

LIFE11 NAT/LU/858

Midterm Report

covering the project activities from 1/09/2012 to 30/04/2015



lifeeislek

RESTORATION OF WETLANDS
AND ASSOCIATED ENDANGERED SPECIES
2012-2017



Reporting date: 30 April 2015

Project acronym: LIFE Eislek



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère du Développement durable
et des Infrastructures
Département de l'environnement

LIFE Project Number

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LIFE+ PROJECT NAME or Acronym

**Restoration of wetlands and associated endangered species in the
 Eislek Region (LIFE Eislek)**

Project Data

Project location	Grand-Duché de Luxembourg, zones Natura 2000 : 1. Vallée de la Woltz et affluents de la source à Troisvierges »(LU0002001) 2. Vallée de la Tretterbaach et affluents de la frontière à Asselborn » (LU0002002) 3. Vallée de l'Our de Ouren a Wallendorf Pont (LU0001002) 4. Vallée de la Tretterbaach (LU0001003) 5. Weicherdange - Breichen (LU0001004) 6. Vallée supérieure de la Wiltz / Derenbach - Weischent (LU0001005) 7. Vallée supérieure de la Sûre / Lac du barrage (LU0001007) 8. Wilwerdange - Conzefenn (LU0001033) 9. Troisvierges - Cornelysmillen (LU0001038) 10. Hoffelt - Kaleburn (LU0001042) 11. Troine / Hoffelt – Sporbaach (LU0001043)
Project start date:	01/09/2012
Project end date:	31/08/2017
Total Project Duration (in months)	48
Total budget	1,766,775€
EC contribution:	883,389€
(%) of eligible costs	50%

Data Beneficiary

Name Beneficiary	natur&ëmwelt – Fondation Hëllef fir d’Natur	
Contact person	M. Patrick Losch, president	Mme Michelle Clemens, M. Claude Schiltz project coordinator
Postal address	5, rte de Luxembourg L-1899 Kockelscheuer	Antenne nord: 2, Kierchestrooss L- 9753 Heinerscheid
Telephone	00352 29 04 04-1	00352 26 90 81 27-35
Fax:	00352 29 05 04	00352 26 90 81 27-33
E-mail	patrique.losch@online.lu	m.clemens@naturemwelt.lu
Project Website	www.naturemwelt.lu	www.life-eislek.lu

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2 Executive summary

Life Eislek is a Life+ Nature project with the aim of restoring a traditional mosaic of habitats composed of fallow wetlands with structural elements, extensively used pastures and hay meadows with delayed cutting regimes. Its area of action is the Upper North Region of Luxembourg called Eislek, characterised by a habitat of high plateau at 560m altitude traversed by a network of rivers and streams. The project works in the 11 Natura 2000 sites of the Eislek region (9 SACs and 2 SPAs).

Three emblematic species typical for the wet grasslands of the Ardennes region will benefit from this project. The violet copper (*Lycaena helle*), the whinchat (*Saxicola rubetra*) and the red-backed shrike (*Lanius collurio*) have declined in numbers due to a decrease in available habitats. The consequence of the intensification of agriculture and urbanisation is a depleted and banal landscape unable to provide a habitat to our target species. The violet copper and red-backed shrike depend on a structure-rich environment that does not conform to the modern day utilisation of the land, the whinchat disappeared with the early cutting regimes enabled by the use of fertilisers.

With the shift in traditional land use, the diversified semi-natural habitats have been abandoned or transformed. The project aims to reverse the trend in the core areas designated during the mapping of the project area (action A1). The measures consist in shrub clearance and restorative mowing to open up abandoned sites. The rehabilitation of rivers and removal of drainage pipes target the renaturation of wetland ecosystems as does the clear-felling of spruce trees in wet habitats. The restoration of bistort meadows serves primarily the violet copper while hedge planting focuses on the red-backed shrike also. The consultation of farmers on the extensification of agriculture and the signing of biodiversity contracts is indispensable in nature conservation.

In addition to the concrete conservation measures, the project works on the elaboration of a management plan for the land owned by the coordinating beneficiary n&ë HfN. This will be achieved through collaboration with other nature protection agencies in Natura 2000 sites, local actors and the agricultural association CA. The practical implementation is carried out by the associated beneficiary CNDs working on the social level through the integration of socially less favoured workers. As a Life project, it is subdivided in preparatory actions (A), the purchase of land (B), concrete conservation measures (C), monitoring (D), dissemination actions (E) and overall project operation (F).

- Administrative part

The project team has been nominated and the tasks assigned to its members. A management and accounting system has been set-up and is exerted by the secretary-accountant and project coordinator. Regular meetings guarantee the well-functioning within and between the beneficiaries. Meetings with the piloting committee and monitoring team are held yearly to discuss the progresses of the project and potential difficulties. So far, nor major problems have

occurred with the project's management and accounting. The name of the beneficiary organisation has changed to natur&mwelt Hëllef fir d'Natur.

- Technical progress

Action A1: Action programme

Action A1 was finalised in the end of 2014 with a delay of one year due to adverse weather conditions delaying the mapping of the project area. The result is an action programme in form of a GIS document that is consulted for the implementation of the concrete actions.

Action A2: Planning of concrete actions

A careful planning of the measures includes regular contact with concerned authorities and landowners. Planning should assure best practice and cost efficiency for the practical implementations. The action furthermore involves preliminary site visits with contractors to assure the proper execution of the works in accordance with the aims of the project. The chapter provides a detailed description for the planning of each C action.

Action A3: Elaboration of Natura 2000 management plans

The planning office TR-Engineering is commissioned with the elaboration of the management plans for the Natura 2000 sites in Wincrange. The Life Eislek team has attended several meetings with the planning office for preparation, gathering of material and analysis and interpretation of historical and gathered data. A summarised plan was sent for revision by TR-Engineering in August 2014.

Action A4: Elaboration of grazing/ mowing plan

n&ë HfN owns 315ha of land in the project area that is leased to several partners and tenants. The management of the sites was analysed to assure its compatibility with the restoration goals of our target species. The grazing plan was finalised in the end of the grazing season 2012/13, it will be updated each year according to the latest findings and most up-to-date level of experience.

Action A5: Preliminary planning of target species monitoring

The monitoring plan was set up after the consultation of historical data and coordination with other organisations carrying out similar monitoring programs. The action was finalised in the first year of the project. Nevertheless contact with other actors in the area is kept up throughout the project.

Action B1: Acquisition of land

To date, 16.90ha of clear-cuttings, wet meadows, drained wetlands, wooded structures and agriculturally used land were acquired through the project. Another 4.99ha are at the notary's to formalise the act of purchase. The acquisition of all 30ha should be finished by the end of 2016.

Action C1: Restoration of abandoned wetlands

All the machines necessary for the execution of the works were purchased by CNDP. 2.24ha of shrubs have been removed and 5.45ha were mown during the first half of the project. Furthermore a large scale shrub-clearance (1.12ha) and restorative mowing (4.57ha) was carried out as a complementary action with converted PistenBullys by a specialised German firm at *Cornelysmillen*, the largest wetlands owned by n&ë HfN in the project area.

Action C2: Hydrological restoration

This action enfolds two sections:

- the restoration of a water course that is currently in planning with the AGE and the community of Winchrage and
- the removing of drainage pipes that was not successful so far. At one site, no pipe could be found, at another site no acceptable solution was found to fill up drainage trenches.

Action C3: Conversion of spruce plantations

At the moment 1.65ha have been cleared of conifers and 5.82ha were mulched/freed of left-over material after the clear-cutting (including clear-cuttings from other projects). The practical implementation is carried out by contractors or CNDP.

Action C4: Restoration of bistort meadows

Three different methods are used to reintroduce the bistort on clear-cuttings, former acres and abandoned wetlands:

- rhizome transplantation: 2.87ha with varying success at different sites
- seeding: 0.84ha, up to now negative results → set-up of various ex-situ germination tests
- hay transfer: 1.33ha with promising results after one year

The methods have not been perfected yet. A collaboration with MNHN is supposed to help enhance the methods.

Action C5: Plantations

In three planting seasons, 3580 hedges and 78 trees were planted by CNDS through the Life Eislek project.

Action C6: Grazing infrastructures

The cattle shelter and truck have been built/acquired and have been in use by CNDS for working with the Galloways. 4.13km fences were set-up. The troughs and cattle bridges are still in planning. Fences and troughs will be set-up within the framework of the project *Trëtterbaach* in collaboration with CA, ASTA and ANF.

Action C7: Consulting land users in Natura 2000 areas

10 consultations have taken place and 10.28ha are in an extensification programme since 2015. The action depends on the implementation of the "Plan du développement rural 2014-2020" that has not yet been approved by the EC.

Action D1: Monitoring of target species

All Natura 2000 sites have been monitored in the past 2 seasons with different local focus points for each season. For *L. helle*, many new sites have been found, *L. collurio* is present mainly on wetlands belonging to n&ë HfN and *S. rubetra* no longer breeds in Luxembourg and can only be monitored during migration.

Action D2: Monitoring of grazed/mown sites

- To control the execution of the grazing plan, meetings are held every two weeks with the shepherd Weber and CNDS and the grazed sites are visited with or without Weber/CNDS. The sheep exert grazing pressure on the bistort plant and cannot be used in high densities on sensitive sites.
- Early cutting regimes are necessary to effectively control ruderal plants like *Epilobium*.
- Monitoring of hydrologically restored sites: remeandration at sites of deflector introduction visible during winter floods
- Monitoring of restored bistort meadows: good success with rhizome transplantation and hay transfer. Up to now no success with seeding in the wild.

Action D3: Evaluation of socio-economic impact

Action not scheduled until the end of the project.

Action E1: Sensitisation of public

A graphic identity, stationary, flyers, roll-ups and provisional signs have been designed by Atelier Kurth and been in use since the beginning of the project to improve the project's visibility.

An introductory event, guided tours and “chantiers natures” were organised and Life Eislek visited a range of fairs and markets to involve the public in conservation actions. Press releases are another important aspect of dissemination actions, over 40 articles have been published during the first half of the project.

Action E2: Website

The final website is online since December 2013 and is updated every two weeks: www.life-eislek.eu.

Action E3: Sensitisation of agriculturists

Three information events and two on-site visits were organised to inform agriculturists on the classification of nature reserves and the use of pesticides. Two articles were published to introduce the Natura 2000 network and the Life Eislek project. Furthermore, Life Eislek participated at the agricultural fair in 2013 and 2014.

Action E4: International seminar

This action is scheduled for the end of the Life project.

Action E5: Popular report

This action is scheduled for the end of the Life project.

Action F1: Project Management

The project team has been nominated at the beginning of the project. The coordinating beneficiary holds yearly meetings with the piloting committee and the EC.

Action F2: Follow up of the project

The chapter provides an overview of the targets reached so far. Most actions are within the time schedule.

Action F3: Networking

The project team has been in contact with land managers in the surrounding area, with experts and other projects. Furthermore it has visited a range of conferences and measures implemented by other projects.

Action F4: After Life conservation plan

This action is scheduled at the end of the Life project.

3 Introduction

→ Description of background, problems and objectives

- Overall objectives

According to the *Rapport de l'Observatoire de l'environnement naturel 2007-2009* of the MDDI, wetland areas have gone through a dramatic decline in Luxembourg, between 1962 and 1999 82% of the wetlands in Luxembourg were destroyed. Furthermore the development of the street network has led to an alarming fragmentation of the landscape and 25.5% of hedges and lines of trees as well as 55% of solitary trees have been removed. This development has drastic consequences on biodiversity, especially in this specific habitat that used to be abundant in the valleys of the Eislek region. n&ë HfN is owner of 135ha of land in this area and aims at increasing this surface through the project as well as working out new management methods for the restoration of a mosaic habitat of fallow lands, extensively used pastures and lately mown hay meadows.

- Project area

Natura 2000	Code	Name
SAC	LU0001002	Vallée de l'Our de Ouren à Wallendorf Pont
	LU0001003	Vallée de la Tretterbaach
	LU0001004	Weicherdange- Breichen
	LU0001005	Vallée supérieure de la Wiltz
	LU0001007	Vallée supérieure de la Sûre/ Lac du barrage
	LU0001033	Conzefenn
	LU0001038	Troisvierges- Cornelysmillen
	LU0001042	Hoffelt- Kaleburn
	LU0001043	Hoffelt- Sporbaach
SPA	LU0002001	Vallée de la Woltz et affluents de la source à Trosvierges
	LU0002002	Vallée de la Tretterbaach et affluents de la frontière à Asselborn

- Targeted species

Lycaena helle, *Lanius collurio*, *Saxicola rubetra*

- Main conservation issue: Habitat degradation, destruction, and fragmentation

One of the reasons for the decline in habitats is the abandonment of wetlands. Life Eislek tries to counteract this problem by buying or leasing unused land and start restoration through the removal of shrubs and intensive mowing before setting up a long term management plan through grazing or late mowing. For each site, only a third of the area is managed each year to keep refuges for our target species.

In order to be able to use wetlands in agriculture, many sites were drained through drainage pipes or trenches and streams were straightened to increase flow velocity and thus drain the surrounding fields. Rewetting measures include the removal of pipes, filling up of trenches and restoration of water streams by remeandration projects.

Land that could not be used otherwise was often planted with conifers, including wetlands in the valleys of the Eislek region. Several projects have already tackled this problem. The life Eislek project aims at removing another 5ha of conifers and conversing 15ha of clear-cuttings into wet meadows.

The problem of the intensification of agricultural practices will be seized by sensitisation of land users and individual consultations. MAEs and biodiversity contracts subsidise agriculturists with extensive management practices.

To support the development of bistort meadows, the habitat of *L. helle*, the bistort plant will be reintroduced at the sites restored using the aforementioned measures. Solitary tree and hedge planting will increase the number of structural elements in the landscape.

→ Expected longer term results

An improvement of the status of the three target species is the main goal of the Life Eislek project. This will be achieved through an appropriate management of the land owned by n&ë HfN as well as the quantifiable goals set by each practical conservation action (C1 – C6). A better collaboration between the agriculturists active in the Natura 2000 sites and the nature protection agency will lead to a more environmentally friendly land use outside the areas managed specifically for the target species. The sensitisation events will furthermore spread public awareness and a better involvement of the public in the goals of n&ë HfN. The actions planned for the three target species will furthermore have positive impacts on biodiversity in general. The restoration methods elaborated within the project framework will be used in the future by n&ë HfN and will be shared with other environmental actors to improve management methods on a larger scale.

→ Socio-economic impact

Land usage is high in Luxembourg due to a constant increase in population size. In the project area, the upper North of Luxembourg, agriculture is the main actor concerning land use. In the 11 concerned Natura 2000 sites, 4877ha are in agricultural use. Therefore the socio-economic impact is likely to be most important for land users. The project allows an increased cooperation of NGO's; administrations and local actors. Agriculturists that commit themselves in the project will be compensated for losses due to an extensification of their practices. The resulting diversity in the landscape will result in an augmented quality of life for the inhabitants. Public awareness will increase thanks to dissemination actions. Furthermore, the restorative works to be carried out will benefit the local economy. The involvement of the associated beneficiary CNDS as a social structure will allow socially disadvantaged people to find a way back into the working life.

4 Administrative part

4.1 Description of the management system

→ Description and schematic presentation of working method

1) Project office and team

The project is based in Heinerscheid, 2 Kiirchenstrooss on the first floor of the building of the community Clervaux. The project team is composed as follows:

Project coordinator n&ë HfN:

- scientific coordinator: Mireille Molitor (01.09.12) → temporally replaced by Michelle Clemens during sabbatical year (15.05.14)
- scientific N.1: Claude Schiltz (01.09.12)
- secretary- accountant: Patricia Heinen (01.09.12)
- punctuated help: Gilles Weber, director of n&ë HfN (action F1: 01.09.12)
- punctuated help: Mikka Mootz, Richard Dahlem (action D1: May-July 2014)

Associated beneficiary n&ë asbl:

- scientific N.2: Mikis Bastian (01.09.12)
- punctuated help: Katharina Backes (married Klein) (action D1: May-July 2013 & 2014)

Associated beneficiary CNDS:

- foreman: Serge Leyder (01.09.12)
- foreman: Cédric Lembrée (15.10.13)

2) Project management and accounting

The project coordinator and secretary-accountant are primarily responsible for the well-functioning of the administrative part of the project. The secretary-accountant is responsible for the daily financial and administrative works, whereas the coordinator is responsible for the follow-up on the inputs and outputs and the coordination with the European Commission and associated beneficiaries. Furthermore, the coordinator is responsible for the adherence to the time schedule and the execution of the actions in accordance with the project's objectives. The partnership agreements were signed within the first half year of the project. Since then the name of the project management organisation has changed to natur&ëmwelt Fondation Hëllef fir d'Natur. An accounting system was set-up (8EUEISLECK) and coordinated with the central accounting system of n&ë HfN and the systems of our project partners. Gilles Weber, the director of n&ë HfN is responsible for the contact with the administrative council and acts as an advisory in several matters.

3) Piloting committee

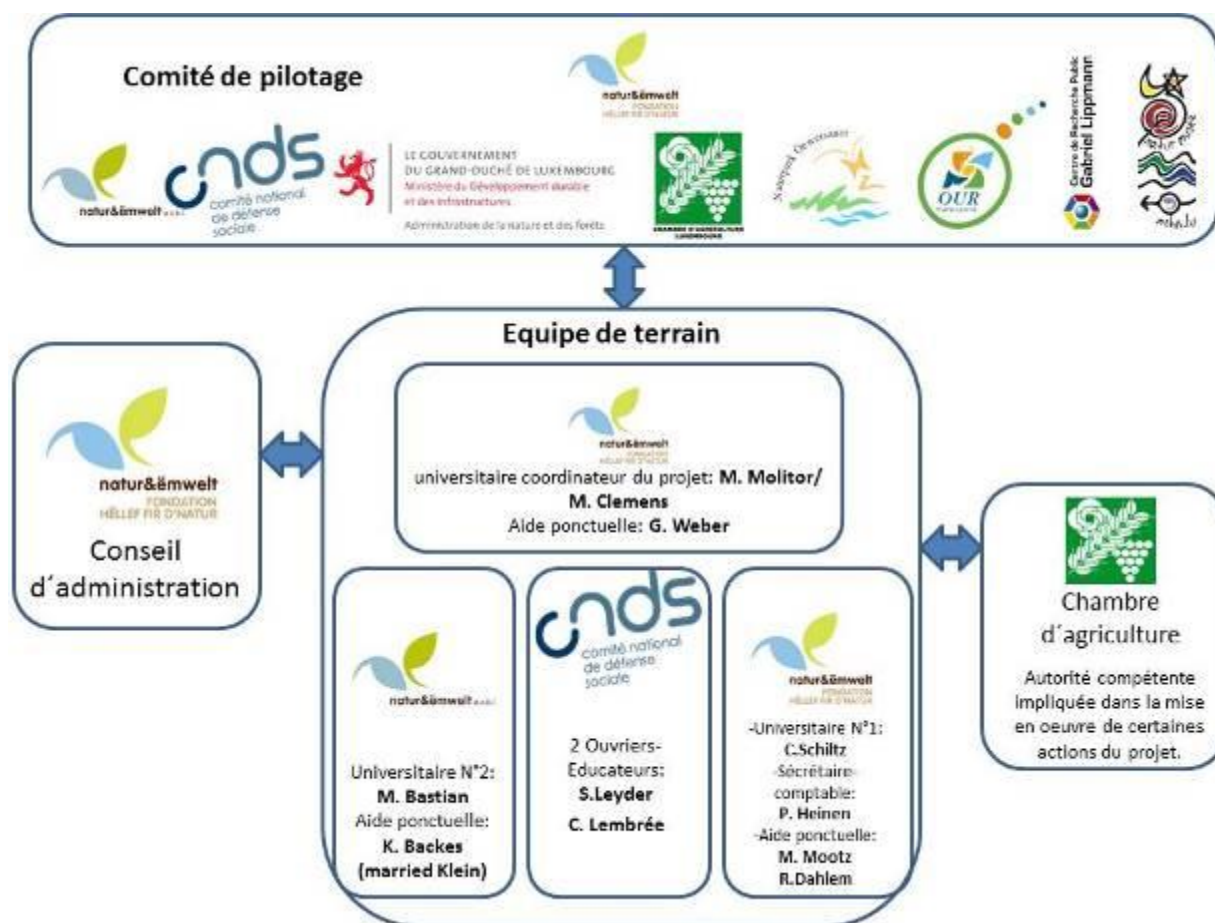
The members of the piloting committee were assigned at the beginning of the project and the list was in the appendix of the inception report (appendix 1). Yearly meetings with the piloting committee are hosted by the Life Eislek project: 17.09.12, 17.07.13, 01.10.14.

