# LIFE Herbages project

## Review of 7.5 years of grassland and meadow restoration in Belgian Lorraine and southern Ardennes












Wallonie

Jardin botanique de Meise

NATURA 2000

## What is a LIFE project?

LIFE projects are the result of a European funding program created in 1992 whose objective is to support the development and implementation of the European policy on environment and sustainable development.

A “LIFE Nature” project is specifically dedicated to the conservation of the flora, fauna and their habitats. These programs are developed within the Natura2000 network, which aims to restore connections between natural habitats across the continent.

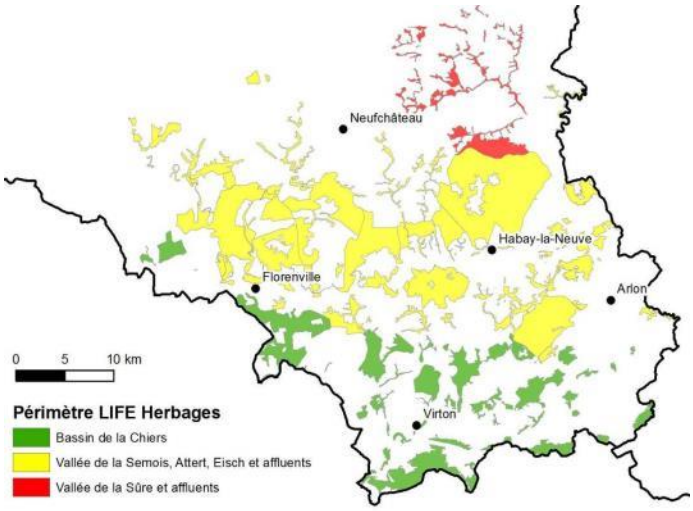
Since 1994, 26 LIFE-Nature projects have been funded in the Walloon Region. At Natagora alone, 21 of these projects have restored more than 2,300 ha of habitat and created more than 1,500 ha of additional nature reserves. And these orders of magnitude are similar for the Nature and Forest Department (DNF) of the Walloon Region!

## Background and objectives of the LIFE “Herbages” project

Grasslands and permanent meadows, which are neither ploughed nor amended, are among the most species-rich ecosystems. This grassland biodiversity plays an essential role in our environment: conservation of rare and endangered heritage species, quality food for livestock, pollination, water purification, atmospheric carbon storage, erosion and flood control, phytopharmaceuticals resources, leisure and relaxation…

However, in the Walloon Region, around 5 hectares of permanent meadows disappear every day in favour of intensive crops or urbanization (cf. SPF Economy). Both at European and Walloon level, meadows and grasslands are the habitats that are experiencing the greatest degradation of their biodiversity.

The objective of this LIFE Herbages project was therefore to improve the biodiversity and connectivity of at least 400 hectares of meadows, grasslands, marshes and humid forests on 26 sites of the Natura 2000 network in the Belgian Lorraine and southern Ardennes. Its duration: 2013-2020.




## A large number of partners and stakeholders

The LIFE Herbages project is the result of a partnership between Natagora, the Department of Nature and Forests (DNF) and the Department of Natural and Agricultural Environment (DEMNA) of the Wallonia Public Service and the Meise Botanical Garden. As the project progressed, 12 municipalities joined in: Arlon, Attert, Habay, Etalle, Tintigny, Virton, Florenville, Chiny, Saint Léger, Rouvroy, Meix-devant-Virton and Herbeumont, as well as 3 natural parks: Attert Valley, Gaume, and Haute Sûre Forêt d'Anlier. The non-profit organizations Natagriwal and Ardenne & Gaume also actively contributed to the objectives of the project, as did a large number of volunteers and interns.

*"The municipality of Herbeumont was immediately enthusiastic about participating in the LIFE project. Today, we don't regret it. With the help of the DNF, around 10 hectares of new nature reserves, owned by the municipality, were created. The biodiversity that hikers can discover is already exceptional! These directly visible and concrete results are an important vector for raising awareness of respect for our environment and Nature. "*

Catherine Mathelin
Mayor of Herbeumont

*"As a former director at DNF, what a pleasure to have been able to end my career in a competent and motivated team, and with such remarkable results for nature. "*

Bernard Van Doren
Director of DNF à Arlon
until 2018

*"The clearing of the top of the cliff at Tattert was a big change in the landscape because the site is located on the edge of the village. Discussions, information and various adjustments allowed the good acceptance of the project. The frequentation of the site and the positive results bear witness to this! "*

Dominique Scheepers
Project manager at the Attert Valley Natural Park

*"This habitat restoration program is a fantastic opportunity to accelerate the actions carried out in favour of nature protection. The knowledge acquired is the entire biosphere and not only my nature reserve. We also know that the loss of global biodiversity is linked, not to humans themselves, but to their GHG-emitting activities. Let's try to be active to limit its effects. A drastic change in our lifestyles that lead to the overconsumption of the planet's resources is imperative. Conserving biodiversity is the other aspect. Whatever the difficulties of the task, I would like to be faithful to both. "*

