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# LIFE-Nature Programme

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Actions for the Croix-Scaille  
valleys and peat bogs

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2006-2009



## LIFE-NATURE



Initiated in 1992 by the European Commission, the LIFE fund (the EU's funding instrument for the environment) finances projects intended to improve the environment in a broad sense. Within this Fund, *LIFE Nature* deals more specifically with safeguarding biodiversity through programmes for the protection and restoration of habitats and endangered species at EU level. Through their specific actions, the LIFE Nature programmes contribute to the implementation of the «Birds» and «Habitats» European Directives and the set-up of the Natura 2000 network.

Since the creation of the LIFE Fund, Wallonia has benefitted from around fifteen *LIFE Nature* projects, mainly focused on the restoration of natural habitats in decline such as peat bogs, wet meadows, chalk grasslands, or the implementation of measures for the protection of vulnerable species such as otter, pearl mussel, and some butterfly species.

## THE NATURA 2000 NETWORK

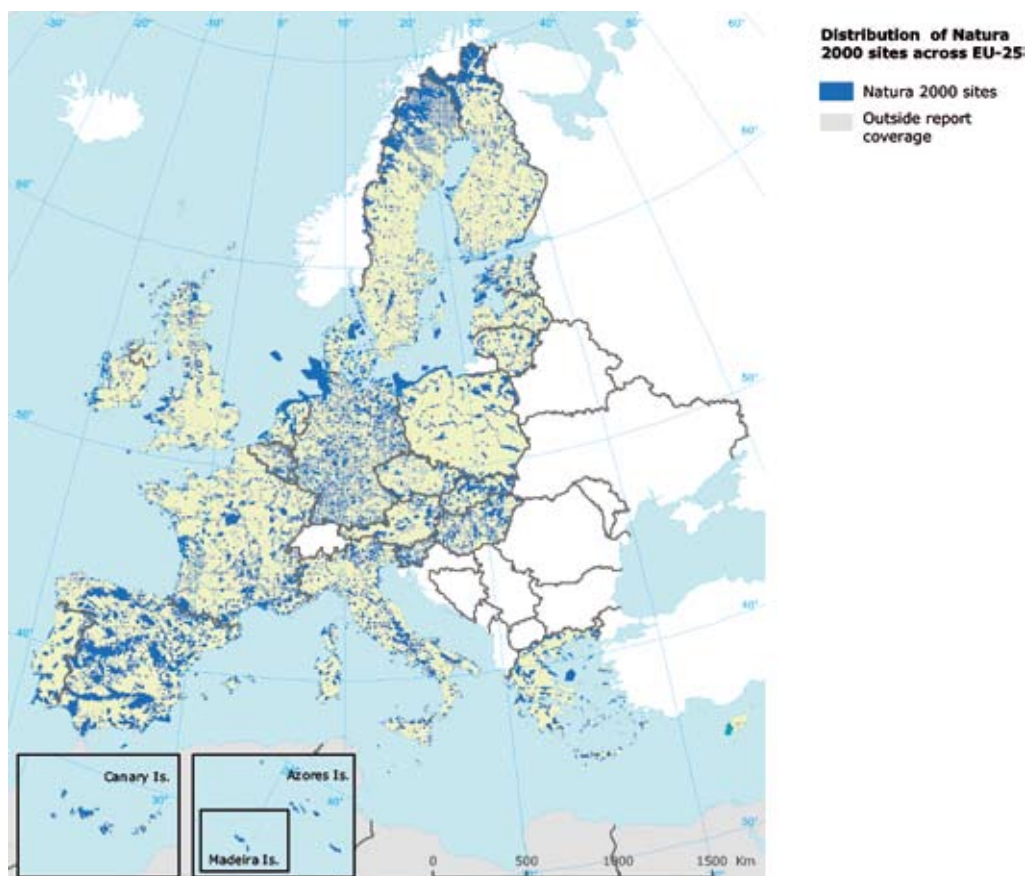


Natura 2000 is a network of natural sites of high ecological interest on a European level. Through the conservation and restoration of these areas, the EU Member States intend to preserve their flagship European natural heritage sites.