4) Auditor's report

Grant Thornton LUX Audit S.A. at 89A Pafbruch, L-8308 Capellen is charged with the final revision of the financial management of the project.

→ Project Organisation

1) Organogram



2) Project coordination:

- Weekly team meetings: every Monday morning to discuss the plans for the coming week
- Monthly team meetings: division of tasks for the following months → Excel table with time schedule of tasks to be carried out by each person
- Monthly meetings with the organisation's director (Gilles Weber): discussion of progress, problems encountered etc. → Written reports
- Monthly meetings between director (Gilles Weber) and administrative council, validation of budget spent outside Life (e.g. land purchase) or other important decisions
- Meetings with CNDS at least 4 times a year for each season to discuss the implementation of the measures. Regular contact in addition to the meetings.
- Meetings with other agents contributing to the project are mentioned at the concerned actions.

→ Amendments to the Grant Agreement.

- No amendments are necessary as the statutes of HfN did not change, only the name changed from Fondation Hëllef fir d'Natur to natur&ëmwelt Fondation Hëllef fir d'Natur.
- The former LNVL has changed its name to natur&ëmwelt asbl: their new statutes were provided with the inception report (appendix 2).
- Since the 1st of March 2015, n&ë HfN has a new president: Patrick Losch.
- The TVA statement of CNDS was submitted with the inception report (appendix 3). The document concerning the modifications concerning the TVA status of CNDS is in appendix 4. The TVA statutes of n&ë HfN and n&ë asbl have not changed since the beginning of the project.

→ Partnership agreements

- Convention Life Eislek-MDDI (11.12.12) → Inception report (appendix 5)
- Convention Life Eislek-n&ë asbl (19.12.12) → Inception Report (appendix 6)
- Convention Life Eislek-CNDS (26.03.13) → Inception Report (appendix 6)
- A letter on the long term collaboration of n&ë HfN and CNDS, as asked in the letter of the 14.01.13, was provided with the inception report (appendix 7).

4.2 Evaluation of the management system

→ Evaluation of project management process

The project management and cooperation with the associated beneficiaries has not provided any important problems:

- The project coordination was influenced by a change of staff due to the absence of one year of the coordinator M. Molitor. During her absence, her replacement M. Clemens and the scientific N1 C. Schiltz are running the planning of the project and every actor has taken over their responsibilities with the result of the project continuing in the same rhythm.
- The collaboration with CNDS works well with regular contact between the foremen and the coordinator about every month or according to necessity.
- During the first years of the project, there was a problem of sub-use of hours by n&ë asbl. This was due to the change in personnel at n&ë asbl and the employee now charged with the project receives a lower salary due to a lesser length of service. However, the scientific N.2 M. Bastian is now more involved in the project and works regular hours on his tasks.

→ Communication with the Commission and Monitoring team

The project coordinator is in regular contact with the monitoring team (M. Tom Andries) and the representative of the EC (M. Simon Goss) concerning any problems or desired changes. In general we receive quick and clear answers to our questions and can consider this to be a well-functioning supporting system. Contact and submission of information is by several means:

- Participation at kick-off meeting in Paris 25.10.12
- Reception of external team (M. Tom Andries): 14.12.12, 19.11.13, 04.11.14
- Regular contact with external team by mail or phone
- Submission of progress reports

5 Technical part

5.1 Technical progress per task

Action A1 : Etablissement d'un programme d'actions de restauration des habitats des espèces cibles

→ Activities and Outputs

As a first step, literature on the target species as well as on the actions previously carried out in the project area was gathered and analysed in electronic and paper form for consultation throughout the project. Data on historical and recent distribution of the target species was provided by different instances: MNHN, n&ë asbl, CRP-GL, MDDI and DEMNA (appendix 10).

During the first half of the project, the complete area was mapped with regards to land use, distribution and state of target species' habitats and priority action sites. A Geographical Information System (GIS) was established to gather all the relevant data of the project. Maps and shapefiles were applied for at several administrations:

- topographical maps ✓
- cadastre ✓
- orthography ✓
- land cover ✓
- biodiversity contracts ✓
- biotope cadastre ✓
- spring protection areas ✓
- MAE → NOT received

The historical monitoring data, the shapefiles received from the administrations as well as our own mapping data are gathered in the GIS. The action programme exists in the form of the GIS and is consulted for the implementation of concrete conservation actions. Furthermore, a folder has been introduced in double format, one copy for CNDP the project partner for practical implementation, and one copy for the project manager, collecting all the work to be carried out throughout the project. The folder is updated during meetings at least four times a year (for each season).

Mireille Molitor was responsible for the planning of this action, mapping was carried out by the academic staff and Claude Schiltz has setup the GIS and is keeping it up to date.

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x																	
Planning revised	x	x	x	x	x	x	x	x	x	x												
Planning realised	x	x	x	x	x	x	x	x	x	x												

→ Indicators used to test the performance of the action

Milestones	Deadlines	Progress
Personnel Nomination	01.09.12	finished → F1
Action Programme	01.09.13	finished → GIS

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

The European Commission approved an extension for the mapping of the project area that was delayed due to bad weather conditions. The mapping has been completed at the end of 2014 as recorded in the revised planning schedule. The delay did not have any adverse effects on the execution of the project as other actions were carried out during that time (letter EC 06.06.13).

n&ë HfN applied for the shapefile with the current MAEs for the first time on the 10.12.12 at ASTA, which replied that they cannot provide the data and that we need to apply at the Ministry of Agriculture. On the 04.02.14 we send an application to the MA. The answer was that our application needs to pass through the MDDI. The MDDI has informed us, that the MA never follows up to applications for the concerned shapefiles. Even the CA has not been successful in that perspective. An official letter was addressed to the MDDI on the 30.06.14 (appendix 11). The discussion has been continued with Nora Elvinger, representing the MDDI, during the visit of Tom Andries. In conclusion, we were not able to receive the shapefile of the current MAEs, neither through the ASTA, nor MA, CA or MDDI. This is contrary to the law of the 25th November 2005 concerning "l'accès du public à l'information en matière d'environnement". This delay has implications on the practical implementations of actions C7 and E3. Without the information contained in this shapefile, the project coordinator does not possess information on the current MAEs which makes the first contact with landowners more difficult but does not prevent the actions in themselves.

→ Complementary actions outside LIFE

not applicable

→ Perspectives

The data obtained through the mapping of the project area can still be used for measures carried out after the project has been concluded.

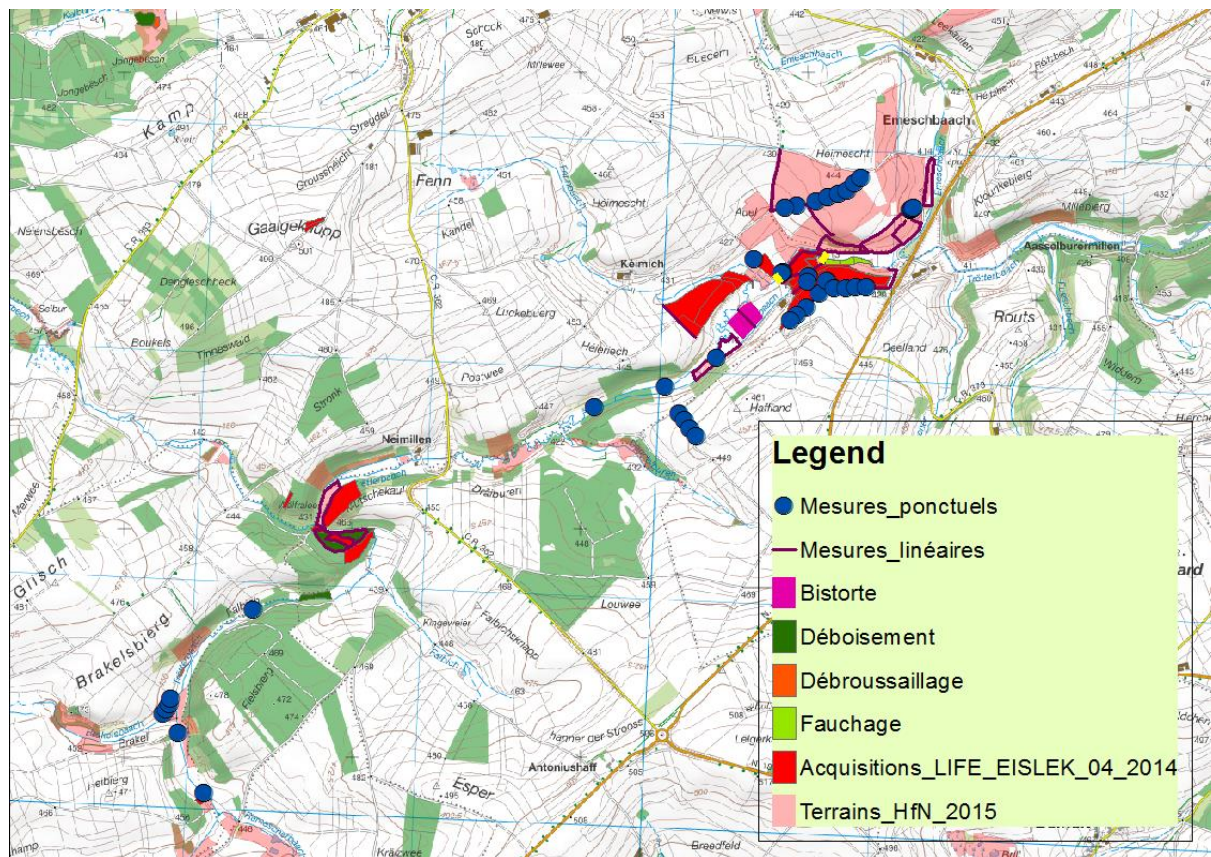


Figure 1. Extract of the GIS

Action A2: Planification technique des actions de restauration des habitats des espèces cibles

→ Activities and Outputs

To plan the concrete actions, contact with the concerned authorities, such as communes, the water management office and the nature administration, is necessary throughout the project. Many actions require authorisations that are applied for at the responsible administrations. Additionally, landowners involved in the implementation of concrete actions are contacted. A request for the data on landowners in the project area was addressed to the ACT. We obtained the data in the beginning of the project.

For each purchase and service, proposals are written to get the best price-service-ratio. Restoration sites are shown to the foremen of the project and/or the contractors to discuss best practice for each site. The measures are guided and controlled by the academic team of the project. Best practice and cost efficiency have been/ are being worked out, details will be given for each action below.

Action C1:

The restoration of wet meadows requires the use of appropriate machinery. Therefore, information on agricultural machines adapted to wetlands was gathered from several instances: Rajo (14.11.12), Natuurpunt Ekeren (24.01.13), Natagora Lorraine (31.01.12), Moselle bois (23.09.13), Meyer-Luhdorf (29.03.13, 26.03.14), Naturland Ökoflächen-Management GmbH.

We contacted a local agriculturist (M. Pint) to discuss the disposal of the cuttings resulting from action C1 (22.07.14). He is willing to take the cuttings for a financial compensation (10€/m²). The agriculturist will compost the cuttings and use them to improve the humus content in his fields.

Action C2:

(1) Restoration of a water course

First meetings concerning the renaturation of the *Cornelysmillen* were organised with the appropriate administrations, AGE (14.12.12 morning) and SIDEN (14.01.13 afternoon). Subsequently, a letter was addressed to the MDDI, MIGR, AGE and SIDEN (19.02.13) concerning the construction of a new purification plant upriver from the *Cornelysmillen* in Haubtellain/ Basbellain. We asked to classify the plant as a priority to improve water quality onsite within the duration of the project (appendix 12 & 13).

To better understand the water system and to get more information on the water quality, we gathered all available information concerning the old river bed, valley profile and fishing data. Consequently to the bad water quality, we held meetings with the community Troisvierges (09.12.13, 20.03.13): the community has no objections to the project and encourages it as it can

have positive impacts on inundation problems. Further exchanges with SIDEN, MDDI, AGE and MIGR showed that the new purification plant will not be in service before the end of the Life project. Therefore we met onsite with Simone Schneider (26.06.13) an expert on vegetative associations to define areas that should not be touched by the eutrophic water to prevent damage to the established ecosystem. A planning office was contacted and the site visited with the AGE and ANF (03.07.13, 11.09.13) to discuss the approach to take on this action. It was decided that the site should be mown to see where the new meanders could be. The site was mown in September 2014 (see action C1 outside Life).

A water analysis (14.11.13, 03.12.14, 23.04.14, 16.06.14, 21.07.14) was supposed to provide a better idea on where the contaminated water originates and a fish inventory by electrofishing was carried out to identify potentially sensitive species prior to the implementation of a remeandration project (24.04.14). The results of the water analysis (appendix 14) proved to be catastrophic while the fishing results were better than expected considering water quality (appendix 15). The water's eutrophication is mainly due to a point pollution linked to the capacity overload of the purification plant in Huldange, not as previously thought the purification plant in Hautbellain/ Basbellain. Nevertheless, the water quality will not be improved in time for this Life project.

Further discussions with the AGE and the planning office (10.07.14, 22.09.14) showed how difficult this part of our Life project is going to be. The bad water quality in combination with the vegetative value of the site means that the restoration needs to be carefully planned and executed. The costs of such an action are a lot higher than the costs of a simple introduction of natural materials, as originally planned in the application.

After careful consideration, we believe that the site might not be ideal for a restoration project as long as the water quality remains at its current level. We visited three sites with Stream and River Consult (20.11.14), a consultancy firm on the management of aquatic habitats: (1) the original site, (2) another part of the *Cornelysmillen* and (3) the *Léresmillen* (newly acquired by the Life Eislek project) and asked for advice considering the three sites (appendix 16). Their conclusion was that the site at *Léresmillen* (315m) would be more suitable for a remeandration project than the two sites at the *Cornelysmillen*. The estimated costs of about 72,000€ for 320m, however, can only partly be covered by the Life Eislek project, therefore we are applying for funds from the "Fonds pour la gestion de l'eau". Considering that the site is part of the management plan of the AGE, we have good chances of receiving funds at a high percentage. However, the "Fonds pour la gestion de l'eau" can fund public associations with only 50%, whereas they can fund communities at up to 100%. A meeting with the community of Wincrange took place on the 16th of April 2015 including a presentation of the results achieved so far and the remeandration project. The community is willing to participate in the project. A meeting with the AGE, the community and the Life project will be the next step.

(2) Drain removal

The acquisition of the *Léresmillen*, announced in the progress report, has been finalised. An analysis of maps from 1951, in comparison with the current situation indicated the presence of a

drainage pipe of about 190m. We were not able to obtain drainage plans for the site of interest. After a site visit with a contractor (09.01.15), it was decided that a digger will search for the lowest part of the drain. The pipe can then be plugged and the water will slowly fill up the drains until it seeps out into the meadow.



Figure 2. Site before drainage (1951)



Figure 3. Site today

A second site that was considered for this part of the action is at Kiirchermillen. This site has been drained with a series of trenches. It is a clear-felling that was cleared several years ago. However, we have not yet decided on the best method to fill the trenches:

- fill with soil from onsite: not possible because not enough soil + presence of tree stumps,
- fill with soil from outside, not advisable, introduction of foreign matter,
- mulching or removal of tree stumps → destruction of the by now established ecosystem.

Furthermore, the site is part of a monitoring programme of Interreg 3 *Déboisement des fonds de valets* on the development of clear-cuttings and a drastic measure would mean that the monitoring could no longer be carried out.

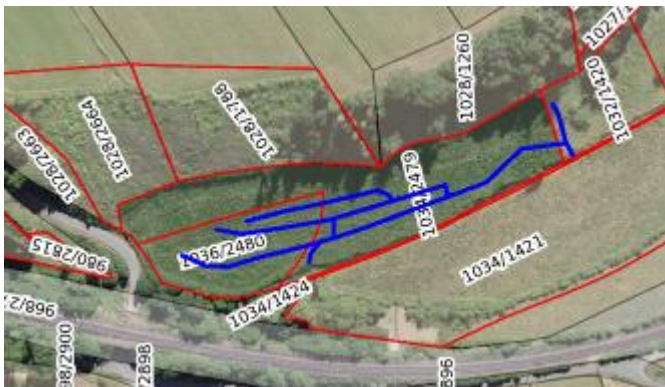


Figure 4. Draining trenches (in blue) at Kirchermillen

Action C3:

The aid schemes concerning the clear-cutting of premature spruces is specified in the "Règlement grand-ducal du 10 septembre 2012 instituant un ensemble de régimes d'aides pour la sauvegarde de la diversité biologique en milieu rural, viticole et forestier". We had two meetings with the ANF (28.02.13, 12.03.13) to discuss the new procedure on conventions with private people that want to participate in the action C3.

Procedure for each site:

- Application for an authorisation from the MDDI concerning the conversion of spruce forests into grasslands
- Stock taking of timber volume
- Work out rewards if felling of premature wood
- Specification sheet for contractors
- Site visit with three different timber merchants
- Give order to the most suitable merchant

The implementation of a ray-grass experiment on one of the new clear-cuttings was introduced in the progress report. The idea was that this would delay the establishment of ruderal species to support the desired plant species. However, we were advised against the execution of this experiment by the ANF at the piloting committee meeting and did not obtain the necessary authorisation.

We were planning to clear a site and remove the felled trees by cable winch at an otherwise inaccessible site and contacted the only firm using this technique in the region. After a site visit (10.02.15), we received a price estimation of 9000€ which was higher than what we were willing to pay. The project coordinators are now looking for alternative methods concerning this site as well as other inaccessible conifer forests. An option we are considering is the use of metal plates.

Action C4

(1) Hay transfer

Research on implementation from other projects and planning with CNDS. Participation at the seminar Life+ "Restauration des milieu herbeux" on the 2nd and 3rd of June 2014. The seminar provided new insights that can/will be applied if the opportunity occurs.

(2) Rhizome transplantation

Two Wallonian Universities: ULB and UCL were contacted concerning a collaboration in the form of a thesis on the subject of rhizome transplantation of the bistort plant (appendix 17). However, we were not able to find a student willing to work on the proposed subject.

