



Project Life Natura2mil

Restoration of habitat at military camps in Wallonia

Layman's Report



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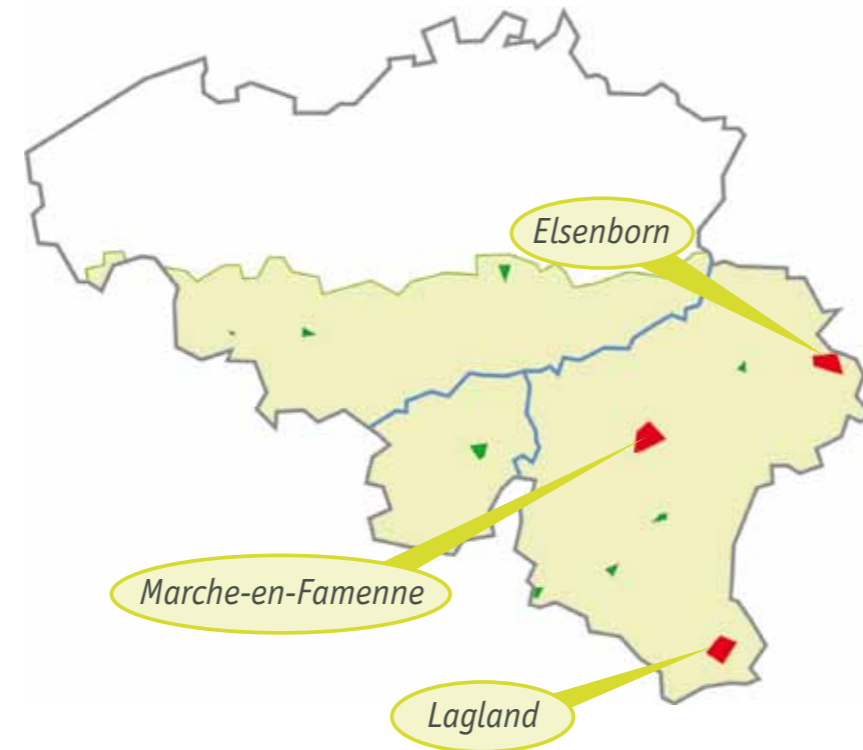




The LIFE programme is the European Union's financial instrument to support environmental projects in its member states. Since 1992, the programme has financed more than 3 115 environmental protection projects throughout Europe.

From 2006 to 2010, the project Life Natura2mil (Life 05 NAT/B/000088) had the objective of *restoring** different natural open habitats (that is, not covered with trees or shrubs) in the military camps at Lagland, Marche-en-Famenne and Elsenborn, which are the three principal military areas of Wallonia (Belgium). This brochure summarizes the actions, achievements and prospects of the project.

Words in italics are explained in the glossary at the end of this brochure.



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Sand lizard
(*Lacerta agilis*)



Blue ground-cedar
(*Diphasiastrum tristachyum*)



Great crested newt
(*Triturus cristatus*)

↓ Whinchat (*Saxicola rubetra*)

What nature is in the military camps?

In Belgium, more than 18 000 hectare of military areas are part of Natura 2000, the European network for the protection of biodiversity. These lands are occupied primarily by the Ministry of Defence («Defence») for exercises by Belgian military personnel, and sometimes by their European colleagues. For decades, agricultural and economic activities have been rare, and there has been little intense logging in the forests. Thus, we find in these areas today plant and animal species that have become very rare elsewhere, such as the crested newt (*Triturus cristatus*), blue ground-cedar (*Diphasiastrum tristachyum*), the sand lizard (*Lacerta agilis*), and the whinchat (*Saxicola rubetra*)....

It is not only rare species that one finds in these camps, but also *natural habitats**, such as *bogs**, ponds, unfertilized meadows of flowers, dry and wet *heathlands**... Many areas are under a growing threat from human activity (diverse construction, intensive farming with fertilizers and pesticides, conifer plantations, invasive plants...).

Defence, which manages these training areas, pledged to protect their biodiversity, notably through two Life projects: Danah, from 2003 to 2010, in 12 military zones of Flanders; and Natura2mil, from 2006 to 2010, in Wallonia. For Defence, it is important that these vast terrains continue to as military training grounds, whilst their ecological value is maintained.