In Wallonia, 213,000 hectares (13% of the territory) have been selected as Natura 2000 sites. Three quarters of this area are covered by forests.



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© Erwan Clematec

*Common cottongrass*



© Pascal Hauteclair

*Heath spotted orchid*



© LIFE Plateau des Tailles

*Cranberry*



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*The Houille river*



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*Violet copper*

## IN BRIEF

### THE PROJECT AREA

In a region relatively well preserved from the rampant urbanisation that dominates Wallonia, the Municipality of Gedinne is crammed with interesting natural sites. The Croix-Scaille plateau is the highest point of the Namur province at 503 metres and is home to several rare peaty sites in Wallonia. The Hulle and Houille valleys originate from within this body essentially made up of forestland. They meet about nine miles downstream before flowing into the Meuse at Givet.

### THE SITES

Three Natura 2000 sites (about 4,500 hectares) constitute the project work area.

- The Houille valley downstream of Gedinne (BE35039)
- The Hulle valley (BE35040)
- The Houille basin upstream of Gedinne (BE35041)

### AIMS

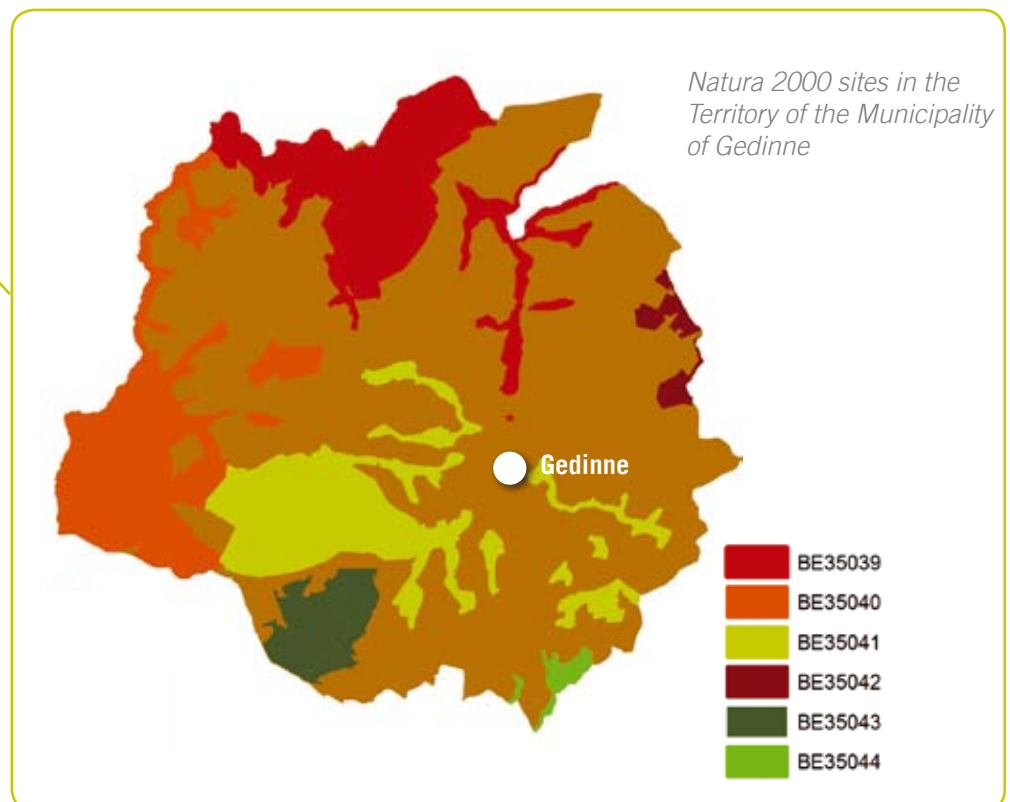
The LIFE project is essentially devoted to the restoration and development of a group of peaty sites and wet valleys deteriorated by coniferous plantations, and the works associated with these plantations (like excavation of drains).