As a consequence, we contacted Life Papillon, DEMNA and tree nurseries to gain information on their experiences on rhizome transplantations. An experimental set-up was planned to answer questions on:

- density of transplantations for the best success,
- annual progression of bistort dispersion,
- influence of soil composition/ water gradient on success.

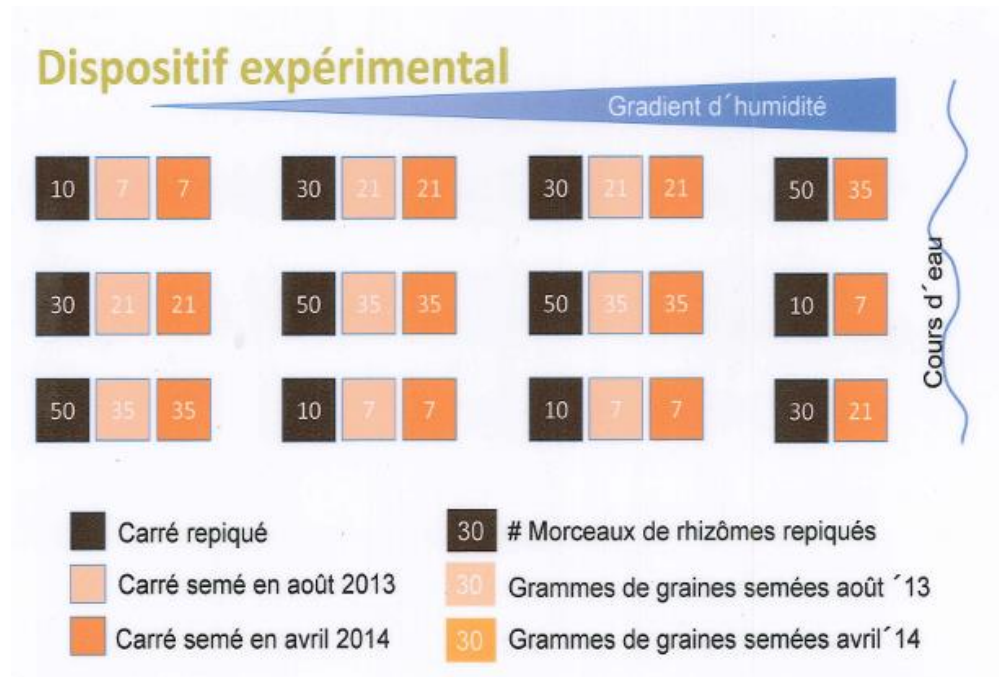


Figure 5. Experimental set-up on rhizome transplantation and seeding densities at varying humidity levels

In addition to the experimental set-up, transplantations were carried out at different sites with varying properties and management regimes. A soil analysis at the concerned sites is supposed to answer the question on the influence of soil properties on reintroduction success.

The results of the soil analysis (appendix 18) show that all the tested sites have acidic soils and available phosphor content at the clear-cuttings was high compared to the acre and bistort meadows.

(3) Seeding

To test the success of seeding at different densities with a varying water gradient and to compare the results to those of the rhizome transplantations, the same experimental set-up was used.

Monitoring in 2014 showed 0% germination for the seeding experiment, therefore germination experiments were carried out ex-situ. Due to a lack of appropriate experience and equipment at n&ë HfN, several meetings with the MNHN (07.7.14, 09.07.14, 04.02.15) lead to a collaboration

on the rearing of bistort plants (appendix 19). Considering that SICONA is planning a reintroduction of bistort at several sites in their area as well, the collaboration was expanded to their organisation (meeting SICONA 03.03.15).

Action C5

Contacting tree nurseries with local genetics, ordering plants, planning with CNDs.

Action C6

Details on the planning of the cattle shelter were given in the inception and progress reports:

- determination of the precise location with ANF (27.03.13)
- elaboration of construction plans (appendix 20)
- applying for authorisations at the community of Wincrange (07.12.12) and the MDDI (14.01.13) (appendix 21)
- elaboration of a specification sheet
- call for offers (25.03.13) (appendix 22)
- site visits with contractors

Since November 2012, a large project on the installation of fences and troughs at the *Sporbaach* has been in planning (appendix 23). Since this project overstrains the financial capacities of the Life project, a financial contribution was applied for at the ASTA and ANF. After the elaboration of the action plan, an information reunion was organised for the concerned agriculturists followed by site visits. The financial contribution turned out to be too high for the agriculturists. At the concerned site, a cheaper solution was not available as the catchment area is too small to use the water from the stream as source for the troughs. Consequently, the initial project was rejected. As a budget of 42.000€ has already been applied for at the "Fond pour l'Environnement", we now try to reinvest the money at another site along the *Trëtterbaach* between Troine and *Léresmillen*. This is a hotspot for *L. helle* and *L. collurio* and one of the last breeding spots for *S. rubetra*. The site is within the Natura 2000 network and will provide migration corridors to *L. helle* and a feeding habitat to both bird species due to an increased presence of insects along the brooks. Furthermore the project will contribute to improving water quality and thus the state of wetlands in the area. In addition to sponsoring 85% of the price on troughs (ANF & ASTA) for the agriculturists, the ANF would sponsor fencing posts and wire. Whether the agriculturists have to install their fences or the Life Eislek project takes over this task remains to be discussed and depends on the number of participating land managers. An analysis of the water level at the *Trëtterbaach* has shown that water pumps supplied by the stream will be used. The next steps are:

- work out the financing plan
- rewriting of the application to the "Fond pour l'Environnement"
- contact agriculturists, conventions of 10 year
- apply for authorisations at AGE
- installation of troughs

Action C7

Several meetings were held with the CA (20.12.12, 16.04.13, 05.03.14, 23.01.15) to discuss how to plan actions C7 and E3. The aim is to be prepared for the implementation of the new law concerning MAEs:

- Identification of sites where we need extensifications for *S. rubetra*
- Validation of planned actions and evaluation of potential *S. rubetra* sites by Gerhard Reuter (AVES) 11.12.13
- Identification of landowners at concerned sites
- Studying the proposal for the new law

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							
Planning realised	x	x	x	x	x	x	x	x	x	x	x	x	x	x								

→ Indicators used to test the performance of the action

Milestones	Deadlines	Progress
Planning of restoration techniques	01.02.16	Continuing action, no major delays at present.

→ Technical and/or financial modifications and justification

C2: Due to the bad water parameters at the *Cornelysmillen* that cannot be improved within the duration of the project, we reckon that carrying out the action as planned would probably lead to the deterioration of a valuable site. In the initial project, an introduction of natural materials was planned, so that the water can find its own course. To better control the remeandration, a careful study and dredging will become necessary and the costs increase drastically. Therefore a renaturation of the 1.5km as planned becomes financially unsupportable and the measure would have to be reduced to the recreation of a single meander. The consulting firm indicated that such a reduced measure would not bring the desired ecological improvement. After visiting two alternative sites, it quickly became clear that the newly acquired land on the *Trëtterbaach* would provide a much more suitable site for this action. Beside the *Cornelysmillen*, the *Trëtterbaach* is one of the hotspots of the Life project and provides an opportunity to considerably ameliorate a specific habitat. Due to relatively high grazing pressure under the management of the previous owner, the ecosystem value is not as high as at the *Cornelysmillen* and the consequences of eutrophication through a rewetting of the meadows are not as risky as they are at the original site. Furthermore, the new site is part of the management plan of the AGE and therefore the "Fond pour l'eau" would be willing to financially support the measure at this site. We feel that carrying out a measure at all costs is not advisable and that changing the

location of this measure will bring better results and therefore lead to an amelioration of the available habitat to our three target species.

C6: The price for the cattle shelter has been miscalculated due to two reasons, (1) the bid file did not include the costs of an access route and (2) the MDDI obliged us to exclusively use Douglas fir wood that is more expensive than spruce wood. The project coordinators proposed a change in the placement of the cattle shelter to save money on the access route. This way the budget overdraft is less than 10%/30,000€. In total, 30,000€ were foreseen for infrastructure costs, the actual costs were 54,216.52€, the overdraft is therefore 24,216.52€.

→ **Major problems/ drawbacks/ delays**

not applicable

→ **Complementary actions outside LIFE**

not applicable

→ **Perspectives**

This action will be concluded with the project but the concrete actions (C actions) will be continued and described in the After Life conservation plan.

→ **Photographs**



Figure 6. Site visit at *Trërterbaach* with Stream&River Consult to discuss the remeandration project (C2)



Figure 7. Electro-fishing (C2)



Figure 8. Soil analysis at bistort meadows and restoration sites (C2)



Figure 9. Site visit "Troughs" with ASTA, ANF and AGE concerning the *Trätterbaach* project (C6)



Figure 10. Water analysis (C2)

Action A3 : Contribution à l'élaboration de plans de gestion des sites Natura 2000 du périmètre de projet

→ Activities and Outputs

The team of the Life Eislek project has helped at the elaboration of the management plans for the Natura 2000 sites in Winrange. Due to the knowledge of the area and the experience of managing sites within the area, the academic team has been of considerable help to the planning office charged with the elaboration of the plan. The specification sheet for management plans in Luxembourg is in the appendix 24.

- Preparation, gathering of material: meeting K. Gessner (TR-Engineering): 17.10.12, 22.01.13, 23.04.13, 26.06.13, 09.07.13, 31.07.13
- Analysis and interpretation of historical and gathered data: presentation of the results at MDDI & CA: 26.11.13
- Informing the community Winrange (letter 02.12.13)
- Organisation of a round table debate: meeting MDDI, TR-Engineering & CA (13.03.13, 20.01.14, 10.02.14 12.03.14): Elaboration of a proposition concerning "Consultation et information des parties prenantes dans le cadre de l'élaboration de plans de gestion N2000"
- Writing of the "plan de gestion": meeting TR-Engineering, MDDI & CA (31.07.14)
- Mail by Kalle Gessner with management actions (19.08.14) (appendix 25)
- Executive order: foreseen for 31.08.2017

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
Planning realised	x	x	x	x	x	x	x	x	x	x	x	x	x									

→ Indicators used to test the performance of the action

Products	Deadlines	Progress
Management plan Natura 2000	1.09.16	abbreviated version almost finished (appendix 25)
Milestones	Deadlines	Progress
Adoption of the management plan N2000	31.08.2017	/

→ **Technical and/or financial modifications and justification**

not applicable

→ **Major problems/ drawbacks/ delays**

The management plans of all the Natura 2000 sites in Luxembourg have to be handed in to the EC by 2016. Therefore, the new strategy worked out by the ANF in 2013 concerning the adoption of a more land user orientated approach will not be carried out in a first phase. In order to be able to finalise all plans in time, abbreviated plans containing measures at the territorial level will be drafted for all Natura 2000 sites first. In a second phase, the landowners will be consulted and the more concrete measures elaborated. The abbreviated plans are supposed to be easy to consult and should simplify the procedures. For this reason, the round table discussion has not taken place as planned in autumn 2014 but has been postponed to a not yet defined date. However a management plan will be adopted before the end of the project.

→ **Complementary actions outside LIFE**

not applicable

→ **Perspectives**

The "Bureau du Nord" of n&ë HfN will be able to advise local land users concerning land lying within the boundaries of the Natura 2000 network in the Eislek. Furthermore, n&ë HfN owns land in the network and has experience in its management. This experience will help the consultation of concerned individuals.

Action A4 : Etablissement de plans de pâturages et/ou de fauche des réserves naturelles

→ Activities and Outputs

In the project area, n&ë HfN is the owner of 315ha land of which 130ha are grazed by cattle of 28 tenants and partners. The four main actors are Weber (60ha), Mathieu (1.7ha), Ovis (1.4ha) and CNDS (18.7ha). An analysis of the leasing contracts by Claude Schiltz has shown which ones are compatible with the requirements of the target species of the Life Eislek project (appendix 26).

- Analysis of existing lease agreements and their compatibility with restoration goals for target species ✓
- Elaboration of a list of modifications that need to be done to the agreements ✓
- Resolution of contracts not compatible with the target species and signing of new contracts → Nesser, Zeimes, Theis, Weber, Meyers, Hosinger
- Elaboration of a first grazing plan in 2013: meeting Weber & CNDS (08.04.13)
- Each year adaptation of the plan to the results of the monitoring
- Meeting with Weber and CNDS twice a month during the season
- Consulting ANF for management on sites belonging to the state

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x				x				x				x			
Planning realised	x	x	x	x	x	x	x				x											

→ Indicators used to test the performance of the action

Products	Deadlines	Progress
grazing plan	31.12.13	finished

Monitoring of the pastured sites (D2) to control their evolution and appropriateness for the target species.

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

No delays, the schedule is on time.

→ Complementary actions outside LIFE

not applicable

→ Perspectives

The grazing plan will be kept up to date each year and the management will remain the same/ be adapted to the situation after the end of the Life project.

→ Photographs



Figure 11. Grazing with white polled heath and "Roter Ardenner" by Naturhaff



Figure 12. Grazing with Galloways by CNDS



Figure 13. Grazing with blackface sheep by the sheepfold Weber



Figure 14. Parcel of land bought through Life Eislek as "parking spot" for blackface sheep during sensitive phases for *L. helle*

Action A5 : Travaux préparatoires au monitoring des espèces cibles dans le périmètre du projet

→ Activities and Outputs

The action is a preparatory action for action D1 on the monitoring of our target species and the impact of our restoration measures on these. Mireille Molitor and Claude Schiltz primarily planned the butterfly monitoring while Mikis Bastian was responsible for the planning of the bird monitoring.

- Elaboration of a monitoring plan after the consultation of historical data: before the "biomonitoring national", the distribution of *L. helle* was not very well known. The database of the MNHN is based on random observations. At the beginning of the project, the results of the biomonitoring provided a better idea on butterfly occurrences. The distribution of both bird species was quite well known at the beginning of the project thanks to the efforts of the COL. For all three species, monitoring will now be done more specifically in the project area and will show the development of the species' populations.
- Coordination with people in charge of "biomonitoring national": meeting on the 28.11.12 and 02.04.13. Regular contact over phone and email, especially before and after the monitoring season to coordinate monitoring and exchange results to prevent double efforts.
- Coordination with COL: meeting Feld-AG on the 27.02.13 with a presentation of the Life project
- Defining indicators for conservation status of target species through literature research
- Establishing of shapefiles with the historical data and printing of maps for field work
- Coding of data in the recorder of the MNHN (data.mnhn.lu), participation at a workshop "Le nouvel outil de saisie data.mnhn.lu" (16.03.13)
- Trainings
 - "observation du compartement de ponte et recherché d'oeufs de *L. helle*" (07.06.13 Philippe Goffart)
 - "Cypéracées et Joncacées" (19.-21.06.13 CNB, Vierves sur Viroin)
- Application for an authorisation to capture butterflies

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x																		
Planning realised	x	x	x	x																		

→ Indicators used to test the performance of the action

not applicable

→ **Technical and/or financial modifications and justification**

not applicable

→ **Major problems/ drawbacks/ delays**

The action has been finalised within the time limits.

→ **Complementary actions outside LIFE**

not applicable

→ **Perspectives**

The planning of the monitoring and elaboration of best practice will serve future monitoring of butterfly and bird species.

Action B1: Maîtrise foncière

→ Activities and Outputs

With the acquisition of land, the persistence of restoration measures and the appropriate management thereafter can be assured. In a first instance, the acquisition committee of n&ë HfN was contacted to discuss the procedure for the acquisition of land, prices etc. (07.11.12). Meetings are held regularly to visit acquired sites and discuss progresses (25.04.13, 03.10.13, 02.07.14). Additionally, contact with volunteers involved in acquisitions are held every 6 to 8 weeks. Claude Schiltz is the person responsible for the coordination of land purchases.

The landowners in the project area were identified (ACT). Additionally, the project participates at auction sales. Procedure for each acquisition:

- a folder is prepared for the Committee (up to date 58 folders were put together)
- validation of the acquisition by the committee
- the offer is presented to the landowner
- when the landowner agrees to the offer, the notary is contacted
- classification of the acquired land under the RNA status (in delay due to revision of the law on the protection of nature)

Despite the fact that land pressure is extremely high in Luxembourg, parcels are generally very small and prices are increasing drastically, we have been able to make considerable progress at the acquisition of the planned 30ha of land and are now over the half-line with 16.90ha signed and another 4.99ha at the notary's. The new acquisitions will complement the land owned by n&ë HfN and will be managed to benefit the environment. Maps with the location of the purchased parcels are in the appendix 27. The notary acts are kept in paper form at the office and electronic format on the server of n&ë HfN. The electronic form is provided in the appendix 28.

Table 1. Detailed table of acquisitions

ID	ETAT	Zone du projet	Gestion / Action	Date	Surface totale (ares)	Total achat+acte	PART LIFE
1	Acte signé	O-Wincrange / Tretterbaach	C4, C6, C7	10/04/2013	35,40	3712,00	1856,00
2	Acte signé	O-Wincrange	C5	10/04/2013	26,60	10440,00	5220,00
3	Acte signé	O-Wincrange / Tretterbaach	C3	11/09/2013	231,90	32929,74	16464,87
4	Acte signé	O-Troisvierges / Cornelysmillen	C1	24/09/2013	34,80	7350,90	3675,45
5	Acte signé	Conzefenn	C3	16/12/2013	43,50	4946,57	2473,29
6	Acte signé	O-Wincrange / Tretterbaach	C1, C6	18/12/2013	46,20	5492,93	2746,47
7	Acte signé	Sure	C1, C6, C7	27/12/2013	54,40	4829,66	2414,83
8	Acte signé	O-Wincrange / Sporbaach	C1, C3	25/02/2014	274,13	18981,93	9490,97
9	Acte signé	Conzefenn	C1	03/07/2014	18,00	2174,99	1087,50
10	Acte signé	O-Troisvierges	C5	29/04/2014	45,52	2074,84	1037,42
11	Acte signé	Breechen	C1, (C4)	23/10/2014	133,80	9932,49	4966,25
12	Donation signée	O-Wincrange / Tretterbaach	C7	25/11/2014	9,40	524,24	262,12
14a	Acte signé	O-Wincrange / Tretterbaach	C1, C2, C4, C5, C6, C7	01/07/2014 & 23/09/2014	678,43	161603,58	80801,79
15	Acte signé	Wiltz	C1	05/08/2014	7,60	1773,66	886,83
16	Donation signée	Sure	C3	15/10/2014	27,30	506,29	253,15
17	Acte signé	Sure	C1	22/10/2014	8,70	1049,39	524,70
18	Acte signé	Sure	C1, C4	23/12/2014	14,30	1744,24	872,12
	SOMME Acte signés				1689,98	270067,45	135033,73
19	Acte en cours	Wiltz	C1	2015	11,35	1350,00	675,00
20	Acte en cours	Sure	C1, C4	2015	25,80	2000,00	1000,00
21	Acte en cours	O-Wincrange / Tretterbaach	C6, C7	2015	14,00	1900,00	950,00
22	Acte en cours	Sure	C6, C7	2015	54,40	5500,00	2750,00
23	Acte en cours	Our	C2, C7	2015	11,52	1402,00	701,00
24	Bail emphytéotique en cours	O-Wincrange / Tretterbaach	C7, C6	2015	40,90	500,00	250,00
25	Acte en cours	Wiltz	C1, C4	2015	51,20	4700,00	2350,00
26	Acte en cours	Conzefenn	C1, C6	2015	101,60	7750,00	3875,00
27	Acte en cours	O-Wincrange / Tretterbaach	C3, C6, C7	2015	119,73	17875,23	8937,61
28	Acte en cours	O-Troisvierges	C1	2015	18,50	1610,00	805,00
29	Acte en cours	O-Wincrange / Tretterbaach	C3	2015	50,00	8000,00	4000,00
	SOMME Acte en cours				499,00	52587,23	26293,61
	SOMME LIFE				2188,98	322654,68	161327,34
13	Bail emph. En cours	O-Wincrange / Tretterbaach	C1, C6	2014	154,28	500,00	0,00
14b	Acte signé	O-Wincrange / Tretterbaach	C5, C6	01/07/2014	420,45	85308,32	0,00
14c	Acte signé	O-Wincrange / Tretterbaach	/	01/07/2015	60,00	526115,73	0,00
	SOMME HORS LIFE				634,73	611924,05	0,00

Table 2. Overview of the results of action B1

Habitat type	Objective (ha)	signed acts (ha)	acts in progress (ha)	%of objective	Outside Life
clear-cuttings	~5.00	2.47	0.17	52.76	
fallow wetlands	~10.00	2.77	0.83	35.98	1.54
wet meadows	~2.00	0.23	0.30	26.43	
drained wetlands	~5.00	1.94	0.00	38.71	
wooded structures	~3.00	1.53	0.50	67.68	
intensively used lands	~3.00	5.30	1.91	240.10	
acres	~2.00	0.27	0.00	13.30	4.80
others	/	2.41	1.28	/	
TOTAL	30.00ha	16.90ha = 56.33%	4.99ha = 16.63%	72.97%	5.74ha

Table 3. Type of habitat purchased for each Natura 2000 area

Habitat \ N2000 site	Our	Treterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmille n	Kaleburn	Sporbaach	O-Troisvierges	O-Wincrange
clear-cuttings		219.3			27.3						
fallow wetlands		46.2	133.8	7.6	77.4		34.8				
wooded structures									107.5	45.5	
agricultural land		529.7									
acre											26.6
drained wetlands		193.6									
others		179.2				61.5					

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
Planning realised	x	x	x	x	x	x	x	x	x	x	x	x	x									

→ Indicators used to test the performance of the action

Milestones	Deadlines	Progress
Acquisition of 30ha	31.12.16	2/3 finalised

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

The action is within the time schedule.