Mortar exercises in a recently cleared area



Before deforestation



After clearance



← Oligotrophic* pond at Marche

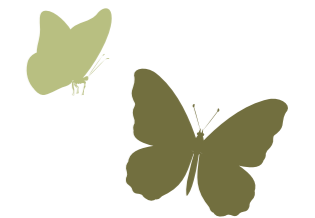
↑ Dry heathland in flower at Lagland



A Life project: *but why?*

Due to a decrease in military activities during the past 30 years, «invaders», trees and shrubs, have gradually colonized what were previously open areas in these camps. Given that the forest is both useful and necessary for our planet, it is also essential to maintain non-forested areas. For some species, the arrival of the forest simply means death, more or less rapidly. Indeed, trees block light from reaching the ground, changing the conditions for life; natural environments, such as heathland, are gradually disappearing, taking with them a series of animals that depend on heather for life.

The military, in order to undertake their exercises, also need non-forested areas, especially for parachute descents, or for manoeuvres with armoured vehicles. In this context, the Life project has defined a core objective: **to restore natural open habitats in the camps of Lagland, Marche-en-Famenne and Elsenborn.** In parallel, a series of threats to biodiversity were also highlighted; they include the overpopulation of wild boar at Marche and at Lagland, the lack of information from the users of these camps on the wealth of natural resources; the presence at Elsenborn of old military targets that are now useless and polluting, or the lack of procedures for managing nature...





↳ The Marche plain overgrown with bushes



← Military vehicles on exercises in an open zone



Manual cutting



Removal of plaggen



Girdling

How can success be achieved?



Overall, the project has gone through two successive phases; first **the restoration of habitats** by removing most of the *ligneous** (woody) plants that had invaded, then **the management** of these areas to prevent regrowth of the trees that had been cut.

There are various techniques for restoring an area that has been invaded by trees and shrubs, yet all have the same purpose, to eliminate these plants, or to limit their growth. In addition to traditional cutting with a chainsaw (or a trimmer for bushes), there are several other mechanical means: rotary shredding (*girobroyage*), shearing, or cabling that removes shrubs located in wet areas without the operators sinking. The girdling (ring-barking) of trees, which is done by hand, is a technique whereby the tree dies where it stands, thus providing a stock of deadwood that attracts many living organisms.

Another technique used, especially to restore heathland, is *removal of plaggen*. This involves removing, usually with a mechanical shovel, the covering of organic matter from the soil, which is subsequently taken away. This procedure brings to light the seeds that are buried at depth (known as the seed bank), and activate their germination; in addition, this depletion of the soil, allows some habitats to develop better.





↑ Scientific monitoring



Pasture with red Ardennes sheep



↑ Open house with children

After contractors completed these restoration works in the three camps, we implemented management measures that are mainly: grazing, mowing, and controlled burning.

Alongside these very technical actions, it was also important to help educate, train and build the awareness of the users of the different military areas to pay more attention to their ecological importance. Training, guided walks, open days focused on nature, signs, brochures and folders, and even a website and a film were the main tools used for this purpose.

Monitoring the evolution of certain species, both plant and animal, regarded as *indicators**, was established in order to assess the effect of our actions on biodiversity, and to make adjustments, if needed.

These different actions would not have been possible without a permanent dialogue between the four project partners, united by a steering committee, and without an effective project team that consisted of both military personnel and civilians. And of course, there would have been no project without financing by the European Union and Wallonia.

And finally, what was the result?



Globally in the 3 camps



Type of action	What was planned	What was achieved
Restoration of habitats by deforestation and removal of spruce regrowth	380 hectare	712 hectare
Restoration by <i>removal of plaggen</i>	35 hectare	44 hectare
Organization of « nature » open days at the camps	9 days	9 days
Establishment of information boards for the civil public	9 panels	9 panels
Publishing brochures and folders for the military	6 000 brochures and 5 000 folders	6 500 brochures and 24 000 folders with translations in Dutch, German and English
Organization of symposia	Intermediate and final conference	Symposium intermediate (2 days) and final conference (3 days)
Drafting of management plan	1 per camp	1 per camp

Also significant were the establishment of Life observation patrols in the three camps, a *GIS** of nature, scientific monitoring, a website, training of military advisers in the environment, and numerous actions to raise awareness of the ecological richness of the camps.