Quatre objectifs principaux ont été poursuivis :

- Elimination of 160 hectares of coniferous plantations
- Restoration of at least 80 hectares of open habitats
- Creation of 50 hectares of new nature reserves
- Development of public awareness through a range of activities

### THE ACTORS

This project has brought together the efforts of NATAGORA (nature protection charity), the Municipality of Gedinne, and the Beauraing services from the DNF (Forest and Nature Department), with funding essentially from the European Commission and the Walloon Region.







## CONIFER PLANTING IN WET AREAS

Initially kept open through human exploitation, the valley floors and peaty areas of the Croix-Scaille belt were systematically planted with conifers during the twentieth century. This sudden change created many issues:

### LOSS OF BIODIVERSITY

Walking through a spruce plantation in the Croix-Scaille is enough to notice how few plant species are growing there and how little sunlight reaches the soil. The poverty of the habitat is the same as far as animal species are concerned. This is in glaring contrast to the biological diversity of hay meadows and heaths that used to be there!

### INCREASED FLOODS

The numerous drains excavated in the wet areas in order to dry them out for conifer plantation accelerate the flow of rainwater into the watercourses. The flooding problems are therefore increased downstream.

### EROSION OF RIVERBANKS

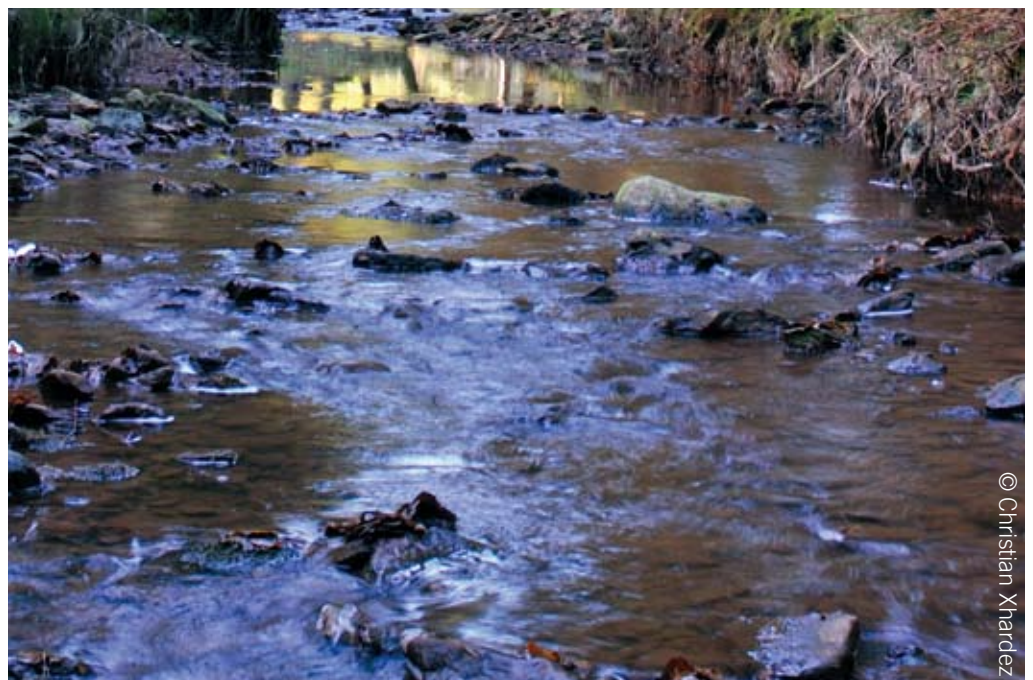
Once conifers are planted, the banks are no longer stabilised by natural vegetation. This leads to faster erosion. When the river floods, a larger quantity of soil is released into the water, accelerating the filling of riverbeds and spawning beds.