Yves Storder
Active volunteer and president of the Management Committee
Natagora Haute Semois et Gaume

## Results exceeding the objectives

Between January 1, 2013 and June 30, 2020, it was not 400 hectares, but **629 hectares that were restored by the project**. Among these plots, 309 hectares were purchased from individuals and 72 hectares are municipal properties made available to the Walloon Region or Natagora. All will obtain status and complete the network of state or approved nature reserves in the region.

| | Habitats | Objective (ha) | Restored (ha) |
|---|---|---|---|
| 6510 | Lowland hay meadows | 150 | 198 |
| 6520 | Mountain hay meadows | 5 | 10 |
| 6410 | *Molinia* meadows | 5 | 24 |
| 6430 | Hydrophilous tall herb fringe communities | 60 | 87 |
| 6120 | Xeric sand calcareous grasslands | 55 | 67 |
| 6210 | Semi-natural dry grasslands on calcareous substrates | 18 | 31 |
| 6230 | Species-rich *Nardus* grasslands | 65 | 128 |
| 7230 | Alkaline fens | 15 | 15 |
| 7220 | Petrifying springs with tufa formation | 2 | 2 |
| 91D0 | Bog woodland | 10 | 11 |
| 91E0 | Alluvial forests | 15 | 45 |
| | Ecological corridors between Natura 2000 sites | - | 11 |
| | | **400** | **629** |

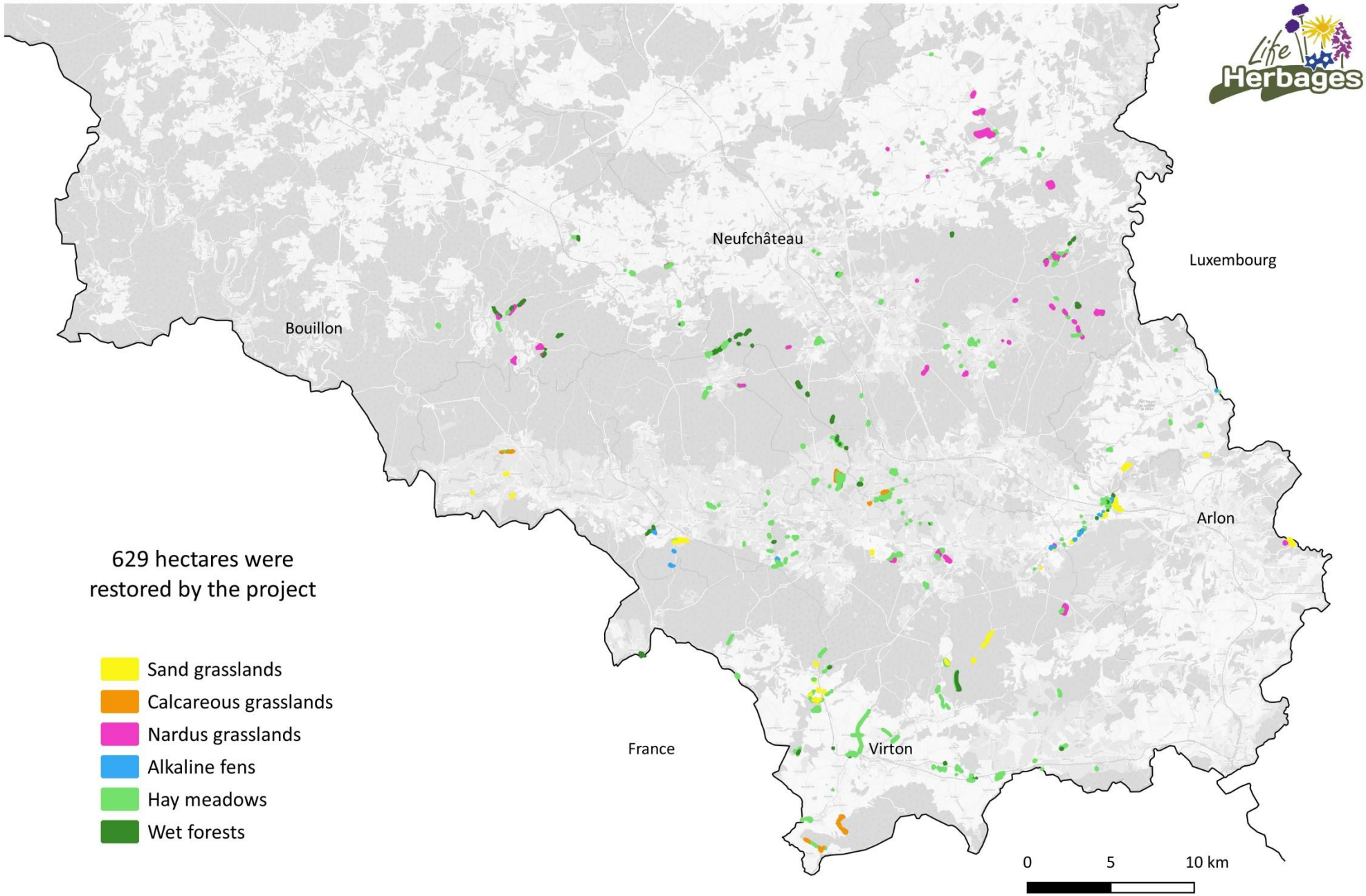
**Meadows** are herbaceous plant formations on relatively fertile soils. They are traditionally mown for the production of hay. Regrowth is either grazed by livestock or mown at the end of summer. Depending on the altitude, soil richness or humidity, we can recognize different types targeted by this project (Natura 2000 codes: 6510, 6520, 6410). All are currently seriously threatened in Europe. Tall herb communities (6430) can be assimilated to meadows with very high and exuberant vegetation developing on rich and damp soil, along rivers or forest edges.