Meadow of wolf's bane (*Arnica montana*) at Elsenborn

Meadow of flowers in Marche-en-Famenne





← Reopening of an area by rotary chopping (grobroyage) ↑ Deforestation with retrieval of timber



Mowing



↓ Controlled burning



Special situation of the Elsenborn camp

This camp is a living museum of nature, exhibiting a landscape that existed throughout the Eifel a century ago. With the establishment of the military zone in 1893, no adding of fertilizer, and no planting of spruce have occurred on these 2000 hectares of open countryside, as was generally the case elsewhere. This explains the presence of species and habitats that are becoming quite rare, such as meadows of Alpine fennel (*Meum athamanticum*), and heather moors. The current use of the military camp does not allow the option of management by grazing. The plains are kept open by accidental fires during weapons practice, and, increasingly, by neighbouring farmers who mow the land, or with a mowing machine purchased by the project.

Type of action	What was planned	What was achieved
Peatland restoration	2 hectare	3 hectare
Removal of old, abandoned targets	100	203
Restoration of moorgrass of fennel by milling, harrowing and rolling	9 hectare	28 hectare
Management of moorgrass by mowing	21 hectare	55 hectare
Management of moorgrass and heathlands by controlled burning	376 hectare	752 hectare



Removal of old targets



Information board at Elsenborn



Plugging of drains



↓ Fenced pond



Grazing in pens



Special situation of the Lagland camp

Camp Lagland, near Arlon, is much more wooded than Elsenborn. More than 500 hectare has been gradually colonized by trees over the past 30 years. The Life project was, therefore, set to reopen more than 200 hectares, part of which was then fenced to be managed by grazing, with the support of local farmers who bring their animals there. At the same time, many drains were plugged to restore the hydrology of the bogs and wet heaths.

These more open areas are critical to maintaining populations of sand lizard (*Lacerta agilis*), wart-biter cricket (*Decticus verrucivorus*), nightjar (*Caprimulgus europaeus*), natterjack toad (*Bufo calamita*), or the cranberry fritillary (*Boloria aquilonaris*), all of which have become very rare in Wallonia.

Type of action	What was planned	What was achieved
Plugging drains	8 kms	15.6 kms
Digging ponds	10	Several hundred
Revision of the hunting concession	Stopping feeding	Feeding stopped in 2006
Grazing management	9 kms of fencing 5 cattle and 30 sheep	8.45 kms 30 sheep
Monitoring the population of wild boar by establishing plots where the earth turned by the animals could be identified	1000 m ²	3775 m ²



Special situation of the Roi Albert camp, Marche-en-Famenne

Camp King Albert, at Marche-en-Famenne, was created in 1974, making it the newest of the three camps in the Life project. In addition to more than 1 600 hectare of forests dominated by oak, it includes former agricultural grasslands that have been gradually re-colonized by woody species, but the areaw has not been fertilized and is, therefore, quite diverse in botany. The passage of military vehicles on schist ground created hundreds of pools which are very attractive to amphibians, including the largest population of great crested newt (*Triturus cristatus*) in Wallonia. The control of wild boar populations, which were very large, due to intensive feeding, when the project began (1967 boars slaughtered between 2006 and 2009), was performed by implementing higher kill targets, and the gradual stopping of feeding.

Type of action	What was planned	What was achieved
Restoration of riparian habitat quality	6 holt*	6 holt* and an attack on the balsam*
Grazing management	Building 1 sheepfold 100 sheep	Building of a sheepfold 200 Ardennes red sheep purchased
Revision of the hunting concession	Stopping feeding	Feeding stopped in 2010
Monitoring the wild boar population	1000 m ² of observation plots	4 225 m ² followed in 2007 and 2009 Marking of 400 boars, and nocturnal census



Otter holt



↓ Curly-haired boar



Sheepfold





Cooperation between partners

And in the future?



Now that hundreds of hectares have been restored, what will become of them? Who will provide management and monitoring? And with what money?

