











Natura 2000 Seminars

Natura 2000 Biogeographical Process

Second Atlantic Seminar Ennistymon - Ireland, 25 – 27 October 2016

Seminar Input Document







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1 Introduction

The Natura 2000 Biogeographical Process was launched by the European Commission in 2011 to assist Member States in managing Natura 2000 as a coherent ecological network. The Process provides practical means to exchange the information, experience and knowledge that are required to identify and define common solutions and develop cooperative actions, which can be delivered to ensure progress towards the EU 2020 Biodiversity Strategy targets, in particular Targets 1 & 2.

As responsibility for implementation of Natura 2000 and ensuring progress towards the EU's Biodiversity Strategy targets lies with Member States, they are key actors in the Natura 2000 Biogeographical Process. The Process also provides an opportunity to mobilise expert networks and inputs from other key stakeholders, including NGOs. This is important in order to tap into the direct experience of Natura 2000 practitioners, expert stakeholders and Member States' representatives with specific responsibilities for implementation of Natura 2000. This underlines the strategic and operational importance of the Process, the integrated inputs required from diverse actors and the opportunities available to develop concrete collaborative actions for future implementation.

As a long-term, continuing process, since the first Atlantic Natura 2000 Biogeographical Seminar in the Netherlands in December 2012, the strategic orientations of the Natura 2000 Biogeographical Process have been further developed – these are described in Annex 1 to this document.

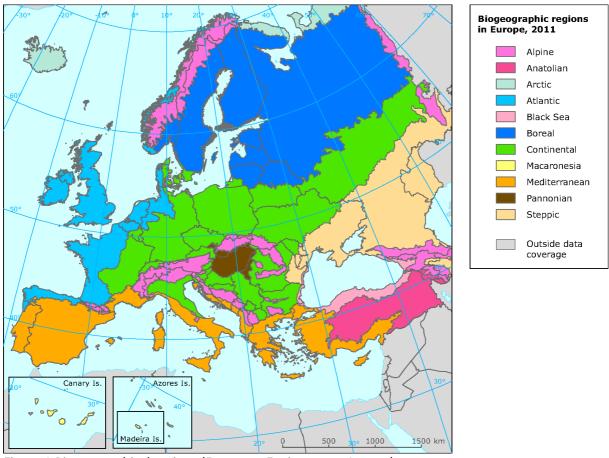


Figure 1 Biogeographical regions (European Environment Agency)

2 The 2nd Atlantic Natura 2000 Biogeographical Seminar

The second Atlantic Biogeographic Seminar is being hosted by the National Parks and Wildlife Service (NPWS), part of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, of Ireland. This Seminar provides an important opportunity for participants to improve and strengthen the implementation of Natura 2000 in the Region and ensure progress towards the EU 2020 Biodiversity Strategy targets. This includes building common understanding of practical management issues identified as being of common priority, stimulating new know-how about effective management approaches and developing cooperation and networking activities on issues of shared importance.

This Seminar is a milestone in a continuing process of networking, information sharing and knowledge building, of direct benefit to stakeholders across the Atlantic Biogeographical Region. Over three days, the Atlantic Seminar will aim to generate concrete outputs as identified by participants, which can be further developed following the Seminar. Although some attention will be given to reviewing progress since the first Atlantic Seminar (held in the Netherlands, December 2012), the focus is very much forward-looking - this will include:

- Taking stock of the activities implemented since the kick-off seminar and identify and agree further concrete actions and cooperation priorities, which can be developed and taken forward by various actors in the Region – with the aim of reaching favourable conservation status (FCS).
- Identifying possible new conservation issues/priorities new cooperation actions based, in particular, on the lessons learnt from the latest State of Nature Report, including a 'Roadmap' of agreed future collaborative actions.
- Compiling sources of information and experience that capitalise on completed projects, available guidance and potential new proposals to increase synergies and collaboration opportunities.

The primary purpose of the Process is to provide practical means to ensure progress towards achievement of the favourable conservation status (FCS) of habitats and species of European Community importance in the Atlantic biogeographical region. By focusing on common priorities and shared interests identified by experts as being important to improve habitat management, the objective of the Seminar is to help Atlantic Member States and expert stakeholders to identify and agree on a number of collaborative, concrete actions that can be followed up to address the main common priorities and shared issues identified. Subject to the views of participating experts, the scope of focus within the Natura 2000 Biogeographical Process can also be extended to cover species management.

2.1 The Atlantic seminar document

This document forms the basic reference for the second Atlantic Natura 2000 Seminar. It presents, in a digested form, the contributions from habitat management experts from the nine Atlantic EU Member States¹ gathered during an online consultation exercise. Their first-hand expert knowledge has been complemented with information presented in published sources, in particular, habitat-

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¹ NL, DE, DK, FR, UK, BE, IE, PT, ES

related guidance and publications produced by the national authorities, the European Commission and the European Topic Centre on Biological Diversity (ETC-BD).

This document provides an overview of the Natura 2000 Biogeographical Process, its purpose and strategic objectives. It focuses on the objective of the second Atlantic Natura 2000 Seminar, provides detail about the 'Low Hanging Fruit' habitats as an approach, as well as consideration of the Atlantic habitats originally selected for priority consideration in 2012, and addresses thematic issues (chapter 2). Chapter 3 provides an analysis of comments given by Atlantic experts about the strategic orientation of the Natura 2000 Biogeographical Process.

The core of this document (chapter 4) presents a summary account for the habitat groups selected for priority consideration, including habitats identified as 'Low Hanging Fruits', based on the Atlantic expert consultation and latest Article 17 reports. Each habitat group chapter focuses on issues, challenges and the scope for (collaborative) solutions and opportunities. Using the latest Article 17 reports, a detailed fact sheet for each of the 37 Atlantic habitats considered in this report are presented in annexes 4 to 8. These were produced by ILE-SAS in consultation with the ETC-BD. The final part of the document (chapter 5) presents an overview of other useful sources of reference, as well as relevant (LIFE) projects and initiatives currently in development or being implemented in the Atlantic region.

2.2 Habitats selected for priority consideration and 'Low Hanging Fruit' Habitats

This 2nd Atlantic Seminar focuses attention on ways to achieve progress towards the achievement of Favourable Conservation Status (FCS) for those habitats and species of community interest that have been identified for specific consideration in the Atlantic biogeographical region. Reflecting the urgency to demonstrate progress towards achieving the targets of the EU 2020 Biodiversity Strategy in the short to medium term, the Seminar also provides an opportunity to consider a new method which can help to identify priorities for action. This includes the idea of addressing the so-called 'low hanging fruit' (LHF): the LHF methodology, developed by the ETC-BD in consultation with the European Commission has been previously circulated during the Atlantic expert consultation exercise, but is annexed to this document for ease of reference – see Annex 3.

In summary though, benefitting from the latest Article 17 reports (2007–2012) and working together with the European Topic Centre on Biological Diversity (ETC-BD), the LHF approach involves identifying those species and/or habitats for which measurable improvements of conservation status could be reached by means of some measures which are straightforward to implement and achievable in the short term. Therefore, this Seminar will also enable participants to discuss the 'Low Hanging Fruit' approach and how it may be used to ensure increased progress towards reaching favourable conservation status for particular habitats. This will be considered along with progress and possible scope for increased cooperation with regard to those Atlantic habitats originally selected for priority consideration. In addition, of course, it is worth emphasising that other habitats, or indeed species, which expert stakeholders may wish to discuss and work on together are open for discussion where there may be scope for practical cooperation and collaborative actions in the Atlantic region.

Based on this approach, 19 Atlantic habitats have been identified as Low Hanging Fruits (LHF). It is noted that 2 LHF habitat is also included in the 20 Atlantic habitats previously identified for priority consideration. In total, therefore, 37 Atlantic habitats are considered in this document: it summarises their current status, management issues and threats, as well as possible solutions, which may form the basis for future cooperative actions in the Atlantic region.

In the online consultation conducted to help prepare this document, Atlantic experts were asked to share their knowledge of the status of all the habitats, including their views on the Atlantic LHF habitats identified. All of the Atlantic habitats considered in this document are listed in Table 1 below.

Table 1. Overview of all habitats per habitat group in the Atlantic biogeographical region

Coastal and dunes (including estuaries)			
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat
1130	Estuaries		Yes
1230	Vegetated sea cliffs of the Atlantic and Baltic coasts	Yes	
1310	Salicornia and other annuals colonizing mud and sand		Yes
1340*	Inland salt meadows	Yes	
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	Yes	
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")		Yes
2130*	Fixed coastal dunes with herbaceous vegetation ("grey dunes")		Yes
2140*	Decalcified fixed dunes with Empetrum nigrum	Yes	
2180	Wooded dunes of the Atlantic, Continental and Boreal region	Yes	
2190	Humid dune slacks		Yes
Wet and dry grasslands			
Habitats Directive	Habitat name	Low Hanging	Priority

code		Fruit	consideration habitat
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)		Yes
6230*	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)		Yes
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)		Yes
6440	Alluvial meadows of river valleys of the <i>Cnidion dubii</i>	Yes	
6510	Lowland hay meadows (<i>Alopecurus</i> pratensis, Sanguisorba officinalis)		Yes
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)		Yes
Heaths and bogs			
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat
4010	Northern Atlantic wet heaths with <i>Erica</i> tetralix	Yes	Yes
4030	European dry heaths		Yes
5230*	Arborescent matorral with Laurus nobilis	Yes	
7110*	Active raised bogs		Yes
7140	Transition mires and quaking bogs		Yes
7230	Alkaline fens		Yes
Rivers and lakes			
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration
			habitat
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	Yes	habitat Yes
3110	minerals of sandy plains (Littorelletalia	Yes	

	benthic vegetation of <i>Chara</i> spp.		
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation		Yes
3180	Turloughs	Yes	
3260	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation		Yes
3270	Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation	Yes	
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)		Yes
Other habitats – woodland and forests			
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat
9110	Luzulo-Fagetum beech forests	Yes	
9130	Asperulo-Fagetum beech forests	Yes	
9150	Medio-European limestone beech forests of the <i>Cephalanthero-Fagion</i>	Yes	
91A0	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Yes	
91C0*	Caledonian forest	Yes	
91J0	Taxus baccata woods of the British Isles	Yes	
9260	Castanea sativa woods	Yes	

2.3 Thematic issues

Based on replies to the Atlantic expert consultation and in discussion with the host, several thematic issues have been identified as a useful basis for specific discussion during the 2nd Atlantic Seminar – these are:

- Integrated management approaches to Natura 2000
- Adaptive approaches to agriculture and nature conservation
- Communication and stakeholder engagement
- Setting conservation priorities

The themes will be of particular interest during the 2nd Atlantic Natura 2000 Seminar mainly because of the scope they may hold for possible cooperation and collaborative actions. Also, there are several current projects and excellent examples related to these themes which will provide useful 'food for thought' to trigger discussions. Subject to the views of participants at the Seminar, there are opportunities to consider and share views about, for example:

- Issues related to integrated management planning linked to a multiple benefits agenda for example, flood mitigation; coastal zone management; forestry management; locally-led and results-based agri-environmental schemes.
- Approaches to setting restoration priorities, including considerations of scale and scope for cooperation, as well as ways to improve and better structure coordination of such approaches.
- Methods and means to initiate, continue or improve communication about Natura 2000, particularly in terms of public engagement and outreach for example, the value of working with Atlantic flagship species and/ or habitat types to communicate the importance and purpose of Natura 2000 in tangible ways: also, effective solutions which may be applied, specifically related to management of conflicts.
- The approach used to identify "low-hanging fruit" and appropriate cooperative management actions which could be developed and implemented in order to accelerate progress towards improving the conservation status or achieving favourable conservation status of LHF habitats; setting conservation objectives at different scales; dealing with potentially conflicting conservation priorities; experience with Favourable Reference Values at which levels can these usefully be set?

Although possibly out of the scope of the Natura 2000 Biogeographical Process, there is evidence of increasing interest to incorporate social, cultural and ecological aspects relevant to nature and its conservation. The concept of working through and with Natura 2000 in order to generate and achieve cross-cutting multiple benefits, often across sectors, and in order to integrate diverse priorities in different policy agendas is of particular interest.

Such ideas are most obvious in relation to, for example, concepts of nature-based solutions where Natura 2000 sites' ecosystems and their services are being managed in order to protect against floods: also, there are equally opportunities to increase outreach and extend public engagement in Natura 2000 conservation management through, for example, collaborative work on flagship species or habitat types. In addition though, there is also evidence of the growing awareness of opportunities to strengthen implementation of Natura 2000 by consciously linking natural and cultural heritage. Also in the Atlantic Region, there are possible multiple benefits to be derived from strengthening connections between people and place, including customs and traditions – for example, to promote eco-tourism and enhance visitor numbers.

3 General observations about Natura 2000 in the Atlantic biogeographical region

In the online consultation, experts addressed a broad range of significant developments that have influenced Atlantic habitats in positive and negative ways. Limited but noticeable improvements have been achieved in a variety of habitats, particularly in dunes habitats, where the institution of the Nature 2000 throughout Europe, according to some experts' opinion, seem to be doing already a good job in improving their conservation status. All in all, concern for the preservation of the dunes has become an important topic in national policies. Now there is a need for the local version of good practice to be encouraged by the State.