**Grasslands** are low open plant formations, colonizing generally shallow soil, poor in nutrients and dry, fairly rich in bases (6120 and 6210), or acidic (6230). In Wallonia, these environments have become rare. They often have an agro-pastoral origin, shaped by the flocks of sheep and goats.

**Alkaline fens** develop on waterlogged soil with base-rich water. The vegetation of some alkaline fens was once mown for the production of litter.

**Petrifying springs** designate sources or small streams where the calcium bicarbonate dissolved in the water precipitates to form a brittle rock (tuff or travertine). These environments are rare and are home to highly specialized flora and fauna (mosses, algae, insects, etc.).

**Bog woodland** are boreal forests occupying wet and very acid peat soils, mainly in the Haute Ardenne. These are sparse woodlands of low height and dominated by downy birch. **Alluvial forests** are located in the flood


Neufchâteau
Luxembourg
Bouillon
Arlon
France
Virton
629 hectares were restored by the project
Sand grasslands
Calcareous grasslands
Nardus grasslands
Alkaline fens
Hay meadows
Wet forests
0
5
10 km

# A variety of machines, livestock and techniques used

The majority of grasslands and meadows were restored on abandoned land which has naturally been reforested. To do this, the most used technical approach was as follows: deforestation, raking and cleaning of branches and cuttings, stump grinding, soil removal or soil milling, harrowing and planting or sowing. The meadows are then mown, and the grasslands fenced and grazed.

Rotovating, mulching, milling or shredding (sometimes synonymous): these techniques prepare the soil for mechanical management.

Topsoil removal involves stripping the surface layer of the soil (~ 5 cm) in order to remove organic matter, therefore favouring typical grassland species.

Seeds are collected using harvesters from nearby meadows, where the target habitat is still present.

Harrowing and sowing are ideally done in late August - early September. The first mowing will already take place in the spring.

Rustic cows (here from the Highlands), are suitable for wet and non-mowable plots, with the advantage of not very selective grazing.

Goats (here "from Lorraine") are essential for managing grasslands, at least the first years, because they eat brambles and other woody suckers.

# Some restored sites seen from the sky

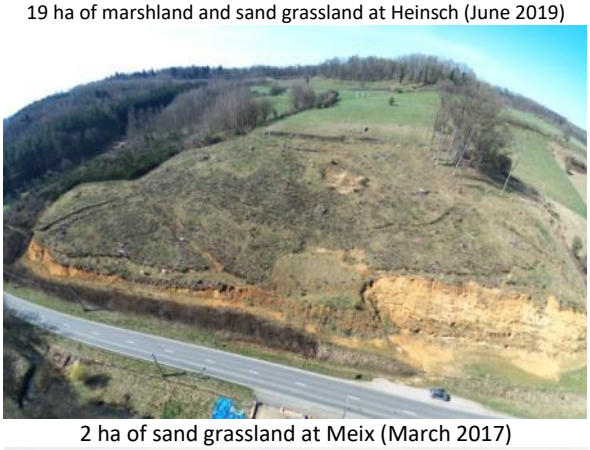
© S. Bocca

27 ha of *Nardus* grassland at Beulet (Winville, August 2017)

2 ha of hay meadow at Gérouville (May 2019)

19 ha of marshland and sand grassland at Heinsch (June 2019)

16 ha of meadows and *Nardus* grassland at Ilé (Etalle, Febr. 2017)



2 ha of sand grassland at Meix (March 2017)

11 ha of marly grassland at Rossignol (September 2018)

13 ha of mountain hay meadows and *Nardus* grassland at Wisbisch (June 2019)

The sheepfold at Fratin (February 2019)

# Great innovations

In addition to the quantitative results obtained in terms of restored areas, LIFE Herbages has brought a whole series of innovations in terms of restoration, management and monitoring of the targeted habitats.

