Seminar report

3rd Natura 2000 seminar for the Boreal region

14-16 October 2019

Tallinn, Estonia

Consortium Information:
Wageningen Environmental Research, Wageningen Marine Research, Wageningen UR

In cooperation with:
Estonian University of Life Sciences
NatureBureau Ltd.
Regional Environmental Centre
Terraecogest
Mãe d'água

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Event: For more information on this seminar, see the Natura 2000 Communication Platform: http://ec.europa.eu/environment/nature/natura2000/platform/index_en.htm

Relevant documents can be found here:

https://ec.europa.eu/environment/nature/natura2000/platform/knowledge_exchange/28_document_library_en.htm

Contents

1. Introduction

1.1. Context of the Natura 2000 seminar for the Boreal region

The Natura 2000 biogeographical process was launched in 2011 by the European Commission. The objective of the process is to promote information exchange, networking and cooperation on Natura 2000 related issues amongst Member States and stakeholders at biogeographical region level. The process involves regular seminars in each (group of) biogeographical region(s) to discuss key conservation challenges and agree on a roadmap for cooperative action in the region(s) for the following years.

The Boreal region is a land area including forests and wetlands, which involves five EU Member States: Sweden, Finland, Estonia Latvia and Lithuania (Figure 1). To the north, it merges with the taiga and tundra forests of the Arctic, to the west with the Fennoscandian mountains and, to the south, it gradually turns into the deciduous forests of the Continental region. The region has relatively flat lands, mostly below 500m. Centuries of grazing and haymaking have resulted in typical semi-natural habitats of high conservation value, such as the Boreal Baltic coastal meadows and the Nordic alvars. Extensive background documentation prepared for the seminar is available here.

The seminar took place from 14 to 16 October 2019 in Tallinn, Estonia, and was hosted by the Estonian Ministry for the Environment. In total some 68 participants attended the seminar, originating from 6 Member States and some international NGO's.

The field visits were organised by the Environmental Board of Estonia with support of the Ministry of Environment.

1.2. The themes selected for the seminar

The Natura 2000 seminar was organised around three main themes and four habitat working groups.

The following cross-cutting themes were the central focus for the first day as well as for the site visits on the second day of the seminar:

- Theme 1: Stakeholder engagement in Natura 2000
- Theme 2: Priorities for action
- Theme 3: Natura 2000 and climate change

On the third day habitat working groups were organised around:

- Rivers and lakes
- Wetlands
- Forests
- Grasslands

Reports on the outcomes of the thematic and habitat working group sessions were presented in the plenary session on the last day.

1.3. Reading guide

After this introduction, Chapter 2 provides a summary of the opening session (day 1). Chapter 3 presents reports from the two field excursions and the main topics that were discussed during the excursions. Chapter 4 presents the reports from the three thematic working groups, with the findings and recommendations as presented on the closing day. Chapter 5 provides the report of the four habitat working groups. Chapter 6 highlights the discussions and outcomes of the habitat working groups. The plenary discussion of the conclusions, as well as the important issues which might require follow-up actions are presented in Chapter 7. Chapter 7 also presents follow-up actions which are included in the roadmap that will be presented in the relevant groups (Steering Committee, NADEG[1]) and made available to the seminar's participants and the general public. Annexes 1 to 3 list the programme, the participants, and organisations present at the knowledge market. Annex 4 provides a summary of the survey undertaken amongst participants to evaluate the seminar.

All presentations of the seminar are available online:
https://ec.europa.eu/environment/nature/natura2000/platform/events/third-boreal-biogeographical-process-seminar.htm

2. Opening and plenary sessions

The seminar was opened by Mr. Marku Lamp, Deputy Secretary General who welcomed the guests and participants at the Zoo on behalf of the Ministry. He underlined that the main task of the seminar is "not only sharing experiences, but also to undertake joint action for nature in the EU". Climate change is a main threat for biodiversity but at the same time there is hope as the EU has set the ambitious goal to become climate neutral. In particular, forest and wetlands are important ecosystems to mitigate and adapt to climate change and both are present to a large extent in the Boreal region.

[1] EU Expert Group on the Birds and Habitats Directive

Picture 1: Official opening of the Boreal seminar by Mr. Marku Lamp, Deputy Secretary General, Ministry of Environment, Estonia

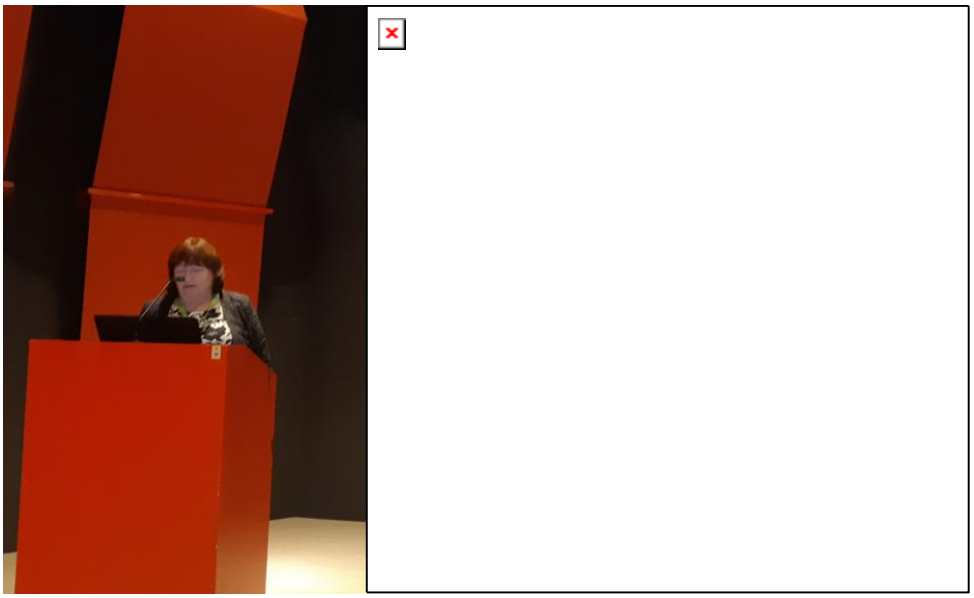
Mr. Micheal O'Briain of the Directorate General Environment (DG ENV) of the European Commission, underlined the relation between the activities of the Zoo and in situ conservation. He underlined the progress made in previous years in the field of nature protection through the Birds and Habitats Directive, the role that Natura 2000 biogeographical process plays in learning from each other and the benefits expected from co-operation to conserve nature. The year 2020 is again an important year due to various policy-related events. The EC with the help of Member States will report on progress made on the Birds and Habitats Directive. From the preliminary report it is clear that successes were achieved but at the same time there is still decline in conservation statuses throughout the EU. However, an ambitious programme is foreseen for the coming years: the Biodiversity Strategy will be revised for the next period and the newly appointed Commissioners will publish a European Green Deal to tackle environmental challenges.

After the opening, the context and objectives of the seminar were introduced by Mrs. Sophie Ouzet, DG ENV, European Commission. She recalled that the first seminar was held in Hämeenlinna (Finland) and the second in Vilnius (Lithuania) and that the aim of the Natura 2000 biogeographical process is to work together to improve the management of Natura 2000 network. It is about networking and is meant to spark new initiatives for cooperation, for knowledge sharing and harmonisation of approaches. It offers the possibility to take follow-up action through activities such as networking events, that can also be supported through the resources and support available through the Commission's support contract for process. Mrs Ouzet also pointed to the preliminary results of the Article 17 reporting that are now available on-line (https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards)

Mrs. Kadri Möller (Estonian Ministry of the Environment) presented the current state of the implementation of the Birds and Habitats Directive and Natura 2000 in Estonia. She showed the latest national information on the Article 17 reporting: several species and habitats have improved but also some have declined. In total 17.8 % of Estonia is covered by Natura 2000. The sites benefit

from legal protection and site level management plans exist for the sites where active management is needed. There are plans to restore the water regime of 10,000 ha mires, and to increase the area of managed semi-natural lands from 25,000 to 45,000 ha. Estonia has also drafted national species action plans for practically all Habitats Directive species and Birds Directive Annex I species and for several threatened habitats. The Natura 2000 budget for the period 2014-2017 consisted of EUR 51 million of national funding and EUR 50 million of EU co-funding.

Mr. Algirdas Klimavicius presented on behalf of Lithuania, the host country of the second Boreal seminar. He highlighted the themes and experiences in previous seminars, which are reflected in topics of this seminar. In particular, the knowledge market offered the opportunity to become informed on different projects ongoing in the Boreal region. Various follow-up events were organised after the second seminar, as part of the implementation of the roadmap. Several initiatives for further collaboration and joint management of Natura 2000 were also developed.



Picture 2: Kadri Moller (Ministry of Environment, Estonia) presents the implementation of Natura 2000 in Estonia

Bent Søholm Jepsen from NEEMO demonstrated the shared objectives of Natura 2000 and the LIFE programme. LIFE and N2000 areas are intrinsically linked, as also formulated in the LIFE regulation. The first LIFE programme was initiated the same year as the Habitats Directive was adopted. The last LIFE programme (2014-2020) had a total budget of 3.5 Billion Euro, of which 55% is for LIFE Nature and Biodiversity. LIFE Nature & Biodiversity aims specifically at contributing to the development and implementation of EU policy and legislation in the area of nature and biodiversity (LIFE Regulation Art. 11). The LIFE-Nature programme is not only focused on nature management measures, but also on stakeholder involvement, communication and education.

Since 1992, 408 ongoing or closed LIFE projects have been undertaken, of which 156 maintain and improve biodiversity and ecosystems and in particular the Natura 2000 network. For each of the habitat groups Mr. Jepsen demonstrated used methods and examples of projects. The

Biogeographical Process has an important function to enhance and share information on experiences gathered in LIFE projects. For the next period much more funding will be provided. The current proposal is to allocate 5.45 Billion – 2.15 of this for nature. However, the climate programme may also provide opportunities for nature conservation.

3. Site visits

Two site visits were organised, both to Lahemaa National Park. The visits were organised by the Estonian Environmental Management board. An extensive excursion guide was prepared and handed out to the participants.

3.1. Field trip 1: Forest & grasslands of Lahemaa National Park

Guides: Kaidi Silm, Kristiina Jürisoo, Imbi Jäetma, Riina Kotter
Rapporteurs from BGP: Theo van der Sluis, Kalev Sepp, Diana Pungar
The first site visited was to Nordic alvar and precambrian calcareous flatrocks (Habitat 6210, priority habitat)[2]. The definition of alvars differs slightly per country. Alvars are old agro-ecosystems - those in the area visited have been farmed for the past 3000 years. Stone walls (some hundreds of years old) divide the area in sections, and farmers can apply for subsidies to maintain them. A restoration programme for alvars is popular with farmers. As a measure, the shrub and forest growth is cut. Within the site visited it is mainly Junipers that are managed (some 30 % of the nicest Junipers remain).

In the discussion on alvar management it is mentioned that setting realistic targets for restoration is very motivating and rewarding: from the targets you can see how much progress has been made. There are not only subsidies for restoration, but also management subsidies for grazing or mowing (5 years minimum period). The scheme is so popular that it is now being considered to extend it outside of the Natura 2000 network, into farmland areas.

[2] There is a guidance document for management of Alvars:
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&ved=2ahUKEwi3sLWd0LflAhUPJ1AKHT0YBR0QFjAGegQICxAI&url=http%3A%2F%2Fec.europa.eu%2Fenvironment%2Fnature%2Fnatura2000%2Fmanagement%2Fhabitats%2Fpdf%2F6280_Nordic_alvar_flatrocks.pdf&usg=AOvVaw2PhLrq8OTkHt-h2gipLF42

Picture 3: Discussion on alvar management in Lahemaa national park.

The next visit was to the Boreal baltic coastal meadows (Habitat 1630, priority habitat). Most coastal meadows became overgrown during the communist era: it was a border zone at the time, where no people lived. Nowadays there are projects to restore meadows, mow the reeds and graze them with cattle. The farmer that particpants met with grazes some 56 cattle on 100 ha of rented land, and he receives subsidy and loves the restored view at the sea! Also, the communities and local farmers are eager to restore the open landscape. Some communities rent cattle to graze the meadows. They are now preparing a new action plan for semi-natural grasslands, with a focus on connectivity.

Lunch was held at the Sae sheep-farm. This farm lies entirely in the N2000 area of semi-natural habitats, with a grazing/mowing obligation of 13 ha. The owners are collecting breeds of native sheep from all over Estonia, as part of the national cultural heritage. They use Maremma dogs to prevent wolf predation and make a living from the sale of wool and other farm products.

The last visit was to old secondary forests, part of Western Taiga (Habitat 9010, Conservation Status mostly 'unfavorable-bad'). In core areas of the forest no management has been practiced for the past 200 years. Old growth forest indicators here are related to dead wood and structural habitat diversity: moss species, lichens, structure. Some discussion arises around tourism: if you want to sensitise people on the importance of this habitat type you have to open some areas, which requires trails and has an impact on the habitat (e.g. wooden paths). Between the various countries there are differences in defining the conservation status of planted forests, which was further discussed on various sites.

