LIFE IN QUARRIES PROJECT - BIOLOGICAL INVENTORIES

BIODIVERSITY MANAGEMENT IMPLICATIONS

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Innovating partnership: multi-sectorial collaboration

“Industry – Public authority – University – NGOs”
Duration: 5 years [2015 – 2020]

Budget: € 5 millions

Implementation: Through quarries’ human and machines resources
Life in Quarries Project

Project in 2 phases – on 24 sites
Dynamic management of nature
From...

Temporary habitats

To... Permanent habitats
The 3 pillars of the project

On-site demonstration
- Test & validate best practices
  Dynamic management of biodiversity in the framework of extraction plans

Legal analysis and support
- Finding an incitative framework
  Long term effect of the project

Communication
- To the sector and its stakeholders
  Large diffusion of project actions and results
Goal: Develop biodiversity management plans

Phase I [2015 - 2019]
Implementing biodiversity management plans in 14 Walloon quarries

On Site demonstration
Goal: Develop biodiversity management plans

On Site demonstration

Develop management plans along with quarry personal

Dynamic management of biodiversity

Creation of temporary habitats ... but permanently available on site
Goal: Develop biodiversity management plans

On Site demonstration

Dynamic management of biodiversity

Permanent nature management

Develop management plans along with quarry personal

Prepare restoration... to maximize post-exploitation hosting capacity for biodiversity
On Site demonstration

Phase I [2015 - 2019]
Implementing biodiversity management plans in 14 Walloon quarries

Goal: Develop biodiversity management plans
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On Site demonstration

Inventories
Identify target species & habitats & define biological context

Five target biological groups
- Vascular plants
- Dragonflies
- Amphibians
- Reptiles
- Birds
Goal: Develop biodiversity management plans
Presentation Structure

- Outcomes of target groups inventories
- Related actions within the Life In Quarries project
- Case study
Inventories

**Amphibians**

Presence of 12 out of 13 Walloon species

**Pioneer nature**

- Natterjack toad (*Bufo calamita*) (6)
- Midwife toad (*Alytes obstetricans*) (9)

**Permanent nature**

- Great crested newt (*Triturus cristatus*) (2)
- Pool frog (*Rana lessonae*) (4)
... and also

Alpine newt
(*Ichthyosaura alpestris*) (11)

Smooth newt
(*Lissotriton vulgaris*) (10)

Common frog
(*Rana temporaria*) (9) &
Common toad (*Bufo bufo*) (10)
Inventories

**Dragonflies**

Presence of 32 out of 64 Walloon species

Pioneer nature

- **Keeled skimmer** (*Orthetrum coerulescens*) (3)
- **Southern skimmer** (*Orthetrum brunneum*) (5)
- **Scarce blue-tailed damselfly** (*Ischnura pumilio*) (7)
... and also

Banded darter
(*Sympetrum pedemontanum*) (1)

Small red damselfly
(*Ceriagrion tenellum*) (1)

Common winter damselfly
(*Sympecma fusca*) (5)

*Charas spp.* Ponds (10)
Water bodies: Proposed actions

Collection of rainwater
Water bodies: Proposed actions

Channeling of water runoffs
Water bodies: Proposed actions

Digging to reach groundwater level

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Water bodies: Case studies

Development of habitats for temporary nature species

Natterjack toad – Dynamic network of ponds
Water bodies: Case studies

Reintroduction & development of habitats for permanent nature species

Great crested newt – Habitat creation & evaluation of introduction potentialities
Rocky structures: Reptiles
Inventories

Reptiles

Presence of 6 out of 7 Walloon species

- Common wall lizard (*Podarcis muralis*) (6)
- Sand lizard (*Lacerta agilis*) (1)
- Smooth snake (*Coronella austriaca*) (3)
- Grass snake (*Natrix natrix*) (2)
Rocky structures: Reptiles

... and also

Calcareous screes

Viviparous lizard
(Zootoca vivipara) (6)

Slow worm
(Anguis fragilis) (11)
Rocky structures: Proposed actions

Setting up of shelters, linear screes and «Hibernacula»
Rocky structures : Case studies

Scree and shelters development on a site hosting smooth snakes

Permanent nature species

→ On sites’ borders
Inventories

**Plants** 630 species of the Walloon flora
82 patrimonial species (40 protected)
13 orchids species
Pioneer grasslands: Plants & associated species

... and also: a diversity of pioneer grasslands

Calcareous

Sandy

Siliceous
Pioneer grasslands: Proposed actions

Setting aside pioneer areas of high patrimonial value
Pioneer grasslands: Proposed actions

Creation and sowing of refuge zones

or Creation through transfer of seed banks
Pioneer grasslands: Case studies

Developing habitats for rare plant species
Other structures: Birds
Other structures: Birds

Inventories

**Birds**

Presence of 101 nesting species – 158 species observed

Three target species

- Sand martin (*Riparia riparia*) (4)
- Peregrine falcon (*Falco peregrinus*) (2)
- Eagle owl (*Bubo bubo*) (7)
Other structures: Birds

... and also

Common gull (*Larus canus*) (3)

Common tern (*Sterna hirundo*) (1)

Little ringed plover (*Charadrius dubius*) (9)

Bluethroat (*Luscinia svecica*) (2)

Alpine accentor (*Prunella collaris*) (1)

Black redstart (*Phoenicurus ochruros*) (14)
Other structures : Proposed actions

Development of birds platforms

Creation of sandy cliffs
Other structures: Case studies

Developing host structures for target birds
Not individual but rather Integrated actions

Species evolving on diverse habitats

Little ringed plover
Pioneer ponds
Pioneer grasslands

Natterjack toad
Shelters
Pioneer grasslands
Pioneer ponds
Not individual but Integrated actions

Group of actions targeting habitats or species

→ temporary refuge zones
Thank you for your attention - Muito Obrigado

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