**New restoration and management techniques in Wallonia**

LIFE Herbages is the first Life project in Wallonia to restore calcareous grasslands on sand and marl. The peculiarity of these two habitats compared to conventional limestone grasslands is their link with the extractive industry - marl or sand pits - which have made it possible to constitute temporary refuge areas. The abandonment of most of the sites led to their reforestation. Residual areas were therefore particularly small (less than two hectares), and the possibility of restarting periodic extractive activity on a large number of small sites was impossible. It was therefore necessary both to actively restore on the basis of new technical approaches, but also to develop recurrent management techniques, in a context where all know-how in terms of recurrent management of these habitats had disappeared..

*"Compared to the European Union's objectives of halting the loss of biodiversity, Life Herbages has not only made an important quantitative contribution targeting the most threatened habitats, but above all it has demonstrated that the large-scale restoration of flower meadows , Nardus grasslands or calcareous grasslands was technically possible, by developing the corresponding technical approaches, as well as the associated recurrent management methods. Before, we knew we had to act, but we did not know if it was possible. Now that we know we can, we just have to replicate on a large scale. "*

Patrick Verté, Scientific Project Manager at SPW/DEMNA

The challenge was particularly difficult for grasslands on calcareous sand, insofar as this habitat corresponds to a pioneering stage with sand laid bare regularly and therefore a more disturbing regime than for conventional calcareous grasslands. Discussions with site managers in Germany have led to a move towards grazing management, generally associating goats, sheep and horses, after restoration involving a stripping of the organic surface layer of the soil and addition of diaspores.

Cleaning of a calcareous sand cliff in Pin using a lifting platform.

Plantations of clustered bellflower plants by Meise Botanic Garden's team and its volunteers.

**Spreading of hay and harvested seeds, combined with sowing and planting of cultivated species**

The project is also pioneering in its use of a combination of hay spreading techniques, sowing propagated or harvested seeds, as well as planting plug plants. This on the basis of a preliminary diagnosis of the typical species still present, of those likely to come back spontaneously via the seed bank or the seed rain, as well as techniques of diaspore addition. In fact, seed harvesting only makes it possible to bring species that are frequent enough in the source sites, tall enough to be harvested and whose seeds are ripe during harvesting. For other species, the production of plug plants was necessary. These are rarer species (for example field scabious in hay meadows), species whose seeds are ripe too early (mountain arnica in *Nardus* grasslands, or viper's-grass in *Molinia* meadows), too late (small scabious), or too small species (primroses, cinquefoils, milkworts).

*"Ecosem has been working to restore indigenous and threatened plant communities for 20 years. Recent LIFE projects aiming at restoring meadows have given new impetus to this challenge, and we are delighted about that. With the LIFE Herbages project, 6,250 kg of seeds were harvested locally, and 19,000 seedlings of various species were produced by our company. 310 ha of natural habitats have benefited from this. "*

David Becker and Pascal Colomb, Managers of the company Ecosem

The project also made it possible to make progress on the needs in terms of soil preparation before plant establishment, in particular on the importance of managing competition between species, the main obstacle to the establishment of seeds whose dispersal capacities are already very limited.

The innovative work carried out by Meise Botanic Garden, in terms of ex-situ reproduction of endangered plant species with the aim of reintroducing them into their natural environment, was also considered an example when it was published and presented at international conferences. What was judged to be unique was the scientific rigor and the thorough and methodical approach, with a very comprehensive monitoring, and the size of the transplanted populations (planting of minimum 500 individuals per population).

**Reinvented pastoralism**

Most of the meadows present in Wallonia have undergone addition of fertilizers, amendments or seeds, and are largely the result of the agronomic improvement of former pastoral rangelands. Pastoralism, in the sense of *"livestock activities which enhance the spontaneous fodder resources of natural areas by extensive grazing"*, has become rare. Consequently, the know-how in the management of these areas, animals capable of developing them, the manner of managing pastures, and the products that can be obtained from them, are today incomplete. With more than 250 ha of pastures restored and brought into agreements with local breeders, the LIFE project contributes to the redevelopment of pastoralism in the region. A selection of the necessary rustic cattle and a grazing plan are considered and adapted on a case-by-case basis for each plot. The project also supported the installation of an itinerant shepherd in the Anlier forest, with a herd kept during the day, a practice that had long since disappeared from Wallonia.

*"This LIFE project was a very positive first experience for Meise Botanic Garden. In addition to the particularly encouraging results which have been obtained, this project has also demonstrated the complementarity and effectiveness of a partnership between the major players in the field of conservation and a botanical garden whose main mission is ex situ conservation. If this kind of collaboration was until recently unlikely in the context of LIFE projects, today it represents real added value for nature restoration projects. "*

Sandrine Godefroid
Research Scientist at Meise Botanic Garden

**Creation of an autonomous agricultural company managing exclusively nature reserves**

In order to perpetuate the management of nature reserves and to diversify funding sources for this, Natagora created the company "Epipactis". By investing in the construction of a sheepfold and in animal husbandry and mowing equipment, the LIFE project allowed the company to take off.