→ Complementary actions outside LIFE

- 154.28 are with long-term lease within the project area: not eligible for the project because the contract is with a community.
- *Léresmillen*:
 - building not eligible for Life, bought on budget of n&ë HfN. The building will be resold with a part of the surrounding land, the exact dimensions will be discussed with interested parties.
 - acre of 420.45 are bought with special funding from MDDI for compensation measures.

→ Perspectives

n&ë HfN is provided with a yearly budget by the MDDI for the acquisition and management of land. The land acquired through Life Eislek will be managed according to the measures worked out by the project during and after the project's duration.

→ Photographs



Figure 15. bistort meadow at the *Bungerefermillen*



Figure 16. bistort meadow on the brooks of the Sauer



Figure 17. grove in *Herbach*



Figure 18. clear-felling on the *Trëtterbaach*



Figure 19. grassland at the *Trëtterbaach*



Figure 20. fallow land in *Breechen*

Action C1: Restauration de zones humides à l'abandon et/ou embroussaillées

→ Activities and Outputs

1) Equipment

Vehicle: Ford transit	11.12.12	28,098.00€
Mobile phones Laptop	14.07.14	842.29€
Tedder	18.07.13	4,260.87€
Cutter bar	26.07.13	7,217.39€
Disc mower	03.14.14	9599.99€ (budget CNDS)
2 brushcutters, 1 chainsaw		756.52€ + 812.41€ + 547.23€

2) Restoration actions

Restoration actions are being carried out in the areas designated after the mapping of action A1 and are indicated in the project's GIS system. The work is carried out by the foremen and their teams and is planned and controlled by the project coordinators. The cuttings from 2014 were used by M. Pint for a monetary compensation (1540.00€). Maps with details on the works that were carried out are in the appendix 29.

A group of parcels owned and managed by n&ë HfN in the project area of Life Eislek in Baschleiden *Hellekessel* is subject to the law from 2011 governing the use of land in proximity of the dam Haut-Sûre. It states that "le pâturage sur une bande de terrain d'une largeur de cent mètres à mesurer à partir du bord du lac à la cote N.N.+321" is forbidden. Before 2011, the site was managed for 22 years: cleared of shrubs, fences were installed and it was extensively pastured by Galloways. Due to the law from 2011, the site has now been abandoned for three years and starts to grow over. As it concerns the abandonment of wetlands, the coordinators of the project felt responsible to change the current situation. An according letter was sent to the MDDI (24.06.14) (appendix 30).

Table 4. Overview of results of action C1

Action	Objective	Results	Total	% of objective	outside LIFE (ANF)	Complementary action
Removing shrubs	10ha	2.24ha	7.69ha	76.9%	0.42ha	1.12ha
Restorative mowing		5.45ha			0.86ha	4.57ha

Table 5. Restoration of neglected wetlands for each Natura 2000 site (in ha)

N2000 site Habitat	Our	Treterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sporbaach	O-Troisvierges	O-Wincrange
extensively grazed land		0.05					1.30			0.06	0.62
fallow wetlands		0.28					2.20		0.06	2.12	0.70
old clear-fellings							0.23				

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled					x	x	x		x	x	x		x	x	x		x	x	x		x	
Planning realised		x	x		x	x	x		x	x	x											

→ Indicators used to test the performance of the action

During the monitoring of the restored sites (D2), we will observe whether there is an improvement as habitat for the target species.

→ Technical and/or financial modifications and justification

- The 4x4 vehicle was replaced by a 5 seat pick-up with a tipper body. We could not find any proposals for 4x4 vehicles with 5 seats sufficiently large to transport the necessary materials to the sites at the price planned in the application form. Therefore we asked to change the type of vehicle which did not have any effects on the overall objectives of the project. This modification was approved in the letter from 06.06.13 (appendix 31)
- The two mobile phones that were supposed to be purchased by CNDS were replaced by a laptop because CNDS lacked adequate informatics equipment. Since the two mobile phones were not indispensable, the project manager applied for a change in the budget. The request was approved in the letter from the 06.06.13.
- The purchase of additional material (brushcutters, chainsaw) was possible as budget was left over from the cattle truck that was less expensive than foreseen (letter 17.03.14 →C6)

→ **Major problems/ drawbacks/ delays**

No delays, the action is within the time schedule.

→ **Complementary actions outside LIFE**

A large scale shrub clearance (1.5ha) and restorative mowing (5ha) was done at *Cornelysmillen* by Meyer-Luhdorf, a German firm working with converted PistenBullys. The costs for this action were taken over by the land management budget of n&ë HfN (→ A2 planning of action C2: mowing to determine new meanders for initial water course restoration project). The site has been in possession of n&ë HfN for almost 20 years and has not been properly mown due to its inaccessibility with machines and its large size making manual work difficult.

The project coordinators are in regular contact with the ANF concerning land management of parcels owned by the state within the perimeter of the project. The aim is to insert these parcels into the network of land managed accordingly to our target species.

Furthermore, we are in contact with Natagora considering *L. helle* populations on the Belgian border.

→ **Perspectives**

The action foresees a first management of sites no longer suitable to our target species because they are overgrown by shrubs or disturbance species. After a first treatment, they will be included into the rotational management plan for the land owned by n&ë HfN.

→ **Photographs**



Figure 21. Manual mowing of a bistort meadow by CNDS



Figure 22. Collection of cutting material that will be used by M. Pint



Figure 23. PistenBully converted into a mower with collection container



Figure 24. PistenBully converted into a mulcher



Figure 25. *Cornelysmillen* before mowing/ mulching



Figure 26. *Cornelysmillen* six months after mowing/ mulching



Figure 27. Before mowing/ mulching



Figure 28. After mowing/ mulching

Action C2: Restauration hydrique de zones humides asséchées

→ Activities and Outputs

1) Restoration of a water course

Site 1: Woltz (changed to *Léresmillen*): currently in planning → A2.

Note concerning stream restoration by Stream&River: 2,250.60€

Site 2: Trëtterbaach: installation of 3 deflectors in form of conifer trunks thanks to an opportunity which arose from a clear-cutting.

2) Removing drains

On the 26.03.15, the coordinator of the project met on site with the contractor concerning the assumed drainage pipe at the *Léresmillen*. Even though the maps indicated a draining at the site of interest, we were not able to find it with the digger. Therefore we were not able to carry out the measure.

Filling draining trenches at the *Kiirchermillen* will only be carried out if an acceptable solution can be worked out. → A2

Table 6. Overview of results of action C2

Type of restoration	Objective	Results	% of objective
Removing drains	500m	0	0%
Restoration of water course	1,5 km 15ha	70m	4,6%

Table 7. Hydrological restorations for each Natura 2000 site

N2000 site Habitat	Our	Tretterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sporbaach	O-Troisvierges	O-Wincrange
clear-felling		70m									

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled				x	x			x	x			x	x			x	x			x	x	
Planning revised								x	x			x	x			x	x			x	x	
Planning realised					x							x										

→ Indicators used to test the performance of the action

Monitoring will show the progression of the rewetting measure onsite → D2

Additionally we have foreseen an analysis of several parameters at the site of the remeandration project, before the practical implementation to be compared with the data obtained after the works were carried out. These include:

- Water quality
- Soil samples

→ Technical and/or financial modifications and justification

The installation of tree trunks as deflectors at the *Trëtterbaach* does not replace the before planned renaturation but should be considered as an additional measure. It was carried out by the forestry company and did not result in additional costs.

→ Major problems/ drawbacks/ delays

Due to the underestimated planning effort, the project coordinator applied for a revised planning schedule. The European Commission allowed a delay of 6 months in the letter from the 06.06.13.

The additional delay concerning the renaturation is explained in the planning of action C2 (→ A2). The benefit of changing the site and thus profiting from additional funds from the Fond pour l'eau provides the possibility of a better control of the action outcome. The significant delay in time is due to the more complicated planning. Instead of relying on a simple introduction of deflectors, we now have the opportunity to carry out a well-planned remeandration at one of the hotspots of the project area.

→ Complementary actions outside LIFE

Two ponds were dug out in the project area:

At *Emeschbaach*, we profited from the presence of diggers at the site during the construction of the cattle shelter. A first excavation was done in October 2013. The pond was then enlarged in October 2014.

At Kaleburn a sedimented pond was opened up free of charge by the digger of the community. After a first intervention in November 2013, the crested newt was captured in the pond. In July 2014, the pond was further excavated and monitoring of the newts will take place in spring 2015.

→ Perspectives

At the end of the project, this action will be finalised but monitoring will continue in order to observe the development of the sites. Management will be adapted to the new situation.

→ Photographs



Figure 29. New site for remeandration project at *Léresmillen*



Figure 30. Installation of deflectors at *Trëtterbaach*



Figure 31. Searching for drainage pipes at *Léresmillen*



Figure 32. No drainage pipe was found at the site



Figure 33. Digging of pond at *Emeschbaach* 2013



Figure 34. Pond after 2nd excavation 2014



Figure 35. Excavation of sedimented pond in *Kaleburn* (19.07.14)



Figure 36. Pond at *Kaleburn*, situation 8 months after excavation (26.03.15)

Action C3: Restauration de zones humides enrésinées

→ Activities and Outputs

Conversion of conifer plantations in wet areas are being carried out in the areas chosen after mapping (A1). The works are carried out by forestry companies or by CNDs and are planned and controlled by the coordinator. Maps with details are in the appendix 32.

Shrub clearance: Hamiville, Troine & Willwerdange	25.06.14	2,632.06€
Clearance: 2 sites in Wintrange	25.06.14	3,197.00€

Table 8. Overview of results of action C3

Type of restoration	Objective	Results	% of objective
Felling of conifers	5ha	1.65ha	33%
Clearing	15ha	5.82ha	39%
TOTAL	20ha	7.47ha	37%

Table 9. Reconversion of conifer plantations into grassland for each Natura 2000 site (in ha)

Habitat \ N2000 site	Our	Treiterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sporbaach	O-Troisvierges	O-Wintrange
spurge plantations		2.45						0.41			
old clear-fellings						0.57	3.53			0.23	0.23

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x			x	x			x	x			x	x			x	x			x	x	
Planning realised	x	x	x	x	x			x	x													

→ Indicators used to test the performance of the action

Monitoring of the development of the sites is carried out to follow the reestablishment of meadows suitable to our three target species. The species targeted for each site depends on the situation.

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

No major drawbacks, the action is within the time limits

→ Complementary actions outside LIFE

not applicable

→ Perspectives

The clear-cuttings will be finished at the end of the project, the sites will be added to the management schedule of n&ë HfN for grazing or mowing to ensure the development into the desired ecosystem.

Clear-cuttings on privately owned land will have a contract that obliges the land owners to manage the land for 30 years according to the guidelines set up by the coordinators.

→ Photographs



Figure 37. Stock taking of timber volume at *Bungerefermillen*



Figure 38. Mulching of clear-felling



Figure 39. Site after 3-4 months: invasion by *Epilobium*

Action C4: Restauration de prairies à bistorte et de mégaphorbaies

→ Activities and Outputs

A lot of clear-felling was done in 2004-2011 through several projects in the valleys of the Ösling. The monitoring of these sites has shown that *P. bistorta* cannot easily recolonize the sites because its seeds are not very persistent in the soil. Therefore, the Life Eislek project has planned to reintroduce the host of *L. helle* on a total area of 10ha to re-establish connections between the remaining populations. Little information could be gathered on the restoration technique for bistort meadows, therefore, three different methods have been experimented on since 2013 by Mireille Molitor/ Michelle Clemens.

1) Rhizome transplantation

The technique of rhizome transplantation has already been used by the Life Papillons project in Wallonia, with good success. They found out that spring (March, April) is the best time for this action. Several questions remain to be answered:

- density of transplantations,
- annual progression of rhizomes,
- importance of soil characteristics on success of transplantation.

To answer these questions, 5 sites were chosen to test the influences on success of different characteristics:

- past management (clear-felling, abandoned wetlands, acre),
- different levels of humidity,
- different densities of rhizome transplantations.

Rhizomes were planted on these sites in April 2013. Additionally, on one of the sites, an experimental set-up was used (→ A2): on a clear-felling, 12 squares of 4m² were transplanted with different densities of rhizomes (10/4m², 30/4m², 50/4m²) at different levels of humidity in the beginning of April 2013.

In 2014, 2 more sites were transplanted with rhizomes, both clear-cuttings at *Helzer Klaus*. The method was slightly changed, instead of excavating each rhizome separately, a square with the side length of a spade was dug out and transplanted at the new site.

Rhizome transplantation in 2015 was carried out on the 15th April on the clear-felling *Breitwies* along the *Trätterbaach* and the mown and mulched site at *Cornelysmillen*. Considering the results from rhizome transplantation in 2013 and 2014, we used a density of approx. 30 rhizomes/4m² and selected drier patches within the sites. Transplantation occurred using individual rhizomes rather than squares (as was the case in 2014).

2) Seeding

Seed collection: in 2013, 2000g seeds were collected in +/- 30 hours. Weighing showed that 1g contains approx. 80 seeds.

Collection of seeds in 2014 at 6 different sites between 10th and 18th July → 802g.

Seeding took place at 3 clear-cuttings on the 31.08.13:

- 1000g *Conzefenn*
- 300g *Stauwelsbaach*
- 252g experimental set-up: test seeding at different densities (7g, 21g, 35g) at a varying humidity gradient.

500g of the seeds collected in 2013 were kept in a closed bucket outside for vernalization.

12.04.14: some of the seeds were spread at two sites:

- 200g clear-cutting at *Trëtterbaach* (4x50g in circles with 4m diameter)
- 252g experimental set-up

Seeding from August 2013 and April 2014 was negative, possible reasons:

- Seeds from August: mild winter, vernalization did not happen. If that is the case, germination of seeds possibly in spring 2015 → Monitoring
- Seeds from April: dry vernalization at -18°C instead of moist vernalization at <4°C.

Several germination tests were used to find the most efficient method for seeding:

(1) Test 1: 18.04.14 no vernalization

humidification of 4x30 seeds in petri dishes closed with parafilm at ambient temperature → 07.07.14 NO germination

(2) Test 2: 01.06.14 dry vernalization at -18°C:

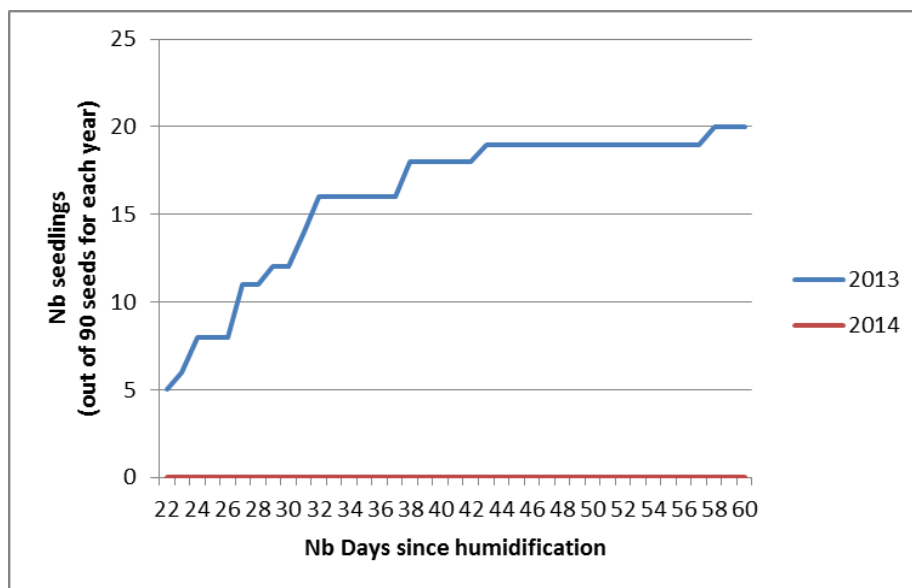
Seeds put into freezer at -18°C for 15-21 days. humidification of 4x30 seeds in petri dishes closed with parafilm at ambient temperature → 07.07.14 NO germination

(3) Test 3: 15.07.14 moist vernalization in petri dishes at ~4°C

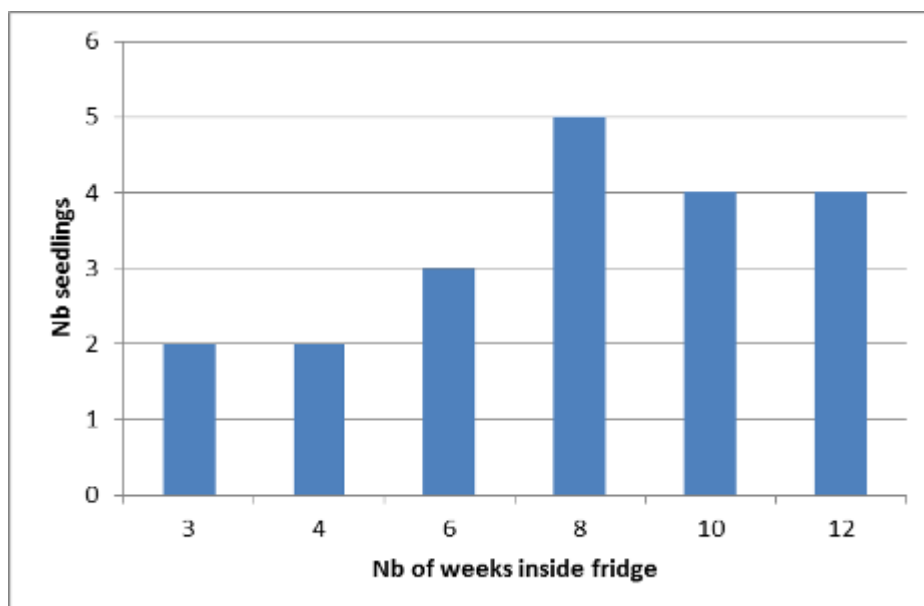
humidification of 6x30 seeds (15x2013 and 15x2014) in petri dishes closed with parafilm kept in refrigerator at ~4°C for different lengths of time (3, 4, 6, 8, 10 and 12 weeks). Afterwards kept at ambient temperature.