More specifically, with relevance to coastal dune habitats, the development of holistic approaches to shoreline management planning (e.g. Shoreline Management Plans in England & Wales or the Dutch coastal policy) shows that EU habitats can be protected and enhanced by appropriate coastal policies, including habitat creation linked to coastal defence works. There is a gradual increase in appreciation of the role of coastal habitats in helping to manage flood and erosion risk, followed by a move towards more 'soft engineering', still yet to be fully adopted. This does show potential for less damage by the hard defences in future and measures to restore ecosystems. There is a need to embed these approaches in coastal defence planning throughout the Atlantic region by sharing good practice examples, developing international communication projects and influencing national coastal policy.

The second significant change is a growing optimism that the challenges for coastal dune habitat management can be met with sufficient resources and commitment from national authorities. In recent years large-scale dune rejuvenation projects have been carried out in the Netherlands and, for several Dutch habitats, future prospects are now classed as favourable. This momentum needs to continue and to spread to other Member States.

A gradual increase in appreciation of the role of coastal habitats in helping to manage flood and erosion risk has meant a move to more 'soft engineering', still yet to be fully adopted but does mean potential for less damage by hard defences in future and measures to restore systems. A move to more strategic, long-term approaches to risk management (such as Shoreline Management Plans in England) based on information about coastal processes and accompanied by monitoring programmes has been beneficial, for example by creation of new habitat in compliance with the Directives.

There is knowledge available, and there are now examples of successful restoration starting to show results for several Atlantic habitats. Next to the already mentioned coastal dune habitats, there are examples of successful restoration of freshwater habitats, good species-specific measures, as well as nature development examples.

LIFE programme has a significant role in the conservation and restoration action. For example, in Ireland, considerable effort has been invested in addressing threats and pressures in the three Burren SACs (for 6210, 8240 and 6510), in particular through the initiatives: BurrenLIFE, the Burren Farming for Conservation Programme and the "new" Burren Programme. The momentum gathered in the Burren has provided inspiration to other Natura areas within Ireland and across Europe. In addition: progress is currently being made in the Aran Islands (for 6210, 8240 and 21A0) through the

AranLIFE project; the KerryLIFE project is currently addressing the improvement in status of freshwater pearl mussel populations in two catchments in Kerry; RBAPS, an Irish/Spanish partnership funded by DG Environment, is exploring results based approaches to deliver favourable conservation condition in an area of dual designation (SAC and SPA) in the Shannon Callows. The Dept of Agriculture in Ireland have advanced a novel innovation in the current RDP which allows for the development of Locally-led approaches to conservation management.

Also the Water Framework Directive (WFD) contributes significantly to the improvement of the freshwater habitats through the improvement of water quality. This improvement of water quality had a tremendous positive effect on aquatic species of community interest and has resulted in the return of some fish species in lower parts of the rivers.

Nevertheless, situation is still far from ideal. The fact remains that the Atlantic region is a very densely populated region with many pressures to nature and biodiversity from numerous land-uses and various human activities. Fragmentation is a growing problem in densely populated areas (which make up a large part of the Atlantic Region). Fragmentation pressure further increases due to, for example, renewable energies (e.g. corn crops, or wind energy as direct threat to species such as bats, birds, marine mammals). The fact remains that there is far too high nutrient status (both N and P), affecting mainly low productive habitat types (e.g. 4010, 4030, 6210, 6230, 6410, 3110, 3130). Altered hydrology in the lowlands is another problem, affecting especially wetlands (4010, 7110, 7140, 7230 and to some degree also Rivers and lakes).

Also the impacts of climate change are becoming more and more obvious: measured changes such as sea level rise, increased rainfall, reduced wind and warmer conditions threaten open habitats such as coastal and inland dunes through vegetation growth, loss of bare sand and increased susceptibility to IAS moving northwards. Despite, and because of these challenges, there is a need for an active programme of bare sand creation. Without such interventions the loss of open habitats will continue. Related to climate change, invasive species spread from south to north. Coastal dunes are especially vulnerable to invasion, yet particular problem species are not included on the EU lists. Cooperation between MS is needed to establish and maintain early-warning systems.

In conclusion, integrated management planning and management of various ecosystem types had a positive effect on the overall results of biodiversity conservation efforts, but also on awareness raising and willingness to act of both decision makers and the general public. The concept of ecosystem services also helped to get attention and approval from public opinion for conservation oriented issues and measures.

Programmatic approach towards ubiquitous pressures such as water pollution, atmospheric deposition, and invasive species look like a promising approaches to tackling these issues (the Natura 2000 Biogeographical Process is trying to promote these: e.g. for nitrogen). Nevertheless, economical issues and measures still tend to prevail and tilt the overall balance of integrated management plans to the negative side for conservation issues – especially estuaries suffer of net habitat destruction and quality loss due to deepening and infrastructure development. Conservation issues in estuarine management plans are still mostly subordinate to the economical aspects.

Feedback from Atlantic experts regarding the strategic orientation of the Natura 2000 Biogeographical Process (See Annex 2) and how the Process can be further applied in the Atlantic region

As part of the consultation exercise, the following feedback has been received from Atlantic experts, summarised per strategic objective of the Natura 2000 Biogeographical Process.

1. To strengthen and focus the work of the Process in contributing to meeting the EU 2020 Biodiversity objectives, primarily the full implementation of the nature directives (Target 1), i.e. the improvement of conservation status.

As it was pointed out, the Living Planet Report 2014 shows an ongoing massive decline in biodiversity between 1970 and now – also for Europe. Achieving the EU 2020 biodiversity objectives will achieve at most that this negative trend is stopped. Therefore reaching favourable conservation status for species and habitats as defined by the Birds and Habitats directive is crucial but also minimal. For many habitats and species there are no signs these objectives are being reached. This stresses the need for ongoing effort to find ways to realize conservation objectives.

Experts feel that the improvement of conservation status should remain in the focus as it is still declining. Trying to meet the requirement of obtaining favourable conservation status is not target specific as the means chosen is mostly general regulation and voluntary agri-environmental schemes (not result based). However, not only improving the conservation status is important, but also the guarantee of the conservation of the current values. This may also take considerable action and funding. A general awareness of the full requirements of obtaining FCS and the cost of it should give a strong motivation for target specific management actions.

It would therefore be useful to strengthen the focus look for synergies in the implementation of the Birds and Habitats Directives and other relevant European Directives (e.g. WFD; MSFD, IAS) and enhance communication between all parties involved. Also it would be good to look for more links or synergies between habitat creation (in favourable conservation status) and adaptive climate strategies; and to pay special attention to the management of cross-border Natura 2000 sites.

There is a need to make an overview of the 2020 goals of each MS. Such overview could be a starting point to evaluate within the Process for which habitat types a significant improvement should be expected, or for which habitats there is a need to strengthen the cross-border cooperation actions.

Lack of information about the real situation is one of the main bottlenecks according to some experts. Information about the real situation is available in several MS but does not flow to the EC. Perhaps the best way to stimulate this is to check the information the MS provide to the EC in the field, not only on paper. Could possibly be done by volunteers and NGO's, but would require a specific administrative structure and adequate funding.

Some experts do not agree with the newly suggested 'low hanging fruit' (LHF) approach and caution strongly against any focus on LHF at the expense of building a long-term strategy for achieving FCS. From experience in the UK, there is a danger that increasing the focus on short-term delivery tends to be associated with pressure to implement measures that do not align with long-term strategic goals, and often move the natural environment towards a more artificial and engineered condition. A

focus on short-term delivery also tends to result in pressure to force down long-term restoration ambition to match what is achievable from short-term measures. It is possible to build a long-term strategy within which short-term measures are identified that contribute to long-term strategic goals, but the long-term strategy is required in order to identify the right measures. On the other hand, the LHF concept is already integrated in the Flemish Natura 2000 policy, (i.e. 16 Flemish priority habitats have been identified, which should reach the FCS by 2020, or, at least all measures should be taken before 2020 in order to make a FCS possible).

An important observation is that the work of the Process would be strengthened by better engagement with practitioners. Most practitioners in the field (site managers) have little knowledge of terms such as Article 17, PAFs, FRV etc. Therefore, they do not feel part of the 'process'. MS authorities should do more to engage with and support practitioners, involving them in research projects, helping to disseminate best practice and supporting multi-disciplinary habitat networks (e.g. by supporting network and exchange events). It is essential to involve the site managers in the conceptual discussions and in order to facilitate this involvement to develop a more practical approach and vocabulary for the process. The implementation discussions of the European nature directive are for the moment being carried out in a much too "esoteric" vocabulary and methods.

The experts also see added value in changing the format of the Seminars slightly. While priority habitat groups have been identified upon which to focus efforts in the Atlantic Biogeographical process, most issues negatively affecting Natura 2000 (e.g. in Ireland) are cross-cutting. Therefore, it is useful to also focus on thematic issues-based groups. This will also better facilitate the consideration of species-related issues (including bird), which have not been well covered in the past.

The main problem in the unfavourable conservation status in the Atlantic region is the quality of the habitat types (i.e. structure and function). This is mainly caused by a surplus of nitrogen (deposition), modification of hydrological systems and insufficient or wrong management. The last is mainly a matter of costs (if traditional [agricultural] management is no longer profitable) and sometimes knowledge. So the main focus areas should be 1) nitrogen, 2) hydrology, 3) financing and 4) knowledge transfer.

Invasive species are increasingly threatening N2000 habitat goals. There is a European invasive exotic species policy being developed but this is not focussed on the biggest threats on nature (N2000 habitats). Deciding together which are the invasive exotic species which cause the biggest problems for N2000 habitats in the Atlantic region (and for which measures would help preventing this) would help to get these on the list of the European invasive species policy list and help N2000 conservation.

Further suggestions by the Atlantic experts on actions towards the improvement of the conservation status include:

- Seek ways to more effectively mainstream basic biodiversity requirements more holistically into farm business decisions consider coherence of EU policies in the CAP mid term review.
- Better communication with the general public about the benefits of biodiversity and perhaps sharing of experiences between member states.
- Continue to support transfer of best practice amongst member states and encourage and support development of a 'Natura network' (elite club) within each member state/region.
- Provide platforms for and actively stimulate exchange of knowledge and experience. Organize a 'best practice tour'.

- Ensure all member states are aware of relevant international research related to the delivery of biodiversity targets.
- Foster links with the Business and Biodiversity Platform to encourage businesses to promote/require biodiversity outcomes within their supply chain.
- More effectively embed natural capital and ecosystems services concepts into EU action programmes.
- Better balance between social impact of nuisance of species and the profit/gain of a species to
 protect them no matter what. Take into account the effects for the social environment in relation
 to the effect on the species.
- More and better international cooperation in tuning the ecological infrastructure across borders.
- Let forest just develop. Create new forest site where humans do not interfere at all, for instance alluvial forests.
- Agriculture create every year a percentage of the Agricultural area as temporary nature.
- Create more reserves for fish species, for instance in areas were also wind turbines are situated.
- Improve the cooperation within the whole river basins (river system including floodplains). Allow for floodplains to exist.
- Concentrate only on alien species that invade our natural ecosystems.
- Look at the urbanisation and abandonment of the countryside as an importance chance to make new nature areas throughout the Atlantic region.
- Resolve apparent conflicts resulting from the implementation of Natura 2000 at the site level by applied research with participation by the competent ministry, relevant provinces and stakeholders in the particular region.
- Focus on specific problems of the habitat types (such as 6230), instead of general discussions.

2. To develop, discuss and work on implementation strategies for biogeographical level favourable reference values (FRVs).

Before taking the discussions on FRVs any further it is important to be clear on what is the purpose of biogeographical FRVs and why do we want to have them. It could be to assess a biogeographical level conservation status; or it could serve as a tool to facilitate the cross-border cooperation between MS. As the MS keep their national responsibilities anyway, the biogeographical FRVs will only help the latter.

Also, a top-down approach should look into the needs of better communication and the question: What does FRV really mean? We need to demystify the terminology and engage more with practitioners. Have we got enough of a habitat and could we restore/ create more is a simpler question. In all cases where Range is unfavourable there should be a response- can anything be done about it? Where Area is unfavourable in all cases there should also be a national plan (perhaps as part of PAFs). FRVs are not something that practitioners can change unless they are working within a national policy. If FRVs have any meaning they must be backed up with the potential for large-scale habitat restoration/ creation at the scale of national spatial plans. Making the FRVs as concrete and SMART as possible will be very helpful, especially when these concrete targets/objectives can also be placed in time. This will help to get them on the radar by decision makers and will help to mainstream with other policy areas.

There is a need for a high level strategic agreement on setting biogeographical FRVs before more in depth work can be started, as an attempt to align the approaches between MS would be difficult due to political and juridical issues. Such work should start by compiling reports on identifying similarities and dissimilarities between MS and start the discussion on FRVs from there (e.g. by organising a small and targeted expert workshops to elaborate the theme). It might also help to study the WFD intercalibration process. The differences per MS are often linked to the specific situation in each MS, such as natural and anthropogenic differences, colonization debt, intensity in land use and fragmentation of the habitat types etc.