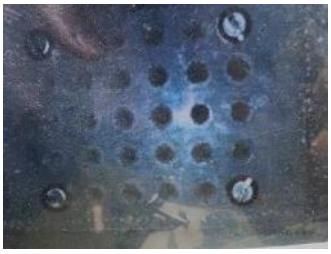
3.2. Field trip 2: Freshwater & Wetlands

Guides: Meelis Tambets, Katrin Kaldma, Marko Kohv, Agu Leivits
Rapporteurs from BGP: Irene Bouwma

Seven waterways flow through the Lahemaa national park – the Kolga, Pudisoo, Võsu, Loobu and Valgejõgi rivers and the Mustoja and Altja brooks. Of these, the Loobu and Valgejõgi are the biggest although the rivers in Lahemaa are small and fast-flowing. Salmon and trout come to spawn here,

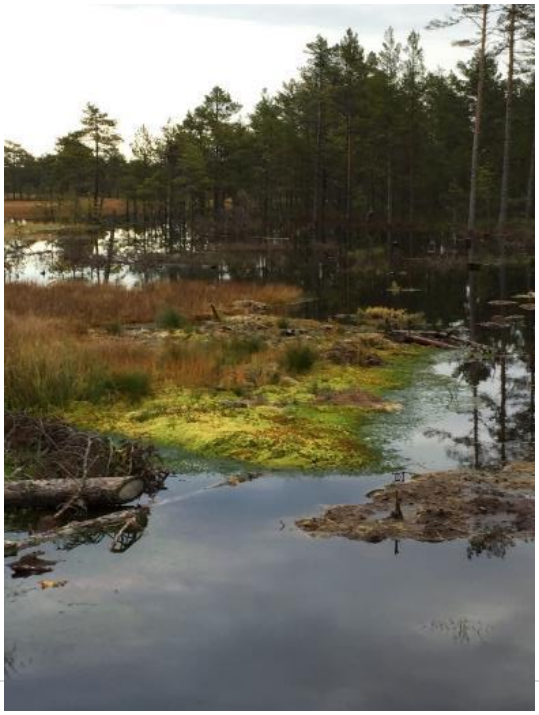
and their offspring spend the first years of their life in the rivers. Smaller fish species, such as the spined loach, bullhead and bleak also inhabit these waters. The populations of fish in these rivers are hampered by several dams that interrupt the migration from sea to the spawning grounds. The restoration of migration routs is obligatory on priority rivers in Estonia (approx. 112 priority rivers). Two areas were visited where migration barriers were removed. At the first stop a former hydropower station was dismantled, resulting in migration of various fish species. At the second stop a dam had been demolished and removed. It is generally costly to remove a dam and is a long process of discussion with owners, stakeholders and the government. In the ensuing discussion on site it became apparent that although the potential for hydropower is rather low, there is still pressure to maintain and create hydropower stations in Estonian rivers.

The next visit was to the Pärlijõgi/Pudisoo (Pearl) River, the only river where the freshwater pearl mussel (FPM), *Margaritifera margaritifera*, is still occurring in Estonia. The average age of individuals in the population is 60 years and older and although reproduction is taking place (e.g. the host fish is infected with the FPM glochidia), no juveniles are found in the river. The species is considered one of the rarest and most endangered animals in Estonia. All Central-European populations have decreased dramatically. The main threat to the species is degradation and loss of habitats (fast-flowing cool rivers and streams). As part of the CoastNet LIFE project- an artificial or semiartificial breeding programme is under development at the visited site, to secure the conservation of the local FPM population. By collecting glochidia and rearing juveniles of the species in specific developed containers (see picture) hopefully juveniles will establish themselves in the river.



Picture 4: container for Pearl mussel breeding

After lunch in a local restaurant the next visited site was the Laukasoo mire where a MIRES ESTONIA LIFE project deals with the restoration of the mires. In the past, extensive forest drainage around the mire reserve has occurred, together with former peat extraction with drainage ditches in the north-west of the project area. Drainage ditches link the bog pools and have lowered the water level, and the influence of drainage extends far into the 7110* habitats (active raised bogs). Former peat extraction sites are now covered with relatively dense forest. Restoration of sites requires forest clearance as well as the closing of drainage ditches. The work is in full progress and already the positive effects of closing



Picture 5: Excursion to the restored mires at Lahemaa National Park

drainage ditches on the water table can be noticed – often this response is very quick. Vegetation recovery requires more time, but in some locations already new Sphagnum is growing. The monitoring is ongoing of water level changes, amphibians, birds, butterflies and archaeology. Drones are used for monitoring changes in vegetation cover - in addition to traditional botanical studies. During the field visit the issue of monitoring was discussed at length: how often and at what level of detail should the changes in mires be measured? Is it possible to exchange information on methods and techniques, and maybe also reach an agreement on who does what?

4. Thematic sessions

4.1.1. Theme 1 – Stakeholder engagement in Natura 2000:

Chair: Mart Külvik; Facilitator: Irene Bouwma

Presenters: Outi Silfverberg (Forum for environmental information), Silvia Lotman (Estonian Fund for Nature)

Context

Stakeholder engagement is one of the key success factors in the implementation of Natura 2000. Conflicts can be prevented and costs reduced by engaging all right-holders, landowners as well as users, in the formulation and realisation of Natura 2000 conservation and restoration objectives. There are different strategies and approaches for stakeholder engagement that can be successful. The choice of strategy depends however on the context which may be different for each Member State, region or site. Lessons can be learnt from one another by establishing learning communities, supported by different instruments and tools. The focus will be in particular on private land owners in the forestry sector, considering the large share of forest land in and outside of protected areas**.**

Objectives of the thematic session

- Exchange knowledge on different strategies and approaches to initiate and develop communication to overcome obstacles and increase stakeholder engagement; and
- Share ideas and best practices on the development of learning communities and mechanisms, instruments and tools that seem most successful for this purpose.

Presentations

Outi Silfverberg presented three ways to communicate on nature and biodiversity, based on:

1. Nature's benefits to people – Ecosystem services;
2. All life is precious and unique – Intrinsic value of nature;
3. Web of life – Interdependence.

She stressed the importance of shared knowledge development between stakeholders and researchers as a mechanism to increase awareness of the importance of nature and their dependence on nature. When engaging with stakeholders be sure to reserve sufficient time when tackling multidimensional problems.

Silvia Lotman started her presentation by asking participants "who likes people?" (everybody raised their hand) and "who feels like they are good communicatiors?" (almost no hands were raised). She then shared her experiences with engaging stakeholders in the LIFE project 'Piloting Natura2000 communication in Estonia, NaturallyEst LIFE'. The project undertook a survey and studied attitudes in Estonia amongst forest owners and conservationists regarding their trust, institutions and

communication skills. It showed that (in particular amongst small forest owners) trust is low and the institutional capacity and communication skills are limited. Also amongst forest protections, trust is low. They undertook several activities to improve the situation, including a Helpdesk on Natura 2000 related questions, a case study on wooded meadows with organised site visits, organising meetings of managers and experts, study tours, a public campaign and a scythe mowing competition.

Discussions in working groups

Three working groups were formed: two on stakeholder involvement in forest-related issues, and one on agriculture. In the group on agriculture the central topic discussed was *"how to reach new landowners/farmers to engage them in conserving grasslands".* The following successful ways to contact landowners were discussed:

- Sending letters – works only if addresses are available. Experience in Estonia showed that although the response rate was between 10-30 %, those that responded were positive;
- Combine contacting stakeholders with a monitoring programme. In Finland this approach was very successful as farmers would often join the field visit (although this is time consuming);
- Find local field-co-ordinators with ties to the community;
- Involve farmers associations.

A typical problem in some Member States is that some landowners are not residing in the area itself but in the city, or even abroad.

The strategies to reach people that can assist in grassland conservation were also discussed. Options mentioned included:

- Branding of products, which may attract users (meat/wool/souvenirs);
- Use the traditional media (they can be a good partner to build strategic relations);
- Find people who can spread the message (message leaders);
- Use of social media.

It was also stressed not to forget known stakeholders, and to communicate regularly with them through newsletters and networking events.

Strategic communication plans for grasslands are identified for further exchange between Member States. Estonia is considering to develop one and Latvia also has some experience in ongoing projects.

One session on forests focused on the issue of "*Best practices and methods in planning and management".* The following stakeholders were identified to involve in planning and management: private forest owners, state, municipalities, local people visiting forests, researchers and NGO's. The importance was underlined to involve an independent facilitator or mediator in case of conflicts.

In the planning process it is important to consider whether stakeholders share the same objectives. If this is not the case, how can these be defined? Also, clear instructions are needed for the planning process.

Although everyone agrees that stakeholder involvement is important and the planning should be an inclusive process, in practice this is more difficult:

- Open information, clear criteria and transparency on the process is needed, good and frequent communication is key
- Support from all stakeholders is essential
- LIFE Projects often do not involve forest owners, and they have a crucial role in the management of the site
- Stakeholders experience that site protection is 'forced' upon them, which is not a good start for an inclusive planning process.

The METSO programme (presented on the third day) was considered a successful way to involve forest owners.

The last group discussed "*How can we best institutionalise stakeholder involvement"*. The following suggestions were made:

- Support existing organisations
- Professional communication is needed – avoid fake news
- Inclusion of stakeholders in forest management and the planning process
- Prepare guidance and recommendations

There was some discussion on whether an EU Directive is needed or whether this is a national responsibility. Also, whether stakeholder involvement should be embedded in legislation or not. The following issues for co-operative actions were identified,:

- Review of how forest management plans and Natura 2000 management plans are developed (8)
- Exchange/ training on mediation and facilitation (4)
- Development of a project for combining multifunctional forest and Natura 2000 (10)
- Development of strategic communication plan on grasslands (12)
- Exchange information on on-going projects on forests (METSO, Flying squirrel) (6)

Between brackets is a priority ranking, providing two key issues for further discussion in the last session selected by the participants. Highest priority was given to the following topics:

- Development of a project for combining multifunctional forest and Natura 2000 (10)
- Development of strategic communication plan on grasslands (12)

4.1.2. Theme 2 – Priorities for action

Chair: Ilona Mendzina; Facilitator: Kalev Sepp

Presenters: Santtu Kareksela (Metsähallitus, Finland), Gita Strode (Nature Conservation Agency)

Context

For certain species and habitat types there is a higher urgency to improve/restore their conservation status. While relevant information is available (EU, national and regional Red Lists, Article 17 data, Article 12 data for bird species, etc.), there is currently no agreed approach for identifying priorities and associated measures at EU or biogeographical region level, there is no clear mechanism for agreeing on such priorities, nor is there any process to follow-up on their implementation. It is important therefore to exchange experiences on setting priorities, using different tools and including the PAF.

Objectives of the thematic session

Through the discussion, shared approaches and actions were defined on:

- Prioritisation of conservation actions: where to target the money for the best effect and how to balance short and long-term effects/goals and small (regional, national) and large (biogeographical, EU) scale effects/goals?
- Prioritisation tools in the Boreal region: how do we evaluate experiences in the Boreal region so far? What role can they play in conservation planning?
- Implementation of the PAF: what kind of cooperation would support their efficient implementation?
- Development of further concrete action: what use can we make of experiences with the PAF in the Boreal countries to develop future projects, in particular to frame LIFE projects?

The topic of setting priorities was also discussed in the previous biogeographical seminar in Vilnius. At that time the focus was on goals and targets of restoration, methods used and costs and effects of the restoration (short vs long term, scale – national vs EU or biogeographical). Participants of the Vilnius meeting agreed on the most important aspects of the priority setting – restoration activities should be data based, planning of the restoration activities should be systematic, and availability and conditions of the funding sources should be taken into account.

This time participants focused on different tools and methods when choosing priorities, the role and place of the PAFs, including e.g. criteria for priority setting, and sharing of best practices. PAFs are developed as national documents, but do they allow for joint actions over the borders? When justifying investments from the Cohesion fund, what socio-economic arguments should we use?

Expected outcome of this session – is there a Boreal way of priority setting? Do we need more cooperative actions in clarification of concepts, methods, projects and actions? What are ideas for joint transboundary projects, e.g. LIFE concept notes?

Presentations

Two presentations (Finland and Latvia) set the stage, showing different approaches to the priority setting.

Finland makes extensive use of data. The zonation model is used, with input of spatial data, current conservation status, potential restoration measures, as well as information on distribution of (e.g. habitats at national and biogeographical level) and priorities for restoration are set. Positive aspects of the approach are that it is 'neutral', priorities based on science which corresponds to the predefined set of criteria. It is also possible to predict a 'best value-for-money' through the modelling approach, spreading resources to have an optimal result. Negative aspects include that the modelling is dependent on the availability and quality of the data, and if data is limited, the result will be less credible. Very important are also the criteria applied, and there are also possible discrepancies between impartially-set priorities and public expectations, which can be difficult to explain to the larger public.

Latvia has had two projects related to prioritisation: a LIFE project, as well as the 'Nature census', through the European cohesion fund. Different criteria were defined for prioritisation of protected areas for which management plans must be developed, priorities for species management plans and for grassland habitats. This is still mainly at the planning stage. One positive aspect is the stakeholder involvement at an early stage, whereby also socio-economic aspects are duly respected. The priorities are described in several documents. Negative aspects include the high risk of prevalence of socioeconomic aspects when deciding on restoration priorities and a lack of a holistic approach in prioritisation.

Discussions in working groups

Three break-out groups discussed the following issues:

1. Which tools and practices are used? What are best practices for prioritisation? Are there in particular useful tools for prioritisation?
2. What are the experiences with the PAF? How has the PAF been implemented in your country? Is harmonisation possible between countries regarding the PAF, and what are suggestions?
3. How can Member States work together on prioritisation across borders?

Results

Group 1: Which tools and practices are used?