Results:

- Germinations happened between week 3 and week 12 in all petri dishes.
- Germinations for seeds from 2013: 20/90 = 22%.
- Germinations for seed from 2014: 0/90.
- A lot of germinations happened while the petri dish was still in the fridge.
- Most germinations in dishes that were in the fridge for more than 6 weeks.
- All petri dishes had moulds.



Graph 1. Nb of germinations over time



Graph 2. Nb of germinations for each petri dish

(4) Test 4: 21.10.14: moist vernalization in sand at ~4°C

containers kept in the fridge at ~4°C

- seeds 2013: 150 seeds + 100g moist sand
- seeds 2013: 10g seeds + 150g moist sand
- seeds 2014: 150 seeds + 100g moist sand
- seeds 2014: 10g seeds + 150g moist sand

Results:

- First germinations in the fridge after 5 weeks → removal
- seeds were spread onto soil in pots and kept in the cellar at ~3-10°C.
- Counting of seedlings after 6 weeks:

Year	Nb of seeds	Nb of seedlings	% germinations
2013	150	33	22
2014	150	3	0.5
2013	10 g = ~800 seeds	92	11.5
2014	10 g = ~800 seeds	14	1.75

Considering the lack of experience with plant rearing at n&ë HfN and the lack of appropriate materials and space, we approached the MNHN with the aim of starting a collaboration considering the propagation of the bistort plant (A2).

Seeding in 2014/15:

- 16.10.14: Dried seeds: 4x50g in circles of 4m diameter → *Cornelysmillen*
- 27.03.15: Seed vernalization: seeds in the fridge at ~4°C in moist sand for 5 weeks
 2x50g in circles of 4m diameter → *Cornelysmillen*,
 2x50g in circles of 4m diameter → clear-felling at *Trëtterbaach*

3) Hay transfer

An acre of 1.33ha will be retransformed into grassland. Hay transfer is supposed to facilitate the invasion by the desired plant species. A bistort meadow of 85are served as donator parcel, it is situated only 300m from the receptor area. The action was executed between the 16th and 21st July 2013. The work was planned and controlled by the project team.

All the sites with bistort planations/seedings can be found in the appendix 33.

Further plans:

Questions asked:

- What influence does population size have on genetic diversity?
- Reproductive system? cloning by rhizomes? self-compatibility?
- What influence does site quality have?
- Best method for new site? Rhizomes? Grains? Cultures? Depends on genetic properties and reproductive system.

Collaboration MNHN:

- Genetic population study: collection of young leaves each metre on a transect in 14 populations of variable sizes
- Genetic composition: on two sites, in one square metre collection of one leaf of each plant
- Grain diversity: germination of seeds of different sites, rearing and study of descendants
- Grain quality: collect all grains of one plant with gaze (20 plants) and count how many are viable
- Pollination: put gaze around flower head to prevent pollinators and see how grains develop

The Life Eislek team and SICONA will collect the plant material and the MNHN will do the laboratory work concerning the genetics and will grow plants from a collection of seeds to determine the best methods for propagation.

Table 10. Overview of results of action C4

Type of restoration	Objective	Results (ha)	% of objective
Rhizome transplantation	10ha	2.87	
Seeding		0.84	
Hay transfer		1.33	
	Total	5.04	50.4%

Table 11. Bistort meadow restoration for each Natura 2000 site (in ha)

Habitat \ N2000 site	Our	Tretterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sporbaach	O-Troisvierges	O-Wincrange
acre											1.90
fallow wetlands							0.04			0.93	
clear-felling		0.01									
old clear-fellings						0.21				1.97	

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled				x	x			x	x			x	x			x	x			x	x	
Planning realised				x				x	x			x										

→ Indicators used to test the performance of the action

Monitoring of the sites (D2) will show whether the bistort will be able to colonise the habitats chosen by the project coordinators. We hope to find the best method this year in collaboration with MNHN and SICONA and then be able to use the appropriate technique successfully on a large scale.

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

We used the seeding technique only minimally in 2014/15 because we have not yet found a technique that will reliably bring success. We will keep most of the collected seeds from 2014 to use them more efficiently in the next season after we worked out the best method.

→ Complementary actions outside LIFE

Eriophorum angustifolium seed collection in Helzen *Am Dall* where we found a large population in 2013 (08.07.13). Seeding at 5 sites: *Conzefenn* 2x (01.08.13), *Sporbech* (12.04.14), *Bungerefermillen* (23.07.14) and *Haardbaach* (30.07.14).

SICONA has reared *Sanguisorba officinalis* for a reintroduction into the wild. Their success was greater than expected, so that they asked us if we want 750 plants for our sites. The nature park Our financed the plants, n&ë HfN in collaboration with CNDS did the practical implementation of the planting. Meeting with nature park Our to determine sites for planting on the 09.10.14. The reared plants were planted at 6 different sites in 22 groups of 30-48 plants per group on the 13.10.14.

→ Perspectives

The Life project allows us to work out best practice methods that we will be able to use in the future. Through dissemination actions we want to provide help to other projects working on *L. helle* or *P. bistorta*.

→ Photographs



Figure 40. Digging out of bistort plants in squares



Figure 41. Transplantation of "square" at the receptor site, a clear-felling at *Helzer Klaus*



Figure 42. Collection of bistort seeds



Figure 43. mature seeds of the bistort plant



Figure 44. weighing of seeds for experimental set-up



Figure 45. Seeding at clear-felling on *Trätterbaach*



Figure 46. Germination test in petri-dish



Figure 47. Germination test in flower pot



Figure 48. Outside Life: Seed collection *Eriophorum angustifolium*



Figure 49. Outside Life: Marking sites for *S. officinalis* planting in collaboration with SICONA and Naturpark Our



Figure 50. Outside Life: Planting of *S. officinalis* in collaboration with CNDS



Figure 51. Outside Life: Marking sites of planting with GPS

Action C5: Plantation de structures ligneuses

→ Activities and Outputs

The best sites for planting measures were designated during the mapping of the project area (A1). We have now finished the third planting season. The work is done by CNDS and controlled by the academic team. The best planting time depends on the weather conditions. The budget for the purchase of plants was set at 5,000€, at half time of the project, we have spent 6,136.76€. The maps with the planting locations are in the appendix 34.

Table 12. Overview of results of action C5

Species	Objective	Habitat type	Natura 2000 site	Results	% of l'objective
Hedges	7.000 plants				3580
<i>Sambucus nigra</i>				200	
<i>Prunus spinosa</i>				475	
<i>Corylus avellana</i>				310	
<i>Rosa canina</i>				225	
<i>Sorbus aucuparia</i>				125	
<i>Crataegus spec.</i>				1685	
<i>Acer campestre</i>				400	
<i>Sambucus racemosa</i>				160	
TREES (10-12 cm circumference)					78
<i>Acer pseudoplatanus</i>				5	
<i>Quercus robur</i>				21	
<i>Prunus avim</i>				8	
<i>Fagus sylvatica</i>				24	
<i>Malus sylvestris</i>				15	
<i>Sorbus aucuparia</i>				3	
<i>Alnus glutinosa</i>				1	
<i>Ulmus glabra</i>				1	
TOTAL:				3.658	52,26%

Table 13. Habitat types with planting actions for each Natura 2000 area

Habitat \ N2000 site	Our	Tretterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sporbaach	O-Troisvierges	O-Wincrange
acre		X									X
fallow wetlands							X			X	X
pasture		X								X	X
hay meadows		X									
old clear-felling							X			X	

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled						x	x			x	x			x	x			x	x			
Planning realised				x		x	x			x	x											

→ Indicators used to test the performance of the action

not applicable

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

The action is within the time schedule.

→ Complementary actions outside LIFE

At *Emeschbaach*, 300m hedges and a field copse were planted through an ecological compensation measure.

→ Perspectives

The maintenance of the planted structures will be assured by n&ë HfN in collaboration with CNDS.

→ Photographs



Figure 52. Planting trees at *Léresmillen* in alternation with hedges and fallow areas.



Figure 53. A fence will be erected at 3.5m to save the plantings from the cattle.



Figure 54. Planting of a field copse as a compensation measure



Figure 55. Planting of a hedge on the wayside

Action C6: Acquisition et installation d'infrastructures relatives au pâturages

→ Activities and Outputs

1) Material

professional drill	30.04.13	273.70€
cattle truck	17.04.14	15,400.00€
installation of fences	spent until 31.03.15	8196.41€

2) Construction of the cattle shelter

The construction of the cattle shelter was planned and guided by Mireille Molitor and took place between October and December 2013. It has now been in use for two seasons. It is built of Douglas fir wood and measures 18x6 metres. It is linked to the road by a 80m path made of regional stones. As there was a considerable run-off at high rain, the path has been completed with gutters in winter 2014. A more precise description of the shelter was provided with the progress report. The total price of the shelter was at 54,216.52€ which is 24,216.52€ over the planned budget. The cattle shelter and cattle truck will facilitate the work with the Galloways that graze many nature reserves belonging to n&ë HfN within the project area.

3) Fences

The installation of fences, troughs and cattle bridges improves the quality of the pastures in ecological terms. Fencing leads to a better state of the brooks creating migration corridors for *L. helle* and increased insect diversity for both bird species. Regularly managed brooks can also provide breeding habitats to *S. rubetra*. Enclosures in bistort-rich areas will provide a refuge for *L. helle* during grazing events.

First installations of fences were carried out in 2013 at sites designated by action A1. These included fencing of pastures, installing fences on brooks and enclosures in bistort-rich areas.

4) Troughs

In planning → A2

5) Cattle bridges

Sites for installation have not been designated yet.

Table 14. Overview of results of action C6

Type of action	Objective	Résultats	% of l'objective	outside Liffe
purchase diverse equipment	/	in progress	/	/
drill	1	1	100%	/
cattle shelter	1	1	100%	/
fences	12,5km	4.13km	33%	2.55
removable fences	500m	0	0%	/
energizer	5	0	0%	/
trough	5	0	0%	0
metallic doors	10	0	0%	/
cattle bridge	5	0	0%	/
cattle truck	1	1	100%	/

Table 15. Fences set for each Natura 2000 area (in m)

N2000 site Habitat	Our	Treterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sporbaach	O-Troisvierges	O-Wincrange
pasture		520			1200		80	40		160	2640

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled				x	x			x	x			x	x			x	x			x	x	
Planning realised				x				x				x										

→ Indicators used to test the performance of the action

Milestones	Deadlines	Progress
Construction of cattle shelter	1.11.13	finished

→ Technical and/or financial modifications and justification

The cattle truck was cheaper than expected, the project coordinators decided to use the additional money for the purchase of brushcutters and a chainsaw (C1) for CNDS. The financial modification was accorded by the EC (letter 17.03.14).

Considering the installation of fences, the implementation of the work was planned to be carried out by CNDS. However, one of the two foremen employed by the Life Eislek project has had an injury making him unavailable during most of winter 14/15. Therefore the installation of fences has known a delay in the implementation. One of our sites is supposed to be grazed from spring 2015 so that it is necessary to install the fence this winter. For this reason we would like to fall back on external assistance regarding this precise part of the project. We have foreseen 47.500 Euro for equipment regarding the installation of fences. We will not need the whole budget if CNDS can build all the fences, especially in combination with the project on the *Trätterbaach*. Therefore we would like to use part of the budget to hire a contractor at this specific site. This financial modification was discussed with Tom Andries and Simon Goss (appendix 35).

→ Major problems/ drawbacks/ delays

The project is in delay considering the installation of fences, this is due to an injury to one of the foremen employed through the project. He was the most experienced concerning fencing at CNDS so that this measure was impeded in winter 14/15. The delay will be compensated during the next season.

So far no troughs were installed due to difficulties in the planning of project *Trätterbaach* (A2). The planning will presumably be finished by next season and we hope to carry out the practical implementation then.

→ Complementary actions outside LIFE

2.55 km fences were set up in the project area outside Life.

→ Perspectives

The installed infrastructures will be used to graze nature reserves in future. Fences on private properties will have a 10 year convention to guarantee their maintenance.

→ Photographs



Figure 56. Building fences at *Kaleburn*



Figure 57. Enclosure Hoffelt Am *Dall*



Figure 58. Site at *Cornelysmillen* before installation of fences along the brooks



Figure 59. Site at *Cornelysmillen* after installation of fences along the brooks

Action C7: Suivi et conseil d'exploitants agricoles travaillant au sein de zones Natura 2000

→ Activities and Outputs

The mapping of the project area (A1) allowed to define areas of interest for an extensification of agricultural practices, especially concerning *S. rubetra* habitats. A few punctuated consultations with agriculturists have taken place up to now. A few biodiversity contracts were concluded to start in 2015 for a period of 5 years. Claude Schiltz and Mikis Bastian are primarily responsible for this action.

Table 16. Overview of results of action C7

Type of action	Objective	Results	% of objective
consultation of agriculturists	50 agriculturists	10	20 %
extensification programs	50 ha	10,28	20,56 %

Table 17. Extensification programs for each Natura 2000 area (in ha)

N2000 site Habitat	Our	Treterbaach	Breichen	Wiltz	Sure	Conzefenn	Cornelysmillen	Kaleburn	Sportbaach	O-Troisvierges	O-Wincrange
agricultural land											10.28

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Planning revised									x	x	x	x	x	x	x	x	x	x	x	x	x	
Planning realised									x	x	x	x										

→ **Indicators used to test the performance of the action**

not applicable

→ **Technical and/or financial modifications and justification**

not applicable

→ **Major problems/ drawbacks/ delays**

The payment of aids concerning rural development is fixed by law and incorporates two parts (1) biodiversity contracts and (2) MAEs. The proposal of the "Plan du développement rural 2014-2020" has not yet been approved by the EC. Therefore no new contracts can be negotiated with the agriculturists. According to the last news, the revision is supposed to be finished by fall 2015 and we hope to be able to make contracts for 2016.

→ **Complementary actions outside LIFE**

not applicable

→ **Perspectives**

The aim is to build up a good connection to local land users that will be kept up after the end of the project. Extensification contracts will be renewed after they run out.

→ **Photographs**



Figure 60. Consultation of local land users

Action D1: Monitoring des populations des espèces cibles

→ Activities and Outputs

1) Equipment

Camera	16.10.12	303.89€
Spotting telescope	05.02.13	1638.00€
Binoculars	04.03.13	1.880,36€
Tripod	29.05.13	271.10€

2) Monitoring

The scientific monitoring of all three target species started in 2013 and has since been carried out on a yearly basis throughout the entire project area by the academic staff. A more detailed description of the methods, study areas and results is provided in appendix 36. Due to the discovery of numerous new sites of *L. helle* outside of the Natura 2000 network (by volunteers contributing to the project), Life Eislek has proposed an adaptation of the existing Natura 2000 habitat zones to the MDDI (appendix 37), as was suggested by the EC (letter from 17.07.2014). This extension should allow for better and more targeted management of *L. helle* habitats and guarantee a better protection of the species. Due to these sites' proximity to the Belgian populations, they could provide a vital aspect in the long-term conservation of this butterfly. The systematic monitoring of both avian target species has provided invaluable insights into the distribution of *L. collurio* and *S. rubetra*. The majority of *L. collurio* breeding territories seem to be closely associated with sites that are owned by n&ë HfN, many of which are specifically managed as part of the Life project (appendix 36), while surrounding areas are almost entirely devoid of this species. Similarly, *S. rubetra* is primarily observed on n&ë HfN sites, although the species now seems to be extinct as a breeding bird in Luxembourg. The Life Eislek project will aim at improving those known stop-over sites in order to encourage a renewed breeding of the species in Luxembourg (see mail exchange between the EC and Life Eislek in appendix 38).

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled				x				x				x				x				x		
Planning realised				x				x														

→ Indicators used to test the performance of the action

not applicable

→ **Technical and/or financial modifications and justification**

not applicable

→ **Major problems/ drawbacks/ delays**

As monitoring is always subject to the weather conditions, some problems were experienced in the field season of 2013. Poor weather conditions in 2013, meant for a very short field survey season, which prevented us from monitoring the entire project area. Instead, monitoring was limited to the most important core areas of the target species in the north-west of the Ösling region. In 2014, weather conditions were much more suitable and monitoring was carried out in all Natura 2000 sites of the project area, with special emphasis on the "Vallée supérieure de la Sûre / Lac du barrage" (LU0001007). As planned, monitoring will continue to be conducted in all project areas until 2017.

→ **Complementary actions outside LIFE**

In 2013 a Master's thesis on the population connectivity of *L. helle* in the North of Luxembourg was carried out in close collaboration with the University of Leeds (Kayser, 2013). This work not only provided valuable insights into the population dynamics of *L. helle* but also allowed monitoring outside the Natura 2000 network (project proposal in appendix 39).

Ever since, the Life Eislek project has been able to rely on a number of volunteers, who contribute to the scientific monitoring both inside and outside the Natura 2000 network. Thanks to the work of these volunteers, new populations of *L. helle* and several sites that were previously unknown have been discovered outside the Natura 2000 network. Similarly, the Life Eislek project has benefitted from the contribution of numerous volunteers of the Centrale ornithologique's field ornithology group, which have been helping with surveys both inside and outside the Natura 2000 network.

→ **Perspectives**

The results of the monitoring will lead to a better knowledge of current distributions and also, in the case of *L. helle*, a better understanding of population dynamics and metapopulation interconnectivity. This, in turn, will lead to a much better management and more targeted application of direct measures and hopefully lead to a successful long-term conservation. The Life project has already contributed to a vastly improved data and knowledge exchange with other conservation bodies in surrounding countries (Gerhard Reuter, aves-ostkantone; Bernhard Theißen, Biologische Station StädteRegion Aachen e.V. - Life Rur und Kall; Alexander Rauw, Natagora - Life Papillons; Philippe Goffart, *L. helle* expert) and should continue to do so in the future. This provides an excellent base for an improved coordination between the regions and allow for a more effective conservation effort.

The monitoring will also help to gain a better understanding of the successfulness of the direct actions carried out as part of the Life Eislek project.