### REDUCED SHELTERING POTENTIAL FOR LARGE WILDLIFE

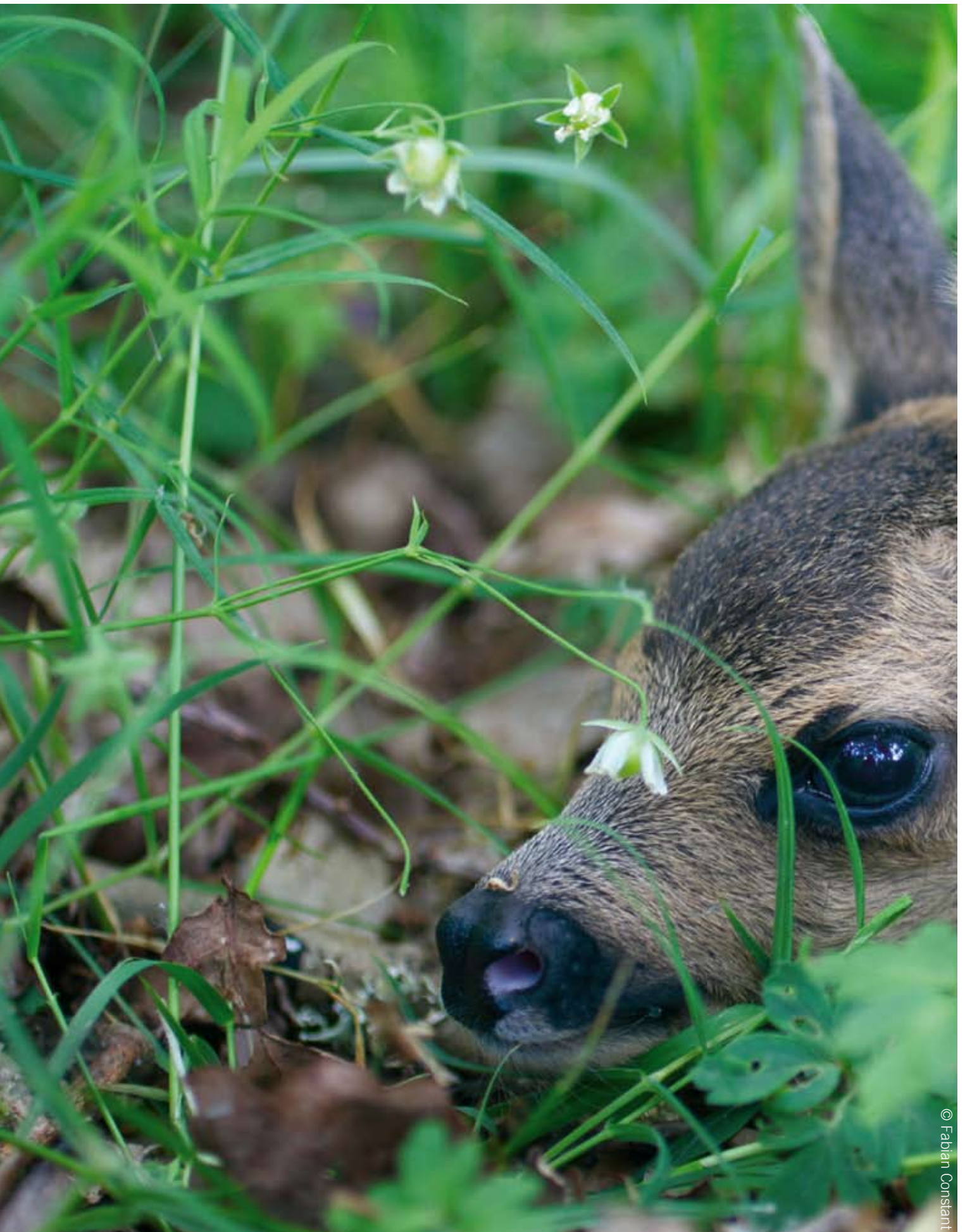
Within coniferous plantations, wild animals are no longer able to find sufficient food. Red deer, roe deer, and boar are therefore forced to move into agricultural areas, causing considerable damage. Game density also increases in deciduous forests and, due to their grazing, often abnormally limit the natural regeneration of plant populations.