Often there are big differences between north of Europe and South of Europe (e.g. for 2120, 2130 and 2190), or even between the north and the south of a single MS. In France, for example, the differences between the regions between the north of Brittany until the Belgium border, and the south of Brittany until Spanish border are very strong, especially in vegetation dynamic. Sedimentary conditions, rainfall and vegetation dynamics can be very different between the regions, and therefore the management should also be adapted. It may be that in the first instance the discussion should be started with the "neighbouring" experts and, only then broader.

A statement was made that in order to improve understanding of FRVs, there needs to be more emphasis on getting better data about the resources and how they function. For example, coastal environments can be mapped with remote sensing but may need more detailed analysis and ground-proofing due to their relatively small scale and linear nature. More information about sediment processes, sources and sinks will also help, requiring other types of science like coastal geomorphology.

Also using biogeographical knowledge on species and habitats and using this for a focus of targets and priority setting for FRVs was suggested. Listing which species are confound to the Atlantic region and depend on certain habitats for survival of the entire population could be a good start. Examples are *Carex trinervis* and *Viola curtisii* for coastal dunes (2190 and 2130 respectively). This work should certainly include invertebrates, as plants are only a part of the story². Distribution of these species will tell us where to look; their ecology what to do.

In general, we should start by identifying the concrete threshold as an unfavourable conservation status changes to a favourable one for each parameter of the EU-Matrix and each objective. Compared with the present situation it will then be possible to have an idea how much effort will be necessary to reach favourable conservation status for each objective.

Further suggestions include looking at whole ecosystems in a particular period of time (historical range, differentiation within rage e.g. subtypes, variability) and have the same ambition too reach those ecosystems again.

According to some experts, FRVs at an Atlantic level should be addressed primarily by the MSs responsible for the core areas (both in extent and quality) of certain (groups of) habitat types: guiding principles need to be established and applied by relevant parties.

² see e.g. Howe et al. 2010 Journal of Coastal Conservation

It is important to note that there is an ongoing (2015-2017) EC service contract on Defining and applying Favourable Reference Values (FRVs) for species and habitats under the EU Birds and Habitats Directive. The contractor's consortium works in close co-operation with the EC and EEA.

3. Strengthening the marine aspect of the Process. Should this be left to the Marine Process or should particular issues also be dealt with in the Atlantic Process?

The answers from experts to this question are somewhat contradictory and range from keeping the two processes completely separate to having different levels of integration. Part of the experts suggests that the marine process should be kept separate. They think that in general the situation in the marine environment differs greatly from the terrestrial environment. There are other uses, pressures, (natural) processes and food chains and also the experts are very separated (most terrestrial ecologists know very little about the sea and the other way around). Moreover the sea is much more one entity, where not only species easily and freely cross member state borders, but also people (e.g. fisheries in the waters of other member states).

However, some of them do recognise that there are important connection for specific habitat types (beach, fore dune, salt marsh) and these do need to be addressed also by the marine process. Also, some aspects like pollution and fish migration, and all marine habitats transition to coastal and terrestrial are clearly linked to the terrestrial process and require a combined discussion of these aspects in both processes. In this approach, fishery and no-take zone, and offshore reefs (e.g.1170), are seen as purely a marine issue and should be left to the marine process.

Some experts emphasize the importance of considering the marine habitats and highly mobile marine species (whales, dolphins, turtles) into the Atlantic discussions, and also consider marine aspects as very important for the river systems. The concept of management unit is common as well (e.g. protected sites) to both terrestrial and marine conservation planning, management and evaluation.

In any case, considering that a lot of Atlantic habitats are coast and water related, it is impossible to ignore the connections. On the policy level, evident is the need for clear integration with the Marine Strategy Framework Directive (MSFD). The forum where the marine aspect is handled should be experts on both the MSFD and the HD.

Some experts point out that strengthening of marine aspect is especially relevant for some habitats (e.g. 1130). In particular the targets for lagoons and estuary should be well "intercalibrated". In these transboundary systems there are several directives (HD, MSFD or regional conventions (e.g. OSPAR) that could give input/facilitate to the conservation process). At present, these seem to be parallel circuits rather than joint directives with rather a common goal. Additional problem can be separation of responsibilities between federal and regional governments in relation to marine issues (e.g. in Belgium).

In general, when addressing coastal habitats (saltmarshes, shingle, dunes etc) a marine dimension must be included. Dune management, for example, must follow a hierarchical approach that takes account of climate, sediment source type, sediment supply and geomorphologic processes before considering options for habitat management. The near-shore, beach and coastal habitats are one

sedimentary unit. Also from a faunistic point of view shallows, beaches, dunes, sea inlets and salt marshes constitute one coherent system as e.g. sea-birds (e.g. terns) nest on beaches and dunes, but forage at sea. Where possible, coastal nature reserves and other coastal protected areas should include a continuous sequence of shallows, beaches, dunes and hinterland of the dunes (e.g. polders).

4. Identifying further initiatives to facilitate and further develop cooperation between Member States, stakeholder organisations, environmental NGOs and specialist networks on the management of Natura 2000 as a coherent ecological network.

All experts agree that there is a need for more and better cooperation at the biogeographical — Atlantic — scale. As the best way to stimulate this kind of cooperation the experts suggest more active sharing of available (published) information and knowledge (not only scientific/biological knowledge but also practical experience), and organising of meetings and conferences. There is a real benefit in participating in such events and expert networks. These, however, need to be targeted at real, carefully selected, priorities. Facilitating and resourcing small focused (low budget) events and then disseminating the lessons learned for a broader benefit (such as the nitrogen tour) might be a positive way to go about this.

The experts agree that there is a communication issue to ensure that the high-level strategic discussions on Natura 2000, which set the scene, are translated into practical delivery, advocacy and awareness raising activities. As the way to achieve this, several experts suggested establishment of habitat based networks or working groups (some habitats are already dealt with in existing working groups). The value of such network should be recognised at EU/Member State level and they should be supported and acknowledged by the MS nature conservation bodies, they should coordinate inter-disciplinary studies and they should reach out to and be relevant for practitioners. As one of such groups, a real European transnational communication network was suggested, focusing in particular on coastal habitats and their main threats and management challenges that should involve field practitioners as well as the "usual experts". The OBN approach³ with field workshops was suggested as an effective model for improving the cooperation between stakeholders, NGOs and specialist.

For the funding of the above described activities, next to the MS funding, the experts felt that the EU support in funding (from LIFE or otherwise) would be beneficial.

Enhancing the funding possibilities for large Life(+) projects and encouraging more of these projects targeted to a few Habitats/ species for a whole biogeographical region was also one of the suggestions.

Joint management of cross-border sites is another important aspect of MS collaboration⁴. This can include joint development of conservation objectives and measures at both sides of the border, and adjustment of protection regime. In this way, the management is the most effective and efficient for both countries, and where necessary, they can share financing for larger projects in the site.

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³ For more info see: http://ec.europa.eu/environment/nature/natura2000/platform/documents/atl-seminar-report-21042013 en.pdf

LTV 2030 Scheldt estuary is an example: http://ec.europa.eu/ourcoast/download.cfm?fileID=801

4 Summary of comments received for all habitat groups

This chapter presents an overview status of the Atlantic Biogeographical Region, but in particular of the four individual habitat groups within the region. It summarises current pressures, factors needed to improve the conservation status, and other relevant observations, per habitat group. In addition to the four habitat groups, 'other habitats' are included which have been identified as a result of applying the 'Low Hanging Fruits' methodology - in this case all of these habitats belong to the woodland and forest habitat group. The information provided is based on analyses of data from the latest article 17 reports, produced in consultation with the ETC-BD and incorporates feedback of Atlantic experts gathered during the online consultation exercise.

Due to the modest size of the response group certain factors in the results seem to be of much greater importance, but, in general, the experts' feedback is in line with the factors reported in the latest Article 17 reporting round.

Therefore, chapter 4 is structured as follows:

- 4.1. Summary of issues and solutions in the Atlantic biogeographical region
- 4.2. General comments provided by experts for the Low Hanging Fruit habitats
- 4.3. Coastal and dunes (including estuaries)
- 4.4. Wet and dry grasslands
- 4.5. Heaths and bogs
- 4.6. Rivers and lakes
- 4.7. Other habitats

Atlantic experts were requested to participate in an online consultation in which they could address the status of Atlantic habitats. For ease of reference, pie-charts, tables and text have been used to summarise key information. In addition, annexes 4 to 8 contain individual fact sheets per habitat, combined per habitat group, which provide detailed information on their status. These annexes have been developed in consultation with the ETC-BD.

4.1 Summary of issues and solutions in the Atlantic biogeographical region

The following sections provide an overview of current pressures, conservation requirements, solutions and opportunities to improve habitats' conservation status per habitat group: in addition, equivalent information is summarised for the new LHF habitats in section 4.7. 'Other habitats'. Also, actions, cooperation opportunities and/or remarks for the habitats selected for priority consideration plus the low hanging fruit habitats are summarised per group. The overviews are based on analyses of data from the latest Article 17 reporting and expert feedback gathered during the consultation exercise.

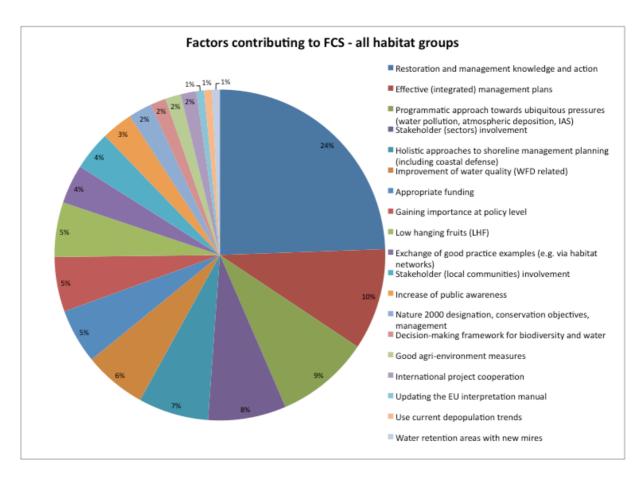


Figure 2 Results from Natura 2000 Biogeographical Process expert consultation: Factors contributing to FCS for the habitats in the Atlantic biogeographical region

As shown in figure 2, based on the expert consultation, the most frequently reported successful means to improve conservation status for all habitat groups is to implement restoration activities (which are starting to show results), and to apply appropriate management actions. Together these two actions were reported in almost a quarter of the responses (24%). For both restoration and management there seems to be enough knowledge and good practice examples across the region. Also effective (integrated) management plans (10%), programmatic approach towards pressures like water pollution and atmospheric deposition (9%) and stakeholder involvement (8%) are frequently mentioned and deliver valuable contribution towards improving the conservation status. In general the holistic integrated thinking, cross-sectoral cooperation and increase in stakeholder dialogue seem to be the approach delivering the most results. This has also led to a better recognition at the policy level, which in return leads to an improved availability of funds. With regards to stakeholder involvement, cooperation with coastal groups is specifically mentioned. Natura 2000 designation and conservation objectives are also mentioned as the tools delivering results – although there are issues to improve in relation to the EU Habitats Manual.

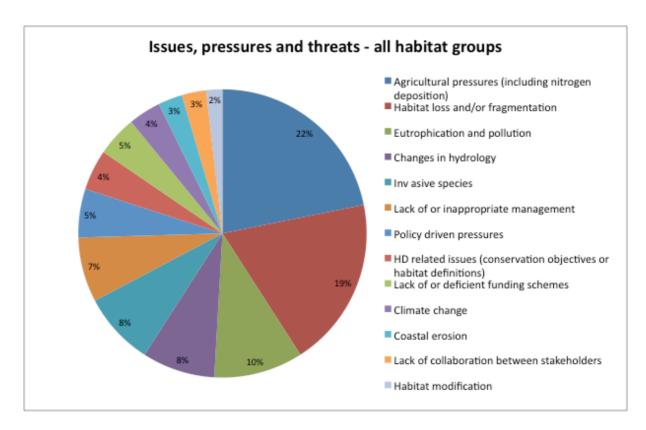


Figure 3 Results from Natura 2000 Biogeographical Process expert consultation: Issues, pressures and threats for all the habitats in the Atlantic biogeographical region

Looking at the pressures to habitats across the Atlantic region it is obvious that we are looking at the region under a lot of pressures from many different land uses with agriculture having a major role. Almost a quarter of pressures mentioned in the expert consultation questionnaire (22%) are related to agriculture and nitrogen deposition issues, with additional 10% pressures relating to eutrophication and pollution that are closely related. The next most frequently mentioned pressure is habitat loss and or fragmentation with 20%. Together these three pressures make for more than half of the responses (51%). Changes in hydrology (i.e. mostly drying out) and invasive species (8% each) are also major threats to the conservation status of habitats ion the Atlantic region.