Action D2: Monitoring des parcelles fauchée/ pâturées et vérification de la bonne exécution du plan de pâturage

→ Activities and Outputs

The monitoring of the sheep and Galloway grazing (April- October) takes place, since 2013, in two forms:

- Meetings every two weeks between Claude Schultz, CNDS and shepherd Weber
- Visiting the grazed sites with or without Weber/CNDS

The results of the monitoring season 2013-2014 concerning grazing are in the document "Bilan du pâturage 2013/ Plan de pâturage 2014" in the appendix 40. The collected observations from 2013 were used to set up the "definite" grazing plan. The observations made from 2014 on will be used for the revision of the grazing plan for the following year. The observations showed that sheep exert a selective pressure on the bistort, therefore sensitive sites are grazed only from August after the main reproductive period of *L. helle* is over. A problem that was observed by the project coordinators is a too high density of sheep on the sites. This problem will be resolved in 2015 as shepherd Weber has built a new stable allowing him to separate his flock into smaller individual flocks better adapted to the patch sizes.

The sites subjected to restorative mowing are monitored the following summer. The analysis has led to the conclusion that the time of mowing needs to be advanced to achieve a better success. Especially *Epilobium* is a plant that colonises clear-cuttings and sites left to succession.

Meeting with Eyeflyinc, a mini-enterprise founded by students from the agricultural school (13.03.15). They provide a service concerning photography from the air with drones. We will hire them to take photographs from 3-4 sites at which we undertook large measures.

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled				x	x			x	x			x	x			x	x					
Planning realised	x	x		x	x			x	x			x										

→ Indicators used to test the performance of the action

This action is used to test the performance of action A4 and C1.

→ Technical and/or financial modifications and justification

not applicable

→ **Major problems/ drawbacks/ delays**

No problems, the schedule of this action is on time.

→ **Complementary actions outside LIFE**

Ms Kayser has published an article "How to manage habitats of the endangered lycaenid butterfly *Lycaena helle* (Denis & Schiffermüller, 1775) (Insecta, Lepidoptera)" after she worked on her Master thesis in collaboration with the Life project. Available online at:

http://www.snl.lu/publications/bulletin/SNL_2014_115_241_249.pdf

→ **Perspectives**

The monitoring and revision of site management during the Life project will lead to a better planned management of the sites of n&ë HfN after the project.

→ **Photographs**



Figure 61. Sites that are not potential habitats to *L. helle* can be grazed more intensively and early in the season



Figure 62. *L. helle* habitats are grazed late in the season at reduced flock size



Figure 63. When sites are grazed too late in the year, the sheep are not able to eat the vegetation and only trample on it

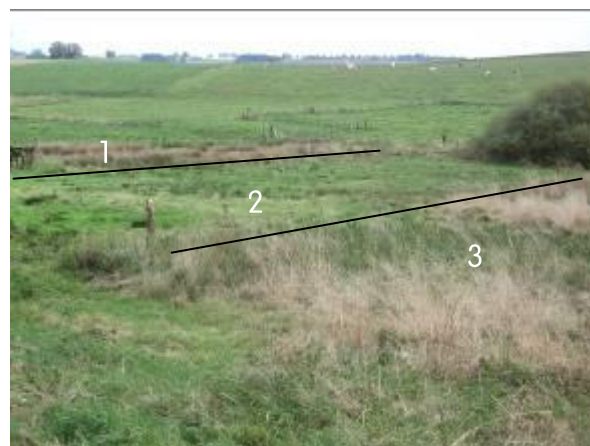


Figure 64. Mowing in thirds (1: 2013, 2: 2014 and 3: 2015)



Figure 65. Development *Tamenne* after mowing in fall 2013 (16.04.14)



Figure 66. Development *Tamenne* (28.05.14): at first *P. bistorta*



Figure 67. Development *Tamenne* (09.07.14): regrowth of *Epilobium*



Figure 68. Mowing at *Tamenne* in summer 2014 (05.08.14): early mowing to control *Epilobium*

Monitoring des actions de restauration hydrologique (action hors LIFE)

The development of the *Trërterbaach* consequently to the deflectors installed at *Breitwies* was followed during winters 2013/14 and 2014/15 by the academic team. The results in form of a remeandration are clearly visible during flooding events in winter.

Even though the deflectors were carefully fixed at the brooks, two deflectors were washed away during winter 2013. The trunks were blocked approx. 100m downriver where dead trees were already stuck in the river bed. This site provides shelter for young fish. The last remaining deflector was fixed with additional posts to guarantee its subsistence.



Figure 69. Situation at introduction of deflectors



Figure 70. Site during flooding event in winter 2013/14



Figure 71. Addition fixation to prevent washing off
 (17.04.14)



Figure 72. Site during flooding event in winter 2014/15

Monitoring des actions de restauration des prairies à bistorte et des mégaphorbiaies (action hors LIFE)

1) Rhizome transplantation

At the experimental set-up, first leaves were observed only 3 weeks after rhizome transplantation at the end of April, after 2 months (12.06.) the majority of the plants were in blossom, at the end of July (31.07.) seeds had been produced.

A monitoring on the 1st of July 2013 focussed on the counting of stems, nb of leaves per stem and nb of blossoms per stem (appendix 41). Results:

- Rhizome density: Squares with 50 rhizomes show proportionally less stems compared to those with 10 or 30 rhizomes.
- Humidity gradient: Drier patches had more stems and more leaves and blossoms per stem than patches saturated with water.

Past management: The past exploitation of a site is important for a successful rhizome transplantation. While the repopulation at the site invaded by *E. angustifolium* was not successful, the results on the acre were more promising.

Concerning the "square" transplantations from 2014: 2 months after the implementation, rarely any plants were in blossom, contrary to the transplantations in the previous year. One reason could be the quality of the site. Another plausible explanation would be the competition exerted through the other plants imported with the squares.

The combination of the negative results at the site overgrown with *E. angustifolium* and the mediocre results of the square transplantations from 2014 indicate that competition, rather than soil characteristics, is likely to be the main reason for failure. Before introducing *P. bistorta* at a new site, ruderal species need to be controlled through repetitive mowing.

2) Seeding

The reintroduction of the bistort through seeding in the wild was not successful so far. In spring and summer one year after seeding, no leaves were observed. There are two possible reasons:

- The winter was not cold enough for vernalization,
- the method used by the project team was not appropriate.

3) Hay transfer

The site was monitored on the 05.06.14, almost one year after the implementation. Almost all plants present at the donor parcel were found on the former acre. They were in very low numbers but that is to be expected only one year after implementation.



Figure 73. Site of experimental set-up (27.05.14)



Figure 74. Rhizome transplantation on the acre after one year



Figure 75. "Square" transplantation at *Helzer Klaus* after 3 months



Figure 76: "Square" transplantation, the transplanted plants did not show significant signs of growth



Figure 77. Donor parcel for hay transfer



Figure 78. Acre with hay transfer after one year

Action D3: Evaluation de la restauration des fonctions écosystémiques et de l'impact socioéconomique des actions du projet

→ Activities and Outputs

We were contacted by Nelly Felter, an intern at Aster at the project Life GypHelp charged with the determination of indicators for socio-economic impacts and the elaboration of a method to determine these. She proposed an exchange of ideas with Aster and other Life projects concerning this action.

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled																			x	x	x	
Planning realised																						

→ Indicators used to test the performance of the action

Products	Deadlines	Progress
Study on socio-economic and ecosystem impacts	31.08.17	/

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

The action is planned for 2017 and has not yet started.

→ Complementary actions outside LIFE

not applicable

→ Perspectives

not applicable

Action E1: Actions d'information et de sensibilisation du grand public

→ Activities and Outputs

1) Materials

The first step was the creation of a graphic identity (appendix 43) to give the project an identification and better visibility. Atelier Kurth was charged with the design of the logo as well as the other dissemination materials. The logo has been in use since 25.02.13 (2881.44€). Additionally, 2000 sheets of stationary (appendix 44) were printed with the graphic identity of the project. 1500 flyers (appendix 45) were designed and printed within the first year of the project (1663.82€). The roll-ups (appendix 46) are set up at every event that Life Eislek organises or participates at (3523.60€). In the areas of action, provisional signs (appendix 47) are set up to inform passers-by of the works carried out and their backgrounds. The signs that we used at first (laminated paper) were not very durable, therefore we had 10 corrugated PVC signs designed and printed. 10 signs were put up so far. After the works are completed, the signs will be moved to other areas of action. The display boards and walking boards will be set up by April 2016.

2) Events

The introductory event included a press conference on the 20.11.12 (appendix 48) and two presentations to the public in Munshausen (12.12.12) and Boulaide (20.02.13) (appendix 49). An important part of the dissemination actions are the guided tours (appendix 50) through nature reserves managed by the project. Three visits took place in the first summer of the project, two in the second. For 2015, three guided tours have been announced in "En Dag an der Natur", a yearly brochure published by n&ë. One of the guided tours will be held on the Natura 2000 day. Four "Chantiers nature" (appendix 50) were organised in the project area by the project coordinators as part of the "Fit by Nature" programme of n&ë. Furthermore, Life Eislek has participated at several fairs, markets and other events:

- 16.06.13: Fest vun der Natur
- 04.08.13: Naturparkfest in Hosingen
- 07-08.09.13 & 13-14.09.14: Beschfest in Munshausen
- 13.-22.09.2013: Expo Belle étoile
- 12.-20.10.2013: Foire d'automne
- 10.01.14: "Métiers de l'environnement" at Athénée
- 23.03.14: Wasserfest at Naturpark Uewersauer
- 30.03.14: Presentation of LIFE Eislek project at meeting of Lions Club
- 24.02.15: "3 Arten 1 Ziel" lecture at the Haus vun der Natur

3) Press releases

The Life Eislek team has written quite a few articles concerning the project, some were published in the organisation's magazine "Regulus", others in local magazines such as "Cliärrwer Kanton" or national newspapers like "Wort" (appendix 50). Additionally, we were in two radio shows to talk about the Life Eislek project. Life Eislek also participated at the Natura 2000 awards 2015.

Alan Johnston, an independent artist based in Luxembourg is working on a book on the wetlands in the Eislek region "Les prës humides de l'Eislek". As an illustrator of flora and fauna, he has already published several books on nature and conservation. In his new book, n&ë HfN, the Life Eislek project and its three target species will be presented with texts and drawings.

Table 18. Overview of results of action E1

Type of action	Objective	Results	% of objective
Graphic identity	1	finished	100%
Letter paper	/	finished	/
Flyer	1.500 ex.	finished	100%
Roll-ups	4	finished	100%
Provisional signs	> 20	10	50%
Display boards	4	Deadline : 30.04.16	0%
Guided tours	10	5 (3 planned for spring/summer 2015)	50%
Chantiers nature	6	4	66%
Walking boards	1	Deadline : 30.04.16	0%
Articles	15	43	>100%
Press conference	/	1	/
Radio/Television	/	2	/
Fair, markets,...	/	10	/
Introductory event	1	finished	100%
Closing event	1	Deadline: 30.06.17	0%

Table 19. Press releases

N°	Date	Type de publication	Nom de l'organe de presse	nom de l'article
1	20.07.2012	homepage LIFE Nature	europaforum.lu	Life Eislek
2	23.07.2012	homepage LIFE Nature	European Commission	Life Projects
3	août 2012	article internet	Greenworks	Financement européen pour 4 projets environnementaux au Luxembourg
4	08.09.2012	article internet	www.volksfreund.de	Feuerfalter und Our-Muschel
5	18.09.2012	article internet	www.tageblatt.lu	Millionen für den Naturschutz
6	21.11.2012	article internet	wort.lu	LIFE-Projekt zur Wiederherstellung der Ardenner Feuchtgebiete
7	21.11.2012	journal quotidien	Luxemburger Wort	Drei Maskottchen und ein Ziel
8	15.12.2012	journal quotidien	Luxemburger Wort	Zwei neue Naturschutzprojekte vorgestellt
9	15.12.2012	journal quotidien	Zeitung Lëtzebuurger Vollek	30 joer aktiven Natur- a Vulleschutz am Cliärrwer Kanton
10	janvier 2013	article grand publique	regulus	Activité section "Cliärref"
11	janvier 2013	article grand publique	Rapport annuel 2012	Life Eislek: un nouveau projet pour la restauration des zones humides de l'Ardenne
12	19.03.2013	journal quotidien	Luxemburger Wort	Umsetzung des Naturschutzgesetzes gefordert
13	avril 2013	article grand publique	En Dag an der Natur	Natur-Zuch - Velostour durch den Dall vun der Woltz
14	avril 2013	article grand publique	En Dag an der Natur	Vullen vum Eisleker Héichplateau
15	08.06.2013	journal quotidien	Luxemburger Wort	Erkundung der Zeit, der Planeten und der Schmetterlingen
16	16.06.2013	article internet	mywort.lu	A day in Nature-From caterpillar to butterfly
17	31.08.2013	journal quotidien	Luxemburger Wort	Vullen um Eislecker Héichplateau
18	septembre 2013	article grand publique	Ardenner&lokal-Express	Bëschfest 2013
19	31.10.2013	article grand publique	De Letzeburger Bauer	"LIFE"-projekte, E Bâm an d'Gewan , Erosion im Attertal
20	mars 2014	article grand publique	natur&ëmwelt Sektoun Cliärref	Vullewelt am Vulleschutzgebidd laanscht d'Brakels- an d'Trätterbaach
21	23.03.2014	article grand publique	Brochure "Weltwassertag"	Activités pour toute la famille autour de la thématique de l'eau

22	mars 2014	article grand publique	Rapport annuel 2013	LIFE Eislek: Une première année de projet réussie
23	mars 2014	article grand publique	Rapport annuel 2013	Projet LIFE EISLEK: Cornelysmillen achat terrain
24	24.03.2014	journal quotidien	Luxemburger Wort	Für konsequenteren Naturschutz
25	avril 2014	article grand publique	En Dag an der Natur	Die Vögel des Öslinger Hochplateaus
26	avril 2014	article grand publique	En Dag an der Natur	Die Allerborner Bleimine: verseuchter Boden oder Biotop?
27	janvier 2013	article grand publique	De Lëtzeburger Bësch	Ein neues Projekt zur Wiederherstellung der Ardenner Feuchtgebiete sowie der hier lebenden Arten
28	08.05.2014	journal quotidien	Luxemburger Wort	Stippvisite im Naturschutzgebiet
29	juillet 2014	Brochure	Journées de la prairie	Les prairies fleuries existent encore
30	juillet 2014	Brochure	Grünlandtage	Es gibt sie noch die bl"henden Wiesen
31	07.08.2014	journal quotidien	Luxemburger Wort	Ornithologischer Spaziergang im Ösling
32	28.08.2015	journal quotidien	Luxemburger Wort	Einblicke in die Vielfalt der Natur
33	18.10.2014	Brochure	Chantiers Nature	Gestion des biotopes sur le Haut-Plateau ardennais
34	décembre 2014	article grand publique	regulus	Cornelysmillen-das grösste zusammenhängende Feuchtgebiet von natur&émwelt
35	octobre 2014	article grand publique	regulus	Acquisition - Projet LIFE Eislek
36	02.10.2015	communiqué de presse	natur&émwelt	Naturschutz durch Technik LIFE EISLEK: grosse Entbuschungs-und Mäharbeiten
37	octobre 2014	article grand publique	Ardenner&Lokal/Express	Naturschutz durch Technik LIFE EISLEK: grosse Entbuschungs-und Mäharbeiten
38	déc 2014	commuinqué de presse	natur&émwelt, Interlife	Life EISLEK: un projet qui avance bien
39	mars 2014	article grand publique	De Cliärrwer kanton	De Bloe Pippel aus dem Eislek
40	déc 2014	article grand publique	regulus	Life Eislek: - 3 Arten, ein Ziel
41	mars 2015	article grand publique	De lëtzeburger Bauer	Einsatz von Spritzmittel
42	mars 2015	article grand publique	regulus rapport annuel	LIFE EISLEK: Restaurierung der Ardenner Feuchtwiesen
43	mars 2015	article grand publique	regulus rapport annuel	LIFE EISLEK: acquisitions

→ **Time Schedule**

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Planning realised	x	x	x	x	x	x	x	x	x	x	x	x	x									

→ **Indicators used to test the performance of the action**

The impact of the dissemination actions and the visibility of the project will be tested in the socio-economic study.

Milestones	Deadlines	Progress
Introductory event	31.05.13	finished
Flyer, Roll-up's	30.04.13	finished
Display boards	30.04.16	/
Walking boards	30.04.16	/
Closing event	30.06.17	/

→ **Technical and/or financial modifications and justification**

not applicable

→ **Major problems/ drawbacks/ delays**

not applicable

→ **Complementary actions outside LIFE**

not applicable

→ **Perspectives**

The experiences made during the project and the methods worked out for the different actions will be published to allow other conservationists to profit from the data. The display boards will inform the public of the main results aimed for and achieved throughout the project's duration.

→ Photographs



Figure 79 Guided Tour "Die Vögel des Öslinger Hochplateau" in Tratten (31.08.14)



Figure 80. Life Eislek at Bëschfest Munshausen (14.09.14)



Figure 81. Chantier nature: mowing and cutting back shrubs (18.10.14)



Figure 82. Sign put up at the erection site of the stable



Figure 83. Provisional signs at areas of action

Action E2: Mise en ligne d'un site internet

→ Activities and Outputs

A provisional website was online since November 2011. The definite version is online since 14.12.13 at www.life-eislek.eu. It works with opensource wordpress and the basic site was set up by Atelier Kurth (6643.23€). The software is easy to handle and is updated regularly by the project team. The site is visually attractive and set up with the same concept as the flyers, roll-ups and information signs. The site is online in German and French. An English summary is also available. The site is updated about every two weeks with news of the works currently being carried out. The news are then automatically posted on the project's Facebook wall. The email address info@life-eislek.lu is functional as well.

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Planning realised		x	x	x	x	x	x	x	x	x	x	x										

→ Indicators used to test the performance of the action

The number of visitors on the homepage and the number of views on the facebook page provide an indication of the dissemination success through internet.

Milestones	Deadlines	Progress
Website	31.12.12	finished

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

The planning schedule is on time.

→ Complementary actions outside LIFE

not applicable

→ Perspectives

The website will remain functional for five years after the end of the project.

→ Photographs



Figure 84. Website www.life-eislek.eu



Figure 85. News section of the website

Action E3: Actions d'information et de sensibilisation du monde agricole

→ Activities and Outputs

In order to guarantee nature protection at a larger scale, cooperation with local agriculturists is mandatory. Therefore the project organises information events and on-site visits with specific themes concerning conservation of the target species and the agriculturists' influence on their status.

- In the project area, three sites are being classified as nature reserves by the Luxembourgish Government. The Life Eislek team contributed to the sensitisation concerning the classification:
 - 16.04.13 Meeting ANF and CA: negotiations on dimensions of the reserves
 - 25.03.13 Meeting with community Wincrange: presentation of folders concerning the 3 nature reserves
 - 09.07.13 Two information meetings and two site visits with concerned agriculturists (~50 participants)
 - 24.09.13 On-site visit with agents of the administrations and seven individual meetings with agriculturists particularly concerned by the reserves.
- Organisation of an information meeting on the subject pesticides "Einsatz von Spritzmitteln - wie können ihre negativen Auswirkungen reduziert werden?" in collaboration with the Life Unio project (appendix 51).
 - 23.01.15 Meeting with CA and Life Unio to discuss planning of the event
 - 04.03.15 Information meeting in Heinerscheid: about 30 agriculturists visited the lectures. After a short introduction of the two Life projects, Jacques Engel (ASTA) presented the laws concerning the use of pesticides, Alain Majerus (CA) presented a talk on how to reduce the negative impacts of pesticides and Gerber van Vliet (IBLA) presented alternative agriculture without the use of chemically synthesised sprays. The power point presentations can be downloaded from the Life Eislek homepage.