### DAMAGE DURING FOREST EXPLOITATION

Finally, many sites planted with conifers on valley floors are difficult to exploit with the logging machines currently in use. The continually increasing weight of these lead to considerable deterioration of paths and trails.









## PROJECT ACTIONS

### CUTTING DOWN CONIFEROUS PLANTATIONS

Most of the sites restored by LIFE were occupied by spruce at various stages of growth. One part is located at the top of Croix-Scaille plateau on municipal land, and the rest on valley floors on mostly private land.

#### ON MUNICIPAL LAND

In the first year of the project, we delimited areas to be cleared of trees. Once this was established, the trees of about a third of the surface area were sold and cut down. Since the rest had no market value and was on very wet soil, the trees were cut down manually or removed by chipping.

In total, 60 hectares belonging to the Municipality of Gedinne were thus reopened. The Municipality agreed to abandon all replantation projects here and on 27 additional hectares not yet planted with conifers. From that point on, management of 87 hectares of peaty habitats will therefore be intended for nature development.

#### PRIVATE OWNERS

Compensation was proposed to the various private owners to encourage them to adhere to the project aims. This was to compensate for the financial loss (future value) caused by prematurely cutting down their plantations.

First of all, all the owners located in areas identified as priority were contacted to invite them to participate in the project. For all those who agreed to this proposal, the LIFE team then estimated the possible compensation price on a case-by-case basis using a compensation table drawn up by the Gembloux Agronomy Faculty, taking into account the category of productivity, the age of the trees, and any damage from game. Once they had agreed, the wood was then sold either by the owner or through LIFE.

In the end, 114 hectares were exploited on private land belonging to some 120 different owners, thus enabling miles of rivers to once again receive sunlight.









## RESTORATION OF MEADOWS AND HEATHLAND

In order to restore open habitats targeted by the project, different restoration techniques were carried out after tree cutting. Once the conifers had been felled and exported, the floor was covered in branches. Leaving them where they were would have considerably prolonged the necessary time for restoration.

### WINDROWING THE REMNANTS FROM TREE FELLING

In order to bring sunlight back to the soil and restore the open habitats that will be maintained by cutting and grazing, the remnants from tree felling were generally windrowed at the boundaries of the parcels and/or in areas as far as possible from watercourses.

In places where we had vast unbroken stretches of valleys, windrows were also established crosswise to these (about every 100 metres). These windrows will enable us to delimit the different parcels, limit the strength of prevailing winds, while creating shelters for numerous animal species (e.g. small mammals, birds, and reptiles). Once they have decomposed, we expect to see sections of hedgerows gradually re-established to help diversify the micro-habitats.

In total, the windrows were laid over a surface area of 90 hectares (77 on valley floors and 13 on the Croix-Scaille belt).

### MILLING OF SOILS AND RESTORATION OF HAY MEADOWS

After windrowing the remnants from tree felling, the stumps present over part of the land were milled. This technique will make it possible to re-establish management through hay cutting while promoting faster germination of dormant seeds contained in the soil. The works were carried out over 62 hectares along the main watercourses.

Areas processed in this way were cut for the first time the following year. Exporting the hay (and with it, the nitrates produced by decomposition of the wood) should promote the gradual restoration of species-rich hay meadows.

### TURF-STRIPPING AND RESTORING HEATHLAND

Areas of peaty soils of the Croix-Scaille belt were turf-stripped. The striped material obtained was then raked to eliminate accumulated mulch (up to 10 cm thick in some places) and encourages, as above, germination of the seeds contained in the soil. About twenty hectares were treated in this way aiming at restoring large areas of heathlands.