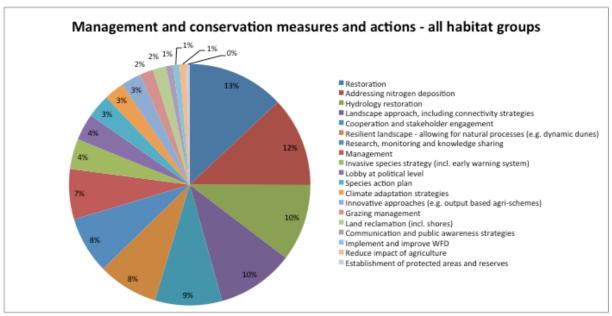


Figure 4 Results from Natura 2000 Biogeographical Process expert consultation: *Management and conservation measures and actions for the habitats in the Atlantic biogeographical region*

Overall, the major conservation requirement that came forward most often for all habitats together is the need for restoration strategies, both on land and for water (hydrology), totalling 23%. This would yield improved conservation status and progress towards achieving Targets 1 and 2 of the EU 2020 Biodiversity Strategy in particular. Specifically removal of top soil, mechanical removal of vegetation and (seasonal) water quantity were mentioned. 'Rivers and Lakes' are the habitat group where (hydrology) restoration is most often mentioned (32%).

Addressing nitrogen deposition was another important area identified. Experts mentioned the promising work through PAN, but they also identified the need to focus more on the source.

The landscape approach, including connectivity strategies, and the need for cooperation and stakeholder engagement were both identified as important as well. For the landscape approach, experts mention the need to consider non-N2000 targets and reducing fragmentation. With regards to stakeholders, the experts mentioned cooperation with farmers and coastal groups, payments to third parties and applying innovative approaches like output-based agriculture measures.

4.2 General comments provided by experts for the Low Hanging Fruit habitats

Atlantic experts were also consulted on the newly selected Low Hanging Fruits and, specifically, the types of cooperative actions they could foresee as being implemented to achieve greater progress towards improved conservation status. Their feedback also provided information on what experts consider the 'Lowest Hanging Fruit', as well as information about other habitats that they consider as additional Low Hanging Fruits. The 'Lowest Hanging Fruits' selected by the experts are displayed in table 2. Experts from three countries (Belgium, Germany and Ireland) marked one of the habitats as the 'Lowest Hanging Fruit': 3270 Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation. Table 3 shows the list of other habitats that the experts consider potential Low Hanging Fruit habitats. Additional two habitats were identified by the experts from three countries (Belgium, Germany, United Kingdom): 2130 *Fixed coastal dunes with herbaceous vegetation (grey dunes) and 2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariea*).

The results produced, however, reflect the fact that experts are more likely to address only those habitats of which they have direct experience or specialist knowledge. In addition, most experts addressed Low Hanging Fruits habitats for their own country and acknowledge that the status and conservation needs of a specific Low Hanging Fruits habitat might vary in other Member States. Also not all LHF habitats appear in all member states, or they sometimes appear in a very limited range and area. Some experts argue that the LHF methodology is difficult to understand.

Interestingly, the experts have come up wit the list of 21 LHF habits of their own (table 3), in addition to the list produced using the LHF methodology of the ETC/BD. For example, Belgium (Flanders) already has a list of 16 habitats that are classified as priority habitats, for which measures should be taken before 2020 – similarly to the LHF approach.

On the other hand, some experts call for caution in following the LHF approach, especially in regarding whole habitat or species features as low-hanging fruit, unless they are associated with dry conditions in naturally dry locations and are of limited spatial extent. Restoration of water-related habitats and their species complements is a long-term undertaking and requires a coherent strategy. Therefore, oligotrophic systems such as 4010, 3110 and 3140 should not be considered as low hanging fruits. Woodlands are also difficult to be perceived as the low hanging fruits as they require a very long time to recover – in most cases several decades.

The advice to the Commission is to resist pressure to think in terms of short-term 'quick-wins' at the expense of thinking about long-term strategy. Progress can be made in the short-term - but in terms of measures applied in certain geographical locations that can improve the conservation status of a range of habitats and species, rather than measures that can take individual habitat or species features all of the way to favourable conservation status quickly. This difference in emphasis does however require a more refined reporting system for tracking progress with improving conservation status.

Some experts fear that LHF method appears very "administrative" and it does not necessary lead to the desired improvement, because only a few habitat types will improve. Considering the current biogeographical conservation status, it could also be assessed, depending on which parameters should be improved, how many and which Member States have to improve what to make the change in the biogeographical conservation status. In this way not all MS have to improve everything (e.g. for 6110 it is enough if only Hungary improves area to FV to come to a favourable assessment for the Biogeographical region, there is no need for Czech Republic to improve future prospects). On the downside: the larger MS almost always have the largest proportion of the habitat type and consequently are almost always the ones who have to improve.

Vegetated sea cliffs of the Atlantic and Baltic coasts (1230) in England and other parts of the UK which have not had artificial stabilisation could be quickly improved in quality by addressing invasive species on cliff slopes and faces and restoration of cliff top land to low-intensity semi-natural vegetation types. Addressing invasive species early reduces the ongoing scale and difficulty of waiting until it is a real problem. A range of issues were highlighted in the 2013 Cliff Symposium⁵. For 1230,

ECNC, CEEweb, Eurosite, Europarc, ELO, ILE SAS

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 $^{^{5}}$ Published as a series of papers in the Journal for Coastal Conservation 2015 vol 19 no 6.

and many other habitats, there are benefits to developing public knowledge of conservation needs, getting them engaged in projects (e.g. citizen science mapping of habitat or species types) and then being engaged in working with projects - these could include crowdfunding of certain aspects such as local projects.

In Germany **Inland salt meadows** (1340) occur on a few sites only and seldom conflict with economic affairs. Also **Alluvial meadows of river valleys of the** *Cnidion dubii* (6440), because of its restricted range and location in protected areas would have some chance for improving.

Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) (1420) in the UK can be promoted more in coastal management schemes. They require little management but need the right level of the intertidal to be available for colonisation. Decreasing fragmentation and ensuring these are not mown during sea wall maintenance works would help improve their status. This requires a better communication with sea defense managers and the public.

It is felt that it would be excellent if the UK and Ireland could make a major push towards FCS for **machair** (21A0) which is currently U1+. A challenge here might be a low coverage of this habitat within the Natura 2000 series (37%). LIFE projects in the UK and in Ireland (Aran Islands) have addressed aspects of agricultural best practice for this habitat and it would be useful to start discussing a plan for machair already at the Atlantic Biogeographic Seminar in Ireland. As a first step the MS could propose a joint approach based on the PAFs and scientific input through the machair study group⁶ as part of the European Dune network

For some dune habitat types there seem to be issues with the Interpretation Manual and the identification of the habitat types (e.g. 2170, 2130 and 2190). This could be addressed by a field excursion and a workshop in France / Netherlands/ Belgium involving vegetation specialists and managers from the relevant member states. Results from this event could be written up in the style of the EU management models. Following a workshop an assessment can be made whether targeted action can improve the status of the habitat (2170) from U1- to U1= or whether it remains intricately linked to the condition of 2130 and 2190 which is a more challenging target. Also a favourable 'Future Prospects' assessment for 2170 in the Netherlands gives optimism.

For Atlantic decalcified fixed dunes (2150) some 65% of the habitat in the Atlantic region is within the UK. With a major dune restoration and management project (to begin in 2018) being developed in the UK, if this habitat can be targeted then it should be possible to aim for a U2+ assessment by 2020. In the Netherlands this habitat has favourable 'Future Prospects'. It should be possible to set a target to move the trend from U2= to U2+ through the application of management measures.

Also, there is overlap between **Decalcified fixed dunes with** *Empetrum nigrum* (2140) and 2150 in several MS and issues for this habitat could be included in the LHF push for 2140. Denmark would be the natural leader for 2140 (for both Atlantic and Continental) and with several LIFE projects currently underway should be able to take on an additional task to develop best practice and work with other MS (especially Germany and the Netherlands). Taking a lead for this habitat, as suggested in the LHF analysis, could be a catalyst for a Danish Dune Network (an idea put forward at the LIFE

ECNC, CEEweb, Eurosite, Europarc, ELO, ILE SAS

⁶ http://www<u>.abdn.ac.uk/geosciences/departments/geography-environment/machair-study-group-1024.php</u>

Platform meeting in June 2016). According to some, 2140 is the least demanding ecologically; in fact decalcified form of other more demanding coastal dune grassland/heathland types.

2140 is closely related to **Fixed coastal dunes with herbaceous vegetation (grey dunes)** (2130) and updated guidance could be a parallel document to the EU management model for 2130. A further idea on how to improve the status of 2130 is to work with managers of dune sites with golf courses to promote better management and conservation of the remaining dune grasslands.

For wooded dunes of the Atlantic (2180), there has been very little exchange of information across the Atlantic, Continental and Boreal regions. In the Interpretation Manual it has a wide definition and can include natural and semi-natural forests and includes spontaneous woodland on fixed dunes and dune slacks. Before pushing ahead with the habitat as a LHF much more needs to be learned about how the habitat is identified and monitored in each MS. There is a concern that a 'wooded dune' as defined in one MS may be considered a threat to 2130 or 2190 in another MS. In the Atlantic region France (with 20,000 ha) and the Netherlands (with 8,100 ha) are identified as leads in the LHF analysis. A first step, perhaps led by France, would be an Atlantic workshop on wooded dunes to confirm whether MS are comparing like with like. This could be followed-up by a seminar with Continental and Boreal MS.

Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. (3140) probably has the lowest surface of all listed habitats so to achieve an improvement in the Atlantic Region would perhaps require the least effort. The habitat is also occurring outside of Natura 2000 sites and nature reserves, e.g. in canals, where it benefits from measures taken to achieve the Water Framework Directive requirements.

Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation (3270) is a pioneer type from nutrient-rich dynamic habitats requiring only dynamics and tolerating consequences of dynamics (such as sediment loads). It also develops within the fresh water tidal reaches of 1130. It is important to note that this habitat also includes gravel bank communities with different requirements in some MS. This habitat requires reducing river maintenance (wherever possible) and reducing artificial bank stabilization. It would easily develop in sheltered tidal areas such as flood control areas with controlled reduced tide, managed realignment sites under specific design conditions – synergy with flood protection to ensure larger retention areas.

For *Luzulo-Fagetum* beech forests (9110) it is needed to allow for natural dynamics by improving the structure. However, an important issue is that the definition of this habitat differs between member states in such degree that comparing the conservation status makes hardly sense.

Table 2. Lowest Hanging Fruits based on results of online expert consultation

	Belgium	Germany	Ireland	Netherlands	United Kingdom
1230 Vegetated sea cliffs of the Atlantic and Baltic coasts				1	1
1340* Inland salt meadows		2			
2140* Decalcified fixed dunes with <i>Empetrum nigrum</i>				1	1
2180 Wooded dunes of the Atlantic, Continental and Boreal region	1			2	
6440 Alluvial meadows of river valleys of the <i>Cnidion dubii</i>		1			
3140 Hard oligomesotrophic waters with benthic vegetation of <i>Chara</i> spp.	1			3	
3270 Rivers with muddy banks with <i>Chenopodion rubri</i> p.p. and <i>Bidention</i> p.p. vegetation	2	1	1		
9110 Luzulo-Fagetum beech forests				2	
9150 Medio-European limestone beech forests of the <i>Cephalanthero-Fagion</i>	1	1			

Table 3. Potential other Low Hanging Fruits habitats proposed by experts in the online expert consultation

	Belgium	Germany	United Kingdom
1140 Mudflats and sandflats not covered by seawater at low tide	1		
1320 Spartina swards (Spartinion maritimae)	1		
1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)		1	
1420 Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	_		1
2110 Embryonic shifting dunes	1	1	
2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	1	1	
2130 *Fixed coastal dunes with herbaceous vegetation (grey dunes)	1	1	1
2140 * Decalcified fixed dunes with <i>Empetrum</i> nigrum		1	
2150 Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)		1	1
2160 Dunes with Hippophae rhamnoides	1	1	
2170 Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariea</i>)	1	1	1
2190 Humid dune slacks	1		
21A0 Machairs			1
2310 Dry sand heaths with Calluna and Genista		1	
2330 Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands		1	
6120 * Xeric sand calcareous grasslands		1	
6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates(<i>Festuco-Brometalia</i>) (* important orchid sites)	1		
7110 * Active raised bogs	1		

7210 *Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	1
7220 * Petrifying springs with tufa formation (<i>Cratoneurion</i>)	1
7230 Alkaline fens	1
8310 Caves not open to the public	1

4.3 Coastal and dunes (including estuaries)

4.3.1 Summary description

Five LHF habitats (1230, 1340, 1420, 2140, 2180) have been added to the five habitats originally selected for priority consideration. Based on the Article 17 reporting, overall, the coastal and dunes (incl. estuaries) habitats are assessed as unfavourable–inadequate or unfavourable-bad with a stable or negative trend. Exceptions are habitats 1310 and 2120 in Denmark, both favourable and a few cases of a positive trend. These exceptions do not influence the overall negative status.