In additio to direct contact with the land users, 5 articles in specialised press were foreseen. An article introducing the Life Eislek project and the Natura 2000 platform was published in the "De Letzebuerger Bësch". Another article was published in the brochure of the "Internationale Grünlandtage" introducing the Life Eislek project (appendix 50). An article explaining the concrete consequences and benefits of the Natura 2000 network for agriculturists in a question/answer style is planned for the Natura 2000 day at "De Letzebuerger Bauer" in collaboration with the CA and private forest owners.

The project was also represented at the foire agricole, the largest agricultural fair in Luxembourg, in 2013 and 2014. In 2013 a poster was printed for the public with an agricultural background. In 2014, the "Internationale Grünlandtage" were based at the agricultural fair and the project coordinators participated at the planning events concerning the "Grünlandtage" (29.01.14,

11.02.14, 24.04.14). During the fair we organised a workshop for children concerning biodiversity and conservation while also answering questions of the land users concerning our organisation and project.

Table 20. Overview of results of action E3

Type of action	Objective	Results	% of Objective
Information meetings	4	3	75%
Articles	5	2 (1 planned for 21.05.15)	40%
On-site visits	4	2	50%
Professional fairs	/	2	/

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Planning revised						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Planning realised						x	x	x	x	x	x	x	x									

→ Indicators used to test the performance of the action

The impact of the dissemination actions and the visibility of the project will be tested in the socio-economic study.

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

cf. action C7

→ Complementary actions outside LIFE

not applicable

→ Perspectives

The connections build up with the land users during the duration of the project will be kept up after termination of the project to improve the state of the agricultural land surrounding the managed nature reserves.

→ Photographs



Figure 86. Information meeting on pesticides



Figure 87. Children workshop at the "Grünlandtage" at the Foire agricole (03.07.14)

Action E4: Organisation d'un séminaire international

→ Activities and Outputs

This action has not started yet. The organisation of the seminar is foreseen at the end of the project.

→ Time Schedule

Yaer	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled																				x		
Planning realised																						

→ Indicators used to test the performance of the action

Milestone	Deadlines	Progress
International seminar	31.05.17	/

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

not applicable

→ Complementary actions outside LIFE

not applicable

→ Perspectives

not applicable

Action E5: Rapport de vulgarisation

→ Activities and Outputs

This action has not started yet. The report is foreseen for the end of the project.

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled																				x		
Planning realised																						

→ Indicators used to test the performance of the action\$

Products	Deadlines	Progress
Rapport de vulgarisation	30.06.17	/

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

not applicable

→ Complementary actions outside LIFE

not applicable

→ Perspectives

not applicable

Action F1: Gestion administrative et financière du projet

→ Activities and Outputs

1. Materials

T-shirts and Hoodies	15.05.13	1836.09€
Laptop	24.01.14	1495.00€

2. Project management: cf. section 4

3. Divers

- participation at piloting committee LIFE Resto Unio 14.11.12, 18.11.13 & 01.10.14
- Visit Marco Schank, delegated Minister of MDDI at CNDS Natuaarbechten in Binsfeld 26.11.14

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Planning realised	x	x	x	x	x	x	x	x	x	x	x	x	x									

→ Indicators used to test the performance of the action

Product	Deadlines	Progress
Financial audit	30.09.17	/

→ Technical and/or financial modifications and justification

M. Mireille Molitor has taken a sabbatical year starting on the 13.10.14, during this time, she will be replaced by Michelle Clemens who has been introduced to the project by Mireille Molitor for three months before her departure (appendix 8).

→ Major problems/ drawbacks/ delays

not applicable

→ Complementary actions outside LIFE

not applicable

→ Perspectives

not applicable

Action F2 : Suivi du projet : évaluation de la mise en œuvre des actions

→ Activities and Outputs

Indicator	Target value	Current value	Met objectives ?
Action A1: - Programme d'action de restauration des habitats rédigé?	1	1	✓
Action A2: - Planification technique des chantiers aboutie ?	1	0	x
Action A3: - Plans de gestion rédigés et approuvés juridiquement ?	1	0	x
Action A4: - Plan de pâturage rédigé ?	1	1	✓
Action A5: - Méthodologie du monitoring élaborée?	1	1	✓
Action B1: - Nbre d'hectares acquis ?	30	16.90	x
Action C1: - Nbre d'hectares débroussaillés - Nbre d'hectares où une première fauche a été réalisée	10ha	2,24ha 5.45ha	x
Action C2: - Nbre d'hectares re-humidifiés - Nbre de mètres de cours d'eau avec rehaussement du lit - Nbre de m de drains bouchés	15ha 1.5km 500m	0 70m 0	x x x
Action C3: - Nbre d'hectares désenrésinés - Nbre d'hectares de rémanents de coupe nettoyés	5ha 15ha	1.64ha 5.82ha	x x
Action C4: - Hectares de prairies à bistorte/mégaphorbiaies restaurées	10ha	5.04ha	x
Action C5: - Nbre de haies/arbres isolés plantées	7.000	3658	x
Action C6: - Abri pour bétail installé? - Passes à bétail installées ?	1 5	1 0	✓ x

- Abreuvoirs installés ?	5	0	x
- Nbre de mètres de clôtures installées ?	12.5km	4.13km	x
- m de clôtures amovibles achetées ?	500m	0	x
Action C7			
- Nbre d'exploitants agricoles conseillés ?	50	10	x
- Nbre d'hectares extensifiés ?	50ha	10.28ha	x
Action D1:			
- Nbre de sites N2000 monitorés ?	11	11	✓
Action D2:			
- Nbre de ha monitorés ?	135ha	>135ha	✓
Action D3:			
-Etude réalisée?	1	0	x
Action E1:			
- identité graphique et logo de projet développés?	1	1	✓
- dépliant imprimé?	1	1	✓
- panneaux réalisés?	4	0	x
- panneau Roll-up réalisés?	4	4	✓
- Nbre de panneaux de chantiers installés	20	10	x
- Nbre de visites guidées organisées	10	5	x
- Nbre de chantiers nature organisés	6	4	x
- Caillebotis installé	1	0	x
- Nbre d'articles parus dans la presse écrite, audiophonique et télévisuelle	15	43	✓
- Événement de lancement organisé?	1	2	✓
- Évènement de clôture organisé?	1	0	x
Action E2			
- Site internet mis en ligne	1	1	✓
- Mises à jour régulières?	1	1	✓
Action E3			
- Nbre de soirées d'information organisées ?	4	3	x
- Nbre de publications dans la presse spécialisée ?	5	2	x
- Nbre de visites de terrain organisées ?	4	2	x
Action E4			
- Séminaire international organisé ?	1	0	x

Action E5 - Rapport de vulgarisation publié?	1	0	x
Action F1 - Personnel engagé/désigné?		✓	✓
- Nbre de réunions du comité de pilotage	5	3	x
Action F2	/	/	/
Action F3 - Nbre de contacts avec des experts	/	13	/
- Nbre de projets visités	/	6	/
- Nbre de colloques auxquels on a participés	/	15	/
- Nbre de formations auxquelles on a participées	1	2	✓
Action F4 - Après LIFE rédigé?	1	0	x

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x			x				x			x					x					x	
Planning realised	x			x				x			x											

→ Indicators used to test the performance of the action

not applicable

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

not applicable

→ Complementary actions outside LIFE

not applicable

→ Perspectives

not applicable

Action F3: Networking avec d'autres projets et experts

→ Activities and Outputs

Contact with land managers in the surrounding area:

- RNOB (Wallonie, B)
- BNVS (Cantons de l'Est, B)
- Chantier intercommunautaire 2013 & 2014 (Natuurpunt, Natagora, n&ë HfN)
- Meeting Naturpark Uewersauer (L) 05.08.14: management of sites with *L. helle* observations within the Naturpark

Contact with experts:

- Jan Christian Habel, Department of Ecology and Ecosystem management, Technische Universität München (D): → genetics of glacial species
- Philippe Goffart, Service Public Wallon (SPW), Département de l'Etude du Milieu naturel et agricole (DEMNA) (B): → behaviour and egg search of *L. helle*.
- Mediterraner Garten und Zentrum für ökologische Gartenkultur (L) → literature exchange and discussion of best practices concerning the restoration of degraded meadows
- Simone Schneider, author of „Die Graslandgesellschaften Luxemburgs“: 26.06.13, 31.07.13 & 11.02.14. → literature exchange and discussion of best practices concerning the restoration of degraded meadows
- Richard Dahlem, responsible for after-Life plan LIFE Arnica: 21.11.13 & 14.01.14. → complementarities between the two Life projects
- Claudine Felten, author of folder concerning the nature reserve „Hachiville am Dall/Weiler Weiher/Kouprich“: 03.07.13 → discussions concerning past management of sites, contact with land users,...
- Benoit Manet, expert on castor at DEMNA: 23.10.13. → design of a protection against castors
- Thomas Frankenberg, geographer at EFOR-ERSA: 20.11.13 → discussion on restorative mowing
- Frank Sowa, SICONA → planning and implementation of remeandration projects

Meetings with other projects (Life and others):

- Project visit Life Möhne (D): 17.04.13 → remeandration project
- Meetings with project LIFE Unio: 22.04.13 → complementarities between the two projects
Dec. 13 → exchange of monitoring results
- Exchange LIFE Orchis: 31.05.13 (reunion) & 28.06.13 (visit) → discussion on seeding practices
- Meeting with Gerhard Reuter, project „Tarier des prés en Wallonie“: 11.12.13 → MAE adapted to life cycle of whinchat and analysis of our sites for brooding

- Regular exchange by mail and phone with LIFE Papillons (B) and meeting with Alexander Rauw: 16.12.13 → Distribution, monitoring and restoration techniques concerning *L. helle*
- Interlife organised by the three Life projects of n&ë HfN: 09.+10.12.14. Presence of ~100 employees of environmental protection agencies from 5 nations (B, NL, L, F, G) and presentation of 12 Life projects. (invitation in appendix 42)
- Project visit to Life Rur und Kall (D) planned for the week of the 4th of May → monitoring and habitat management *L. helle*

Visiting implementations by other projects

- Vogelschutzwarte Frankfurt (30.01.13)
- remeandration project at Harlange (11.09.13)

Participation at conferences:

- European Bird Census Council (EBCC) Meeting in Cluj, Romania: 17.-21.09.13 → Exchanges with ornithology experts on the distribution of the target species, monitoring, restoration techniques,...
- Colloque MNHN in Luxembourg: 15.03.13
- Foire de Libramont: 26.07.13
- Seminar LIFE Walphy: "La restauration hydromorphologique des cours d'eau : premiers enseignements du projet" in Namur (B): 15.10.13
- Presentation ANF: BBD land management: 18.10.13 & 19.03.14
- Conference "Erosionsrisikokarten für Luxemburg": 27.11.13
- Workshop „Financing Natura 2000“: 24.01.14
- Workshop "Schaffung von Flächenpools für die Kompensierung von Eingriffen in die Natur": 10.03.14
- Conference "Wiesentypen Luxemburgs": 20.03.14
- Conference "Monitoring de la biodiversité au Luxembourg": 31.04.14
- LIFE+-Workshop "Renaturierung von Graslandhabitaten" organised by SICONA in Bertrange (L): 02.-03.06.14
- "Gestion des prairies au bord de cours d'eau. 8^e rencontre entre acteurs de la rivière" at Houffalize (B) 17.10.14
- "Wasser und Naturschutz in der Landwirtschaft" organised by n&ë in Mersch (L) 22.10.14
- "Ufer und Uferbereiche" 19.03.15
- Braunkehlchen Symposium planned for 28.-29.05.15 with lecture by Mikis Bastian

Participation at platform Natura 2000.lu (CA, Letzebuerger Privatbësch, n&ë)

- three reunions in Luxembourg: 20.01.14, 10.02.14, 04.12.15

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Planning realised	x	x	x	x	x	x	x	x	x	x	x	x										

→ Indicators used to test the performance of the action

not applicable

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

not applicable

→ Photographs



Figure 88. Interlife: presentation of 12 Life projects



Figure 89. Interlife workshop



Figure 90. Interlife: site visit *Cornelysmillen*



Figure 91. Interlife Site visit *Kalborner Mühle*

Action F4: Plan de conservation Après-Life

→ Activities and Outputs

This action has not started yet. The after-Life plan is foreseen for the end of the project.

→ Time Schedule

Year	2012		2013				2014				2015				2016				2017			
Trimester	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Planning scheduled																			x	x	x	
Planning realised																						

→ Indicators used to test the performance of the action

Products	Deadlines	Progress
After Life conservation plan	31.08.17	/

→ Technical and/or financial modifications and justification

not applicable

→ Major problems/ drawbacks/ delays

not applicable

→ Complementary actions outside LIFE

not applicable

→ Perspectives

not applicable

5.2 Dissemination actions

5.2.1 Objectives

The Life Eislek project needs to raise public awareness in order to involve people in nature conservation. Sensitisation of the public leads to a better acceptance of the works we do at natur&ömwelt in general and the Life Eislek project more specifically. By promoting the Life project, we give the public a better understanding of the Natura 2000 network, conservation at European, at national and at local level.

The project is present at all the larger markets and fairs in the Eislek region and presents its goals and specific actions through the use of the dissemination material produced within the framework of the project. Different games and quizzes are supposed to teach the public in a playful way. Guided tours and "chantiers natures" allow to more specifically show and explain very concrete works carried out by the project. The presence at agricultural fairs and specific information events planned for land users helps at building up a connection between the NGO and the agricultural world. A constant presence in the press through the publication of articles in a large variety of newspapers, magazines, scientific journals and the radio increases the visibility of the project towards different social groups.

Flyers were printed for distribution primarily to people concerned with the project such as land owners, land users and contractors, but also as additional information material for people participating at activities organised by the NGO and/or the Life Eislek project.

The website and Facebook page allow people interested in the project to follow the development of the project through regular updates in the news section. It is also supposed to serve other environmental managers as information source. It will be kept up for five years after the end of the project. Four information signs on walking ways and the walking board will additionally inform the public of the works carried out in the project after the project has terminated. The Layman's report will present a good overview of the goals reached by the project at the end of its five years.

An international seminar will be held to disseminate the methods elaborated and experiences made on a more scientific basis.

5.2.2 Dissemination: overview per activity

view technical part Actions E1 – E5

5.3 Evaluation of Project Implementation

→ Methodology applied

Most actions have now been carried out for two seasons with three seasons still ahead. The project's aim is to elaborate best practice methods for the measures planned for the restoration of wetlands in the Eislek region. For most of these measures, the development of the methods is still on its way with adjustments made during each season:

- Shrub-clearance, mowing and grazing: the methodology was inspired from literature of different authors in the region. Marie Kayser, who has written her master's thesis in the framework of the project, has additionally published an article analysing habitat management for *L. helle*. Monitoring of the managed sites after one season allows to work out how management needs to be adapted to different situations.
- Hydrological restoration measures: the reameandration project is still in planning, the project team has fallen back on experts to assure a good planning of this measure.
- Clear-cuttings: the project team has acquired experiences on clear-felling of spruce plantations during previous projects. The challenge for the current project is the clearance/mulching of felled sites and its reconversion into wet meadows. The experience made so far was the occurrence of ruderal species that need to be controlled through intensive mowing in the first years.
- Restoration of bistort meadows: a collaboration with the MNHN is supposed to lead to an efficient method for the reintroduction of bistorts on clear-cuttings, acres and neglected wetlands. During the first half of the project, many aspects concerning the renaturation were already worked out and problems exposed.

We cannot yet discuss the results of the actions as many actions have not yet been finalised or are still in planning. Up to date, the project has had a good development with good results. Nevertheless the methodology can and will be amended during the second half of the project to increase the positive impacts of the measures. With the elaboration of best practice strategies for each action, their cost-efficiency will ameliorate as well. As an NGO, cost-efficiency is important to reach a maximum of results with the limited budget at disposal.

→ Results achieved

Task	Foreseen in the proposal	Achieved	Evaluation
Purchase of land	30ha	56.33% signed, +16.63% at notary's	Almost 2/3 of the action finished with many parcels still in negotiation and 20 months left to conclude the action.
Restoration of abandoned wetlands	10ha	7.69ha	We will be able to exceed the expected results and continue the management of the sites on the budget of n&ë HfN after the restorative mowing/clearance.
Removing drains	500m	0m	We planned the rewetting on two sites but have not been successful yet. This action will be pursued in the second half of the project.
Restoration of a water course	1.5km	70m	This action is currently in planning and will have to be adapted to unforeseen circumstances.
Restoration of conifer plantations	20ha	7.47ha	This action needs to be prioritised during the next winter to reach the targets set in the proposal, the method concerning the conversion of clear-cuttings into meadows needs to be improved.
Restoration of bistort meadows	10ha	5.04ha	So far we have had good success with the transplantation of rhizomes. We concentrate this year on the elaboration of a seeding method in collaboration with experts at MNHN.
Planting of trees and hedges	7000	3658	>50% achieved within the first half of the project, financial issues encountered.
Infrastructures for grazing	stable	finished	The stable was more expensive than foreseen due to several reasons.
	5 cattle bridges	0	This action will be carried out in the second half of the project.
	5 troughs	0	The set-up of troughs has been delayed due to the possibility of organising a large scale project with funds provided by the "Fond pour l'environnement".
	12.5km fences	4.13km	No major issues encountered.
Extensification programs	50ha	10.28ha	Implementation delayed due to the revision of the subsidising programs.

→ **Monitoring of project results**

Most of our actions are visible immediately after the implementation but do not show their full impact in the first year(s). Measures, like clear-felling and reconversion of the sites into meadows are immediately visible but will take several years to reach the desired state. Reconversion of sites used in forestry or agriculture is a slow process as the whole ecosystem needs to re-establish itself. The improvement of the target species' status, which is the ultimate goal of the project, is a slow process as well that might not be visible immediately after the project. However the presence of the species on restored sites or a wider distribution of the species implies a success of the measures carried out.

→ **Project amendments**

This section will be discussed in the final report as no results can be evaluated at this stage of implementation.

→ **Effectiveness of the dissemination**

The audience reached by the project will be evaluated at the end of the project with the socio-economic study.

5.4 Analysis of long-term benefits

5.4.1 Environmental benefits

→ **Direct / quantitative environmental benefits**

The Life Eislek project is working on a new management technique in collaboration with MNHN and SICONA concerning a large scale restoration of bistort meadows. Rearing and planting as well as the transplantation of rhizomes are methods that are working but that are also time-intensive and have high costs. Therefore, we concluded that the easiest method would be seeding. MNHN is analysing the genetics and propagation methods of the bistort to increase our knowledge concerning this plant with the goal of elaborating an efficient method. The results of this study will be made available to other agencies.

In several measures, the project is working with the AGE concerning the implementation of the water framework directive. These include the remeandration project that is part of the action plan concerning the restoring of a good water quality in Luxemburg and the fencing action that will improve water quality by prohibiting the cattle's access to the stream. The reconversion of spruce forests bordering rivers and streams into meadows will also benefit water quality in the long term.