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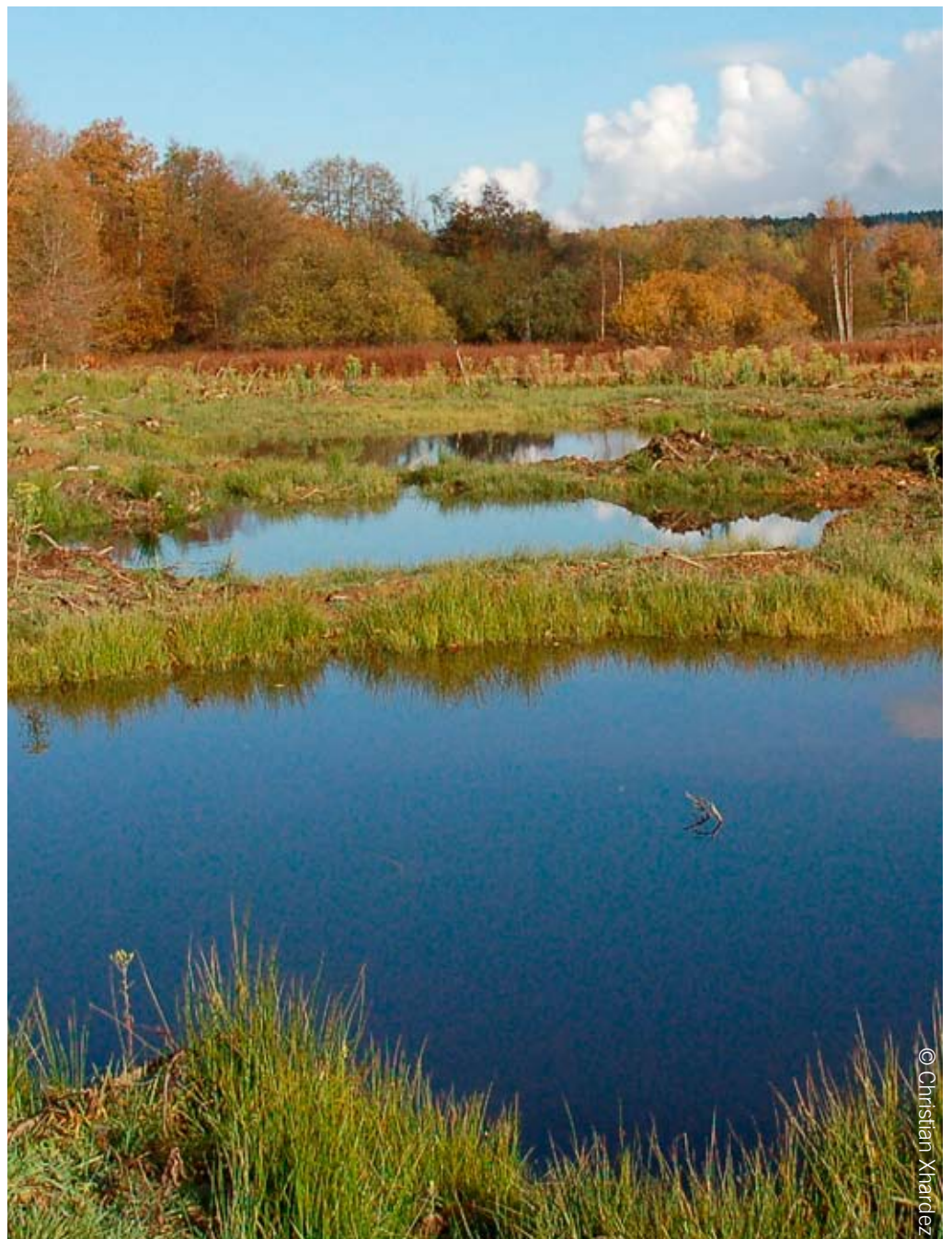
## WATER RESTORATION

The presence of abundant water is essential to maintain peat bogs, peaty heathlands, and wet meadows. Land restoration therefore consisted in blocking up drains, building stone diguettes (low stone barriers), and digging new ponds.