Table 4. Atlantic coastal and dunes (including estuaries) habitat group

Coastal and dunes (i	Coastal and dunes (including estuaries)					
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat			
1130	Estuaries		Yes			
1230	Vegetated sea cliffs of the Atlantic and Baltic coasts	Yes				
1310	Salicornia and other annuals colonizing mud and sand		Yes			
1340*	Inland salt meadows	Yes				
1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	Yes				
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")		Yes			
2130*	Fixed coastal dunes with herbaceous vegetation ("grey dunes")		Yes			
2140*	Decalcified fixed dunes with Empetrum nigrum	Yes				
2180	Wooded dunes of the Atlantic,	Yes				

	Continental and Boreal region	
2190	Humid dune slacks	Yes

4.3.2 Factors contributing to a Favourable Conservation Status

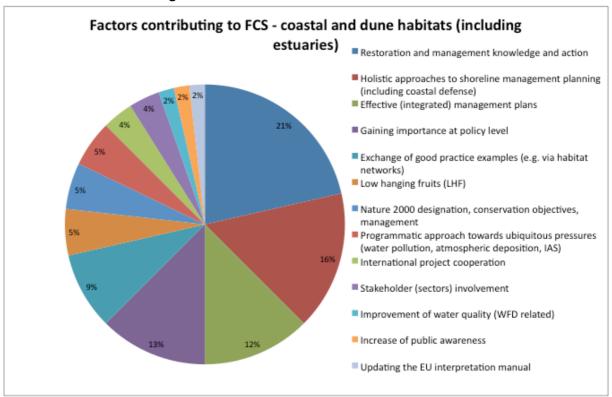


Figure 5 Results from Natura 2000 Biogeographical Process expert consultation: Factors contributing to FCS – coastal and dune habitats (including estuaries) in the Atlantic biogeographical region

Experts identified five factors that they regard as holding potential opportunities and solutions for coastal and dunes habitats, totalling 71%. These are: 1) Existing knowledge of and implementation of the restoration and management actions, 2) holistic approaches to shoreline management, 3) effective (integrated) management plans, 4) gaining importance at policy level, and 5) exchange of good practices.

The holistic approach to shoreline management integrates the concepts of a landscape strategy (including connectivity), creating resilient ecosystems, i.e. allowing natural processes to take place, and integrated management planning including improved stakeholder engagement — doing conservation together. This can be summarized as 'crossing borders': going outside the geographic scope and including other sectors and conservation targets. This involves a change in mindset, shifting away from site-focused management. Also restoration should be considered in a landscape context. This shift in mindset is likely to have implications for current conservation systems, including subsidies.

4.3.3 Issues, pressures and threats

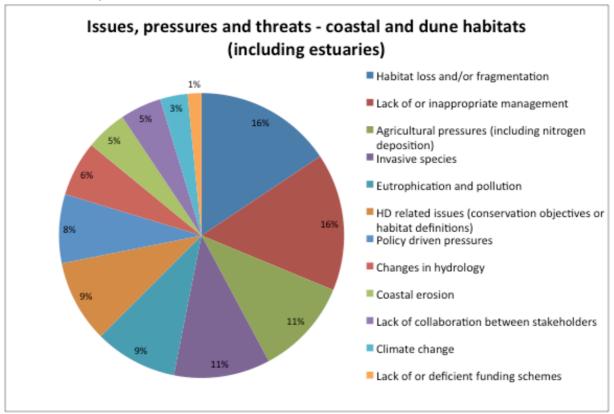
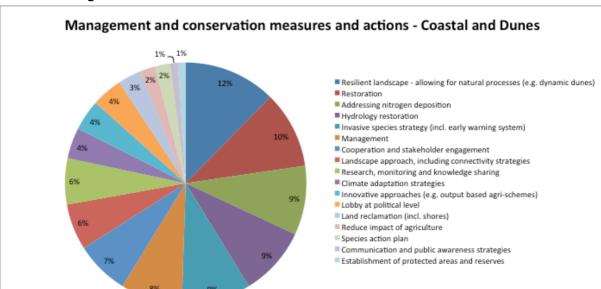


Figure 6 Results from Natura 2000 Biogeographical Process expert consultation: *Issues, pressures and threats – coastal and dune habitats (including estuaries) in the Atlantic biogeographical region*

According to the experts, the four most pressing issues threatening coastal and dunes habitats are 1) habitat loss and/or fragmentation, 2) lack of or inappropriate management, 3) agricultural pressures (incl. nitrogen deposition), and 4) invasive species, totalling 54%. In relation to inappropriate management both too intense or lack of grazing is mentioned.

This is in line with pressures identified in the Article 17 reporting. Additionally the following pressures were mentioned: human activities such as leisure, trampling, overuse of natural resources, dumping of waste, human structures for habitation, coastal protection and shipping industry. Also erosion, estuarine and coastal dredging were mentioned. Water-related pressures include use of water, modification of the water flow and bad water quality.

The factors discussed during the 2012 Atlantic Seminar (which may still be relevant to consider) are: large scale loss of natural habitat, interference with natural dynamics, lack of integrated approach, invasive alien species, climate change, lack of communication, in-appropriate sediment management and habitat fragmentation.



4.3.4 Management and conservation measures and actions

Figure 7 Results from Natura 2000 Biogeographical Process expert consultation: *Management and conservation measure and actions – coastal and dunes habitats in the Atlantic biogeographical region*

Restoration, both of land and water (hydrology) was the most important conservation measure for all coastal and dunes habitats mentioned by the experts, totalling 19%. The Article 17 reporting confirms this priority and specifically mentions improving the hydrological regime and improved quality of coastal areas and water. Several other important measures were mentioned as well, also shown in the graph above.

Experts indicated that allowing natural processes to thrive, leading to a resilient ecosystem is the second most important conservation measure. This is also referred to as the 'Dynamic Dunes' strategy. The Dynamic Dunes strategy, (hydrology) restoration, addressing nitrogen deposition and implementation of an invasive species strategy add up to 51% of most important measures.

In the Article 17 reporting regulating exploitation of natural resources was presented as an important measure. This includes, waste management, waste water treatment, reducing and managing recreational activities, water abstraction, fishing and hunting. Additionally legal protection of habitats and species, establishment of protected areas and sites, erosion control, grazing, blocking of vegetation succession and avoiding conversion to other land use were mentioned as well.

4.4 Wet and dry grasslands

4.4.1 Summary description

Of the six Atlantic wetland habitats, one LHF habitat (6440) has been added to the five originally selected for priority consideration. Based on the Article 17 reporting, the wetland habitats are assessed as unfavourable—inadequate or unfavourable—bad, with a stable or negative trend.

Table 5. Atlantic wet and dry grassland habitats

Wet and dry grasslar	Wet and dry grasslands					
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat			
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)		Yes			
6230*	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)		Yes			
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)		Yes			
6440	Alluvial meadows of river valleys of the <i>Cnidion dubii</i>	Yes				
6510	Lowland hay meadows (<i>Alopecurus</i> pratensis, Sanguisorba officinalis)		Yes			
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)		Yes			

4.4.2 Factors contributing to a Favourable Conservation Status

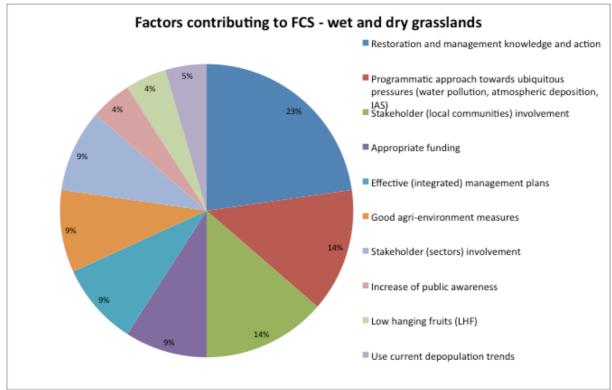


Figure 8 Results from Natura 2000 Biogeographical Process expert consultation: Factors contributing to FCS – wet and dry grasslands in the Atlantic biogeographical region

Experts identified five factors that they regard as holding potential opportunities and solutions for wet and dry grasslands habitats, totalling 69%. These are: 1) Existing knowledge of and implementation of the restoration and management actions, 2) programmatic approach towards pressures like water pollution, deposition and invasive species, 3) stakeholder involvement, 4) appropriate funding, and 5) effective (integrated) management plans.

With regards to the first factor (restoration and management action), grazing management is the main issue. Grasslands in general suffer from lack of or too intensive grazing regimes. It is vital to identify and implement the correct grazing intensity for conservation management. In addition to this is the eutrofication and increased deposition – therefore the programmatic approach to these comes high as a possible solution.

4.4.3 Issues, pressures and threats

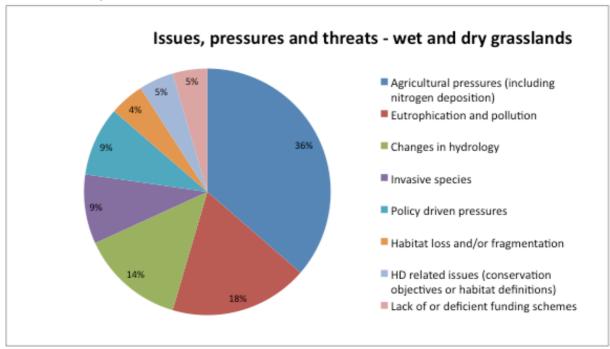


Figure 9 Results from Natura 2000 Biogeographical Process expert consultation: *Issues, pressures and threats – wet and dry grasslands in the Atlantic biogeographical region*

Experts reported eight different pressures on wet and dry grasslands habitats. Agricultural pressures are mentioned by 36% of the experts. This includes nitrogen deposition and insufficient grazing and mowing regimes. Either there is no vegetation removal due to mowing or grazing due to agriculture abandonment, or the grazing regime is too intensive. Agricultural pressures together with 1) eutrophication and pollution, 2) changes in hydrology, and 3) invasive species add up to 77% of the pressures. Fragmentation, mentioned by 4% of the experts, is considered an important pressure in the Article 17 reporting.

Additionally, the Article 17 reporting mentions changes in species composition due to succession. This is also related to lack of grazing and mowing. Furthermore, changes in the hydrological system and groundwater extraction are important pressures.

4.4.4 Management and conservation actions

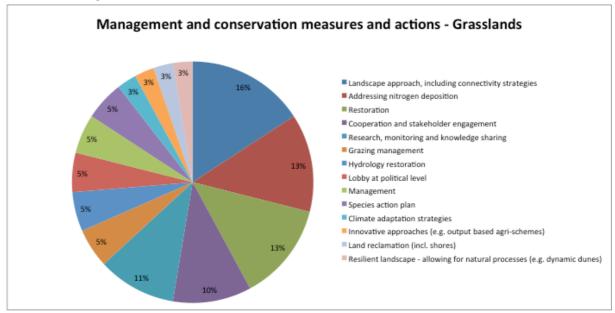


Figure 10 Results from Natura 2000 Biogeographical Process expert consultation: *Management and conservation measures and actions – grasslands habitat in the Atlantic biogeographical region*

In order to improve the conservation status of wet and dry grasslands, the five most important conservation measures according to the experts are: 1) landscape approach (incl. connectivity), 2) addressing nitrogen deposition, 3) restoration, 4) cooperation and stakeholder engagement and 5) research, monitoring and knowledge sharing, totalling 63%.

Restoration of abandoned grasslands is also mentioned as a priority in the Article 17 reporting.

Besides restoration, the Article 17 reporting mentions other priority conservation measures than those of the experts. The five most important measures from the Article 17 reporting include: 1) grassland maintenance due to proper grazing and/or mowing management, 2) hydrology restoration, 3) restoration of abandoned grasslands, 4) establishment of protected areas and 5) managing landscape features.

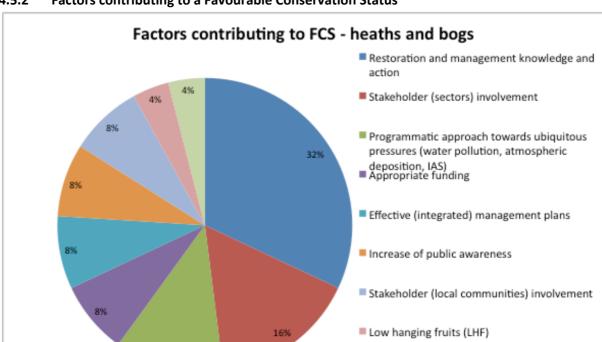
4.5 Heaths and bogs

4.5.1 Summary description

Of the six Atlantic heaths and bogs habitats, two have the LHF status. Habitat 5230 was added and habitat 4010, originally selected, was also given the LHF status. Based on the Article 17 reporting, the heats and bogs habitats are generally assessed as unfavourable—bad and unfavourable-inadequate with a stable or negative trend. Exceptions are habitat 4030 with a favourable assessment in Denmark and Portugal, habitat 7140 with a favourable assessment in Spain and habitat 7110 having a stable, negative and positive trend.