- Two simultaneous approaches are used – defining strategic priorities on a broader level and detailed objectives at the site level – both to be applied systematically;
- Spatial conservation planning tools – useful for setting bigger picture;
- Systematic restoration planning is a must;
- Extent and quality of the data to back up the planning and monitoring of the results is important;
- EC should facilitate data gathering via JRC, ETC BD;
- EC could facilitate prioritisation amongst the biogeographic regions;
- Stakeholder engagement should start early in the process, experts to be involved, also end-users – throughout the process and in validation of the results;
- Low hanging fruits have their own value, the concept should not be abandoned completely.

Group 2: What are experiences with the PAF?

- PAF is a strategic multiannual planning tool, should be a living document;
- Art 17 /Art12 reports submitted in 2019 do not show the impact of the PAF 2014-2020 yet;
- More milestones are needed for the monitoring of the implementation of the PAF, the ultimate objective is not enough;
- Lack of ownership of the PAF may hinder its implementation, this should be worked on;
- Approval of the document is OK, but the ownership is lacking;
- PAF should stress the benefits for other sectors besides nature conservation - this may be a good selling point;
- Regional cooperation – Boreal meeting together with other ministries, especially the Ministries of Agriculture and Ministries of Forestry, this might help in priority setting… think outside of the box.

Group 3: Prioritisation across borders:

- Check the HELCOM practices on cross-border cooperation;
- Common monitoring projects, field studies or use the existing data, use of remote analysis in data analysis;
- No need for a boreal approach for prioritisation;
- Structures and functions – should we focus on core of the distribution areas of habitats and species - or margins as well?
- Common criteria and interpretation for habitats are essential to facilitate the common activities. If this is lacking it may lead to unfair assessment of the conservation status;
- National reporting is too coarse to notice the local improvements or negative trends.

The participants suggested the following issues for the possible detailed investigation and development of the joint projects/activities:

- EC should facilitate data gathering and analysis (JRC, EEA, ETC BD);
- Regional cooperation – boreal expert meeting together with other sectors, especially agriculture and forestry:
- Common monitoring projects, field studies or use of existing data, use of remote sensing in data analysis;

- Common criteria and interpretation of habitats across the EU (?);
- Joint analysis of the habitats data if typical species, structures and functions are similar.

For the concluding plenary session it was proposed to further discuss the topic:

- PAF exchange on boreal level, review and analysis of data and agreement on a common method to set priorities

4.1.3. Theme 3 – Natura 2000 and climate change

Chair: Per Angelstam; Facilitator: Theo van der Sluis

Presenters: Per Angelstam (SLU), Jüri-Ott Salm (Estonian Fund for Nature), Raimo Virkkala (Finnish Environment Institute SYKE).

Context

Climate change can be seen in increasing temperatures, shifting seasons, changing precipitation patterns, the potential increase of weather extremes and sea level rise. This also triggers larger fluctuations of groundwater table, including peat bog fires, higher incidence of invasive alien species, changes in migration patterns or shifts in species' range, accelerated eutrophication and so on. Climate change is a major threat to biodiversity, destroying habitats and causing species to move to new climatically suitable areas, and thus increasing the extinction probability of species inhabiting fragmented landscapes. Integrated natural resource management refers to the management of natural resources such as land, water, soil, plants and animals, including multiple aspects of natural resource use (biophysical, socio-political, and economic) and meeting different goals for a wider community.

The objectives of this thematic session are to:

- Discuss bottlenecks such as legal obstacles and conflicting interests that hinder integrated approaches and their causes, as well possible solutions or strategies to overcome them;
- Exchange knowledge and best practices of integrated approaches using the Natura 2000 objectives to define and design nature-inclusive projects and management plans vis-a-vis climate change:
- Discuss opportunities for transboundary cooperation on the integrated management of Natura 2000 objectives in future projects or management plans.

Presentations

Three presentations set the stage. Per Angelstam (SLU) introduces the theme, in particular the representativeness of protected forest areas. He demonstrates that statistics indicate that trends of old growth forests are still negative, with regard to the total protected area as well as landscape connectivity. Also the Green Infrastructure seems to still be declining. Next, Jüri-Ott Salm (Estonian Fund for Nature) presents results from his own research on the LIFE Mires Estonia project. He demonstrates how much CO2 is sequestered in peatlands. Many areas are degraded however, and

mires restoration could benefit very much the carbon sequestration. Thousands of hectares have been restored, and the project has managed to mobilise land owners, the authorities and many volunteers to cooperate. Raimo Virkkala (Finnish Environment Institute (SYKE), Finland) finally, presents scientific research on the impact of climate change. Climate change is already affecting species in protected areas, and bird populations shifted northwards, on average 1.8km/year. A large and connected protected areas network is highly important for boreal species in a changing climate. The climate 'velocity' is fastest in southern Finland and in southern Natura areas. The coldest climates in January disappear in vast areas in northern Finland according to moderate and severe climate change scenarios.

Discussion in working groups

Three sub-groups were formed to discuss three different questions: What are bottlenecks for transboundary cooperation, what are best practices, and what are opportunities?

What are **bottlenecks** for **integrated approaches for climate change**? There is a divide between the objectives of traditional forestry on the one hand, and environmental/biodiversity interests on the other. The emergence of the bio-economy discourse is amplifying this.

Also, lack of knowledge is an issue: effects of climate change are still largely uncertain, due to the complexity of the matter. The education and vocational training is also insufficient in that respect. Holistic analyses are lacking to civil servants/planners. Research in this field is complicated, and requires inter-/transdisciplinarity. The necessary approaches are perceived by donors as risky and costly. Different researchers have different focal areas and perspectives (e.g., regarding CO_2 and CH_4 nutrient-rich and nutrient-poor sites behaving differently as natural systems, drained systems and restored systems).

Different stakeholder/action groups within research and politics form separate entities that highlight different facts, "post-truth" narratives and perspectives. Various sectors have different interests: while foresters may welcome climate change (e.g., longer vegetation period) due to higher tree growth rates, other sectors regard climate change as negative. There is lack of communication between land owner categories and sectors, e.g. with the EU CAP, some sectors have rather negative impacts. The cross-border and cross-disciplinary communication between scientists is also lacking.

Political and institutional changes makes long-term planning difficult. Also, the circumstances regarding policies, natural conditions, forest disturbance regimes, climate and land use differ greatly between countries and regions: in particular harmonisation of policies would be required. Also, there is insufficient integration between political and scientific levels.

What are **best practices of integrated approaches** for transboundary co-operation regarding climate change and N2000? To address representation of different boreal forest types, forest and previous forest land can be stratified by their natural disturbance regimes created by fire dynamic, flooding, insects and wind (Ieva Rove; I.Rove@lvm.lv). Systematic conservation planning by habitat mapping

and definition of core areas, corridors and stepping stones has been effective (Ieva Rove; I.Rove@lvm.lv).

Ecosystem restoration is proven effective in many countries. Peatland restoration projects benefit from collaboration between forest and conservation sectors and also hunters as local beneficiaries through grouse hunting. Also, stream restoration projects benefit from collaboration between forest and conservation sectors, and sport fishing stakeholders.

Data sharing has been effective: Long term remote sensing and other monitoring data can be shared, but might need adjustments of methods. Also, it is effective to share data on (and studies of) species and planning models on regional scale, based on species ecology. Furthermore, a start was made with harmonisation of research: methods for species studies and data collection. Studies of same habitats in different contexts, same species etc. across ownership/administrative/country borders; eg through LIFE funding.

Harmonisation of transboundary management of species and habitats for shared species populations. Management plans of certain habitats should be prepared on a biogeographical scale.

What are **opportunities for integrated approaches and transboundary cooperation**?

Remote sensing: Harmonisation of methods for remote sensing techniques and data management. In particular techniques like airborne lasers are promising for forest management, but would require new expertise and exchange of knowledge about techniques and contexts. A workshop held in Finland on remote sensing was very useful, as was the Donana workshop organised by Eurosite with BGP. A joint approach for remote sensing could include:

- Techniques and knowledge sharing;
- Division of tasks among boreal countries could lead to more efficiency
- Expert groups could meet regularly

Transboundary management: Areas across the borders should exchange knowledge on management issues and conservation targets etc. This could be easily realised. In its simplest form, N2000 site managers can meet and discuss on a regular basis. In an advanced form, harmonisation and cooperation could be further promoted (joint patrols, joint management planning etc.)

Habitat definition: Habitat working groups could meet to discuss issues related to the definition of habitats.

Representative and functional green infrastructures: Thematic travelling workshops in landscapes/regions with is an excellent tool for stakeholder integration and sharing of experiences.

Stakeholder empowerment and engagement: Exchange experiences about approaches to integration of sectors and levels of governance.

Approaches to assess Green Infrastructure functionality at different scales: Macro-ecological such as among countries; Landscape-level in terms of comparing approaches that are feasible for different land owner categories; Local level in terms of riparian forest and urban/agricultural and forest transitions

5. Habitat working groups

5.1. Rivers and lakes

Chair: Lauma Vizule-Kahovska; Facilitator: Theo van der Sluis

Synergies between Species and habitats directives/WFD; Presenters: Bent Søholm Jepsen (NEEMO) - Synergies from a LIFE perspective; Fredrik Nordwall (Grip on LIFE) - experiences and ongoing work in Sweden.

Context

New approaches and networks are needed to develop and promote synergies of the Water Framework Directive, Floods Directive and Habitats Directive. Since the last Boreal seminar, such an approach has been successfully developed through the Life IP concept. Freshwaters, as open systems, benefit also from projects dealing with grassland, forest and wetland restoration and management. There is an urgent need to remove migration barriers in streams and rivers from both Directives' point of view, in order to improve the conservation status or achieve good environmental status of rivers and freshwater habitats. Over the past years there have been many practical examples of ongoing or finished initiatives. Next question is, how can we identify or improve funding for management activities?

Presentations

Bent Jepsen presents an overview of synergies and parallels between the directives. There are substantial synergies between the BHD and WFD directives, and some LIFE projects are designed to work on the interface of both.

Table 1: Comparison of BD/HD and WFD (B.S. Jepsen)

Birds and Habitats Directives	Water Framework Directive
Favourable conservation status of habitats and species	Good status of surface and ground water
Structure and function of habitats &typical species	Article 6.1. Register of of protected areas ...depending on water (incl N2000)
Specific management measures for species or habitats	Implement necessary measures to reach good ecological status, improve hydrology, water quality etc.
Species with high requirements, e.g. Margaritifera margaritifera	Reference sites

Implementing the Priority Action Framework and River Basin Management plans can have an impact at large scale. It can promote complementary actions with additional co-funding and involvement of stakeholders. Integrated Projects (LIFE) are in particular suited for integrated approaches related to water management, IPs which are ongoing are: Freshabit LIFE-IP (Finland); ForEst&FarmLand (Estonia); LIFE IP CleanEST (Estonia); LIFE GOOD WATER (Latvia); Optimising the management of Natura 2000 network (Lithuania); Rich waters, GRIP (Sweden).

LIFE projects are working to explore new cooperation and financing models. For IP-projects, complementary funding can be derived from many sources, e.g.: Cohesion funds, RDP, EMMF, ERDF/INTERREG, EAFRD/RDP, ERANET, Nordforsk, Operandum and Private funds.

Fredrik Nordwall presents the above mentioned IP-project GRIP in Sweden. The purpose of the project is to increase the understanding for the two directives, to see if objectives are conflicting or not, and identifying common measures and actions. A Swedish report from SLU, 2017[3] describes that despite differences between the two directives, there are synergies and in many cases the objectives and measures coincide. The report describes 8 habitats, and some 34 species of the directives and their sensitivity towards e.g. barriers or water level fluctuations. Very importantly, the report also links the habitats of the directives' structure, function and quality with the WFD. Next, he describes the conflict of realising 100% renewable energy supply through hydropower, and challenges with regard to continuity in Swedish rivers. A national plan for Sweden shows that with appropriate planning and measures it is possible, but still many older plants require environmental measures: all licences are reviewed. Fish passages promoted by the industry are not always effective, and dam owners often have limited interest.

Progress in countries

There is a need for the countries to discuss the achievements in relation to fresh water habitats. Each country reports its main achievements over the past years. A discussion arises on the work done, and possible synergies.

Opportunities

- WFD and BHD can be seen to have common goals and the potential to be implemented jointly and in a mutually supporting manner.
- Favourable Conservation Status can be related to Good Ecological Status of water bodies and hydro-morphological and water quality under the WFD.
- Art. 10 of the Habitats Directive has its parallel under the WFD in the form of Ecological Continuity.
- Joint monitoring of selected species under both the WFD and the Nature Directives are already carried out in some Members States.

[3] https://www.havochvatten.se/hav/uppdrag--kontakt/publikationer/publikationer/2017-07-04-sotvattenanknutna-natura-2000-vardens-kanslighet-for-hydromorfologisk-paverkan.html

- Natural Water Retention Measures have the potential to integrate the Flood Protection Directive into nature conservation and water management.
- Water and nature authorities need to put more effort into cross-sectorial communication and collaboration.

Possible synergies for both directives are:

- Appropriate implementation of WFD and BHDs can reinforce their objectives;
- DG Environment bringing together water and nature and marine directors from Member States;
- Joint monitoring of selected species (WFD-HD-BD) may save money, resources etc.;
- Water/Nature conservation Authorities can jointly approach stakeholders and each other;
- Common objectives are existing, e.g. improving of ecological status of water bodies, including hydro-morphological and water quality;
- Integration of Natura 2000 and WFD into RBMPs and EIAs, Appropriate Assessment (AA) according to HD/BD;
- Improving natural retention capacity (also supporting implementation of Flood Protection Directive).