When conifers were planted, hundreds of drains were excavated in the wettest areas (one drain every four metres in some places!). These were filled in using clay plugs. In some cases, the works were paired with the excavation of small water ponds.

Similarly, during soil-stripping on peatlands, the raked stripped material was generally used to create small retaining reservoirs to limit future dry-out of parcels in dryer periods.

Finally, ponds, generally of limited size and depth, were excavated in scattered locations throughout the area. About 70 ponds were created on the valley floors and 80 others in peaty areas of the belt. Several small existing ponds were also restored.







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## OTHER WORKS

In addition to mechanical restoration work, many manual operations were carried out in the most sensitive areas by the project team and the work reintegration enterprise "La Calestienne".

### SCRUB CLEARING AND CUTTING DOWN AREAS "NATURALLY" INVADED BY CONIFER SEEDLINGS

Scrub clearing works were undertaken on some overgrown parcels. In addition to cutting down trees to ground level, two other methods were tested: girdling of birches and cutting them down to one metre high. We have particularly noted the effectiveness of this second method, with the sap drawer created in this way clearly reducing the amount of stump waste (mainly in the case of birches).

Furthermore, many old abandoned clear-cuts or hardwood forests were invaded by seedlings of coniferous trees. These were cut down and the largest were girdled (debarking of the trunk at 20 cm high and one metre high), a technique enabling the development of standing deadwood which is very beneficial to xylophagous or caverniculous species such as many insects and woodpeckers. During the project, 70 hectares were cleared of conifer seedlings in this way.

### RE-ESTABLISHMENT OF A HAY CUTTING REGIME

During its last year of implementation, LIFE was able to purchase the proper cutting equipment in order to cut wet meadows (a low load-bearing tractor and windrower). This equipment was used from the end of summer 2009 to carry out the first restorative cutting.

### FENCING AND EXTENSIVE GRAZING

Initially envisaged for peaty areas of the Croix-Scaille belt, the enclosures were eventually only placed on some valley floors. Nearly 15 hectares were fenced off and some Galloway cattle were put out to graze.

### THE FIGHT AGAINST HIMALAYAN BALSAM AND GIANT HOGWEED

Finally, during the project, the LIFE team noticed that part of the Hulle and the Houille were starting to be invaded by Himalayan Balsam and Giant Hogweed, two exotic plants supplanting our native species in many areas.

To limit this invasion, the team of LIFE field-workers walked along the watercourses and their tributaries to pull out all visible stems (several thousand in some places). This work, carried out over two consecutive years, has slightly reduced the presence of these two species along the visited watercourses.



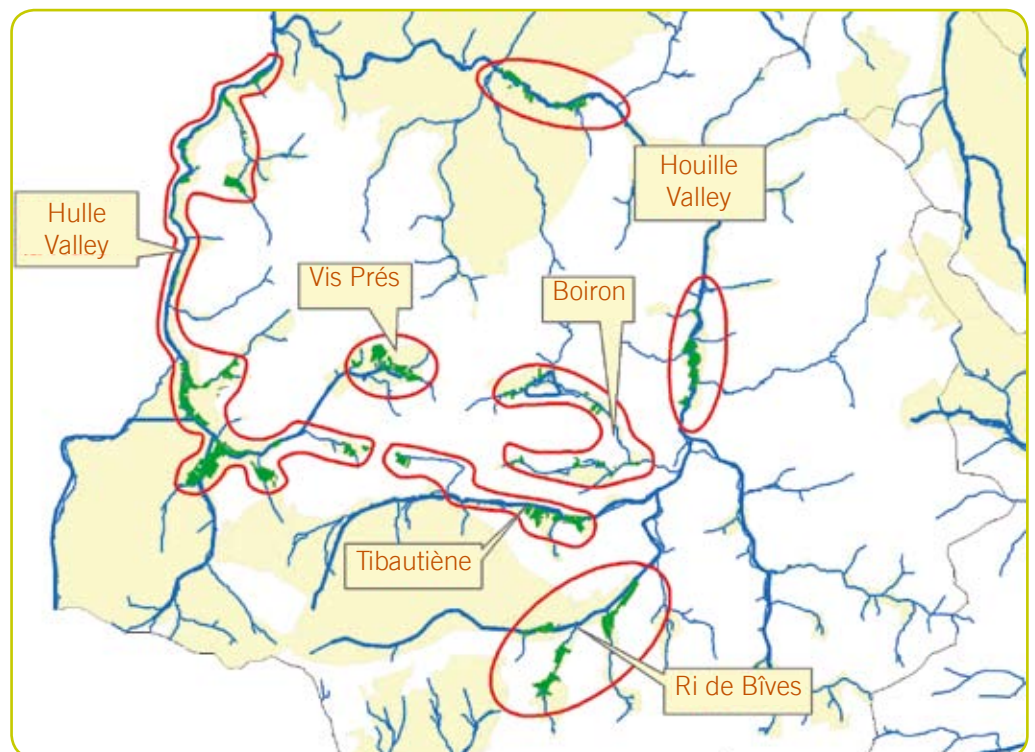
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## NEW NATURE RESERVES