Table 6. Atlantic heath and bog habitats

Heaths and bogs					
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat		
4010	Northern Atlantic wet heaths with <i>Erica</i> tetralix	Yes	Yes		
4030	European dry heaths		Yes		
5230*	Arborescent matorral with Laurus nobilis	Yes			
7110*	Active raised bogs		Yes		
7140	Transition mires and quaking bogs Yes		Yes		
7230	Alkaline fens		Yes		



4.5.2 Factors contributing to a Favourable Conservation Status

Figure 11 Results from Natura 2000 Biogeographical Process expert consultation: Factors contributing to FCS – heaths and bogs in the Atlantic biogeographical regions

In total, experts reported nine different solutions and opportunities for the heaths and bogs habitat types. The three most mentioned are 1) existing knowledge of and implementation of the restoration and management actions, 2) stakeholder involvement and 3) programmatic approach towards pressures like water pollution, atmospheric deposition and invasive species, together 60%.

Water retention areas with new mires

4.5.3. Issues, pressures and threats

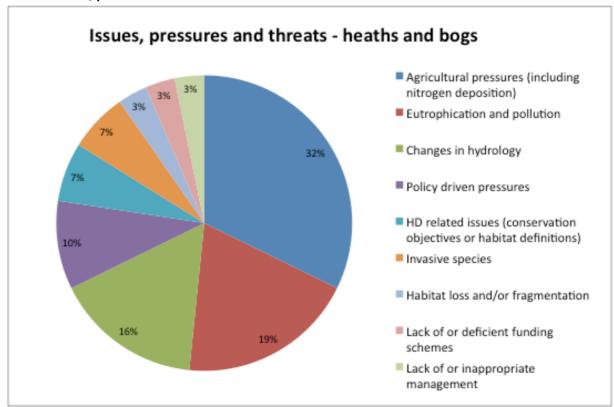


Figure 12 Results from Natura 2000 Biogeographical Process expert consultation: *Issues, pressures and threats – heaths and bogs in the Atlantic biogeographical region*

According to the experts, the four most pressing threats to heaths and bogs are 1) agricultural pressures (incl. nitrogen deposition), 2) eutrophication and pollution, 3) changes in hydrology and 4) policy driven measures, totalling 77%. Policy driven measures include policies promoting renewable energies (wind farms and solar fields), lack of adequate assessments for projects, and the UK leaving the EU.

In the Article 17 reporting a wide range of threats and pressures were reported. As highly important is noted lack of grazing caused by abandonment of agricultural practice, which also leads to succession and vegetation changes.

Other threats, mentioned by both the experts and the Article 17 reporting include fragmentation caused by infrastructure, habitat deterioration by leisure activities, inappropriate management actions like fire and fire suppression and invasive species.

4.5.4. Management and conservation actions

Figure 13 Results from Natura 2000 Biogeographical Process expert consultation: *Management and conservation measures and actions – heaths and bogs habitats in the Atlantic biogeographical region*

Experts mentioned twelve conservation measures for managing heaths and bogs habitats. The five most important ones are 1) restoration, 2) addressing nitrogen deposition, 3) landscape approach (incl. connectivity strategies), 4) cooperation and stakeholder engagement and 5) research, monitoring and knowledge sharing, totalling 66%. Hydrology restoration is also important, mentioned by both the experts and the Article 17 reporting.

The above measures are in line with the Article 17 reporting. Additionally, establishment of protected and wilderness areas, legal protection of habitats and species and invasive species strategies are mentioned as well.

The landscape approach includes traditional forms of management for habitat maintenance within a wider heathland complex. These practices are aimed at stopping succession to woodland and balanced grazing, to maintain open areas. However, for the management and restoration measures, no standard management prescription can be made because each site presents unique challenges. The preparation of management plans should be based on detailed knowledge of the particular site.

4.6. Rivers and lakes

4.6.1. Summary description

Of the eight rivers and lakes habitats, four are assessed as LHF habitat. Habitats 3140, 3180 and 3270 are newly added and habitat 3110 was originally selected. Based on the Article 17 reporting, most rivers and lakes habitats continue to have unfavourable—bad and unfavourable-inadequate conservation status with positive, stable and negative trends. There are a few exceptions: habitat 3130 is assessed favourable in Portugal, habitat 3140 favourable in Belgium, habitats 3150 and 3260 favourable in France, habitat 3270 favourable in Ireland and Portugal and habitat 91E0 favourable in Portugal.

Table 7. Atlantic river and lake habitats

Rivers and lakes					
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat		
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	Yes	Yes		
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea		Yes		
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	Yes			
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation		Yes		
3180	Turloughs	Yes			
3260	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation		Yes		
3270	Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation	Yes			
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)		Yes		

Factors contributing to FCS - rivers and lakes Improvement of water quality (WFD related) 7% Restoration and management knowledge and action 25% Appropriate funding Programmatic approach towards ubiquitous pressures (water pollution, atmospheric deposition, IAS) Decision-making framework for biodiversity and water Effective (integrated) management plans 11% Low hanging fruits (LHF) 11% Stakeholder (sectors) involvement

4.6.2. Factors contributing to a Favourable Conservation Status

Figure 14 Results from Natura 2000 Biogeographical Process expert consultation: Factors contributing to FCS – rivers and lakes in the Atlantic biogeographical region

For rivers and lakes habitats, improvement of water quality (related to the Water Framework Directive) and restoration and management knowledge and action are by far the most important factors contributing to a favourable conservation status. Together these two factors account for 50%. Additionally, appropriate funding and a programmatic approach towards pressures like water pollution, atmospheric deposition and invasive species are mentioned as well.

4.6.3. Issues, pressures and threats

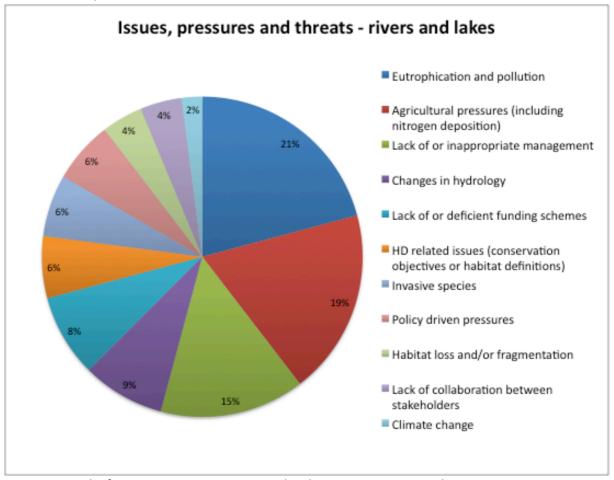


Figure 15 Results from Natura 2000 Biogeographical Process expert consultation: *Issues, pressures and threats – rivers and lakes in the Atlantic biogeographical region*

According to the experts and the Article 17 reporting, the four most important pressures on rivers and lakes habitats are 1) eutrophication and pollution, 2) agricultural pressures (incl. nitrogen deposition), 3) lack or inappropriate management and 4) changes in hydrology, totalling 64%.

Identified sources of pollution include agriculture on land and water (fish farming) forestry, industry (mining) and households. Additionally human disturbance through leisure activities and fishing is mentioned as well. For the LHF habitat 3180, intensive grazing is specifically mentioned as a threat.

4.6.4. Management and conservation measurements and actions

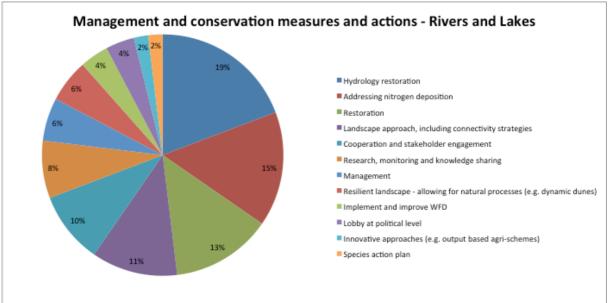


Figure 16 Results from Natura 2000 Biogeographical Process expert consultation: *Management and conservation measures and actions – rivers and lakes habitats in the Atlantic biogeographical region*

For the rivers and lakes habits, (hydrology) restoration is a very important measure, mentioned 32% in the expert consultation. This focus is confirmed by the Member States in the Article 17 reporting. The restoration of rivers and lakes habitats is about improving water quality and quantity (hydrological regime). It includes measures for reducing diffuse pollution from agriculture and forestry as well as point pollution by industry or by household sewage. To achieve this, collaboration with different stakeholders, but especially farmers, is needed.

Additionally, addressing nitrogen deposition (pollution), landscape (management) approach and cooperation and stakeholder engagement are mentioned by the experts as well.

In the Article 17 reporting, establishment of protected areas, legal protection of habitats and species and addressing invasive alien species are considered medium priority.

4.7. Other habitats – woodland and forest

4.7.1. Summary description

Applying the Low Hanging Fruit methodology has resulted in the identification of seven other Atlantic habitats (all belonging to the woodland and forest habitat group) as Low Hanging Fruits. They do not fall within any of the previous habitat groups (coastal and dune habitats and estuaries; wet and dry grasslands; heaths and bogs; rivers and lakes) and are thus discussed separately.

Based on the Article 17 reporting, most woodland and forest habitats have an unfavourable—bad and unfavourable-inadequate conservation status with stable and negative trends.

Table 8. Other Atlantic habitats – woodland and frost habitats

Other habitats – woodland and forests				
Habitats Directive code	Habitat name	Low Hanging Fruit	Priority consideration habitat	
9110	Luzulo-Fagetum beech forests	Yes		
9130	Asperulo-Fagetum beech forests	Yes		
9150	Medio-European limestone beech forests of the <i>Cephalanthero-Fagion</i>	Yes		
91A0	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	Yes		
91C0*	Caledonian forest	Yes		
91J0	Taxus baccata woods of the British Isles	Yes		
9260	Castanea sativa woods	Yes		

4.7.2. Factors contributing to a Favourable Conservation Status

Probably due to the fact that all woodland and forest habitats were not originally selected as priority habitat, there was not much feedback received by the experts. It can be assumed that the most important factors for all habitats are also relevant for this habitat. These include restoration (also hydrology), addressing nitrogen deposition and a landscape management approach, including connectivity strategies.

4.7.3. Issues, pressures and threats

Probably due to the fact that all woodland and forest habitats were not originally selected as priority habitat, there was not much feedback received by the experts.

According to the Article 17 reporting, the main issues are: 1) inadequate forest management, 2) air pollution (acid rain and nitrogen input) and 3) succession and invasive species. Inadequate forest management includes insufficient measures re. removal of dead trees, allowing grazing in forest areas, fire regime and fire suppression.

Additionally, leisure activities, hunting, fragmentation due to infrastructure development and restructuring of agricultural land holdings are mentioned.

4.7.4. Management and conservation measures and actions

Probably due to the fact that all woodland and forest habitats were not originally selected as priority habitat, there was not much feedback received by the experts.

Member States, through the Article 17 reporting, mention the following management actions as having priority: restoration, adequate forest management, establishing protected or wilderness areas and managing leisure activities.

Forest management is linked to several strategic issues, such as natural regeneration, recovery of typical species, diversification of both horizontal and vertical structures, encouraging species diversity, i.e. mixed stands, precautions regarding infrastructures, specific biodiversity measures, e.g. maintaining dead wood, etc. Faced with threat of afforestation with non-native trees, it is important to favour indigenous species, local ecotypes and rare tree species and mixed species stands. As regards structure, it is advisable to maintain heterogeneity (vertical and horizontal) and good connectivity for species with low dispersal capability. On a landscape scale, it is advisable to have several regimes (reserves, coppices, even-aged stands, uneven-aged stands) in a mosaic, which could be achieved by creating more small cutting and regeneration areas. It is advisable to develop microhabitats, such as mega-trees and old trees, and decaying or dead wood to increase forest biodiversity and provide suitable habitat for species of European interest (Thauront et Stallegger 2008). Additionally, managing grazing activities and fire management should be part of a forest management plan.

5. Additional information – species and best practice cases

5.1. Species

In the online consultation, experts mentioned several species and actions related to species management that may benefit from a greater cooperation between the Atlantic Member States. Some experts see the species cooperation as needed and in relation to the integration of species objectives within the objectives of Annex I habitats wherever this is possible, and more broadly within the context of naturally functioning ecosystems. It was also recognised that such cooperation would benefit all mobile and migratory species crossing borders and those with major populations extending across several member states that are not in favourable conservation status.

Further to this, there were also several concrete suggestions made:

Invertebrates

For invertebrates freshwater pearl mussel (*Margaritifera margaritifera*) and two butterfly species were mentioned in this context: *Maculinea alcon* and *Euphydryas aurinia*.

Fish

All anadromus fish species (strongly linked to the marine region) would benefit from more biogeographical level cooperation (*Alosa alosa* and *Coregonus oxyrhynchus* were mentioned specifically). More specifically, it was mentioned that ensuring good water quality in transnational waters, resolving international fish migration bottlenecks would benefit: *Lampetra planeri*, *Cobitis taenia*, *Cottus perifretum*.