A relevant topic for future discussion and cooperation is the use of dead wood in streams. In some countries this is removed as result of policy regulations, in other countries they are purposely kept to improve stream geomorphology and flow dynamics.

5.2. Wetlands

Chair: Agu Leivits; Facilitator: Kalev Sepp

Mire restoration in the boreal region; Presenters: Agu Leivits (Environmental Board, Estonia) – Introduction; Liina Remm (University of Tartu, Estonia) – Restoration dilemmas between future ecosystem and current species values; Tuomas Haapalehto (Metsähallitus, Finland) – Societal benefits by restoring peatland ecosystem structure and function?

Context

Many restoration projects are currently underway in the Boreal region. In these projects restoration dilemmas occur between future ecosystem and current species values. In this session, the issue of monitoring the impact of mire restoration in the boreal region - current situations, bottlenecks and opportunities for joint actions were discussed. Also the issue of 'how to resolve dilemmas between mire habitat restoration and conservation of the threatened species' was addressed.

Presentations

Liina Remm gave a presentation based on a recently published study. Ecosystem restoration is gaining political and economic support worldwide, but its exact targets and costs often remain unclear. A key issue, both for predicting restoration success and assessing the costs, is the uncertainty of post-restoration development of the ecosystem. A specific combination of

uncertainties emerges when ecosystem restoration might negatively affect pre-restoration species conservation values. Such dilemma appears to be common, but largely ignored in restoration planning; for example, in historically degraded forests, wetlands and grasslands that provide novel habitats for some threatened species. In the study, a framework is presented of linked options for resolving the dilemma and exemplify its application in extensive mire restoration in Estonia. The broad options include minimising risks by:

- Good timing of restoration interventions;
- Relocating restoration sites;
- Modifying restoration techniques;
- Managing future habitats of the affected threatened species.

In Estonia these options are assessed based on spatially explicit mapping of expected future states of the ecosystem, their uncertainty and the distribution of species at risk. Such planning documentation, combined with well-designed follow-up monitoring can be used for adaptive habitat restoration and post-intervention management.

Toomas Haapalehto gave a presentation about the national network for monitoring of impacts of restoration measures on peatland ecosystem structure (communities) and functions (nutrient cycles, carbon store, water quality etc.) in Finland. Finland has set up a national network for monitoring long-term mire restoration impacts on hydrology and biodiversity including restoration sites already from since late 1980s. Additionally, every restored peatland is monitored to determine the needs for future management (to identify problems and make planning corrections in restoration interventions). According to national monitoring protocol, 10 replicates for 8 mire habitat types are included to network and a BACI design is used (before and after, restored, drained and pristine sites). Hydrological trends are monitored after restoration by devices automatically recording water level and chemical properties of water samples. Permanent vegetation monitoring and monitoring of butterflies, dragonflies and birds are used to identify changes in peatland biodiversity. Invertebrate community composition starts recovering within a few years after restoration intervention, but plant communities take 5-10 years. Hydrological monitoring demonstrates benefits obtained from water purification. Monitoring results shows that drainage resulted in a substantial net loss of C from surface layer. Restoration has been successful in regaining natural growth in the peatland surface layer already within 5 years after restoration. The structure and function may be recovered after restoration, which may produce benefits related to important societal targets (Biodiversity: Aichi targets and habitats' Conservation status.

It is important is keep in mind:

- Time scale matters;
- Site quality & planning matters;
- Cost matters;
- Structured prioritisation in site selections;
- Transboundary cooperation in monitoring;

- Linking general recovery trends, site specific info & development of habitat conservation status;
- Remote sensing can be a promising tool for monitoring and prioritisation.

Current situation in boreal countries

Finland – Finland has set up a national network for monitoring long-term mire restoration impacts on hydrology and biodiversity. Methods, data collection protocols and the results are being published in scientific journals. Some sites included in the scheme have been restored already in the late 1980s. Monitoring data is collected in the field by Metsähallitus and analysed by universities (a win-win situation). The Finnish monitoring approach can be considered a best practice for measuring impact of mire restoration in boreal region.

Estonia – Short term monitoring (BACI design is common) is carried out in the frame of Life+ projects. Guidelines and plans for long-term restoration impact-monitoring are under preparation, funding for implementation is still insecure. Like in Finland, every peatland restored by the State Forest Management Centre is monitored to determine the needs for future interverntions. In addition, a water level monitoring scheme with automatic divers has been established (https://margus.shinyapps.io/rmk_vesi/). Some species (mirebirds and Western capercaillie *Tetrao urogallus)* are monitored in the frame of the state biodiversity monitoring programme. A special (BACI design) monitoring scheme exists for Tetrao urogallus habitat restoration on peatland forest in Soomaa area.

Latvia – Short term monitoring is carried out in the frame of Life+ projects. Monitoring guidelines have been published. The main problem is lack of funding for long-term monitoring after the end of projects.

Lithuania - Short term monitoring is carried out in frame of Life+ projects. Project based monitoring is done (Life+). Some species-oriented monitoring is done by protected areas staff. The main problem is the lack of funding for long-term monitoring after finalisation of the projects.

Sweden – No report, not present in working group.

Bottlenecks and obstacles identified

- Lack of knowledge. Which indicators are best to measure restoration effectiveness?;
- Lack of transboundary cooperation in monitoring restoration impacts in boreal region;
- No common practices for restoration monitoring;
- Often a short-term project based monitoring approach is dominant;
- Lack of funds and capacity (experts) for implementation of the long-term monitoring programmes;
- Limited public acceptance of restoration technics (re-wetting, afforestation) and lack of understanding benefits of restoration– more evidence needed;

- Knowledge gaps with regard to restoration benefits (water purification, carbon store, biodiversity etc.);
- Weak policy integration regarding peatland restoration benefits (including climate adaptation). Harmonisation of wetland policies is required in boreal region.

Opportunities for cooperation

- Similar nature and same interest in boreal region, good potential for large scale planning;
- Modern techniques (like remote sensing) are available;
- Relatively long-term experience exist in boreal region (the best practice from Finland);
- Evidence base from reliable monitoring data for restoration benefits; essential for public acceptance and policy;
- Open datasets (metadata) and accepted process for gathering data;
- Joint projects and transboundary cooperation (COST, cooperation for funding, work sharing etc);
- Joint expert groups;
- Need for climate strategies and link with peatland debate.

Proposal for Roadmap for 2020-2023

- Knowledge exchange - restoration monitoring expert meeting in Estonia (2020-2021) in the frame of Life+ projects;
- Establishment of an expert network for boreal monitoring experts;
- Data sharing - especially long term remote sensing and other monitoring data;
- Harmonisation of transboundary restoration monitoring approaches, including use of remote sensing techniques;
- Creation of public awareness for peatland restoration benefits, based on monitoring based evidence.

5.3. Forests

Chair: Kimmo Syrjanen; Facilitator: Irene Bouwma

Forest conservation on private land and restoring forest connectivity; Presenters: Kimmo Syrjänen (SYKE, Finland); Per Angelstam (SLU, Sweden)

Context

Forest habitat types of Annex I of the Habitats Directive face different problems inside and outside of the Natura 2000 network. In commercial forest landscapes the formation and maintenance of high quality habitat types of Annex I habitats is slow or non-existent. The protection of key biotopes is not sufficient to maintain connectivity of habitat types at the landscape level. This requires measures

that support connectivity as well as maintain the size and quality of these habitat types outside of conservation area networks.

Presentations

Two presentations introduced the session. Kimmo Syrjanen presented the METSO programme that aims 1) To improve the protected area network, especially at the southern part of Finland 2) To increase biodiversity in commercial forests 3) To increase collaboration between forestry and environment sectors, landowners and other stakeholders 4) To enhance biodiversity knowledge, communication and education to increase the area of forest managed for biodiversity outside of protected areas.

The focus in the programme is on private forests. Land owners can voluntarily offer their forests to permanent or fixed-term conservation agreements and receive full monetary compensation. Kimmo Syrjanen outlined the area under the programme for 10 identified forest types (including several N2000 habitat types) and underlined that the main challenge for the programme is to maintain the financing and human resources of the programme.

Per Angelstam started his presentation with a reference to the Achi target 11 to underline the need for forest connectivity. An analysis in five areas in the Boreal region identified where forest management is currently intensifying. Although more forest areas are being protected, at the same time less natural forest remains. In addition, the connectivity of High Conservation Value Forests is generally limited. He also underlines that depending on which statistics or definition one uses to assess the amount of Green Infrastructure, numbers may vary considerably, which he underpins with a Swedish example. Overall he stresses the need to assess current connectivity and the need for improving forest connectivity.

In the group discussing **forest connectivity** the following suggestions were made to improve connectivity:

- Improve land use planning at all levels;
- Increase the use of buffer zones along rivers and streams for connectivity;
- Ensure that a good spatial analysis is done (for different forest types) to identify need and options for connectivity;
- Consider also other land uses (e.g. watercourses, road and power lines as ways to improve connectivity) ;
- Increase connectivity between local protected areas and N2000;
- Promote voluntary protection amongst forest owners through funding, legislative options (e.g. private forest reserves) as well support system;
- Ensure payment for ecosystem services other than wood, e.g. tourism, Carbon sequestration, flood regulation etc;
- Whilst developing restoration plans, also include issues on connectivity.

However, the forestry sector is rather diverse: you have state owners, big companies as well as small forest owners. The discussion underlined that no obligatory rules can be set without fair compensation for private owners.

Opportunities for cooperation

The following ideas for further co-operation were identified:

- Increase co-operation on Green Infrastructure in the Boreal Region;
- Exchange knowledge on legal tools and financial compensation mechanisms;
- Prepare a gap analysis, using a standardised approach for the different Member States in the Boreal Region. Discuss on this basis joint conservation targets for connectivity;
- Organise joint visits to review forests of different quality with researchers, forest owners, administrators etc. Review amongst others the influence of large herbivores on forest ecosystems and connectivity and management;
- Review different sectors (than forestry) to increase connectivity;
- Organise structural co-operation (like HELCOM) in the region.

The issues of gap analysis was merged in the session on monitoring in the carrousel.

The other group discussed how to deal with species and habitat protection outside of Natura 2000. Several issues emerged: a partnership is needed between the forest sector and the government. In addition, funding must be secured for development of a programme for sustainable use of forests, with forest owners. It is important to have a national plan on what (and how much) is needed to be protected (also as a way to steer the programme) and local programmes that enable owners to take responsibility themselves.

5.4. Grasslands

Chair: Zymantas Morkvenas; Facilitator: Diana Pungar

Scaling of grassland restoration and grasslands agricultural use and CAP; Presenters: Aveliina Helm (University of Tartu, Estonia), Zymantas Morkvenas (Baltic Environmental Forum, Lithuania)

Context

The countries of the Boreal region are currently facing preparation of national rural development strategies and planning of new measures under the CAP policy. The CAP is the most significant policy instrument which affects the state of agricultural landscapes, including natural and semi-natural grassland habitats. Planned agri-environmental measures with the CAP may help to maintain or even restore valuable grassland habitats, while other measures, on the contrary, cause deterioration of

habitats. Improvement of CAP instruments for better grassland conservation can be achieved through better coordination of the Member States environmental authorities and experts, whereby the boreal Natura 2000 biogeographic seminar should contribute as well.

Presentations

Two presentations, from Aveliina Helm and Zymantas Morkvenas described the current situation. Avelliina Helm showed the tremendous decline in grasslands, like wooded meadows, dry calcareous grasslands, dry and mesic grasslands etc. This decline is a result in abandonment of traditional grassland management. In response, an Action Plan for restoration of Estonian meadows was formulated and implemented. Funding could be secured through e.g. Life to Alvars. A prioritisation of restoration areas was based on historical and current landscape structure. Restoration results are presented. Key is engagement of land owners, and to link the management to sustainable farming practices. There is a strong emphasis on provision of ES and climate regulation.

Zymantas Morkvenas paints the situation for Lithuania. He shows the statistics, budget expenditure for grasslands through Agri-environmental measures and the areas which are managed. CAP is a major financial instrument supporting biodiversity conservation in Lithuania. The uptake and targeting of agri-environmental measures is very low (only 3.47% in PA and 0.91% in total area) and needs to be improved (e.g. providing better participation conditions). Protected areas administrations are currently not actively involved in administration and advice-giving of RDP measures and more active engagement of administrations would be good. It would make sense to have the Ministry of Environment aiming on better effectiveness of this financial instrument for biodiversity. There is a need to expand spectrum of management requirements supporting biodiversity conservation within AEMs. Most grassland habitats are managed through conventional farming practices.

Working group discussions

Three different groups discussed various aspects of grassland conservation.

Upscaling grassland restoration:

- There is a need for strategic grassland restoration approach – not only target figures, but also spatially explicit planning;
- A strategic approach for upscaling is lacking in Member States, currently some targets are defined (e.g. FI, EE) or a landscape connectivity plan foreseen (LV);
- In the context of the biodiversity strategy beyond 2020, we should provide the EC with concrete targets from Member States;
- Strategic planning tools are available for use (e.g. Vivagrass, Zonation).