Crucial questions for the future that we wanted to answer:

- The lands are and remain managed by the Ministry of Defence, with the support of the Department of Nature and Forests (DNF), as part of an agreement that binds Defence and the Walloon Region and establishes a permanent framework for dialogue;
- Scientists of the Department for the Study of the Natural Environment and Agriculture (DEMNA) will coordinate scientific monitoring, helped by volunteer naturalists;
- Part of the restored areas will be kept open by grazing and mowing, assured by farmers who benefit under an agreement with the DNF. Controlled burning will take place on another part of the grounds, which will require few resources;

- The management of other areas will be undertaken with financial support from the sale of trees from military areas, money from which goes into a special fund dedicated to work that involves the interests of Defence and nature conservation;
- Finally, military advisers on the environment, specially trained under the project, will work with DNF forest rangers to ensure the sustainability of benefits, based on prepared management plans.

The Life Natura2mil project showed that military activities are broadly consistent with the protection of nature, and can be often beneficial. The continuation of a dialogue between the military and the managers of nature is the guarantee of success after Life...

Glossary

Balsamine (*Impatiens glandulifera*), originating in the Himalayas: plant that colonizes the banks of rivers and wetlands: in Belgium it is considered as an invasive plant to be destroyed.

Bog: a wetland characterized by the accumulation of peat.

DGARNE: Directorate General of Agriculture, Natural Resources and the Environment, of the Wallonian government.

GIS: Global Information System, allowing automated stocking and location of varied data.

Habitat: the natural environment in which a plant or animal survives.

Heathland: zone characterized by low vegetation, mainly ericaceous plants (broom, heather, bilberry...) that can live on very poor, acid soils.

Holt: burrow of otters, usually located in riverbanks.

Indicator species: a species whose presence, absence, or relative well-being is indicative of the health of an ecosystem as a whole.

Ligneous: descriptive term for shrubs and trees, in contrast to herbaceous plants.

Oligotrophic: poor in nutritive element.

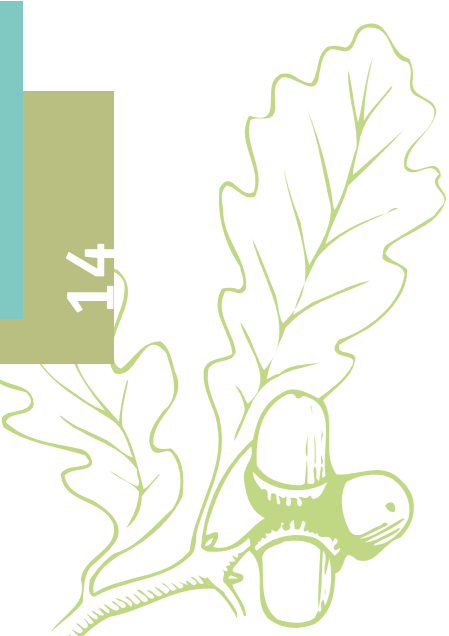
Restoration of habitat: improve the quality of a zone in order to protect one or more species.

RNOB: Belgian association of bird sanctuaries (Réserves Naturelles Ornithologiques de Belgique).



Military domains: Attention, regulated!

Under no circumstances is anybody permitted to enter a military area without formal authorization. Violation of this regulation is a criminal offence. This is also a simple matter of common sense: the use of heavy equipment, weapons, explosives... during training makes some areas highly dangerous. Even units undergoing exercises must coordinate their activities with local officials responsible for security. This applies, of course, to concessionaires, loggers and temporary visitors. It must be remembered that habitats are fragile, and it is, in part, because of this prohibition of access that certain fragile biotopes can be maintained in our areas.





ID card of the Life Natura2mil project

Duration: 5 years, 2006-10

Locations: military camps at Marche-en-Famenne, Lagland (Arlon), and Elsenborn

Budget: €3447436, of which 50% is from the EC, and 34% from the Walloon Region

Partners: Ministry of Defence, DGARNE, Ardenne and Gaume, and RNOB

Area of the project: 7937 hectare

Area restored by deforestation: 712 hectare

Natura 2000 sites concerned: BE34008 (Marche-en-Famenne), BE34058 (Lagland) and BE33037 (Elsenborn)

For more information: <http://www.natura2mil.be>



Project partners:

