INPUT DOCUMENT

Natura 2000 seminar for the Mediterranean region

Regione Calabria & Sila National Park

Italy, 4-7 May 2021

3rd Natura 2000 seminar for the Mediterranean region

Consortium Information: Wageningen Environmental Research, Wageningen Marine Research, Wageningen UR, in cooperation with: Terra Ecogest, Mãe d'água, Nature Bureau Ltd and Estonian University of LIFE Sciences.

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Cover photo: Thermo-Mediterranean and pre desert scrub, with Euphorbia dendroides (Hab. 5330). Picture: Maria Prigoliti.

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

Relevant documents can be found here:

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

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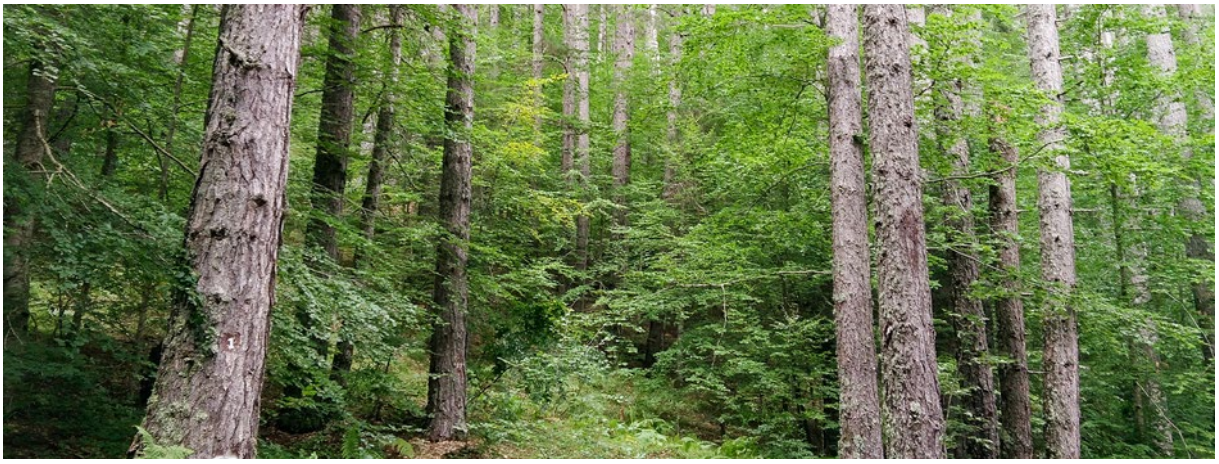

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1. The Natura 2000 biogeographical process and the Natura 2000 seminars

The Natura 2000 biogeographical process was launched in 2011 by the European Commission. The objective of the process is to promote knowledge exchange, networking and cooperation on Natura 2000-related issues at biogeographical region level. At the heart of the process are the Natura 2000 seminars. They are complemented by a networking programme consisting of workshops, meetings and other relevant events.

Assuming that Member States in a given region are facing similar challenges in the management of Natura 2000 sites, habitats and species, the Natura 2000 seminars are intended to stimulate transnational exchanges and promote a coherent management of Natura 2000 at biogeographical region level. As the responsibility for implementing Natura 2000 lies with the Member States, the seminars create an opportunity for key actors to exchange information at biogeographical level. In addition, they also stimulate discussions with and involvement of other key stakeholders and expert networks, including non-governmental organisations (NGO).

The strategic orientation of the process has been evolving over time. The 'Fitness Check' (2016), an evaluation of the EU Nature Directives[2], showed that implementation has been constrained by a lack and insufficient focus of funding, by limited stakeholder awareness and cooperation as well as by knowledge gaps. The evaluation also highlighted the need to put in place more effective conservation and site management systems, with a view to achieving the Directives' objectives, having full regard of the socio-economic context in which the Directives operate. On that basis, the Commission proposed to refocus the Natura 2000 process towards promoting best practices in conservation management, identifying funding opportunities and raising stakeholder involvement.

[1] Pinus nigra forests (Hab. 9530) in Sila National Park, Calabria (Italy). Author: Maria Prigolity

[2] http://ec.europa.eu/environment/nature/legislation/fitness_check/index_en.htm

The recent EU-biodiversity strategy for 2030 is currently being translated into tools and instruments and will have many implications for conservation practice. The EU-biodiversity strategy 2030 focuses in particular on the development of a coherent network of protected areas and an EU nature restoration plan. The development of a coherent network of protected areas will be realized by legally protecting a minimum of 30% of the EU's land area and 30% of the EU's sea area and integrating ecological corridors as part of a "Trans-European Nature Network". At least one third of the EU's protected areas network should be strictly protected and should include all remaining primary and old-growth forests. Finally, it is essential to effectively manage all protected areas, define clear conservation objectives and measures, and monitor areas appropriately.

Ecosystem restoration is a spearhead in the EU's biodiversity strategy for 2030. Related targets and indicators of success are currently being defined. The biodiversity strategy for 2030 highlights links between nature restoration and climate policies (climate change mitigation and adaptation).

In the framework of the EU nature restoration plan, Member States should try to achieve no deterioration in conservation trends and status of all protected habitats and species by 2030. In addition, at least 30% of species and habitats not yet in a favourable conservation status must have reached that status by 2030 or at least show a clear positive trend by that date. Significant areas of degraded and carbon-rich ecosystems are to be restored. The Commission and the EEA will provide guidance to Member States in 2021 on how to select and prioritise species and habitats for restoration.

Subject to an impact assessment, the Commission will put forward in 2021 a proposal for legally binding EU nature restoration targets to restore degraded ecosystems, in particular those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters.

Finally, some specific targets for restoration are set, including the following: three billion new trees are planted in the EU, in full respect of ecological principles; at least 25,000 km of free-flowing rivers are restored; there is a 50% reduction in the number of Red List species threatened by invasive alien species.

The aims set by the biodiversity strategy will fuel the debates in the 3rd Mediterranean seminar as well as future cooperation by key Natura 2000 players in biogeographical regions in the EU. Each biogeographic region has its roadmap, a dynamic work plan that is regularly updated with new actions and projects relating to the objectives of the biogeographical process.

Hence, the Mediterranean seminar will in particular seek to:

- achieve a common understanding on relevant topics, in particular in relation to Natura 2000, in order to improve and standardise what is done at national level in terms of implementation and management (protection/restoration), financing, monitoring and reporting, to ensure coherence and effectiveness of implementation at supranational levels;

- share good practices in regulation, supervision, conservation, restoration with a view to promoting and upscaling them;
- facilitate setting up joint projects to support delivery of these objectives, including on management/restoration;
- identify or update the main aims and actions of the roadmap, which will also set out a framework for the networking programme.

In parallel, starting in late 2021, two pledge and review processes for the EU Biodiversity Strategy targets, one on protected areas and one on the targets for improving conservation status/trends for protected species and habitats will be organised in the frame of the biogeographical process: during dedicated meetings, representatives of Member States, stakeholders, experts and the Commission will achieve a common understanding on processes and objectives under the biodiversity strategy as well as coordinate national pledges in view of the achievement of targets on protected areas and targets for improving conservation status/trends.

This background document serves as a point of reference for discussions during the Mediterranean Seminar of 5-8 May 2021. It presents and summarises information from published sources - in particular, habitat-related guidance and publications produced by national authorities, the European Commission, EEA and the European Topic Centre on Biological Diversity (ETC-BD). This has been complemented with first-hand expert knowledge e.g. from experts managing the LIFE programme and supervising LIFE projects[3].

[3] Experts from CINEA https://cinea.ec.europa.eu/life_en and NEEMO https://neemo.eu/

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2. The Natura 2000 biogeographical process in the Mediterranean region

The Mediterranean biogeographical region stretches along the shore of the Mediterranean Sea. It is the second largest EU biogeographical region, accounting for the 20.6% of the EU. It concerns eight Member States: Croatia, Cyprus, France, Greece, Italy, Malta, Portugal and Spain (Figure 1).

The regional climate is broadly characterised by mild wet winters and warm to hot, dry summers. However, there are important variations from North to South, the climate being warmer and drier in the South, and from West to East, due to the influence of the Atlantic Ocean. The region is further characterised by extreme events such as heatwaves, droughts, and Saharan dust intrusions.

The Iberian, Italian and Balkan peninsulas have a complex orography and the mountain belts close to the coast strongly influence the regional and local climates. The coastline enjoys a more temperate, thermo-Mediterranean climate, with mean minimum temperatures ranging between 3 and 7 degrees. In these areas, the vegetation is dominated by evergreen scrub and pines. At higher altitudes, the climate becomes more extreme and the vegetation is dominated by evergreen sclerophyllous forest. In more humid areas and on north facing slopes there are semi-deciduous forests, which in some areas are a transition to the Atlantic vegetation.

With a flora totalling more than 25 000 species, more than half of that being unique to the region, the Mediterranean region is recognised as one of the world's biodiversity hotspots. Although it only represents 2% of the world's surface, it holds 20% of the world's floristic richness (Médail and Quézel, 1999). This richness originates in the region's functioning as a refuge for biodiversity during the Quaternary glaciations, in combination with its complex orography and its geographic position, at a crossroads between three continents and two seas. The region has also been shaped by human activity

[4] Recovery of autoctonous vegetation after the abandonment of agriculture and livestock activities in SPA Encinares del rio Alberche, Madrid, Spain. Author: Carlos Sunyer

for thousands of years, resulting in a number of semi-natural habitats, some of which have an outstanding biodiversity.

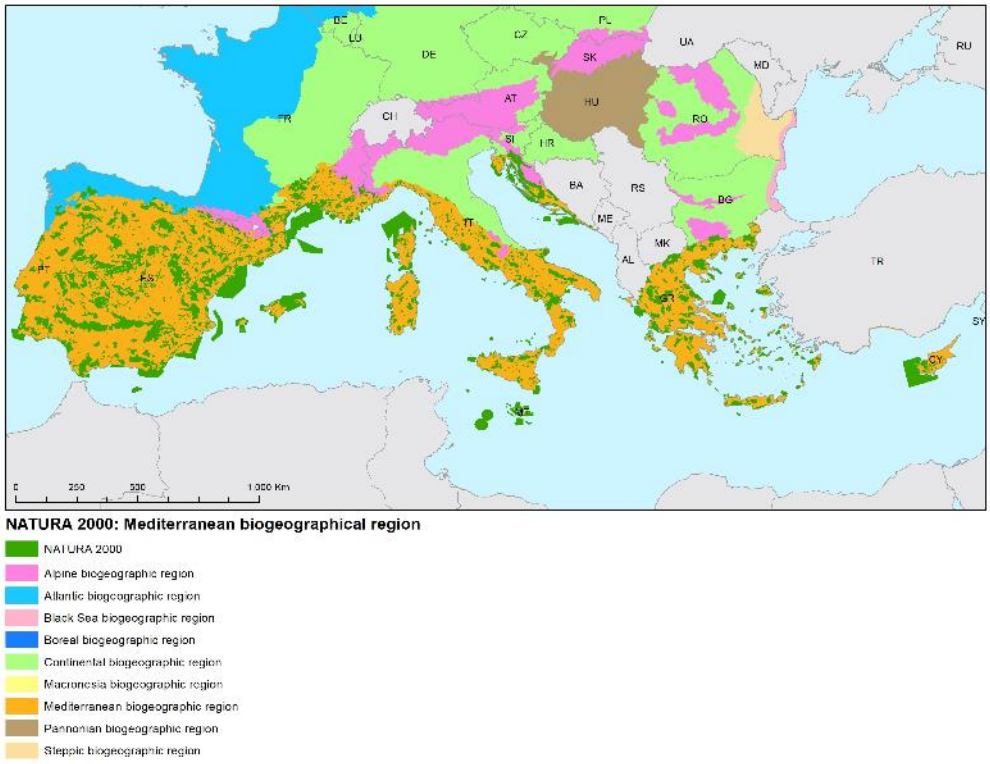

Figure 1: *The Mediterranean biogeographical region (orange) with Natura 2000 sites superimposed (dark green) (source: EEA[5], April 2021)*

However, the region is also facing a multitude of pressures and threats. Important areas are affected by desertification and climate change projections identify the region as one of the most vulnerable to change (Diffenbaugh et al. 2012, Tuel 2020).

Agriculture is both the pressure and threat affecting the highest proportion of habitats and species in the region (approximately 60%) according to Member States' latest reporting under Article 17 of the Habitats Directive[6]. In many areas, the advantageous climatic conditions have favoured the development of a competitive intensive agriculture with high water demand, in a region where it is a scarce resource. There are also large areas threatened by extensification, the abandonment of farmland and related agricultural activities. In the region there are still large areas of semi-natural

[5] https://ec.europa.eu/environment/nature/natura2000/biogeog_regions/mediterranean/index_en.htm

[6] National summary dashboards – Habitats directive Art. 17 for 2013-2018 – Main pressures and threats. https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards (Downloaded April 2021)

habitats under high natural value (HNV) farming systems, but these are threatened due to farm abandonment or intensification, with an importantloss of biodiversity (Keenleyside et al. 2014).