Stakeholder engagement for upscaling grassland management and restoration:

- Local authorities are key players to stimulate upscaling; also local government leaders are important in the local development planning processes;

- Farming advisors can be more involved in the CAP declaration system;
- Protected areas administrations, regional environmental institutions can play significant role;
- There is need for more entrepreneurship, and opinion leaders examples to follow;
- Bottlenecks are socio-economic conditions, which need to be tackled.

Grassland habitats and CAP

- CAP is the most significant financial instrument for biodiversity conservation;
- Improvement is needed in terms of AEM design, targeting and uptake intensity;
- There is an urgent need for a meeting to exchange experiences and plans for the AEM design for the new period (invite Agriculture CA);
- Informal working group of boreal grassland should remain active, and seek for funding opportunities for joint meeting (LIFE IP projects can be utilised).

The working group discussion brought out an urgent need for a meeting to discuss the CAP in MS. The workshop theme "Networking event on grasslands" was taken forward to the last session under the heading 'networking event on grasslands: meeting to share and discuss design of agri-environmental measures for the new CAP policy cycle'.

6. Concluding plenary session and following steps

6.1. Further elaboration of actions

Based on the outcome of the thematic sessions on the first day, as well the Habitat working groups on the last day, several issues were identified for further discussion and brainstorming. Some 8 topics were identified, and listed on posters in various corners of the auditorium. Next, participants could select the most relevant topics which they wanted to contribute to, and provide ideas and suggestions for concrete actions. The facilitator would write down the ideas and suggestions of the participants. The ideas form the basis for the roadmap which is updated as a result. The following ideas were discussed:

1. Develop boreal projects (nat/int) on multifunctional sustainable use of Natura 2000 forestry involving all stakeholders from the beginning (join management, legal opportunities and funding) – Irene Bouwma

The idea was to develop a transboundary LIFE project for the call next June (concept note). The participants agreed that it was important to involve all stakeholders but that this might not be an easy process. Stakeholders that would need to be involved are: forest owners associations, state forest organisations, nature conservation, researchers, green NGO's, FSC certification bodies.

Most likely one or more separate preparation meetings are needed in order to develop a transboundary co-operation project. From the beginning, the process of developing a project should be clear. Elements in the project could be: 1) identify common interest 2) review and develop

funding/regulations needed 3) identify pilot areas where joint management measures are discussed with private owners and implemented to create clarity on which measures are allowed.

The question remained open who could initiate these meetings and the EC representative would review whether there was a possibility in the LIFE-programme to fund such a meeting.

In Latvia, a LIFE project concept note has already been submitted for this year on the management of coastal forests involving all relevant stakeholders.

2. Develop strategic communication plan on N2000 grassland management involving various partners and exchange these in boreal region – Sophie Ouzet

3. PAF exchange on boreal level, review and analyses of data and agree on a common method to set priorities – Kalev Sepp

We do not need a PAF process at the level of Boreal Biogeographical Region, but more regional cooperation. There should be a boreal expert meeting with other sectors, especially agriculture and forestry. A first joint seminar could take place in 2020 to share experience on PAF; how to define priorities. Also common monitoring projects can be discussed, field studies or use of existing data, and use of remote analysis in data analysis. Finally, such meeting could help to identify funding for common activities (e.g. Interreg Life+?).

4. Boreal expert meeting with other sectors (e.g. agriculture & forestry) to discuss and start dialogue on priority setting – Theo van der Sluis

Aim for such an expert meeting is priority setting, which should result in acceptable tools and management measures. This should be a stakeholders' co-design.

Process: It is essential to involve different sectors. Most stakeholders should be involved, and there should be a balanced representation. This is difficult though, e.g. how to involve small farmers that are not represented by farmers unions, nor do they have time to travel far and discuss during day time. Also, in discussions you should focus on one theme only. Facilitation is important to let this work.

The **outcome** probably differs for national and regional levels, which requires also institutional coordination. However, the outcome should be based on facts, data, evidence – not on emotions. One should keep a long-term perspective in mind. The 'solution' cannot be final, we're dealing with systems, which will require fine-tuning.

Example projects are the Finnish METSO project (since 2008), or the Swedish COMET project. The Baltic countries very much would like this approach, and could learn here from the experiences over the past 10 years. A workshop/exchange could be between two countries, or all countries together.

5. Development of a joint approach on monitoring and connectivity analysis for the boreal region – Santtu Kareksela

The topic was understood as a development scheme for consideration of the boreal region habitat continuum from north to south, and how to analyse and monitor effectively and in collaboration changes at this relatively long south-to-north range. The discussion was perhaps a bit mire/wetlands oriented, but should be mostly valid for other habitat groups as well.

The first identified step was quite intuitively knowledge sharing and identification of mutual concepts, methods, and interests. Especially emphasised were unified habitat specific definitions for baselines, targets, habitat statuses and indicators for negative and positive changes.

Putting the analysis early on into a legitimate, relevant, and realistic planning context was emphasised as a way to facilitate effective implementation within and between Member States.

Naturally, the potential of available remote sensing data as well as modelling tools was brought up several times as a cost-efficient way to facilitate and speed up the process. A special example of modelling or existing modelling results that came up are different climate change scenarios that have a high relevance for predicting changes in the future. Also, data on (and importance of) ecosystem services and their changes were discussed as a way to increase the social-ecological relevance of nature monitoring.

It was concluded by many participants that a joint project to effectively promote the monitoring and transboundary collaboration is needed. Interreg, Cost, and Horizon-2020 funding instruments were mentioned as possibilities to finance such transboundary collaboration.

6. Exchange of knowledge on species action plans and joint populations – Kimmo Syrjänen

A lot of national action plans were prepared in former decades; however, the implementation is challenging, slow, there are often not enough resources. There are some good experiences: Black stork, White backed woodpecker. Therefore prioritisation is needed: Annex species and European threatened species, what else? Climate change affects species at national, boreal, wider biogeographic area – what are most vulnerable species, ecological groups, habitats? What should be done?

There are specialist groups of different species groups needed in EU. Also, more co-work is needed, e.g. on large carnivores (ongoing EU action); Invasive species / pests; sustainable use of common species (like annex V).

In some cases, assisted migration of species and habitats might be required. Are national actions required, or action over biogeographic areas?

What is the EC role: legislation vs. recommendation? Effective implementation requires additional legal actions (for example bird protection in South Europe)

7. Networking event on grasslands (what, where etc.) – Diana Pungar

Aim of the networking event would be to share and discuss design of agri-environmental measures for the new CAP policy cycle. Such meeting could be organised in Vilnius, Lithuania; duration: 2 half days. Financing is available through the Lithuanian LIFE IP project (project website: www.naturalit.lt). The target group would be 30 participants - biodiversity/grassland experts, officials of Ministries of Environment and Agriculture, NGOs and regional institutions.

Topics for the meeting:

- Share what agri-environmental measures (ideas, principals or concreate measures) are planned/drafted for next CAP cycle 2021-2027;
- Sharing best practices, lessons learned of agri-environmental measures of 2014-2020 period;
- Agree on cooperation/coordination of the process in preparing environmental measures for the next period;
- Develop ideas on upscaling natural/semi-natural grasslands –design a strategic approach;
- Discuss possible further cooperation and possible new project ideas.

8. How to deal with dead wood in streams? (Ideas for event 2020) - Lauma Vizule-Kahovska

This problem is more recognised in Latvia, Estonia and Lithuania. Habitat restoration activities with wood debris removal is prevalent in Latvia. In Finland and Sweden experts do not consider that dead trees have to been remove from streams. There, it is suggested to leave all dead wood in the rivers, and to take into account landscape level - what is the meaning of this dead wood in the wider landscape, not only in river. More focus should be on the reasons why trees are falling into the streams and rivers and on ways to prevent this. Also, better coastline management should be discussed, taking into account stakeholders.

6.2. Closing remarks

Sophie Ouzet closed the meeting thanking the Ministry of the Environment for hosting the event. The roadmap will be updated and developed on the basis of the working groups sessions; however it is not cast in stone, but it will be updated regularly as part of the biogeographical process. The draft Roadmap will be prepared separately from the seminar report, and will be further elaborated within the steering committee and posted on the Natura 2000 Platform. At the end of 2019 there will be new call for proposals for networking events by the Consortium organising the Biogeographical process. This provides an opportunity to accomodate some of the ideas that have been developed and proposed in the seminar. Announcements will be made on the platform, in the Newsletter and through Twitter.

Also, the LIFE programme can be beneficial for both realising the conservation of Natura 2000 habitats and species. Close collaboration and stimulating conservation measures through e.g. Integrated Projects would benefit our protected areas in the Natura 2000 network.

7. Additional information: development of the roadmap

The roadmap of the Boreal Region will comprise a series of actions which would address the need for knowledge exchange on the key issues already identified. For some of these actions, the roadmap will identify possible lead bodies and a target timetable. In some cases a lead has been offered, in others a lead will be proposed by the European Commission through the Biogeographical Process and in others there are suggested lead bodies.

The roadmap acts as an "aide-mémoire" to put on record the key issues that have been discussed by practitioners over the last decade and as a stimulus for new activities that could be included in, e.g. LIFE projects, cooperation between research bodies or in funding through Member State conservation bodies.

The roadmap has been developed for the Boreal biogeographic region and the Biogeographic Process led by the European Commission. The Habitats Directive requires Member States within each biogeographic region to work together to achieve favourable conservation status at the biogeographic level. However, the ambition of a European Network is to share experience across all biogeographic regions. Moreover, through LIFE projects there is a 'family' of European projects where networking, transfer of knowledge, replication of success and sharing of good practice is built into project design. These projects are encouraged to use available resources from the Natura 2000 Platform and actively participate in the Natura 2000 network events (and sometimes biogeographical seminars).

ANNEXES

Annex 1 – Programme of the seminar

Monday 14 October 2019

Time	Session, topics and speakers	Location
11.00 – 13.00	Registration of participants	lobby Tallinn Zoo
12.00 - 13.00	Lunch (sandwiches)	Lobby
13.00 - 14.30	**Official welcome and introduction** Chair: Michael O'Briain • Mr. Marku Lamp, Deputy Secretary General, Ministry of Environment, Estonia • Michael O'Briain, European Commission, Directorate General Environment (DG ENV) • The Natura 2000 biogeographical process in its strategic context - Sophie Ouzet (DG-ENV) • Management of Natura 2000 in a Boreal biogeographical context - Kadri Möller (Ministry of Environment, Estonia) • Reflection on previous seminar and Boreal roadmap - Algirdas Klimavičius (Ministry of Environment, Lithuania) • Role of LIFE in Natura 2000 - Bent Jepsen (NEEMO) • Overview of programme, announcements - Theo van der Sluis (WENR)	Auditorium
14.30 - 15.00	Coffee break	Lobby
15.00 - 18.00	**Thematic working groups (three parallel sessions)**	
	Theme 1: Stakeholder engagement in Natura 2000: How to develop communication and stakeholder engagement in Natura 2000, targeting in particular private land owners in the forestry sector Chair: Mart Külvik (Estonian University of Life Sciences (EMU) Facilitator: Irene Bouwma Presenters: Outi Silfverberg (Forum Environmental Information, Finland) Silvia Lotman (Estonian Fund for Nature, Life project)	Seminar room "Beaver" (Kobras)
	Theme 2: Priorities for action: How to improve prioritization and objectives setting for restoration and conservation in the Boreal region, including through the PAFs and other planning tools? Chair: Ilona Mendziņa (Ministry of Environmental Protection and Regional Development, Latvia) Facilitator: Kalev Sepp Presenters: Santtu Kareksela (Metsähallitus, Finland) Gita Strode (Nature Conservation Agency, Latvia)	Seminar room "Lynx" (Ilves)
	Theme 3: Natura 2000 and climate change: How to reconcile nature conservation and climate change in the integrated management of Natura 2000 sites? Chair: Per Angelstam (Swedish University of Agricultural Sciences (SLU), Sweden) Facilitator: Theo van der Sluis Presenters: Jüri-Ott Salm (Estonian Fund for Nature) Raimo Virkkala (Finnish Environment Institute (SYKE), Finland)	Seminar room "Bear" (Karu)

Time	Session, topics and speakers	Location
18.00 – 19.00	**Short break / Visit of the Tallinn Zoo**	
19.00 - 21.00	**Knowledge market:** Projects and organizations can present themselves with materials, video, posters etc. The knowledge market will be officially opened by: • Tiit Maran, Director of Tallinn Zoo • Leelo Kukk, Deputy General Director of Estonian Environmental Board • Christina Pantazi, European Commission, DG ENV **Official dinner:** The Estonian Ministry of the Environment generously invites all seminar participants to a banquet in the foyer of the Zoo (same place as the knowledge market).	Lobby Tallinn Zoo

Tuesday, 15 October 2019

08.30 - 18.30 (approx.)	Site visits	Location
	Field visits to Lahemaa National Park: **Group 1: Forest and grassland habitats** **Group 2: Freshwater and wetlands habitats** During the site visits Estonian representatives will give a short overview of the habitats (forest, grassland, freshwater, wetland habitats) and restoration examples. Also the role of stakeholders in management will be highlighted.	Departure from City Centre/ Park Inn hotel
19.00	**Joint dinner in Tallinn**	**Hotel Von Stackelberg, Emmeliine Hall**