Training of nature reserve managers.

Sheepfold built by the project in Fratin (Etalle).

**Training conservators and managers of restored habitats**

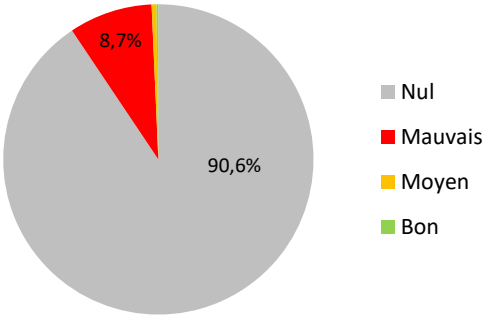
After the project, recurrent management implemented by farmers will be monitored by the Walloon Region and Natagora. In order to enable them to carry out this mission, the project made sure to involve future site managers from the beginning, but also to provide them with training in the recognition of habitats and species, as well as in their management. Technical sheets concerning habitats, their flora and fauna, were written for managers, and annual support in the field was organized with each of them

# Positive impacts on biodiversity

**Evolution of flora and quality of restored habitats**

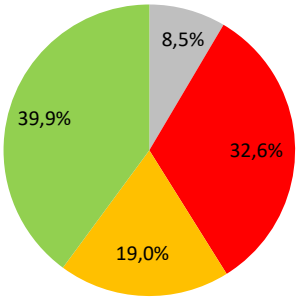
The quality of the natural habitats restored by the project was assessed before and after restoration works. This assessment was made on the basis of the number of plant species typical of each of these habitats, and their land cover rates, according to a standardized method developed by the Walloon Region (conservation status of Natura 2000 habitats).

**Quality of habitats before works**




average = 0.5 typical species,
with 1.4% cover

**Quality of habitats after works**




average = 5.4 typical species,
with 24.1% cover

Sampling n = 179 plots totalling 273 ha (all habitats combined)

Sand grassland in Tattert (June 2018), 2 years after works

Calcareous grassland in Torgny (May 2015), 2 years after works

Hay meadow in Meix (June 2016), 2 years after works

*Nardus* grassland at Wisbisch (June 2019), 3 years after works

**Evolution of animal populations associated with habitats**

Animal species have also reacted very positively to the restoration of their habitat. Some rare birds have found nesting sites on the restored areas.

For example, since the restoration of the Beulet site in the Sûre Valley, a couple of great grey shrikes nest and raise their chicks. The status of this species has become very worrying in this region of the Ardennes. Another remarkable fact is that two pairs of European bee-eaters have benefited from the reopening of sandy cliffs near Meix-devant-Virton as part of the restoration of sand grasslands.

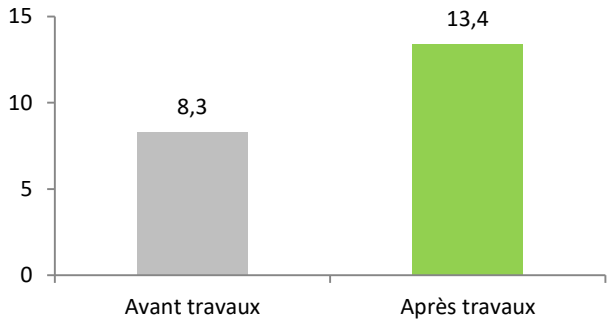
Great grey shrike (*Lanius excubitor)* © S. Bocca

European bee-eaters (*Meriops ater*) © D. Sevrin

The few threatened reptile species present in the region were observed, sometimes in large numbers, on many restored sites: smooth snake, grass snake, and sand lizard.

Observations of wild bees and butterflies have also significantly increased at restored sites, both in number of individuals and species. A dozen species of butterflies were even discovered in some habitats whereas they were supposed to have disappeared from the project area.

**Average number of butterflies observed per site and per visit before and after restoration**




Sampling n = 135 plots

The ilex hairstreak (*Satyrium ilicis*) was for example observed in the Sûre valley, in the restored *Nardus* grasslands bordered by preserved oak forests. This species is very rare in the Ardennes. Similarly, a woodland ringlet (*Erebia medusa*), almost extinct in the southern Ardennes has been observed in a restored meadow at Winville in the Sûre valley.

Ilex hairstreak (*Satyrium ilicis*) © H. Baltus

Woodland ringlet (*Erebia medusa*) © H. Baltus

Several species of critically endangered wild bees have also been observed on sites restored by the project. Among many interesting discoveries, the ruderal bumblebee (*Bombus ruderatus*), almost disappeared from Belgium and found at Bodange in the Sûre valley. The same goes for the very rare carder bumblebee (*Bombus humilis*), sand bumblebee (*Bombus veteranus*) and shrill carder bee (*Bombus sylvarum*), observed in different plots restored in the Gaume and the Ardennes. Note also the observations of the black-headed leafcutter bee (*Megachile circumcincta*) and the Schenck mining bee (*Andrena schencki*) which is extremely rare in Wallonia, in restored meadows of the Plate-Dessous-les-Monts and Sampont. Finally, 2 new species for Belgium were discovered in the framework of the monitoring: *Halictus langobardicus* and *Lasioglossum limbellum*.

