit is complemented by the creation of forest aisles and nutrient-poor grassland in-between the forest pieces.



Emblem of Krailling

COOPERATION



The collaboration between a private forest owner and the nature protection authority enables the long-term protection and ecological enhancement.

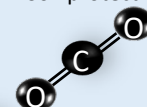
PUBLIC GOODS



Biodiversity



Soil protection



Climate protection

Objectives

Biodiversity protection in the long run through:

- development of a private eco-account in southern Germany that is by its surface one of the largest ones
- long-term preservation of a mosaic of forest pieces and nutrient-poor forest aisles
- compatibility of industrial use and high ecological value in one area



© AGL – Büro Pröbstl



© AGL – Büro Pröbstl

Further PGs

Reduction of landscape consumption due to ecological enhancement alongside with industrial use.

LOCATION

GERMANY



The project area is located in Bavaria, in the southwest of Munich and belongs to Starnberg County. The site is important for the protection of endangered wild animals and plants and habitat connection.

Problem description

The hurricane "Niklas" caused severe damages in the forest on 31st March 2015. Bark beetles damaged the coniferous trees further. This was taken as an opportunity to schedule a large-scale forest conversion. No public funds are available as the forest is declared as a special area due to the industrial use with tank storage facilities in the underground. The idea to create an eco-account was born to enable the forest conversion in direction of the natural forest cover.

Data and Facts

Participation: The company named "G1 Krailling Real Estate GmbH" is owner of the 252 ha site with its forest since 2016. The operator of the tank storage facilities is supported for the forest area by the cooperative named in.Silva eG.

Further participation: The owner of the site was supported by the department for Food, Agriculture and Forestry (AELF) Weilheim, the Upper Bavaria's regional government and the local nature protection authority (UNB) of the Starnberg County. The development of the eco-account is supported by AGL (company for land use planning) that prepared the expert report.

Legal notice: The compilation of the information provided in the factsheets has been done to our best knowledge. Neither the authors nor the contact persons of the presented cases may be held responsible for the use which may be made of the information contained therein.

CONTRACT

Contractual agreement with the nature protection as well as the forest authorities for recognition of the private eco-account.

Financing:

Private pre-financing for the eco-account measures in the forest; refinancing through private and state construction and infrastructure projects.

Payment:

The price setting for the eco-points in the eco-account is based on the cost for the nature preservation measures. Hereby supply and demand on the market of eco-points determine if developers make use of it.

Start: 2019 start of the planning of the eco-account measures

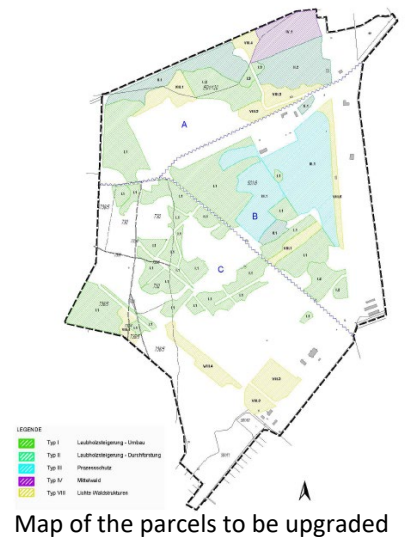
End: ongoing (long-term management and conservation of the eco-account site)

Advantages of eco-accounts

- Planning becomes more flexible and the application of the German Impact Mitigation Regulation is facilitated.
- Economies of scale when implanting the measures due to the large size of the area.
- Possibility to integrate the measures and surface into an overall nature protection concept, e.g. a habitats network.

Development and use of the eco-account:

- The forest owner performs the forest conversion on his own expenses and therefore he acquires eco-points.
- The eco-points are based on the calculation procedures fixed for Bavaria depending upon the measures performed.
- Single forest areas are assigned to forest conservation, thinning and targeted promotion of particular tree species.
- As soon as a developer makes use of the eco-points, an easement for the corresponding forest area is entered into the land register for a permanent safeguarding of the environmental improvement.



Through the establishment of the large-scale eco-account it is possible to steer developers' obligation to offset environmental impacts resulting from construction and infrastructure projects on a site that is particularly important for species and habitat protection.

Controls/monitoring: A multi-step verification is undertaken. First, the planned ecological enhancement needs to be recognized by the specialized public authorities; once the forest conversion is done, an on-the-spot check verifies if the measures are in line with the ecological planning as foreseen in the expert report. Finally when the eco-points are used, the situation of the area concerned is once again controlled before the land registration is done.

Conditions of participation: The development of an eco-account is only possible if from a nature conservation perspective an enhancement can be achieved and if corresponding measures are undertaken after approval by the nature conservation authority. In principle all developers – private and public – can make use of the eco-account, including the private owner of the eco-account himself.

Risks/uncertainties for participants: The setting-up of the eco-account and the implementation of the ecological measures is done on the expenses and risks of the land owner. An uptake of the compiled eco-points is not guaranteed. Due to the proximity to the Bavarian capital Munich and the fact that constructions and investments are foreseen in the region (inter alia in connection with the extension of the freight transport by railway) it is likely that there will be a demand.

Contract features combination: It is foreseen to also enhance the forest aisles and the grassland ecologically, including grass stripes along pathways and pipelines on the site with the tank storage facility. The project is foreseen on 35 ha using financing from the Bavarian state programme "BayernNetzNatur". This programme puts a particular focus on interlinking habitats and its key principles are the voluntary nature and the cooperative approach. The sustainable and environmental friendly use of the areas between the green corridors, here the forest pieces, is a precondition. This is the case thanks to the ecological enhancement foreseen as eco-account measures.

Framework conditions

Landscape and climate: The eco-account area is located in the landscape protection area named "Kreuzlinger Forst". The objective of the protection is to maintain, restore, protect and connect not only the areas grown with heather, but all dryland areas in the west of Munich. As the eco-account area has been used as subterranean tank storage facility since the mid-1930s, the site was inaccessible for the public and wild animals could live there relatively undisturbed. Along the unused railway lines and sunny waysides thermophilic plants and animals have settled that benefit from forest conversion and in particular the ecological enhancement of the open land.

Production system: The area afforested with coniferous trees has been used for silvicultural purposes. Besides there are areas that are more characterized by deciduous trees, and individual old trees have been preserved, including over 100 year-old oaks.



SUCCESS



For the eco-account Krailling the formerly typical oak and hornbeam deciduous forest with wild fruit trees like wild cherry will be re-established on a 100 hectares large area. The planted and preserved deciduous trees contribute to climate protection through carbon sequestration in the biomass besides being an important habitat for rare and protected species. Due to the special use of this site and the exclusion of the public, wild animals prone to disturbance can successfully settle and propagate.

Reasons for success:

- Avoiding compensation measures that are in conflict with agricultural objectives in a prosperous region with high land sealing.
- High demand for eco-points in the region, making it likely that the forest conversion area will rapidly be secured on a permanent basis by entering into the land register.



SWOT analysis