Wednesday, 16 October 2019

Time	Session, topics and speakers	Location
09.00 - 10.30	**Parallel sessions: habitat working groups (Session 1)** *Cross-cutting issue for all working groups: habitat restoration*	
	Rivers and lakes: - Funding and incentives for management activities; - Synergies between the Nature Directives and Water Framework Directive Chair: Lauma Vizule-Kahovska (Nature Conservation Agency, Latvia) Facilitator: Theo van der Sluis Speaker: Bent Jepsen (NEEMO); Fredrik Nordwall (Swedish Agency for marine and water management, Sweden)	Seminar room "Beaver" (Kobras)
	Wetlands: - Monitoring effectiveness of restoration; - Restoration versus species protection Chair: Agu Leivits (Environment Board of Estonia) Facilitator: Kalev Sepp Speakers: Liina Remm (University of Tartu, Estonia); Tuomas Haapalehto (Metsähallitus, Finland)	Seminar room "Lynx" (Ilves)

	Forests: - Conservation objectives; - Forest connectivity Chair: Kimmo Syrjänen (Syke) Facilitator: Irene Bouwma Speakers: Kimmo Syrjänen (SYKE, Finland); Per Angelstam (SLU, Sweden)	Seminar room "Bear" (Karu)
	Grasslands: - Scaling of grassland restoration, large versus small; - Grasslands agricultural use and CAP Chair: Zymantas Morkvenas Facilitator: Diana Pungar Speaker: Zymantas Morkvenas (Baltic Environment Forum, Lithuania); Aveliina Helm (University of Tartu, Estonia)	Seminar room "Living nature" (Elusloodus)
10.30 - 11.00	**Coffee Break**	In the lobby
11.00 - 12.00	**Parallel sessions of habitat working groups continue (Session 2)**	Same rooms
12.00 - 13.00	**Report back on excursions and habitat working groups** Chair: Michael O'Briain (DG ENV) 1. Visit Freshwater and wetlands; WG Rivers and lakes; WG Wetlands 2. Visit Forests and Grasslands; WG Forests; WG Grasslands Following the groups' feedback, there will be time for questions and plenary discussion.	Auditorium
13.00 - 14.00	**Lunch**	Lobby

Wednesday, continued

Time	Session, topics and speakers	Location
14.00 - 14.30	**Reporting from the three thematic working groups** Chair: Michael O'Briain (DG ENV) The feedback will focus on the key points and the outcomes achieved and agreed by each groups' participants.	Auditorium
14.30 - 15.30	**Towards joint transboundary LIFE proposals: ideas for cooperation, in particular under LIFE, INTERREG etc.** Each thematic and habitat working group might have identified one theme which can be successful as a follow-up for a proposal for LIFE or INTERREG. These ideas are further developed in a facilitated session (Theo van der Sluis, Irene Bouwma)	Auditorium
15.30 - 16.00	**Coffee Break**	Lobby
16.00 - 16.30	**Update of the roadmap for cooperation in the Boreal region** Chair: Sophie Ouzet (DG ENV) Facilitated discussion on the initiatives to be developed under the roadmap, in particular on specific cooperation actions identified on agreed common priorities	Auditorium
16.30 - 17.00	**Closing session and vote of thanks** Taimo Aasma (Estonian Ministry of Environment) Sophie Ouzet (DG ENV) Reflecting on the feedback and earlier discussion, this final session aims to summarise the major outcomes of the seminar and expand on future prospects for the biogeographical process.	Auditorium

Annex 2 – List of organisations and projects at the Knowledge Market

This project/poster overview was prepared 12/10/19. Only those projects were included for which data was available.

1. **Tallinn Zoo - three posters about European mink:**
   1) **European mink (Mustela lutreola)**
   2) **Distribution of the European mink**
   3) **The causes of European mink decline**

   Webpage: https://tallinnzoo.ee/en/us/science-in-tallinn-zoo/
   Country: ESTONIA
   Contact: Tallinn Zoo (Tiit Maran, zoo.direktor@tallinnzoo.ee)

   Project: European mink breeding facility and equipment for DNA lab (Funded by Environmental Investment Centre).

   The aim of the project was to establish the species conservation research lab. The lab is responsible for scientific research in Tallinn Zoo. The necessity to establish such a lab came from the management of European mink captive population as well as from the actions aiming to establish a safe European mink population in Hiiumaa Island. This establishment of European mink island population and its management are the most outstanding achievements of the lab in the field of practical species conservation.

   The lab develops research in three directions: the species conservation, animal well-fare and genetic forensic. The laboratory cooperates with the IUCN Species Survival Commission (IUCN SSC) and the IUCN Redlist authorities.

2. **LIFE Mires Estonia - Conservation and restoration of Mire Habitats (LIFE14 NAT/EE/000126)**

   Webpage: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5318
   Country: ESTONIA
   Contact: Estonian Fund for Nature (ELF) (Jüri-Ott Salm, jott@elfond.ee)

   The overall objective of the project is to secure the favourable conservation status of wetlands, especially mires and priority habitats protected by the Habitats Directive: active raised bogs, bog woodland and Fennoscandian deciduous swamp woods. Through the restoration of the hydrological regime and the abandoned peat mining areas, the project also aims to benefit fauna affected by drainage such as birds, amphibians, dragonflies and butterflies. The project will also raise awareness among the local population, present the project results nationally and internationally and develop a methodology and guidelines for the restoration of degraded mire habitats sites supporting western capercaillie (*Tetraourogallus*), moor frog (*Rana arvalis*) and dragonfly (*Leucorrhinia*) populations. The restoration and management activities are carried out on six Natura 2000 areas and the hydrology improved on around 5800 ha of which 3450 ha are Natura 2000 priority habitats.

3. **Designing habitat networks for Siberian flying squirrel (*Pteromys volans*) in Estonian state forest**

   Country: ESTONIA
   Authors: Margus Pensa, Toomas Hirse
   Contact: State Forest Management Centre (Kaupo Kohv, kaupo.kohv@rmk.ee)

4. **Many valuable forest habitats in Estonia are heritage of 20th centuries land use practices. There is conflict with restoration of seminatural habitats. How does it look in perspective of climate changes?**

   Country: ESTONIA
   Authors: Anneli Palo
   Contact: anneli.palo@ut.ee, University of Tartu

5. **Restoration of mire habitats in Estonia**

   Country: ESTONIA
   Authors: Leevi Krumm, Priit Voolaid, Ants Animägi, Kaupo Kohv, Margus Pensa
   Contact: State Forest Management Centre (Kaupo Kohv, kaupo.kohv@rmk.ee)

6. **Project ELME (Establishment of tools for integrating socioeconomic and climate change data into assessing and forecasting biodiversity status, and ensuring data availability**

   Country: ESTONIA
   Authors: Madli Linder
   Contact: Estonian Environment Agency

7. **Purtse jõe valgala puhastamine**
   Webpage: https://www.envir.ee/et/eesmargid-tegevused/vesi/jaakreostus
   Country: ESTONIA
   Contact: Estonian Environmental Ministry (Raimo Jaaksoo, raimo.jaaksoo@envir.ee)

8. EstBatLIFE - Improving the Pond Bat (Myotisdasycneme) habitats in Estonia (LIFE16 NAT/EE/000710)

Webpage:
http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6221&docType=pdf;
http://elfond.ee/bats/the-project
Country: ESTONIA
Contact: Estonian Fund for Nature (ELF) (Lauri Klein, Lauri.Klein@elfond.ee)

The objectives of the EstBatLIFE project focus on the improvement and protection of the species' hibernation sites. Specific objectives are to:

- Secure the most important hibernation sites from uncontrolled visits;
- Reduce visitor flows during the hibernation period in the most vulnerable habitats of the pond bat;
- Stop degradation of habitats caused by low temperatures, draughts and roof;
- Stop degradation of habitats caused by low temperatures, draughts and roof collapse;
- Involve volunteers, private companies and local communities in cleaning the caves and their surroundings, especially the swarming areas;
- Make policy recommendations for management plans for the pond bat and its protected areas;
- Raise public awareness internationally, nationally and locally – to influence local inhabitants' attitudes towards safeguarding bat populations, as well as to improve the understanding of current nature conservation issues, species of EU importance and the Natura 2000 network;
- Promote the replication of project results at national and international scales and share and gain knowledge regarding habitat requirements and the ecology of boreal pond bat population;
- Use high-resolution online bat cameras and 3D images and organise attractive exhibitions for the general public.

9. URBANCOWS - Restoration and Public Access of Urban Coastal Meadow Complex in Pärnu Town (LIFE10 NAT/EE/000107)

Webpage: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4076
Country: ESTONIA
Contact: Estonian Environmental Board (Murel.Truu@keskkonnaamet.ee)

The goal of the URBANCOWS project was to improve the conservation status of 'Boreal Baltic coastal meadows' and 'Coastal lagoons', as well as the characteristic species of these habitats, in the Pärnu Coastal Meadow Nature Reserve Natura 2000 network site.

The project planned to achieve this through habitat management actions and raising awareness among local residents and visitors about their ecological value. Specific project aims included:

- clearing unwanted vegetation from the coastal meadow habitat;
- introducing grazing and erecting fencing and other necessary infrastructure;
- restoring the natural hydrology of coastal lagoons;
- establishing visitor infrastructure;
- developing management recommendations for urban coastal pastures.

10. Estonian seminatural habitats

Country: ESTONIA
Authors: Kaidi Silm
Contact: Estonian Environmental Board (Kaidi.Silm@keskkonnaamet.ee)

11. Project LIFE to alvars (LIFE13 NAT/EE/000082)

Webpage: https://life.envir.ee/english-project-life-alvars
Country: ESTONIA
Contact: Estonian Environmental Board (Annely Holm, Anneli.Holm@keskkonnaamet.ee), Aveliina Helm, aveliina.helm@ut.ee, ElisabethPrangel, Elisabeth.prangel@ut.ee

Project LIFE to alvars was chosen as a winner of 2018 Natura 2000 Award in the Socio-economic benefits category.

This project aims to restore 2500 ha of alvar grasslands in Estonia, designated to the European Union's Habitats Directive (92/43/EEC) code 6280* (Nordic alvar and precambrian calcareous flatrocks). Alvar grasslands are semi-natural grasslands with thin lime-rich soil on a limestone bedrock.

One third of all the alvar grasslands in Europe are situated in Estonia. However, in 2013 only around 2000 hectares i.e. less than 30% of Estonian alvar grasslands are under annual management, which is necessary for long-term persistence of this habitat type. Unmanaged sites have been heavily overgrown with shrubs (mostly juniper *Juniperus communis*) and trees (mostly Scots pine *Pinus sylvestris*). In order to maintain the ecological connectivity and biodiversity of the alvar grassland habitat type in Estonia, a minimum of 7500 ha of habitat area needs to be under annual grazing, as also targeted in Estonian Nature Conservation Development Plan until 2020.

Objective of this project is to restore the most valuable, but currently overgrown alvar areas on 2500 hectares and to create a possibility for local farmers to manage these areas after the restoration. This project involves alvar grasslands situated on both private and public lands and emphasis is on a thorough involvement of private land-owners.

12. LIFE IP CleanEST - Development of an integrated water management and its modern tools in Estonia - strategic choices for future (LIFE17 IPE/EE/000007)

Webpage:
http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=7007
Country: ESTONIA
Contact: Ministry of the Environment of Estonia (Mari Sepp, mari.sepp@envir.ee)

The LIFE IP CleanEST targets the implementation of the River Basin Management Plan (RBMP) 2015-2021 of the East Estonia River Basin District (RBD). The IP itself will focus on fully implementing measures for the Viru sub-basin. The essence of the project is to use new approaches for the integration of measures for water management, nature conservation and achievement of socioeconomic goals.

The overall objective of the project is to achieve a good status of Estonia's aquatic environment considering the chemical and ecological criteria and to ensure the favourable status of water-dependent habitats. The project integrates the activities of river basin management plans and nature management plans and aims to enhance cross-sectoral cooperation and administrative capacity. The specific objectives include:

- Improving the status of surface and groundwater bodies;
- Building capacity to implement cost-efficient new technologies and innovative solutions;
- Increasing know-how and long-term capacity among all stakeholders involved; and
- Updating the RBMP for the next period (2021-2027) and applying the lessons learned in other RBMPs in Estonia as well as at EU level.

13. FRESHABIT - Towards integrated management of freshwater Nature 2000 sites and habitats (LIFE14 IPE/FI/000023)

Webpage: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5437
Country: FINLAND
Contact: Metsähallitus Parks & Wildlife Finland (Ilmonen Jari, Jari.Ilmonen@metsa.fi)

FRESHABIT focuses on fresh- and groundwater dependent habitats, coastal and estuarine habitats and species depending on water in several Natura 2000 network sites across Finland. The project aims to develop new methodology and indicators for assessing the conservation status of freshwater habitats. It further aims to improve the ecological status, management, and sustainable use of these habitats, by developing networks and operational models, and testing them in selected catchments.

The project will enhance capacity building, by setting up coordination structures and pathways that enable the full implementation of the prioritised action framework (PAF) and other environmental policies. By improving multisectoral cooperation, FRESHABIT aims to develop new model frameworks and operational models to facilitate long-lasting results.

14. CoastNet LIFE – Restoring nature's networks (LIFE14 IPE/FI/000023)

Webpage: http://www.metsa.fi/web/en/coastnetlife
Video: https://www.youtube.com/watch?v=1h70bpyTGIM
Country: FINLAND
Contact: Hanna-Leena Keskinen, Metsähallitus, Parks & Wildlife Finland, Coastal and Metropolitan Area

The aim of the project is to restore important coastal and archipelagic habitats, such as sun-lit environments, coastal meadows, herb-rich forests and wooded pastures. Restoration of these areas improves the living conditions of e.g. the Apollo butterfly and the hermit beetle. The area to be managed includes Finnish coastal nature from the Bothnian Bay to the Hanko Archipelago as well as the northern coast of Estonia in e.g. Tallinn and the Lahemaa National Park.