Carder bumblebee (*Bombus humilis*) © H. Baltus

Schenck mining bee (*Andrena schencki*) © H. Baltus

**Development of plants reintroduced by Meise Botanic Garden**

Five species threatened with extinction in Belgium and characteristics of the habitats to be restored have been reintroduced or their populations reinforced from seeds collected in relict populations mainly located in the project area. One of these species being an annual (the proliferous pink, *Petrorhagia prolifera*), it has been sown at 4 restored sites. The 4 other perennial species were reintroduced using plug plants multiplied in the nursery for 3 months (maiden pink *Dianthus deltoides*, dwarf everlast *Helichrysum arenarium*, mountain arnica *Arnica montana* and clustered bellflower *Campanula glomerata*). Prior to sowing and transplanting, an analysis of the soil seed bank was carried out in the sites to be restored. This study was able to confirm that none of the target species were present in the soil seed bank, thus demonstrating the need for reintroductions.

In total, 9,100 plants were transplanted to 13 different sites, in populations of 500 to 700 individuals each. Survival and flowering rates were significantly higher than what has been observed in other similar projects elsewhere in Europe. Over the duration of the project, no less than 33,870 maiden pink flowers were counted. These plants have dispersed more than 1.5 million viable seeds in the area. Populations of dwarf everlast have produced 203,000 flower heads, representing more than 3.9 million viable dispersed seeds. The transplanted bellflowers produced 187,142 flowers, dispersing more than 3.6 million seeds. Mountain arnicas produced a total of 35,340 flower heads, which dispersed more than 1.2 million viable seeds.

Transplants therefore act as seed sources allowing a gradual increase of reintroduced or reinforced populations. This translates into concrete results, since several thousand new rosettes resulting from the germination of these seeds have already been recorded in the restored sites, thus making it possible to perpetuate the restored populations.

Clustered bellflower (*Campanula glomerata)* at Fontenoille in 2018, 3 years after plantation.

Maiden pink *(Dianthus deltoides)* at Meix-devant-Virton in 2017, 4 years after plantation.

Mountain arnica (*Arnica montana) at* Volaiville in 2019, 5 years after plantation.

Dwarf everlast *(Helichrysum arenarium)* at Tattert in 2017, 3 years after plantation.

The biological monitoring within the framework of the project finally made it possible to increase knowledge about the area: 27,789 botanical observations were recorded, as well as 14,733 observations of butterflies, 1,110 of reptiles and more than 9,466 of Hymenoptera.

## Socio-economic impacts and ecosystem services

Given the size of the areas restored by the project, the theoretical socio-economic impacts produced are far from negligible. First of all, no less than **73 people** were among the project partners, with at least part of their working time funded by it. This team called upon more than **125 local companies** for forest works, agricultural works, exterior fittings, construction works, suppliers or service providers to achieve the objectives of the project..

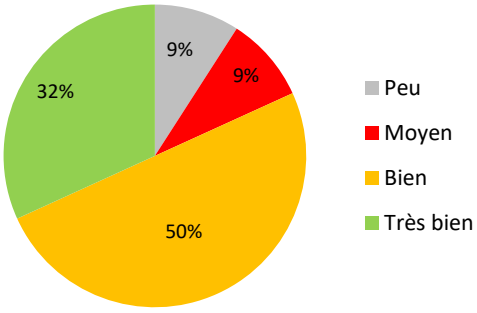
Then, among the restored habitats, 574 ha were on agricultural land, characterized by the Walloon Region as being "meadows of high biological value". The managers of these meadows can then engage in "agro-environmental measures" and benefit from premiums of up to 690 euros per hectare per year. These are therefore almost **400,000 euros per year** in new premiums which **local farmers** can claim as a result of the project.

Furthermore, based on estimates from the Millennium Ecosystem Assessment commissioned by the United Nations (2005), these 574 ha of meadows and grasslands restored by LIFE Herbages should yield on average each year, in terms of monetary benefits for our society, linked to **ecosystem services**: € 40,000 in pollination, € 50,000 in water purification, € 100,000 in flood protection, € 180,000 in carbon storage, € 260,000 in better quality food for livestock, and € 400,000 in educational and recreational values, which means more than **1 million euros per year!**

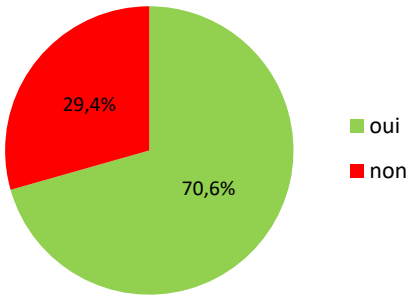
There is now evidence that permanent meadows such as those restored by the project store carbon sustainably in the soil, and therefore contribute significantly to slowing climate change. If we transpose the estimates from a recent INRA study (Pellerin S. et al. 2019), all of the habitats restored by the project would store an average of **51,700 tons of $CO_2$ per year**, equivalent to the annual average emissions of 6,200 Belgians.