Amphibians

Great crested newt (*Triturus cristatus*) would benefit from ensuring connection of appropriate habitat and migration possibilities in border regions. One such example is between the populations in the French and Belgian coastal dunes where cross border cooperation between France and Belgium (Flemish region) is needed. Similarly for Natterjack toad (*Epidalea (Bufo) calamita*), to restore a population in the cross border nature site Zwin and its surroundings cooperation between Belgian (Flemish) and Dutch authorities and nature managers is needed.

Rana lessonae, R. arvalis, Hyla arborea, Alytes obstetricans and Pelobates fuscus would all benefit from ensuring connection of appropriate habitat in border regions, while the last one would also benefit from an international cooperation to maintain its genetic diversity.

Reptiles

The sand lizard (*Lacerta agilis*) is found in five member states (Germany, Denmark, France, Netherlands and UK). Its conservation status is U1 (U1 + in NL and UK) except for France where it is U2=. The sand lizard is a particularly good indicator of the health of the dune system and is present in all dry habitat types from the mobile dunes, through fixed dunes to dune heath and open scrub. It is a species which could be used as a focus for discussions on the importance of fauna in dune management. In setting monitoring criteria for dune condition the distribution of a species such as this one can identify issues of fragmentation, value of corridors etc. Some scientific groups such as

the OBN Knowledge Network in the Netherlands⁷ stress the importance of combining studies of fauna alongside the monitoring of the effects of habitat management. Smooth snake (*Coronella austriaca*) would also benefit from ensuring connection of appropriate habitat and migration possibilities in border regions.

Birds

Regional cooperation was highlighted for migratory birds in general, shorebirds (*Charadriiformes* - waders) and farmland birds (also often migratory). More specifically, combining of monitoring data on an international scale, similar to what is being done for the Birds Directive reporting, was mentioned. Some specific examples include: Red-backed shrike (*Lanius collurio*), Corncrake (*Crex crex*), hen harrier (*Circus cyaneus*), Western marsh harrier (*C. aeruginosus*), Montagu's harrier (*C. pygargus*).

Some more specific examples of possible regional cooperation are *Nycticorax nycticorax*, *Egretta garzetta*, *Platalea leucorodia*: to enlarge the populations of these migratory birds along the Atlantic coasts of Europe more nesting ((semi-)natural Willow and Alder forests – habitat types 2180 and 91E0) and foraging opportunities (open water in salt marshes – habitat types 1130 estuaries and 1150* coastal lagoons – and ponds in wet dune slacks – habitat type 2190) should be provided by nature restoration of nature development measures along the coasts of all Atlantic member states. A strong international networking and cooperation between authorities competent for conservation and conservation NGO's should be developed in order to achieve this.

Charadrius alexandrinus, Sterna albifrons, S. sandvicencis, S. hirundo: these outspoken coastal bird species are also pioneer species that tend to colonize new fitting sites and leave them when these sites get too strongly overgrown by the vegetation. These pioneer coastal bird species are also very vulnerable to predation or catastrophic events (e.g. storms during the nesting season). Their "nomadic" lifestyle and vulnerability require that a much larger number of suitable nesting sites along the Atlantic coasts of Europe should be provided (congruent with e.g. habitat types 1210 Annual vegetation of drift lines and 2110 Embryonic shifting dunes), allowing the colonies of terns and plovers to move from one place to another in case of unfavourable events (new predation, meteorological catastrophes...). A strong international networking and cooperation between authorities competent for conservation, coastal defence and finally harbours (as terns and plovers often start nesting on newly created port sites) as well as between site managers should be developed.

Mammals

For mammals, a need for more and better regional cooperation was highlighted for marine mammals (seals, dolphins, whales), large terrestrial mammals such as otter (*Lutra lutra*), wild cat (*Felis silvestris*), wolf (*Canis lupus*), lynx (*Lynx lynx*), all bat species, and some small mammals such as European hamster (*Cricetus cricetus*) and hazel dormouse (*Muscardinus avellanarius*).

5.2. LIFE projects and other cases in the Atlantic biogeographical region

The EU LIFE Programme supports European actions within environmental, nature conservation and/ or climate objectives. LIFE aims to contribute to 'the implementation, updating and development of

⁷ http://www.natuurkennis.nl/index.php?actie=losse_paginas&id=8

EU environmental and climate policy and legislation by co-financing projects with European added value'. More information about LIFE can be found at its website: http://ec.europa.eu/environment/life/ and more projects can be found in the LIFE database: http://ec.europa.eu/environment/life/project/Projects/

There are important opportunities to increase the long-term benefits that accrue from Natura 2000 projects, many of which are funded through LIFE. Such benefits would be enhanced by independent project monitoring, often beyond the lifetime of a specific project. This is considered important so that lessons can be learned from successes as well as failures.

Table 9. LIFE projects that are key examples of management experience in the Atlantic region

MS	Project name	Habitat group	Short description	Link to the project
DK	REDCOHA-LIFE - Restoration of Danish Coastal Habitats	Coastal and dunes (including estuaries)	Restoration of Danish Coastal Habitats - improving the condition of coastal dune habitats: 2120, 2130*, 2140*, 2180, and 2190 though hydrological measures, clearing of plantations, combatting IAS, e.g. Rosa rugosa	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=4618
DK	RAHID - Restoration of Atlantic Heaths and Inland Dunes in Denmark	Heaths and bogs	The main objective of the project is to improve the conservation status and, if possible, increase the surface area of dry sand heaths with Calluna and Genista (2310), dry sand heaths with Calluna and Empetrum nigrum (2320), inland dunes with open Corynephorus and Agrostis grassland (2330), Northern Atlantic wet heaths with Erica tetralix (4010), European dry heaths (4030)and Juniperus communis formations on heaths (5130).	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=3835
DK	SMOOTH - Restoring Sølsted Mose - a contribution to the network of Danish raised bogs (7110*) in favourable conservation status	Heaths and bogs	This project targets the restoration of raised bog habitat and the management of the Annex II-listed European weatherfish (Misgurnus fossilis) within the Sølsted Mose habitat area in Denmark.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=4052
DK	Houting - Urgent actions for the	Rivers and lakes	The overall aim was to restore and maintain a favourable conservation	http://ec.europa.e u/environment/life

	endangered Houting "Coregonus		status for the threatened houting in four Danish river systems.	/project/Projects/in dex.cfm?fuseaction
	oxyrhunchus"		Specific objectives included the	=search.dspPage&n
	,		removal of weirs and dams in those	proj id=2947
			river systems; the construction of	
			riffles or meanders in order to	
			facilitate upstream migration; and	
			the decommissioning of two	
			hydroelectric power plants and	
			four fishfarms.	
DK	REMAB - Restoration	Wet and	The project's overall aim was to	http://ec.europa.e
	of Meadow Bird	dry	restore, or enhance the	u/environment/life
	Habitats	grasslands	conservation status of areas of	/project/Projects/in
			habitats for dunlin and ruff at four	dex.cfm?fuseaction
			key sites in Denmark. The project	=search.dspPage&n
			actions targeted 13% of the	proj id=3108&doc
			country's dunlin population and 9%	Type=pdf
			of its ruff population.	
DK	DRY GRASSLAND -	Wet and	The project aimed to follow on	http://ec.europa.e
	Dry Grassland in	dry	from the 2004-2008 project and	u/environment/life
	Denmark -	grasslands	continue with the restoration and	/project/Projects/in
	Restoration and		conservation of dry grassland in	dex.cfm?fuseaction
	Conservation		Denmark, in new locations using	=search.dspPage&n
			the experience obtained in the	<u>proj_id=3551</u>
			previous grassland project,	
			supplemented with other methods.	
FR	Life+-Pêche A Piede	Coastal and	The project aims to validate	http://ec.europa.e
	Loisir - Pilot	dunes	effective and transferable methods	<u>u/environment/life</u>
	experiments on	(including	for promoting sustainable	/project/Projects/in
	sustainable and	estuaries)	approaches to shore-based sea	dex.cfm?fuseaction
	participatory		angling in 11 pilot areas.	=search.dspPage&n
	management of			_proj_id=4704&doc
	recreational seafood			Type=pdf
	hand harvesting			
IE	LIFE Irish Raised Bogs	Heaths and	The overall aim is to improve the	http://ec.europa.e
	- Restoring Active	bogs	conservation status of the Annex I	u/environment/life
	Raised Bog in		Habitats Directive habitat 'Active	/project/Projects/in
	Ireland's SAC		Raised Bog', through the	dex.cfm?fuseaction
	Network 2016 - 2020		protection and restoration of 12	=search.dspPage&n
			Natura 2000 network sites in the	_proj_id=5321
			midlands of Ireland.	
IE	LIFE Kerry -	Rivers and	The project's aims to: To	http://ec.europa.e
	Sustainable land use		demonstrate effective	<u>u/environment/life</u>

	management for the conservation of the freshwater pearl mussel	lakes	conservation measures that will restore the freshwater pearl mussel to favourable conservation status in the Caragh and Blackwater catchments; To enhance awareness and understanding of the freshwater pearl mussel among local	/project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=5050&doc Type=pdf
			stakeholders; To demonstrate sustainable management techniques for farming and forestry in freshwater pearl mussel catchments; and To provide guidance for farming and forestry practices that support the conservation of freshwater pearl mussels.	
NL	Dutch dune revival - Realisation of Natura 2000 targets for calcareous white, grey dunes and dune slacks in three Dutch dune sites	Coastal and dunes (including estuaries)	The main aim of this project is to enlarge and restore habitats and increase the presence of rare and characteristic species.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =home.createPage &s ref=LIFE09%20 NAT/NL/000418&a rea=1&yr=2009&n proj id=3853&mod e=print&menu=fals e
NL	"Healthy Heath" - Propagation and development of dry, moist and wet heath in the Dwingelderveld SPA and pSCI	Heaths and bogs	The aim of this project is to restore the natural water balance over 1 100 ha of Dwingelderveld, and to transform the Noordenveld. The project will undertake actions including combating dehydration, eutrophication and acidification; enlarging the area of moist heath within the Natura 2000 area; improving the quality of acid fens, active and recovering raised bogs, depression vegetation, and species-rich grasslands; and reducing disruption to the animals and birds characteristic of the area.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n proj id=3562

NL	Blues in the Marshes - Habitat restoration & development for Scarce and Dusky Large Blue in N2K area Vlijmens Ven, Moerputten and Bossche Broek	Wet and dry grasslands	This project aims to restore the habitat of two highly threatened butterfly species in Europe, the scarce large blue [Phengaris (Maculinea) teleius] and dusky large blue [Phengaris (Maculinea) nausithous]. Both butterfly species are listed in Annexes II and IV of the Habitats Directive and the project is aiming for a significant improvement in the resilience of their populations.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=4316
ES	LIFE+ARCOS - In situ and Ex situ innovative combined techniques for coastal dune habitats restoration in SCIs of northern Spain	Coastal and dunes (including estuaries)	The project aims to improve the conservation status of the targeted Cantabrian coastal sand dunes. It specifically aims to restore coastal sand dune habitat within 10 Natura 2000 sites.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=4887
ES	TREMEDAL - Inland wetlands of Northern Iberian Peninsula: management and restoration of mires and wet environments	Heaths and bogs	The overall intention is to improve the conservation status and resilience of the peaty and wet habitat types in the project locations.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=4280
ES	MARGAL ULLA - Recovery of populations of Margaritifera margaritifera and Galemys pyrenaicus inn the Ulla river basin (Galicia).	Rivers and lakes	The overall objective is to help improve the conservation status of the freshwater pearl mussel and Pyrenean desman in the Ulla river basin, and establish suitable conditions for recovery of the original populations.	http://ec.europa.e u/environment/life /project/Projects/in dex.cfm?fuseaction =search.dspPage&n _proj_id=3844
ES	LIFE OREKA Mendian - Conservation and management of Basque mountain grasslands	Wet and dry grasslands	The project goal is the conservation and management of mountain pastures of Euskadi and Iparralde.	n.a.
UK	Alde-Ore - The Alde- Ore Estuary -	Coastal and dunes	The Alde-Ore project aimed to develop the management and	http://ec.europa.e u/environment/life

	Securing a	(including	infrastructure of two exceptional	/project/Projects/in
	sustainable future	estuaries)	Natura 2000 wildlife sites, Orford	dex.cfm?fuseaction
	for wildlife	cocaaries,	Ness and Havergate Island, in the	=search.dspPage&n
	Tor Wilding		Alde-Ore estuary to sustain and	proj id=3537
			enhance the habitats and species	<u>_proj_id_3337</u>
			of European significance.	
			-	
UK	Cumbrian BogsLIFE+	Heaths and	The project targets the restoration	http://ec.europa.e
	- Restoration of	bogs	of degraded lowland raised bog	u/environment/life
	degraded lowland		within three Natura 2000 network	/project/Projects/in
	raised bogs on three		sites: Bolton Fell Moss, South	dex.cfm?fuseaction
	Cumbrian SCI/SACs		Solway Mosses, and Roundsea	=search.dspPage&n
			Wood and Mosses. The project will	_proj_id=4948
			demonstrate a variety of	
			techniques for the complete	
			restoration of lowland raised bog	
			habitats; including the restoration	
			of natural hydrological systems and	
			biodiversity.	
UK	MoorLIFE -	Heaths and	The main objective was to protect	http://ec.europa.e
OK	MoorLIFE: Active	bogs	the 1 600 ha of active blanket bog	u/environment/life
	blanket bog	bogs	in the South Pennine Moors by	/project/Projects/in
	restoration in the		reducing the erosion on adjacent	dex.cfm?fuseaction
	South Pennine		degraded peatland. To achieve this,	=search.dspPage&n
	Moors		the project aimed to restore 862 ha	
	IVIOUIS		, ,	<u>proj_id=3539</u>
			of active blanket bog through	
			stabilisation, diversification and	
L			gully blocking.	
UK	PIP GB - Pearls in	Rivers and	This overall project objective is to	http://ec.europa.e
	Peril - securing the	lakes	safeguard the future of the most	<u>u/environment/life</u>
	future of the		important pearl mussel	/project/Projects/in
	freshwater pearl		populations (M. margaritifera), in	dex.cfm?fuseaction
	mussel in Great		Great Britain (i.e., in 21 Natura	=search.dspPage&n
	Britain		2000 sites across England, Scotland	<u>proj_id=4311</u>
			and Wales) by tackling the main	
			threats to this and by	
			implementing best practice	
			conservation methods.	