15. Integrated Planning Tool providing opportunities for grassland conservation

Webpage: Integrated planning tool to ensure viability of grasslands (LIFE Viva Grass) (LIFE13 NV/LT/000189) http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4900; https://vivagrass.eu/
Contry: LITHUANIA, LATVIA, ESTONIA
Contact: Zymantas Morkvenas, zymantas.morkvenas@bef.lt

Project aims to support maintenance of biodiversity and ecosystem services provided by grasslands, through encouraging ecosystem-based approach to planning and economically viable grassland management. It shall demonstrate opportunities for multi-functional use of grasslands as basis for sustainability of rural areas and stimulus for local economies.

The main goal of the project is to increase effectiveness of natural and semi-natural grassland management by contributing to strategic planning processes in delivering an Integrated Planning Tool for sustainable grassland management. The Integrated planning tool will strengthen linkage among social, economic, environmental and agricultural policies. Also, project will implement business catalytic activities and elaborate business development scenarios that might function as background for investment plans.

16. Success of the first attempt to translocate Aquatic Warbler – Europe's most threatened passerine bird and long-distance migrant

Webpage: Stepping stones towards ensuring long-term favorable conservation status of Aquatic warbler in Lithuania (LIFE MagniDucatusAcrola) (LIFE15 NAT/LT/001024)
https://meldine.lt/en/
Country: LITHUANIA
Contact: Zymantas Morkvenas, zymantas.morkvenas@bef.lt

The LIFEMagniDucatusAcrola project aims to restore degraded habitats of the aquatic warbler in Lithuania, as well as in parts of Belarus. Reducing fragmentation of aquatic warbler breeding habitats is a major precondition for achieving a long-term favourable conservation status in its north-east European breeding range. Habitats in Lithuania are often key steppingstones connecting the remainder of the EU population (in Poland, Hungary and Germany) with that found in Belarus.

The project will apply traditional restoration methods for the target habitats, such as elimination of reeds and removal of bushes and redundant biomass. It will also implement prescribed burning to increase the productivity of the degraded habitat. A second innovation will be the application of an accelerated method of seeding sedge grass vegetation.

The project will establish self-sustaining farming mechanisms to ensure long-term socio-economic preconditions for maintaining aquatic warbler breeding habitat in the Neman river delta. Drawing on European best practice, it will also set up a biomass processing facility in this area to create a marketable product and thereby ensure constant demand for late-cut biomass gathered from the surrounded breeding areas of the aquatic warbler.

Most notably, the project also aims to carry out the first translocation of aquatic warblers.

The main attempts:

1) Firstly, to translocate Aquatic Warbler - Europe's most threatened passerine bird and long-distance migrant;
2) Secondly, from conservation to agricultural practice and business model.

17. From conservation to agricultural practice and business model (poster II, about Aquatic Warbler)
Contry: LITHUANIA, LATVIA, ESTONIA
Contact: Zymantas Morkvenas, zymantas.morkvenas@bef.lt

18. Preconditions for better biodiversity preservation and ecosystem protection in Latvia jeb "Nature Census" (5.4.2.1/16/I/001)

Country: LATVIA
Authors: Dabas skaitīšanas
Contact: skaitamdabu@daba.gov.lv/ www.skaitamdabu.gov.lv/ www.daba.gov.ee

The goal of the project: preparation of preconditions for biodiversity conservation and ecosystem protection by identifying specially protected habitats of European Union importance (hereinafter –protected habitats of EU importance) distribution and quality, analysing acquired basic information.

To elaborate twenty specially protected natural territories (hereinafter - SPTN) management plans and five specially protected species protection plans (hereinafter - the species protection plans).

The main tasks of the project:

- Development of management plans for specially protected natural territories that included in the special areas of requiring conservation plans in accordance with the Regulations of Cabinet of Ministers No 686 on October 9, 2007 "Regulations on drafting the nature protection plans for specially protected natural territories".
- Special protected habitats of European Union importance distribution and quality identification (including expert briefing on protected habitat inventory) informing of local governments and landowners, entering data into natural data management system according to the protected habitats distribution and quality awareness and work organisation methodology being developed by the Environmental Protection and regional development Ministry and published on its Web site.
- Protected habitat of European Union importance distribution and quality awareness under protected habitat distribution and quality examination, work organisation methodology prepared by the Environmental Protection and Regional Development Ministry, information analysis and comprehensive assessment of the habitat territorial distribution and quality in the country.
- Special protected habitat of European Union importance territorial distribution and quality awareness data digitalisation, environmental data system technical improvement for data digitalization and storing.

19. PROGRAMME - National Conservation and Management Programme for Natura 2000 Sites in Latvia (LIFE11 NAT/LV/000371)

Webpage: https://nat-programme.daba.gov.lv/public/eng/about_the_project/
Country: LATVIA
Contact: Solvita Rūsiņa, solvita.rusina@lu.lv

The aim of this project is to prepare, on the basis of the approach of the Priority Action Frameworks (PAFs), concrete and operational measures for the Natura 2000 network.

This LIFE Nature project aims to draft guidelines for the management of each terrestrial habitat type within Latvia's Natura 2000 network. It will prepare a National Conservation and Management Programme that will be designed to inform and complement the forthcoming 2014-2020 Latvian Rural Development Programme.

The project will target all 325 of Latvia's terrestrial Natura 2000 sites. These include some 55 Annex I habitats. The project will ensure a coordinated and programmed approach to safeguarding the long-term conservation and management of Latvia's Natura 2000 network sites. Stakeholder participation will feature strongly in the project activities, which shall promote involvement in nature management implementation by public authorities, nature conservation experts, NGOs, municipalities, local entrepreneurs, landowners and other stakeholders. The project will target awareness-raising actions at these bodies to increase know-how about appropriate nature conservation and management measures, as well as the financial resources that are available for Natura 2000 sites in Latvia.

20. Prioritising semi-natural grassland restoration sites: the experience of LIFE project GrassLIFE (Latvia)

Webpage: GrassLIFE - Restoring EU priority grasslands and promoting their multiple use
LIFE16 NAT/LV/000262,
http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6293
Country: LATVIA
Contact: Solvita Rūsiņa, solvita.rusina@lu.lv

GrassLIFE will focus on developing, optimising and improving the conservation status of five EU priority grasslands in Latvia (6120*, 6210*, 6230*, 6270* and 6530*). All restoration activities will be carried out within 14 Natura 2000 network sites.

Objectives:

- To restore the target priority grassland habitats and improve their conservation status on 1 320.5 hectares by applying best-practice and testing pilot and restoration methods;
- To establish a long-term sustainable management (grazing) system on the restored grassland areas;
- To prepare recommendations for improving their conservation status and grassland connectivity;
- To improve the economics aspect of sustainable grassland use; and
- To improve knowledge and public awareness about the importance of preservation of priority grasslands in Latvia and the EU.

21. Mobile grazing herds – a tool for restoration of priority grassland habits in Latvia
Country: LATVIA
Authors: Laura Zvingule
Contact: Latvian Fund for Nature, laura.zvingule@ldf.lv

22. GRIP on LIFE-IP - Using functional water & wetland ecosystems and their services as a model for improving green infrastructure and implementing PAF in Sweden (LIFE16 IPE/SE/000009)

Webpage: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6525
Country: SWEDEN
Contact: Fredrik Nordwall, fredrik.nordwall@havochvatten.se

The long-term aim of the project is to help fully implement the Prioritised Action Framework (PAF) for Natura 2000 in Sweden. This will be done by:

- Disseminating and gaining a wide acceptance for the Swedish PAF as a tool to achieve the goals of the Habitats and the Birds directives;
- Improving the conservation status of watercourse and wetlands habitats and their characteristic species, and thus the ecosystem services they provide, in selected sites within the Boreal and Continental biogeographical regions;
- Increasing available funding by improving the coordination of existing funds to improve the conservation status of habitats and species in the Natura 2000 network;
- Raising awareness of the PAF and building capacity amongst relevant organisations and stakeholders;
- Enhancing sustainable use of watercourses and wetlands to help improve their conservation status.

The project will implement the Prioritised Action Framework (PAF) for Natura 2000 in Sweden with the following results:
- Improved conservation status of watercourse and wetlands habitats;
- The building of knowledge and capacity;
- Improved cooperation;
- The implementation of new knowledge.

Annex 3 – List of Participants (alphabetical order+ list of Member State order)

#	COUNTRY	CODE	ORGANISATION	LAST NAME	FIRST NAME
1	Finland	FI	Ministry of the Environment	ALANEN	Aulikki
2	Sweden	SE	Swedish University of Agricultural Sciences	ALM	Gunilla
3	Sweden	SE	-	ANGELSTAM	Per
4	Lithuania	LT	Ministry of Environment	ANUŠKEVIČIUS	Džiugas
5	Sweden	SE	Swedish Environmental Protection Agency	AUNAPUU	Maano
6	Latvia	LV	MEPRD	BELASOVA	Inga
7	Netherlands	NL	WENR	BOUWMA	Irene
8	Lithuania	LT	State Protected Areas Service	DAPKUS	Dalius
9	Estonia	EE	Estonian Private Forest Union	EELMAA	Ando
10	Estonia	EE	KEM	ERIKSOL	Marike
11	Estonia	EE	Ministry of the Environment	FRIDOLIN	Herdis
12	Lithuania	LT	Natura 2000 Users' Forum / Forest and Land Owners Association of	GALAUNÉ	Alfredas
13	Latvia	LV	Nature Conservation Agency	GALNIECE	Baiba
14	Latvia	LV	Latvian Forest Owners' Association	GRASMANE	Aiga
15	Lithuania	LT	State Protected Areas Service	GRAŠYTĖ	Gintarė
16	Finland	FI	Parks & Wildlife Finland	HAAPALEHTO	Tuomas
17	Finland	FI	Parks & Wildlife Finland	HEINONEN	Mervi
18	Estonia	EE	European Chapter of the Society for Ecological Restoration	HELM	Aveliina
19	Estonia	EE	Estonian Seminatural Community Conservation Association	HOLM	Annely
20	Latvia	LV	Nature Conservation Agency	IKAUNIECE	Sandra
21	Estonia	EE	-	ILOMETS	Mati
22	Belgium		NEEMO	JEPSEN	Bent
23	Finland	FI	Parks & Wildlife Finland	KAREKSELA	Santtu
24	Lithuania	LT	State Protected Areas Service	KATILIUS	Kestutis

#	COUNTRY	CODE	ORGANISATION	LAST NAME	FIRST NAME
25	Finland	FI	Finnish Environment Institute	KERÄNEN	Inka
26	Estonia	EE	Estonian Fund for Nature (ELF)	KLEIN	Lauri
27	Lithuania	LT	Ministry of Environment	KLIMAVICIUS	Algirdas
28	Estonia	EE	Estonian Fund for Nature	KOHV	Marko
29	Estonia	EE	Estonian Environmental Board (Deputy General Director)	KUKK	Leelo
30	Estonia	EE	EMU	KYLVIK	Mart
31	Estonia	EE	Estonian Environmental Board	LEIVITS	Agu
32	Estonia	EE	KEM	LINNAMAGI	Merike
33	Estonia	EE	-	LOTMAN	Silvia
34	Estonia	EE	Talinn Zoo (director)	MARAN	Tiit
35	Lithuania	LT	State Protected Areas Service	MATULEVICIUTE	Dalyte
36	Latvia	LV	MEPRD	MENDZINA	Ilona
37	Estonia	EE	Ministry of the Environment	MOLLER	Kadri
38	Lithuania	LT	-	MORKVENAS	Zymantas
39	Sweden	SE	Swedish Agency for Marine and Water Management	NORDWALL	Fredrik
40	Belgium		DG-Environment	NUIJTEN	Daniel
41	Belgium		DG-Environment	O'BRIAIN	Micheal
42	Estonia	EE	Ministry of the Environment	OTSUS	Merit
43	Belgium		DG-Environment	OUZET	Sophie
44	Estonia	EE	KEM	PALM	Piret
45	Estonia	EE	-	PALO	Anneli
46	Belgium		European Commission, DG ENV	PANTAZI	Christina
47	Lithuania	LT	-	PASKEVICIUTE	Lina
48	Finland	FI	-	PIETOLA	Liisa
49	Estonia	EE	Ministry of the Environment	PULK	Eleri
50	Estonia	EE		PUNGAR	Diana
51	Finland	FI	Parks & Wildlife Finland	RAATIKAINEN	Katja