Finally, the positive socio-economic impact of the project is confirmed by a survey of 43 farmers affected by the restorations:

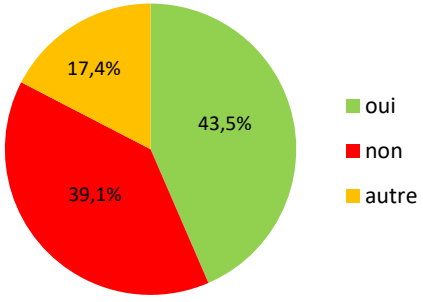
Does your livestock appreciate and properly eat the hay from the restored plots?



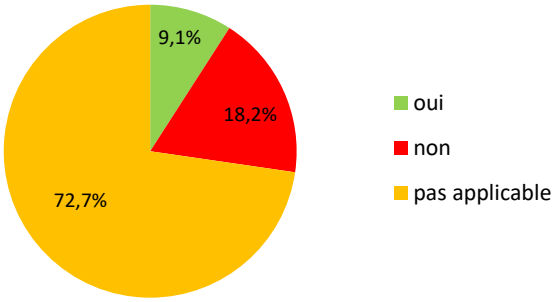

Do you have more forage autonomy thanks to the management of the restored plots?




Do you think that the nature reserves created attract more visitors who participate in the local economy?




Do you think that the nature reserves created attract more visitors to your farm?




Sampling n = 23 responses among 43 farmers contacted (MSc thesis by P. Laurent, 2019)

## Local and international communication

Throughout the project, more than 260 activities were organized to present the project, its actions, and visit the restored habitats: guided walks, conferences, management days, events, stands, etc. Several thousand people participated in these activities.

Inaugural party for the sheepfold in Fratin, June 2019.

Visit of the Beulet site (Winville), October 2017.

In terms of project documentation :

- LIFE news and progress reports were periodically disseminated by means of newsletters available on the website: www.life-herbages.eu
- a film explaining the project, with a focus on plant reintroductions, was produced by Meise Botanic Garden: www.youtube.com > LIFE Herbages
- a photo exhibition gathering 23 captioned photos illustrates the key actions and results of the project. It is available for loan on request

Guided tour of the Illé site (Etalle)


Extract from the film on LIFE Herbages, illustrating the plant propagation at Meise Botanic Garden

- 26 educational panels and itineraries for walks and visits to the nature reserves have been created on several sites restored by the project. The majority are or will be downloadable on the project website or on: www.natagora.be/balade
- several articles concerning the project were published by Meise Botanic Garden in international scientific journals such as Plant Ecology, Restoration Ecology and Conservation Genetics

## And after… ?

The work accomplished in such a project does not stop with its end date, and is even less limited to habitat restoration. Restored or recreated environments must be maintained. For this, we are fortunately not alone. The continuity of a LIFE project, called "After-LIFE", can often be estimated from the quality and diversity of the partnerships forged during the project. Professional teams and conservators of nature reserves will be accompanied in their missions by:

- school groups, youth movements or “greening” companies, within the framework of management days. By raking, clearing or pond cleaning, they provide essential manual work in certain areas of the reserves;
- people subject to community service penalties. Sometimes little aware of nature conservation, they live an experience that can create vocations;
- passionate naturalists, generally members of Natagora. They help on several levels according to their skills and desires, whether by reporting their biological observations, by participating in management days, or by taking part in strategic decisions during "management commissions".

*"Our group of volunteers from the Natagora Lorraine regional section is motivated and will help maintain the sites after this ambitious program. One way to do this is to make as many people as possible responsive to nature. In fact, in the green province of Luxembourg where we live, people do not always notice that greenness is gradually being reduced. "*

Pierre Lemaire
Active volunteer and president of the Natagora Lorraine regional section

According to our estimates, all of these one-off grants total **more than 400** “man-days” per year! In addition to this very significant manual labour, there is the mechanized or animal management of the vast majority of plots thanks to farmers. At the end of this report, agreements were signed with **50 different local farmers** to manage **515 ha restored by the project**. Among them, 10 farmers are under the age of 40. Respecting the biodiversity found on the sites, these privileged partners mow or graze nature reserves while benefiting from agro-environmental measures, additional areas for their exploitation, and quality hay for their livestock.