The pressure and threat ranking second are the development, construction and use of residential, commercial, industrial and recreational infrastructure and areas which are reported to have affected approximately 55% of the habitats and 45% of the species in the region[7]. From 2000 to 2018 they have had an important impact in most coastal regions, largely driven by tourism (EEA, 2019). Land use change and agricultural intensification not only destroys habitats but also increases habitat fragmentation, jeopardising the stability and resilience of habitats and species.

Invasive alien species as well as natural processes also rank among pressures and threats, as well as does forestry, which is listed as a pressure for one third of the habitats in the region.

Some of these issues, along with many others, have been addressed in previous Mediterranean Natura 2000 seminars and will be addressed again with a renewed focus in the third Mediterranean seminar hosted by Regione Calabria and Sila National Park (Italy).

The first Mediterranean seminar was held in Thessaloniki, Greece, in 2014. A milestone in a continuing process to develop practical solutions for habitat management priorities, it was organised around four priority habitat groups: coastal, freshwater & wetlands, grasslands and forests[8].

In the second seminar, held in Limassol, Cyprus, in 2017, participants contributed to four working groups on issues relevant to the EC's Nature Action Plan[9]:

- *Assessment and sustainable development of ecosystems. To find a common understanding in relation to the interpretation of habitat types; favourable reference values; standardized procedures for assessing conservation status and criteria to upgrade from national to biogeographical level.*
- *Conservation objectives & monitoring and evaluation, with the aim to improve the effectiveness of monitoring conservation measures and discuss approaches to setting restoration priorities.*
- *A governance model for integrated approaches to implement Natura 2000. To integrate Natura 2000 into wider society, including stakeholder engagement and the economic value of ecosystem services*

[7] Ibidem.

[8] https://ec.europa.eu/environment/nature/natura2000/platform/documents/med_2nd_pre-scoping_document_20131015_eng.pdf

[9] Nature Action Plan: An Action Plan for nature, people and the economy (COM(2017) 198 final).

- *Addressing threats and pressures on habitats & species. To identify management practices required to adapt or mitigate the main regional threats: rural depopulation, invasive alien species and climate change.*

The second seminar resulted in a road map for the Mediterranean region [10] (Annex 1) and action was continued through different networking events (Annex 2). Spain for example initiated a series of five workshops focusing on the harmonisation of procedures for monitoring, assessment and conservation of the habitat types of Community interest in the Mediterranean biogeographical region (see below and under Section 5).

[10] https://ec.europa.eu/environment/nature/natura2000/platform/documents/second_mediterranean_seminar/2nd_Mediterranean_Seminar_Report.pdf

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3. Selected themes for the third Natura 2000 seminar for the Mediterranean region

In addition to sharing knowledge and best practises, the third Natura 2000 seminar for the Mediterranean region has as its main aim the identification, prioritisation and development of transboundary cooperative actions that will help Member States and stakeholders achieve the operational and effective implementation of the requirements of the Natura 2000 network and ultimately improve the conservation status of species and habitats of Community interest. The discussions should result in agreed proposed collaborative steps to take, as well as – ideally – a series of commitments to deliver on these agreed actions. The agreed actions will be compiled in an update of the roadmap for cooperation in the Mediterranean region. This roadmap, which is a dynamic action plan with specific, detailed, follow-up events and programmes will then be shared and monitored with the steering committee for the Natura 2000 biogeographical process in the Mediterranean region.

