Project description:

Background

A wide range of temporary habitats is generated by the digging of quarries, with some becoming more permanent. In many cases, the ecological value and ecosystem services quarries could generate are neglected. Quarries can act as stepping stones and play a significant role in regulating green infrastructure in landscapes. In highly urbanised landscapes quarries are an exceptional opportunity to maintain rare and threatened transient habitats that host pioneer species. Such ephemeral biodiversity in and around quarries cannot be managed through the legal protection status of a site, but their biological potential could be maximised by optimising groundwork throughout the whole exploitation process and upon closure of the quarry. However, the lack of knowledge of the ecological potential in and around quarries is hindering such biodiversity protection and preventing the restoration of ecosystem services following their closure.

Objectives

The LIFE IN QUARRIES project aims to develop biodiversity in active quarries by:

- Testing and defining methods for the restoration, maintenance and management of pioneer species and habitats;
- Testing and defining methods for preparing the physical quarry infrastructure during exploitation processes, in order to facilitate the establishment of restoration plans that will increase ecosystem services and biodiversity following exploitation;
- Identifying lock-in situations and challenges for biodiversity development in active quarries such as legal constraints, lack of biodiversity management awareness etc.;
- Developing the awareness of quarry managers, public administration
managers and other local stakeholders for biodiversity management; and

- Demonstrating best practices of adapting management throughout the complete exploitation process for up to 24 Belgian quarries and sharing this experience in the European context.


2. Active management of:
   - 12 ha of temporary ponds and 120 temporary ponds of 5-25m²;
   - 10 banks of loose materials for solitary bees and sand martin reproductions;
   - 5 ha of screes with pioneer vegetation of the Alyssosedion;
   - 96 fauna shelters;
   - Four translocated populations of *Bufo calamita* and four translocated populations of *Triturus cristatus* to suitable quarry habitats in the project sites; and
   - Successful introduction of a population of *Bombina variegata*.

3. Permanent actions:
   - Creation of 24 ponds larger than 25 m²;
   - Creation of adequate conditions for the installation of 400 m of reedbeds on deep quarry lakes;
   - Installation of 16 terns platforms;
   - Securing four galleries for bats;
   - Installation of 50 ha of infrastructure for pasture grazing and diversification of habitats;
   - Floral diversification and 10 ha mowed grasslands; and
   - Setting up of 8 km of linear screes adapted to reptiles.

4. Training for CEOs and staff members of the 24 Walloon quarries and six EU quarries, including workshops, development of factsheets and guidelines for the creation and management of temporary habitats in quarries. Development of supporting videos and a picture database aimed at species recognition for quarry workers.

5. External communication, demonstration and dissemination, including information panels, website, leaflets and newsletters for the general public as well as information material for other EU quarries and experience-sharing events with relevant partners in France, Germany and the Netherlands.

6. Research:
   - Inventories of actual and potential ecosystem services provided by the extractive industry;
   - An analysis of the quarry network contribution to green infrastructure; and
   - Analysis of the Walloon and EU legal framework.

Results
Environmental issues addressed:

Themes

Biodiversity issues - Ecological coherence
Industry-Production - Mining - Quarrying

Keywords

quarry, renaturation

Target EU Legislation

- Nature protection and Biodiversity
- Directive 92/43 - Conservation of natural habitats and of wild fauna and flora- Habitats Directiv ...
- COM(2011) 244 final “Our life insurance, our natural capital: an EU biodiversity strategy to 2020 ...
- COM(2013) 249 final “Communication from the Commission on Green Infrastructure (GI) - Enhancing E ...

Target Habitat types

- 6510 - "Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)"
- 8150 - Medio-European upland siliceous screes
- 8160 - Medio-European calcareous scree of hill and montane levels
- 8210 - Calcareous rocky slopes with chasmophytic vegetation
- 8220 - Siliceous rocky slopes with chasmophytic vegetation
- 2330 - Inland dunes with open Corynephorus and Agrostis grasslands
- 3140 - Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
- 3150 - Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
- 6110 - Rupicolous calcareous or basophilic grasslands of the Alysso-Sedion albi
- 6120 - Xeric sand calcareous grasslands
- 6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)

Natura 2000 sites

Not applicable
Beneficiaries:

Coordinator: Federation des Industries Extractives SCRL
Type of organisation: Professional organisation
Description: FEDIEX is a professional federation of Belgian companies active in the extractive industry and transformation of non-fuel rocks, such as producers/extractors of limestone, compact rock, alluvial, marines, sand and quicklime, as well as companies working with dolomite and ornamental rocks, etc. FEDIEX tackles areas such as socio-economic issues, the environment, security, product quality and capacity building on behalf of its members. It also provides general information on the sector. In recent years, FEDIEX has added biodiversity to its priorities and has begun cooperating with the department of nature and forests, the nature conservation NGO Natagora and the University of Liège. This cooperation has resulted in the development and distribution of best practices for the sector and the signing of a ‘Charter on Quarries and Biodiversity’ in 2012.

Partners: Natagora (Natagora), Belgium ULg (University of Liege), Belgium PNPE (Commission de Gestion du Parc Naturel des Plaines de l'Escaut ASBL), Belgium

Administrative data:

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EU contribution: 2,825,558.00 €
Project location: Région Wallonne (België - Belgique)

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