The LIFE project developed the network of nature reserves in the Municipality of Gedinne by acquiring 113 hectares of previously unprotected areas. This area, essentially made up of land undergoing restoration, has been used to expand four pre-existing nature reserves (Hulle Valley, Prés, Tibautière and Ry de Bîves) and create three new ones (Houille Valley, Platte Pierre and Boiron).

Gedinne now contains about 250 hectares of land (1.6% of its territory) managed specifically for nature development: 150 hectares divided into 7 private nature reserves managed by Natagora (see map) and about 100 hectares managed by DNF (2 state nature reserves – the Fange de l'Abîme et Etang de Coubry nature reserves – as well as 87 hectares of peaty areas restored as part of the LIFE project).







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## RAISING AWARENESS

The raising-awareness actions led by the LIFE team consisted of visits and guided trips, management activities, conferences, and presentations. A special attention was given to the schools in the region, youth movements, local residents. The activities were organised in partnership with the Municipality and the local tourism actors.

During the LIFE project, more than 120 activities were carried out and reached nearly 2,000 people in total. Not bad for a Municipality of just 4,500 inhabitants!





## KEY FIGURES

Natura 2000 sites	<b>4,500 hectares</b>
Project duration	<b>4 years (2006-2009)</b>
Budget expenditure	<b>€2,065,000</b>
Total area restored	<b>263 hectares</b>
Area of conifers felled	<b>174 hectares</b>
Windrowing	<b>90 hectares</b>
Milling / Stripping-Raking	<b>90 hectares</b>
Other works	<b>80 hectares</b>
Drain plugging	<b>400 plugs</b>
Ponds created	<b>150 ponds</b>
Miles of rivers cleared	<b>15 miles</b>
Surface area dedicated to nature by the end of the project	<b>250 hectares</b>
New nature reserves	<b>113 hectares</b>







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## USEFUL INFORMATION:

### **Natagora**

[www.natagora.be](http://www.natagora.be)

### **Natagora – Régionale Lesse & Houille**

Thierry Maréchal

Rue de Felenne 39 – 5575 Bourseigne-Neuve

Tel: 061-50 24 43

[tmarechal@skynet.be](mailto:tmarechal@skynet.be)

### **Municipality of Gedinne**

[www.gedinne.be](http://www.gedinne.be)

### **Tourism Office**

Rue des Sabotiers 8 - 5575 Gedinne

Tel: 061 58 74 84

[officedutourisme.gedinne@skynet.be](mailto:officedutourisme.gedinne@skynet.be)

### **Beuraing Office**

Département de la Nature et des Forêts

Rue Vieille 58 - 5570 Baronville

Tel: 082-64.36.10

[Cantonement.beuraing@spw.wallonie.be](mailto:Cantonement.beuraing@spw.wallonie.be)