In the online consultation, experts mentioned several cases and developments in their own countries:

- The role of NGO's is very important for establishing networks between stakeholders. Good example is EUCC-France. Link: http://www.euccfrance.fr/.
- Having a strategic programme or plan, which extends beyond specific sites helps to improve conservation efforts.

- The New Forest SAC is an excellent landscape-scale example of how to restore natural ecosystem function for the benefit of all characteristic habitat and species of a locality. Link: http://www.natura.org/sites_uk_newforest.html.
- Documentation and agreements made at previous Atlantic seminars remain relevant and should be considered. Especially
 - O Dynamic Dunes 2015 meeting. Link: https://www.pwn.nl/dynamicdunes;
 - The LIFE Platform Meeting, Zandvoort, June 2016. Link: http://ec.europa.eu/environment/nature/natura2000/platform/events/258_ecology morphology management of coastal and inland dunes en.htm.
- Development of a European Dune Network and a 'roadmap' for knowledge exchange and coordination and to sponsor relevant studies are promoted.
- Programmatic Approach on Nitrogen (PAN).
- Successful experiment on a small scale: Development of an alkaline fen 7230 by removing the superior clayish soil layer in polder at Adinkerke (Belgium).
- Alterra project on (re)setting conservation targets in Natura 2000 sites coherent at the
 landscape level rather than for individual habitat types and species and by considering other
 nature values as well. This approach offers more opportunities for natural dynamics and e.g.
 allows for 'deterioration' of area/quality of one type at the benefit of others. This approach
 anticipates future conflicts between Natura 2000 features and other nature values and does
 justice to natural dynamics within managed landscapes Link:
 http://library.wur.nl/WebQuery/wurpubs/fulltext/390281.
- BurrenLIFE Farming for conservation in the Burren (LIFE04 NAT/IE/000125) Link: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n proj id=2661
- RBAPS project: Developing Results Based Agri-environmental Payment Schemes Link: https://rbaps.eu/.

Annexes

ANNEX 1 Overview of responses Online Expert Consultation

COUNTRY	EXPERTS
Belgium	9
Denmark	1
France	1
Germany	3
Ireland	3
Netherlands	6
United Kingdom	4
Total	27

ANNEX 2 Core purpose and messages of the Natura 2000 Biogeographical Process

The contribution of the Natura 2000 Biogeographical Process to the EU 2020 Biodiversity Strategy

The Natura 2000 Biogeographical Process is a vital means to ensure progress to delivering the EU 2020 Biodiversity Strategy. As a reminder, the headline target is:

'Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.'

At the same time, ways to strengthen implementation of Natura 2000 through the Birds and Habitats Directives are the core subject of Target 1 of the Strategy:

'To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, compared to current assessments: (i) 100 % more habitat assessments and 50 % more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50 % more species assessments under the Birds Directive show a secure or improved status.'

Synergies should also be sought with the other five targets of the EU Biodiversity Strategy, which are:

- **Target 2**: By 2020, ecosystems and their services are maintained and enhanced by establishing **green infrastructure** and **restoring** at least 15 % of degraded ecosystems;
- Target 3 A) Agriculture: By 2020, maximise areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the CAP so as to ensure the conservation of biodiversity and to bring about a measurable improvement⁸ in the conservation status of species and habitats that depend on or are affected by agriculture and in the provision of ecosystem services as compared to the EU 2010 Baseline, thus contributing to enhance sustainable management;
- Target 3 B) Forests: By 2020, Forest Management Plans or equivalent instruments, in line with Sustainable Forest Management (SFM), are in place for all forests that are publicly owned and for forest holdings above a certain size⁹ that receive funding under the EU Rural Development Policy so as to bring about a measurable improvement in the conservation status of species and habitats that depend on or are affected by forestry and in the provision of related ecosystem services as compared to the EU 2010 Baseline;
- Target 4 Fisheries: Achieve Maximum Sustainable Yield (MSY) by 2015. Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no

ECNC, CEEweb, Eurosite, Europarc, ELO, ILE SAS

⁸ For both targets, improvement is to be measured against the quantified enhancement targets for the conservation status of species and habitats of EU interest in Target 1 and the restoration of degraded ecosystems under Target 2.

⁹ For smaller forest holdings, Member States may provide additional incentives to encourage the adoption of Management Plans or equivalent instruments that are in line with SFM (to be defined by the Member States or regions and communicated in their Rural Development Programmes).

significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the Marine Strategy Framework Directive;

- Target 5: By 2020, Invasive Alien Species and their pathways are identified and prioritised, priority species are controlled or eradicated and pathways are managed to prevent the introduction and establishment of new IAS;
- Target 6: By 2020, the EU has stepped up its contribution to averting global biodiversity loss.

However, ensuring progress towards implementation of Natura 2000 should also be considered in the wider EU agenda, in particular the following strategic objectives:

- A more resource-efficient economy: The EU's ecological footprint is currently double its biological capacity. By conserving and enhancing its natural resource base and using its resources sustainably, the EU can improve the resource efficiency of its economy and reduce its dependence on natural resources from outside Europe;
- A more climate-resilient, low-carbon economy: Ecosystem-based approaches to climate change mitigation and adaptation can offer cost-effective alternatives to technological solutions, while delivering multiple benefits beyond biodiversity conservation;
- A leader in research and innovation: Progress in many applied sciences depends on the longterm availability and diversity of natural assets. Genetic diversity, for example, is a main source of innovation for the medical and cosmetics industries, while the innovation potential of ecosystem restoration and green infrastructure is largely untapped;
- New skills, jobs and business opportunities: Nature-based innovation, and action to restore ecosystems and conserve biodiversity, can create new skills, jobs and business opportunities. The TEEB (The Economics of Ecosystems and Biodiversity) study estimates that global business opportunities from investing in biodiversity could be worth in the region of €1.7 to €5 trillion by 2050.

Therefore, through the Natura 2000 Biogeographical Process, there are vital opportunities available for all stakeholders to contribute to this wider agenda. Joint actions developed in the context of the Process create new scope to generate greater synergies, realise shared benefits and establish new ways to demonstrate the integral value of Natura 2000 for reaching societal goals and conservation objectives.

Aims and objectives of the Natura 2000 Biogeographical Process

As a reminder, the primary aims and objectives of the Natura 2000 Biogeographical Process are:

- To ensure significant and practically oriented progress towards the EU 2020 Biodiversity Strategy Targets, in particular Targets 1 and 2;
- To achieve this through improved and strengthened implementation on Natura 2000, in ways that help Member States to fulfil their legal obligations under the Nature Directives;

- To strengthen common understanding of the critical role of the Natura 2000 Network in achieving favourable conservation for habitat types and species subject to protection in Natura 2000¹⁰:
- To identify future priorities and conservation objectives for Natura 2000, based on relevant data from Article 12 and 17 reports, and facilitate the formulation of 'strategic cooperation objectives', which may be applied and implemented at a biogeographical level;
- To establish a practical framework for networking that helps put in place practical management actions designed to maintain or achieve favourable conservation status for those habitats and species that fall within Member States' territories;
- To develop cooperation between Member States, stakeholder organisations, environmental NGOs and specialist networks that will lead to new 'know-how' to support the achievement of favourable conservation status.

The following points highlight key features of the Natura 2000 Biogeographical Process:

- Participation in the Natura 2000 Biogeographical Process is voluntary;
- The Process provides added value means to work collectively towards achieving the legal obligations of the Nature Directives;
- The Process offers a practical framework for networking, sharing information and experience
 and building knowledge about the most effective ways to reach and maintain favourable
 status for habitats and species of European Community importance this includes
 opportunities to identify and promote the multiple benefits (environmental, social and
 economic) linked to such actions;
- The Process focuses on practical habitat (and/ or species) management and restoration activities and provides a framework to share best practices, compare approaches, build contacts, exchange information and build new knowledge;
- The Process is supported by follow-up networking events designed to further build practical knowledge and capacity, along with a dedicated Natura 2000 Platform to communicate and share information.

Developing the strategic orientation of the Natura 2000 Biogeographical Process

As a dynamic and continuing process, Member States and their representatives are supported by the team of contractors and other actors working for and through the Natura 2000 Biogeographical Process. In 2015 and 2016, a discussion paper was produced which suggested elements for adapting the strategic orientation for the further development of the Natura 2000 Biogeographical Process in the coming years. In consultation with members of the EC's Expert Group on Management of Natura 2000 and reflecting feedback from other EC expert groups, including NADEG, the strategic objectives of the Natura 2000 Biogeographical Process were refined to the following:

¹⁰ There will be a need to examine ways of improving coherence with outcomes of work on assessing favourable conservation status through monitoring and reporting under Article 17 of the Habitats Directive and the results of the Birds Directive Article 12, especially with regard to eventually determining how best to build a common understanding of what needs to be achieved for different habitats and species to reach FCS.

1. To strengthen and focus the work of the Process in contributing to meeting the EU 2020 Biodiversity objectives, primarily the full implementation of the nature directives (Target 1), i.e. the improvement of conservation status;

The focus of the Natura 2000 Biogeographical Process is on improving the conservation status of a set of habitats and species that will be defined over the coming months region by region. Defining this set of habitats and species shall make full use of the results of the 2015 State of Nature exercise and reported data. The criteria for selection shall also include identification of those habitats and species where improvements of conservation status may be more straightforward to achieve in a biogeographical region, the so-called 'low hanging fruits' approach. Once the habitats and species are defined, joint strategies and plans ('roadmaps') in working together towards the favourable status shall be the focus of the work (in seminars, workshops, etc.).

2. To develop, discuss and work on implementation strategies for biogeographical level favourable reference values (FRVs);

In the frame of the review of the Art.17 reporting process, several Member States had requested further work on FRVs. In a sub-group of the Expert Group on Reporting, this work is now taking place. The question of testing the setting of FRVs on the biogeographical level is part of this work and this aspect, once further developed, may be addressed by the Process, for example through follow-up actions and thematic events.

3. Strengthening the marine aspect of the process. Should this be left to the Marine Process or should particular issues also be dealt with in the Atlantic Process?;

So far the Process has mainly dealt with terrestrial systems. As the marine network nears completion, at least in coastal areas, work on marine ecosystems in an early stage of site designation and objective setting becomes very important. Marine systems depend even more on collaborative approaches between Member States (e.g. control of fisheries), the challenges of marine conservation are less well understood and in many ways pressures on marine features are less controlled and regulated. All this requires a special focus on marine features in the coming years to make the marine Natura 2000 network a success and sufficient support by Member States to establish the Natura 2000 Biogeographical Process also at sea.

4. Identifying further initiatives to facilitate and further develop cooperation between Member States, stakeholder organisations, environmental NGOs and specialist networks on the management of Natura 2000 as a coherent ecological network.

The Process will continue to promote cooperation between Member States, stakeholder organisations, environmental NGOs and specialist networks through the establishment of a practical framework for networking and help putting in place practical management actions designed to maintain or achieve favourable conservation status. At the same time, the Process will encourage active involvement of interested stakeholder groups.

ANNEX 3 European Topic Centre on Biological Diversity: Low Hanging Fruits methodology

This annex updates the 20 Atlantic habitat-types, previously identified for priority consideration, using 2013 Article 17 data and the results of applying the Low Hanging Fruit approach. The full document will be made available on the Natura 2000 Communication Platform.

ANNEX 4 Habitat factsheets – coastal dunes and estuaries (10 factsheets)

ANNEX 5 Habitat factsheets – grasslands (6 factsheets)

ANNEX 6 Habitat factsheets – heaths and bogs (6 factsheets)

ANNEX 7 Habitat factsheets – rivers and lakes (8 factsheets)

ANNEX 8 Habitat factsheets – other habitats: woodland and forests (7 factsheets)