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52	Estonia	EE	Estonian Environmental Board	RAKKO	Aimar
53	Estonia	EE		REMM	Liina
54	Estonia	EE	NEEMO EIG	RITSO	Katrin
55	France	FR	Council of Europe	ROEKAERTS	Marc
56	Estonia	EE	KEA	ROOSE	Tarvo
57	Latvia	LV	-	ROVE	Ieva
58	Latvia	LV	-	RUSINA	Solvita
59	Estonia	EE	MENDZINA	SALM	Jüri-Ott
60	Estonia	EE	EMU	SENEN	Maaria
61	Estonia	EE		SEPP	Kalev
62	Finland	FI	-	SILFVERBERG	Outi
63	Estonia	EE	Estonian Environmental Board	SILM	Kaidi
64	Estonia	EE	NEEMO EIG	SIMINOV	Luuk
65	Latvia	LV	Nature Conservation Agency	STRODE	Gita
66	Finland	FI	Finnish Environment Institute	SYRJANEN	Kimmo
67	Estonia	EE	-	TAMBETS	Meelis
68	Estonia	EE	Estonian Environmental Board	TATTAR	Taavi
69	Sweden	SE	Swedish University of Agricultural Sciences	TORANG	Per
70	Estonia	EE	EMU	TOURSON	Pille
71	Lithuania	LT	Ministry of Environment	TUKAKACIAUSKAS	Tomas
72	Finland	FI	Finnish Environment Institute	TURUNEN	Jarno
73	Finland	FI	-	TURUNEN	Olli
74	Netherlands	NL	WENR	VAN DER SLUIS	Theo
75	Finland	FI	Finnish Environment Institute	VIRKKALA	Raimo
76	Latvia	LV	Nature Conservation Agency	VIZULE - KAHOVSKA	Lauma
77	Estonia	EE	KAUR	ZINDER	Made

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1	Belgium		NEEMO	JEPSEN	Bent
2	Belgium		DG-Environment	NUIJTEN	Daniel
3	Belgium		DG-Environment	O'BRIAIN	Micheal
4	Belgium		DG-Environment	OUZET	Sophie
5	Belgium		European Commission, DG ENV	PANTAZI	Christina
6	Estonia	EE	Estonian Private Forest Union	EELMAA	Ando
7	Estonia	EE	KEM	ERIKSOL	Marike
8	Estonia	EE	Ministry of the Environment	FRIDOLIN	Herdis
9	Estonia	EE	European Chapter of the Society for Ecological Restoration	HELM	Aveliina
10	Estonia	EE	Estonian Seminatural Community Conservation Association	HOLM	Annely
11	Estonia	EE	-	ILOMETS	Mati
12	Estonia	EE	Estonian Fund for Nature (ELF)	KLEIN	Lauri
13	Estonia	EE	Estonian Fund for Nature	KOHV	Marko
14	Estonia	EE	Estonian Environmental Board (Deputy General Director)	KUKK	Leelo
15	Estonia	EE	EMU	KYLVIK	Mart
16	Estonia	EE	Estonian Environmental Board	LEIVITS	Agu
17	Estonia	EE	KEM	LINNAMAGI	Merike
18	Estonia	EE	-	LOTMAN	Silvia
19	Estonia	EE	Talinn Zoo (director)	MARAN	Tiit
20	Estonia	EE	Ministry of the Environment	MOLLER	Kadri
21	Estonia	EE	Ministry of the Environment	OTSUS	Merit
22	Estonia	EE	KEM	PALM	Piret
23	Estonia	EE	-	PALO	Anneli
24	Estonia	EE	Ministry of the Environment	PULK	Eleri
25	Estonia	EE		PUNGAR	Diana
26	Estonia	EE	Estonian Environmental Board	RAKKO	Aimar

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28	Estonia	EE	NEEMO EIG	RITSO	Katrin
29	Estonia	EE	KEA	ROOSE	Tarvo
30	Estonia	EE	MENDZINA	SALM	Jüri-Ott
31	Estonia	EE	EMU	SENEN	Maaria
32	Estonia	EE		SEPP	Kalev
33	Estonia	EE	Estonian Environmental Board	SILM	Kaidi
34	Estonia	EE	NEEMO EIG	SIMINOV	Luuk
35	Estonia	EE	-	TAMBETS	Meelis
36	Estonia	EE	Estonian Environmental Board	TATTAR	Taavi
37	Estonia	EE	EMU	TOURSON	Pille
38	Estonia	EE	KAUR	ZINDER	Made
39	France	FR	Council of Europe	ROEKAERTS	Marc
40	Latvia	LV	MEPRD	BELASOVA	Inga
41	Latvia	LV	Nature Conservation Agency	GALNIECE	Baiba
42	Latvia	LV	Latvian Forest Owners' Association	GRASMANE	Aiga
43	Latvia	LV	Nature Conservation Agency	IKAUNIECE	Sandra
44	Latvia	LV	MEPRD	MENDZINA	Ilona
45	Latvia	LV	-	ROVE	Ieva
46	Latvia	LV	-	RUSINA	Solvita
47	Latvia	LV	Nature Conservation Agency	STRODE	Gita
48	Latvia	LV	Nature Conservation Agency	VIZULE - KAHOVSKA	Lauma
49	Lithuania	LT	Ministry of Environment	ANUŠKEVIČIUS	Džiugas
50	Lithuania	LT	State Protected Areas Service	DAPKUS	Dalius
51	Lithuania	LT	Natura 2000 Users' Forum / Forest and Land Owners Association of	GALAUNÉ	Alfredas
52	Lithuania	LT	State Protected Areas Service	GRAŠYTĖ	Gintarė

#	COUNTRY	CODE	ORGANISATION	LAST NAME	FIRST NAME
53	Lithuania	LT	State Protected Areas Service	KATILIUS	Kestutis
54	Lithuania	LT	Ministry of Environment	KLIMAVICIUS	Algirdas
55	Lithuania	LT	State Protected Areas Service	MATULEVICIUTE	Dalyte
56	Lithuania	LT	-	MORKVENAS	Zymantas
57	Lithuania	LT	-	PASKEVICIUTE	Lina
58	Lithuania	LT	Ministry of Environment	TUKAKACIAUSKAS	Tomas
59	Netherlands	NL	WENR	BOUWMA	Irene
60	Netherlands	NL	WENR	VAN DER SLUIS	Theo
61	Finland	FI	Ministry of the Environment	ALANEN	Aulikki
62	Finland	FI	Parks & Wildlife Finland	HAAPALEHTO	Tuomas
63	Finland	FI	Parks & Wildlife Finland	HEINONEN	Mervi
64	Finland	FI	Parks & Wildlife Finland	KAREKSELA	Santtu
65	Finland	FI	Finnish Environment Institute	KERÄNEN	Inka
66	Finland	FI	-	PIETOLA	Liisa
67	Finland	FI	Parks & Wildlife Finland	RAATIKAINEN	Katja
68	Finland	FI	-	SILFVERBERG	Outi
69	Finland	FI	Finnish Environment Institute	SYRJANEN	Kimmo
70	Finland	FI	Finnish Environment Institute	TURUNEN	Jarno
71	Finland	FI	-	TURUNEN	Olli
72	Finland	FI	Finnish Environment Institute	VIRKKALA	Raimo
73	Sweden	SE	Swedish University of Agricultural Sciences	ALM	Gunilla
74	Sweden	SE	-	ANGELSTAM	Per
75	Sweden	SE	Swedish Environmental Protection Agency	AUNAPUU	Maano
76	Sweden	SE	Swedish Agency for Marine and Water Management	NORDWALL	Fredrik
77	Sweden	SE	Swedish University of Agricultural Sciences	TORANG	Per

Annex 4- Evaluation of the seminar (summary)

In total 77 people attended the seminar. 27 responses were received in the evaluation survey and are included here (response rate = 35,5%). In the evaluation the delegates could score from 1-10 for various parts of the seminar. The range varied from 10 – 3. All aspects of the seminar were highly rated, with scores ranging from 7.7 to 8.5 out of 10 (Table 1), but highest were the 'overall organisation, the work presentations and field visits.

The average scores are presented in the table below:

Table 2: Overall rating of the Boreal Biogeographical Seminar

Issue	**Average score** (best score = 10/10)
the overall organisation of the seminar	8.5
the opening plenary session of the seminar	7.7
the work presentations	8.4
the quality of the facilitation	7.7
the interactions with other participants	7.5
the field visits	8.4

Table 2 presents the overall scores given to the eight scoring questions. Some 21 times a score was given below 6 (10%). In total only 2 participants gave consistent low scores, which accounted for half of the low scores.

Table 3: Overall scores for all questions sumarrized.

Scoring	**Total**
1	1
2	2
3	3
4	2
5	13
6	11
7	26
8	60
9	58
10	37
Grand Total	213

Participants were asked to provide feedback on the values of the seminar they attended in 4 fields, these being knowledge, interaction and empowerment (Table 3). There were no change in views, but that is not expected either. The majority however claimed to have gained more insights and more ideas for work which can be used in their work regarding N2000. The survey confirms that the interaction with other participants is important and highly rated. The empowerment aspect is also positively rated by participants, most feel that the seminar reinforces the implementation of Natura 2000 joint strategies. Only few participants see little benefit with regard to those aspects.

Table 4: The value of the seminar for the work of the participants, with regard to knowledge, interaction and empowerment.

Knowledge	**Strongly disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
The talks and discussion I heard during the seminar have changed my view of the management of Natura 2000		1	21	15		37
The information provided at the seminar has given me a more in-depth understanding of the intricacies of the management of Natura 2000			5	26	6	37
During the seminar I gained new and useful ideas for my future work		1	4	26	6	37
I am likely to use the information provided at the seminar to change or adapt my own management or implementation of Natura 2000	1	1	14	18	3	37
Interaction						
The seminar allowed me to become acquainted with new contacts and has expanded my professional network			3	20	14	37
The seminar allowed me to reconnect with previous professional acquaintances	1	2	10	18	6	37
Through the seminar I learned that other participants are facing similar challenges as I am with implementing Natura2000 policy			6	17	14	37
Empowerment						
This seminar reinforces the strategic importance in my organisation to invest in Natura 2000	1	3	11	17	5	37
The information provided at the seminar allows me to have better discussions on the purpose and goals of Natura2000 policy with colleagues from my home organisation and other related parties in my country		2	5	23	7	37
Taking part in the seminar helps me with initiating or taking part in follow-up actions under the Natura 2000 biogeographical process	1		8	21	7	37

Participants could also indicate one issue they felt was a particular success during the seminar. What stands out is the field visits, which is mentioned most as success (9 x mentioned), and the interactive approach and facilitation techniques that were used to have all people contribute and participate (4 x). And in particular, the last session for preparing the road map (4 x).

The responses are given below:

- It was all extremely well organised on both days from the variety of talks, rooms and food with very knowledgeable people leading segments of the field trip.
- The roving groups in the last session which helped to distil down actions for the roadmap (each person developing and contributing to 3 of the 9 themes) (4 x)
- Well-run field visit, with useful and practice-oriented discussion and interaction (9 x)
- The overall structure with introductions, presentations, interactivity during the workgroups, the field visits, the off times (4 x)
- The facilitation techniques and approach used in the interactive sessions - compared with previous seminars, the Friday morning interaction is definitely a valuable addition.
- Valuable opportunity for networking (3 x)
- Good range of participants, from most member states in the region (4 x)
- Timing very well adhered to, facilities very good (2 x)
- Good location near a train station, so therefore easy to reach
- The hospitality
- The multitude of idea's I bring at home to improve the work on n2000 in my own country
- Interactive approach, workshops
- Information sharing and having key actions for international working to take forward in current bidding rounds.
- Motivation, new ideas and contacts for a growing network
- Fieldtrips and breakout groups
- the overall organisation - the discussion between all the participants
- Linking up with science and policy people across the region
- Field trip including discussions between participants and stakeholders/residents

Participants could also indicate one issue they felt needed to be improved during the seminar. Particular comments focus on shortage of time for discussions and going in-depth. This, however, is a result of the choice for a thematic approach, and the habitat working groups, which do compete for time in the schedule. Also recurring is the knowledge market, which leaves room for improvement and more clarity in the process. Below the responses are given:

- Lunch on the final day would have been a nice conclusion to the event (2 x).
- General introduction
- Knowledge market (2 x)
- Maybe there should be extra time for the knowledge market, before dinner starts

- I did not understand how the knowledge market and its awarding was done.
- The attention to the stands on the knowledge market seemed lower this time. A brief moment at every stand consecutively, with a glass in hand, in a few sentences, a recruiting eye opener for the group (this was the procedure in Ireland if I remember correctly?)
- To have a specific time for organisation (preparation?) of the knowledge market
- The integrative management of N2000 need perhaps a precision of what we want to integrate: the different rules, the stakeholders, the managers, all those items?
- Agenda during the workshop was not totally clear (what results should be achieved) (2 x)
- Give more information about the field trips in advance, suggest at each part of a field trip the discussion point to exchange thoughts on.
- Parts of our field trip
- More focused themes on the workshops
- There was much too little time to have discussions in workshops! If we are to contribute substantially more time is needed. Maybe run the same themes for workshops several times, at different times, so it will be possible to participate in more than one workshop/theme.
- There should be more time for discussion in the thematic workgroups. Link between themes from workgroups and field excursions should be made clearer.
- Planning field trips before the working groups
- Editorial checks for the documentation - always scope for improvement!
- More information on the Biogeographical process, habitats, Article 17 & 12 reporting etc Connect process to Article 17 reporting (2 x)
- More time to meet other participants (2 x)
- Ability to attend more than one workshop
- The workshop
- The sessions on Wednesday afternoon were a bit long, starting with 3 presentations.
- The room for our sub session was very small
- Organisation of chairs for the breakout groups during the workshop sessions
- The only part I would report back was we were unfortunate recipients of a smelly coach on trip 2. Luckily we got to spend lots of time outside of it.
- Better exchange of contact information regarding future cooperation
- Less traffic at rush hour
- We needed to have more interaction with other stakeholders – everyone gravitated towards their own countries.
- Better knowledge of the results of the other workshops, I hope to find them in the report
- Follow-up process
- Can't think of anything (2 x)
- To receive a list of participants/affiliations in advance (instead of during the meeting)