→ Relevance for environmentally significant issues or policy areas

The project's aim is the restoration of degraded ecosystems and its durable protection by land purchase. By rebuilding stepping stones and corridors, fragmentation is reduced. Regular contact with experts and monitoring teams of neighbouring countries assures connectivity not only within but also between the countries. European policy is based on the Natura 2000 network, the project is active within this network and protects species for which the sites were designated. Concerning *L. helle*, a highly endangered butterfly species, Luxembourg is part of a small population shared with Germany and Belgium, genetically distinct from other European populations. In general Luxembourg has a central location in Europe and is thus an important factor in genetic exchange and metapopulation dynamics. Furthermore, the three target species are umbrella species and the project's actions will have a positive impact on other species as well. Therefore the project corresponds to priority objective 1 of the 7th environment action programme.

Another objective is the consultation of farmers concerning environmental issues. Land pressure is especially high in the North of Luxembourg, the project area. The high living standard in Luxembourg means that extensive agriculture is no longer lucrative. The number of agriculturists in Luxembourg is continuously decreasing while the average size of agricultural holdings is increasing and processing methods are more and more applied on a large scale. A good collaboration of land users and NGOs can have a large impact on soil and water quality and biodiversity in general. Information evenings on the use of pesticides and fertilisers are planned. Furthermore, the project team tries to make extensification contracts primarily in target areas. This way, the project plans, in collaboration with the CA, a focused consultation of agriculturists working in Natura 2000 areas. An exchange platform will also lead to a better understanding of the problems from the agriculture point of view by the project team and thus the finding of compromises between nature conservation and agriculture.

A third large theme of the Life project is raising awareness and education on nature conservation. The targets of the EAP can only be reached through the appreciation and collaboration of the general public.

5.4.2 Long-term benefits and sustainability

→ Long-term / qualitative environmental benefits

The management of the land acquired through the Life project as well as the land owned by the NGO in the project area will be financed through the land management budget of n&ë HfN that it is provided with on a yearly basis by the Luxembourgish government, through sponsoring and donations. Part of the parcels are leased out to land users on the terms of the NGO. Most of the habitats indirectly targeted by this project do not require a yearly management so that a rotational management plan can be set up. n&ë HfN works in close collaboration with CNDS concerning the management of land. They will be charged with the maintenance of the parcels after the Life project with the machines acquired through Life Eislek. The extensification contracts will be renewed by the competent institutions on behalf of the MDDI. The project team will try to

work out a follow-up project to enable a more distinctive continuation of the protection of the wet meadows in the Eislek region.

→ **Long-term / qualitative economic benefits**

This section cannot be commented at the current state of the project and will be attended in the final report.

→ **Long-term / qualitative social benefits**

The project beneficiary CNDS being a socially economic structure carrying out practical implementations in nature conservation, the social, ecological and even economic benefits are combined. The two foremen employed through the project work with teams of socially difficult people and contribute to their social and professional development.

→ **Continuation of the project actions by the beneficiary or by other stakeholders**

n&ë asbl will continue the bird monitoring and specific action programs after the end of the Life project as it is their responsibility through the centrale ornithologique. *Saxicola rubetra* and *Lanius collurio* will be monitored specifically every six years in the framework of the reporting of the birds directive article 12. The next monitoring will be in 2017 for *L. collurio* and in 2019 for *S. rubetra*.

CNDS will use the machines acquired through the project for land management of n&ë HfN and the land owned by the state. Their mission being the practical implementation of nature management, they will continue with supplementary restoration measures as well as recurrent management as defined in the after Life action plan.

It is the CA's mission to sensitize and consult the agriculturists and their actions will continue at the end of the project. The collaboration between the CA and our structure will continue after the project where necessary.

5.4.3 Replicability, demonstration, transferability, cooperation

The methods worked out during the duration of the project will very likely be of use to other environmental managers and be put at their disposal. At this moment in the project more information concerning this section is not yet available and will therefore be provided with the final report.

5.4.4 Best Practice lessons

The measures being used during the project follow recommendations by the IUCN, ulterior Life projects and international experts. The beneficiaries have experience concerning land management that is of great use in the project. The more innovative measures have not completely been formulated yet and are still in a dynamic process. More information will be provided with the final report.

5.4.5 Innovation and demonstration value

The demonstration value of the project will be apparent at the end of the project's duration and presented in the final report.

5.4.6 Long term indicators of the project success

The project's success in the long term will be evaluated by the status of its three target species and a comparison of their distribution before and after restoration measures. The state of the wetlands in the Eislek region provides a second indicator for success concerning the Life Eislek project.

6 Financial report

6.1 Summary of Costs Incurred

Table 21: Summary of project costs incurred (status of the 31.03.15)

Project Costs Incurred (31.03.15)			
Cost Category	Budget according to the grant agreement	Costs incurred within the project duration	% of total costs
Personnel	€ 910.125,00	€ 42.419,80	46,74%
Travel	€ 15.850,00	€ 8.429,60	53,18%
External assistance	€ 139.675,00	€ 26.775,87	19,17%
Durable goods - Infrastructure	€ 30.000,00	€ 54.216,52	180,72%
Durable goods - Equipment	€ 127.150,00	€ 83.919,20	66,00%
Land/rights purchase/lease	€ 405.000,00	€ 270.512,35	66,79%
Consumable material	€ 17.050,00	€ 22.077,26	129,49%
Other direct costs	€ 32.925,00	€ 15.187,10	46,13%
Overheads	€ 89.000,00	€ 26.026,79	29,24%
TOTAL	€ 1.766.775,00	€ 932.564,49	52,78%

Personnel: The personnel costs are at about 50% at mid-time of the project as would be expected. There was a problem of under consumption of hours by the associated beneficiary n&ë asbl due to a change in personnel at the beginning of the project. The problem has been solved.

Travel: The main part of this category goes towards fuel consumption of the coordinate beneficiary for site visits and monitoring.

External assistance: The budget for external assistance has not been charged significantly yet. The dissemination materials (action E1) have been designed/produced as planned at the beginning of the project. Many other actions are yet in the planning phase (action C2, C3, C6) and some are not planned until the end of the project (action D3, E5).

Durable goods/ Infrastructure: This category includes only one action, the building of a stable (action C6). Due to unforeseeable circumstances, the budget was overcharged (see action A2: financial modifications). The surplus is less than the 30,000€ limit set for each category.

Durable goods/ Equipment: More than 50% of the budget has been spend as most equipment is purchased at the beginning of the project to be used from the start. Most of the left-over budget is of action C6, namely the erection of fences and other grazing infrastructures that are still in planning.

Land purchase: About 76% of the budget has been spend on 56% of the area to be purchased. The prices of land are constantly increasing in Luxembourg. Further budget from n&ë HfN can be used to purchase land in the project area if necessary.

Consumables: This category is overcharged due to the costs of the fuel of CNDS that was not considered in the initial budget (see inception report and letter of the 06.06.13). Considering that CNDS is not charging their overhead costs at a high rate, the costs could perhaps be transferred between the categories.

Other costs: Other direct costs are used up almost half as expected at this stage of the project.

6.2 Accounting system

→ Accounting system

The central accountant department of n&ë HfN is located at the main office located at the Kockelscheuer in Luxembourg. They use an analytical accounting system (Software Ciel), the invoices are paid here and the originals archived. The invoices are labelled 8EUEISLECK and numbered.

→ Procedure of approving costs

Invoices concerning the Life Eislek project are addressed to the project's seat in Heinerscheid. The invoices are controlled by the secretary-accountant Patricia Heinen and the project coordinator Mireille Molitor/ Michelle Clemens concerning the presence of the Life code, correct amount of costs and eligibility. The project coordinator notes the action and cost category and signs the invoice before the secretary-accountant inserts the information into the accounting table in Excel. The original invoice is sent to the main department, a copy is kept at the office in Heinerscheid in the Life folders.

→ Time recording system

Team members record their time spent on the project in Excel-based timesheets (EC LIFE template) prepared by the secretary-accountant in the beginning of each year.

→ Invoices

For each purchase and service, we ask to put the Life reference on the invoice.

6.3 Partnership arrangements

After the submission of the funding application to the EC and/or MDDI, n&ë HfN receives the respective funds and redistributes the parts of the associated beneficiaries to n&ë asbl and CNDS respectively.

The financial office of CNDS regularly sends the invoices with the debit notes concerning the Life Eislek project to the project's office in Heinerscheid. The secretary-accountant introduces the numbers into the Life Eislek Excel folder. At the end of the year, a control takes place through the comparison of the general ledgers.

n&ë asbl only has travel expenses and personnel costs submitted on a regular basis.

6.4 Auditor's report/declaration

The auditor's name is Grant Thornton LUX Audit S.A. 89A, Pafelbruch L-8308 Capellen.

6.5 Summary of costs per action

Table 22. Summary of costs per action

Action	Short name of action	1. Personnel	2. Travel	3. Ext Assistance	4. a. Infrastructure	4.b. Equipment	5. Purchase of land	6. Consumables	7. Other costs	8. Frais généraux	Total
		425.419,80 €	8.429,60 €	26.775,87 €	54.216,52 €	83.919,20 €	270.512,35 €	22.077,26 €	14.919,73 €	26.026,79 €	932.297,12 €
A1:	Etablissement d'un programme d'actions de restauration des habitats des espèces cibles	29.167,64 €	925,39 €	142,03 €	0,00 €	119,00 €	0,00 €	601,49 €	1.172,10 €		32.127,65 €
A2:	Planification technique des actions de restauration des habitats des espèces cibles	21.782,24 €	356,33 €	0,00 €	0,00 €	0,00 €	0,00 €	117,04 €	0,00 €		22.255,61 €
A3:	Contribution à l'élaboration de plans de gestion des sites Natura 2000 du périmètre de projet	9.816,03 €	180,82 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €		9.996,86 €
A4:	Etablissement de plans de pâturage et/ou de fauche des réserves naturelles	13.275,01 €	265,92 €	355,20 €	0,00 €	0,00 €	0,00 €	117,04 €	0,00 €		14.013,17 €
A5:	Travaux préparatoires au monitoring des espèces cibles dans le périmètre du projet	8.974,66 €	180,82 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	264,00 €		9.419,48 €

B1:	Maîtrise foncière	26.923,97 €	531,84 €	0,00 €	0,00 €	0,00 €	270.512,35 €	0,00 €	0,00 €		297.968,16 €
C1:	Restauration de zones humides à l'abandon et/ou embroussaillées	33.748,45 €	148,91 €	1.540,00 €	0,00 €	52.902,56 €	0,00 €	5.798,21 €	8.061,81 €		102.199,94 €
C2:	Restauration hydrique de zones humides asséchées	31.972,22 €	186,14 €	2.403,30 €	0,00 €	0,00 €	0,00 €	1.134,61 €	90,00 €		35.786,27 €
C3:	Restauration de zones humides enrésinées	40.853,39 €	186,14 €	5.829,06 €	0,00 €	0,00 €	0,00 €	1.612,48 €	0,00 €		48.481,07 €
C4:	Restauration de prairies à bistorte et de mégaphorbiaies	19.538,58 €	159,55 €	0,00 €	0,00 €	0,00 €	0,00 €	560,86 €	0,00 €		20.258,99 €
C5:	Plantation de structures ligneuses	15.986,11 €	159,55 €	0,00 €	0,00 €	0,00 €	0,00 €	6.136,76 €	0,00 €		22.282,42 €
C6:	Acquisition et installation d'infrastructures relatives au pâturage	47.070,21 €	186,14 €	0,00 €	54.216,52 €	23.870,11 €	0,00 €	1.596,01 €	84,46 €		127.023,45 €
C7:	Suivi et conseil d'exploitants agricoles travaillant au sein de zones Natura 2000	5.983,10 €	148,91 €	0,00 €	0,00 €	0,00 €	0,00 €	415,00 €	59,62 €		6.606,64 €

D1:	Monitoring des populations des espèces cibles	11.966,21 €	1.595,51 €	0,00 €	0,00 €	4.093,35 €	0,00 €	831,13 €	52,20 €		18.538,40 €
D2:	Monitoring des parcelles fauchées/pâturées et vérification de la bonne exécution du plan de pâturage	11.966,21 €	531,84 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €		12.498,05 €
D3:	Evaluation de la restauration des fonctions éco-systémiques et de l'impact socioéconomique des actions du projet	0,00 €	- €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €		0,00 €
E1:	Actions d'information et de sensibilisation du grand public	10.517,18 €	252,62 €	7.242,99 €	0,00 €	146,53 €	0,00 €	311,82 €	1.309,21 €		19.780,35 €
E2:	Mise en ligne d'un site internet	7.478,88 €	122,32 €	7.570,67 €	0,00 €	0,00 €	0,00 €	5,32 €	457,47 €		15.634,66 €
E3:	Actions d'information et de sensibilisation du monde agricole	7.245,17 €	148,91 €	0,00 €	0,00 €	0,00 €	0,00 €	68,49 €	0,00 €		7.462,57 €
E4:	Organisation d'un séminaire international	0,00 €	- €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €		0,00 €
E5:	Rapport de vulgarisation	0,00 €	- €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €		0,00 €

F1:	Gestion administrative et financière du projet	62.647,32 €	425,47 €	1.663,82 €	0,00 €	2.787,65 €	0,00 €	2.292,62 €	3.240,55 €		73.057,43 €
F2:	Suivi du projet: évaluation de la mise en œuvre des actions	2.664,35 €	61,16 €	0,00 €	0,00 €	0,00 €	156,46 €	0,00 €	0,00 €		2.881,97 €
F3:	Networking avec d'autres projets et experts	5.842,88 €	1.675,28 €	28,80 €	0,00 €	0,00 €	321,92 €	128,31 €	0,00 €		7.997,19 €
F4:	Plan de conservation Après-Life	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €		0,00 €

7 Annexes

All the annexes are presented in a separate document.

7.1 Administrative annexes

Appendix 1: List of members of piloting committee submitted with the inception report (April 2013)

Appendix 2: Statutes of n&ë asbl submitted with the inception report (April 2013)

Appendix 3: TVA statements submitted with the inception report (April 2013)

Appendix 4: Modifications on TVA status of CNDS

Appendix 5: Cofinancement agreement submitted with the inception report (April 2013)

Appendix 6: Partnership agreements submitted with the inception report (April 2013)

Appendix 7: Letter on the long term collaboration of n&ë HfN and CNDS and "accord de cooperation HfN-CNDS" submitted with the inception report (April 2013)

Appendix 8: Documents concerning job offer for project coordinator submitted with the progress report (April 2014)

7.2 Technical annexes

Appendix 9: List of keywords and abbreviations

Appendix 10: Action A1: Convention with DEMNA submitted with the inception report (April 2013)

Appendix 11: Action A1:

- Letters concerning the MAE shapefiles submitted with the progress report (April 2014)
- Letter to MDDI concerning MAE shapefiles

Appendix 12: Action A2/C2: Letter concerning the water course restoration submitted with the inception report (April 2013)

Appendix 13: Action A2/C2: Letters/ emails/ phone contact with SIDEN, MDDI, AGE and MI submitted with the progress report (April 2014)

Appendix 14: Action A2/C2: Results of the water analysis

Appendix 15: Action A2/C2: Results of the electric fishing

Appendix 16: Action A2/C2: Professional note on water course restoration by Stream&River Consult

Appendix 17: Action A2/C4: Description of subject for thesis on bistort transplantation submitted with the inception report (April 2013)

Appendix 18: Action A2/C4: Results of soil analysis

Appendix 19: Action A2/C4: Letter MNHN concerning collaboration on bistort meadow restoration

Appendix 20: Action A2/C6: Construction plan of stable submitted with the inception report (April 2013)

Appendix 21: Action A2/C6: Authorisation to construct a stable submitted with the inception report (April 2013)

Appendix 22: Action A2/C6: Tendering for the stable construction submitted with the inception report (April 2013)

Appendix 23: Action A2/C6: Project of installation of fences and troughs at *Sporbaach* submitted with the progress report (April 2014)

Appendix 24: Action A3: Specification sheet concerning the elaboration of a management plan in Luxembourg submitted with the inception report (April 2013)

Appendix 25: Action A3:

- Presentation of intermediate results of management plan submitted with the progress report (April 2014)
- Presentation of provisional version of management plan

Appendix 26: Action A4: Analysis of leased parcels submitted with the progress report (April 2014)

Appendix 27: Action B1:

- Maps concerning the purchase of land April 2013- March 2014 submitted with the progress report (April 2014)
- Maps concerning the purchase of land April 2014- March 2015

Appendix 28: Action B1:

- Notary acts concerning the purchase of land parcels 1-6 submitted with the progress report (April 2014)
- Notary acts concerning the purchase of land parcels 7-17

Appendix 29: Action C1:

- Maps concerning the restoration of neglected wet meadows 2013-2014 submitted with the progress report (April 2014)
- Maps concerning the restoration of neglected wet meadows 2014-2015

Appendix 30: Action C1: Letter to MDDI concerning grazing at *Hellekessel*

Appendix 31: Action C1: Mail exchange concerning the purchase of the vehicle submitted with the inception report (April 2013)

Appendix 32: Action C3:

- Maps concerning the restoration of conifer plantations 2013-2014 submitted with the progress report (April 2014)
- Maps concerning the restoration of conifer plantations 2014-2015

Appendix 33: Action C4: Maps concerning the restoration of bistort meadows

Appendix 34: Action C5:

- Maps concerning the location of plantations 2013-2014 submitted with the progress report (April 2014)
- Maps concerning the location of plantations 2014-2015

Appendix 35: Action C6: Mail exchange concerning the change in financing of the fences

Appendix 36: Action D1:

- Monitoring report 2013 submitted with the progress report (April 2014)
- Monitoring report 2014

Appendix 37: Action D1: Maps concerning the extension of the Natura 2000 network

Appendix 38: Action D1: Mail exchange concerning the status of *S. rubetra*

Appendix 39: Action D1: Project proposal by Marie Kayser of the University of Leeds (UK) submitted with the inception report (April 2013)

Appendix 40: Action D2:

- Grazing booklet 2012-2013-2014 submitted with the progress report (April 2014)

Appendix 41: Action D2 (outside Life): Results of rhizome transplantation submitted with the progress report (April 2014)

Appendix 42: Action F3: Invitation to Interlife in december 2014

7.3 Dissemination annexes

7.3.1 Layman's report

The Layman's report will be provided with the final report.

7.3.2 After-LIFE Communication plan

The After LIFE communication plan will be provided with the final report.

7.3.3 Other dissemination annexes

→ Photographs

All the photographs will be provided with the final report.

→ Dissemination related products

Appendix 43: Action E1: Graphic identity submitted with the inception report (April 2013)

Appendix 44: Action E1: Project stationary submitted with the inception report (April 2013)

Appendix 45: Action E1: Flyer submitted with the progress report (April 2014)

Appendix 46: Action E1: Roll-ups submitted with the progress report (April 2014)

Appendix 47: Action E1: Provisional signs

Appendix 48: Action E1: Documents on the press conference form the 20.11.12 submitted with the inception report (April 2013)

Appendix 49: Action E1: Documents on introductory event from the 12.12 and 20.02.13 submitted with the inception report (April 2013)

Appendix 50: Action E1/E3: Scan of press releases

- 1-15 submitted with the inception report (April 2013)
- 1-26 submitted with the progress report (April 2014)
- 27-43

Appendix 51: Action E3: Invitation to information evening on pesticides

→ **Standard presentation**

The standard presentation will be submitted with the final report

7.4 Final table of indicators

Appendix 52: Output indicators submitted with the inception report (April 2013)

The final table of indicators will be submitted with the final report.

8 Financial report and annexes

The financial report and its annexes are presented in a separate document.