*“Maintaining the sites restored by the LIFE project is a great opportunity to be useful to nature while improving your farm. I am proud to help maintain our biodiversity and beautify the landscapes ”*

Henk Van der Heyde
Farmer and manager of many restored sites

*"On the DNF cantonment of Virton, 487 ha will obtain the status of nature reserves in this year 2020! About a quarter is the result of the LIFE Herbages project, the rest is the result of long-term work carried out by the cantonment for almost 20 years. We are proud of this assessment in favour of biodiversity, but also aware of the importance of the management that follows, and of the human and financial resources that it is necessary to devote to it on a recurring and long-term basis. term. "*

Alain Crépin
District Forest Officer at the DNF (area of Virton)

*"With the support of more than 100,000 sympathizers, 25,000 members and thousands of active volunteers, as well as a very constructive partnership with the Public Service of Wallonia, Natagora works daily to manage a vast network of nature reserves which extends over all of Wallonia. This tremendous teamwork is gradually bearing fruit and we are proud of the excellent biological results we can see today. However, our actions remain insufficient to deal with the biodiversity crisis, we are aware of this and therefore we must continue! "*

Joëlle Huysecom, Head of the Conservation Department at Natagora

Finally, in order to also manage the wettest land in the project area, the most difficult to access, and/or the least profitable from an agricultural point of view, Natagora can now count on a team of 3 farmer-breeders, part-time hired by its agricultural company "Epipactis". The team mows approximately 130 hectares of meadows and marshes annually, and grazes nearly 90 sheep on 30 hectares of grasslands.

Willow clearing in the Fouches marshland by schoolchildren.

Collecting hay in the Sampont marshland

Mowing meadows and *Nardus* grassland at Wisbisch.

Grazing in the Breuvanne nature reserve.

## Thank you !

A huge thank you to all the partners and participants in the project: professional teams and volunteers from Natagora, the SPW (DNF and DEMNA), as well as Meise Botanic Garden; Natagriwal and Ardenne & Gaume asbl; natural parks; municipalities; farmers; agricultural, forestry and construction companies; and land owners. Thanks also to the NEEMO monitoring team.

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The LIFE Herbages team (whose working time was paid at least partly by the project, and totaling around 6 FTEs over its duration) was composed: **at Natagora** : Hubert BALTUS, Stéphane BOCCA, Sébastien BOUVÉ, Elisabet CODINA-LLAVINA, David DOUCET, Joëlle HUYSECOM, Xavier JANSSENS, Laurent JUBERT, Jerôme LOBET, Jean-Luc MAIRESSE, Jean-François MAQUET, Youri Martin, Adrien MONART, Jean-Luc PARISSE, Kévin PERARD, Julien TAYMANS, and Marie VANSCHEPDAEL. **At the DNF :** Benoît ALLARD, Marc AMEELS, Benoît BAILLEUX, Christian BAUDE, Jean-Claude BERGUET, Patrick BERT, Jean-Pierre BLAIRON, Jacques CHINA, Luc COLLIGNON, Nathalie COUTELLIER, Thierry CRAVATTE, Jean CRELOT, Alain CREPIN, André CULOT, Benjamin DE POTTER, Charles DEVLEMINCK, David DOUCET, Alain DRON, Philippe FERY, Anne FOCANT, Jean-Robert FRANCOIS, Philippe GERARD, Jean GILISSEN, Patrice GILLET, Pierre GOBIN, François GRUSLIN, Pascal HAVART, Benoît HAVENNE, Marc HENRION, Jean-Marie LAMBERT, Nathalie LEMOINE, Guy LOUPPE, André MABOGE, Jean-Claude MACCATORY, Xavier MAQUA, Yves MAYERUS, Guy MERLOT, Jean-Marie MOTCH, Jean-Paul NICOLAS, Dominique NOEL, Christophe PIERLOT, Jean-Luc PIERRARD, Michaël PLUMIER, Philippe PROTIN, David STORMS, Stefan TERWEDUWE, Philippe TOUSSAINT, François VAN DER OUDERRA, Bernard VAN DOREN, and Yvan VINGERHOETS. **At the DEMNA :** Séverin PIERRET, and Patrick VERTÉ. **At Meise Botanic Garden:** Wim BAERT, Sandrine GODEFROID, Franck HIDVEGI, Sarah LE PAJOLEC, and Fabienne VAN ROSSUM.

*"Coordinating this project for more than 7 years was a very enriching experience. I was impressed, often amazed, by the speed with which biodiversity can reappear if it is given the means. I also enjoyed working in a contrasting and passionate team. "*

Xavier Janssens
Coordinator of the LIFE Herbages project

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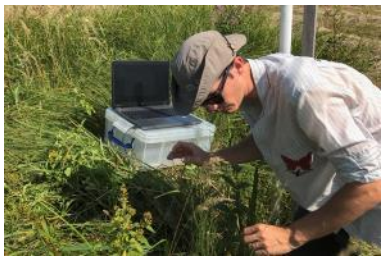

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