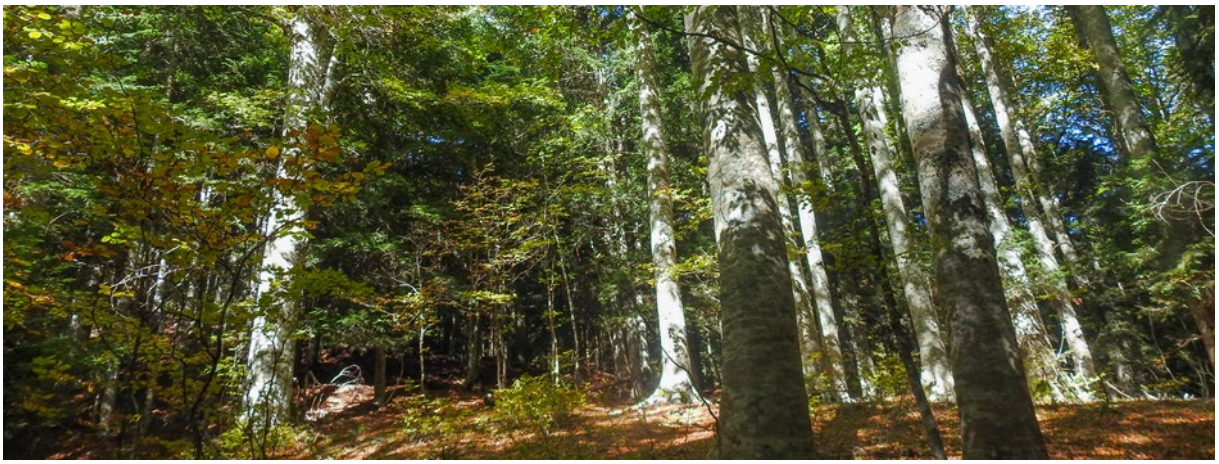
The seminar is organised around the discussion of four major themes, which have been identified and designed through a meeting of the above-mentioned steering committee and pre-seminar expert consultations. Each of these four themes has been identified as being of common interest across Member States, offering opportunities for further exchanges and strengthening of transnational cooperation around Natura 2000:

- *Theme 1 – Defining and coordinating a Natura 2000 restoration agenda for the Mediterranean region.*
- *Theme 2 – Defining conservation objectives and monitoring the impact of the measures.*
- *Theme 3 – Addressing land abandonment in the Mediterranean region.*
- *Theme 4 – Building capacity for Natura 2000 management: How to develop and build capacity for Natura 2000 management, targeting in particular site managers and landowners.*

[11] SAC Fiumara Bonamico, Calabria (Italy). The bonamico river, about 31 km long crosses southern Calabria. It has vast areas of boulder and gravels, with tipical Mediterranean galleires of Nerio-Tamaricetea & Securinegium tictoriae (Hab. 92D0). Author: Maria Prigoliti

The following section provides an introduction for each theme which forms the starting point for group discussions at the seminar.

The seminar also further builds on the knowledge and information gathered in a series of five preliminary workshops organised for the Mediterranean region by the Spanish Government from 2019 to 2021. These workshops explored such fundamental issues as: the definition of habitat types of community interest (HCIs); criteria and approaches to set favourable reference values (FRV); assessment of the structure and function of habitat types of community interest; standardised procedures for assessing pressures and threats affecting the conservation status of habitat types of community interest; development of action plans for habitat types of Community interest at biogeographical level. The outcome of these workshops, as available in March 2021, are summarised under Section 5 below.



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4. Background information and issues for consideration in relation to the selected themes

4.1 Theme 1: Defining and coordinating a Natura 2000 restoration agenda.

4.1.1. Context

The Global Assessment report of IPBES (IPBES, 2019) on biodiversity and ecosystem services concluded that the health of ecosystems on which humans and all other species depend is deteriorating more rapidly than ever before. Restoration of ecosystems is urgent and fundamental, not only to improve biodiversity but also to achieve the Sustainable Development Goals. This triggered the United Nations General Assembly to proclaim 2021–2030 as the Decade on Ecosystem Restoration. The EU aims to lead the way with a new EU Nature Restoration Plan, under its Biodiversity Strategy for 2030 *Bringing nature back into our lives* (European Commission, 2020). Though the EU already has legal frameworks[13], strategies and action plans to protect nature and restore habitats and species, results have so far remained incomplete, restoration too small-scale, and implementation and enforcement of legislation insufficient[14]. This can be illustrated by the conservation status of Mediterranean habitats. Figure 2 shows that 71% of the Natura 2000 habitat types in the Mediterranean region are currently assessed as being in unfavourable conservation status, with 30% even considered to be in unfavourable-bad status. Improvement in conservation status has only been recorded for 22 Natura 2000 habitat types (out of 148) in the Mediterranean region.

[12] The Mediterranean peninsulas were refuges for flora and fauna during the glaciations, from where many species later expanded northeards, such as the beech. Bosco del Gariglione, P.N. Sila: Apennine beech forests with Abies alba (Hab. 9220). Author: Maria Prigoliti

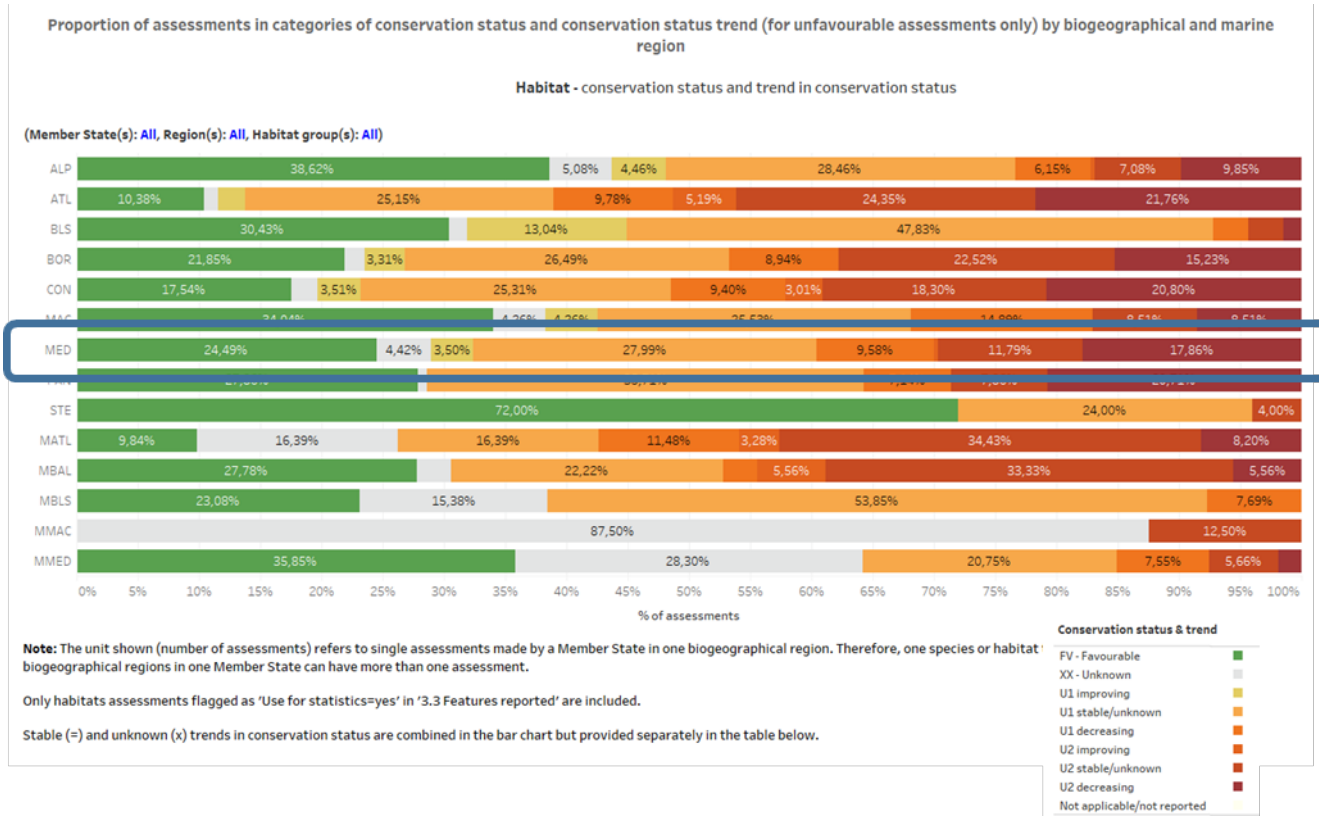
[13] Notably the EU Birds Directive (2009/147/EC), Habitats Directive (92/43/EEC), Water Framework Directive (2000/60/EC), Floods Directive (2007/60/EC) and Marine Strategy Framework Directive (2008/56/E

[14] Mid-term review of the EU Biodiversity Strategy to 2020 (COM(2015) 478 and SWD(2015) 187); Fitness Check of the EU Nature Legislation (Birds and Habitats Directives) (SWD(2016) 472); Fitness Check of the EU Water Legislation (SWD(2019) 439).

To ensure that nature restoration is speeding up, increasing the EU's resilience and contributing to climate change mitigation and adaptation as a key nature-based solution, the Commission puts forward two strands of action:

1. Member States will have to ensure that at least 30% of their species and habitats not currently in favourable status are in that category or show a strong positive trend by 2030. The Commission and the European Environmental Agency will provide guidance to Member States in 2020 on how to select and prioritise species and habitats.
2. Subject to an impact assessment, the Commission will put forward a proposal for legally binding EU nature restoration targets in 2021 to restore degraded ecosystems, in particular those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters.

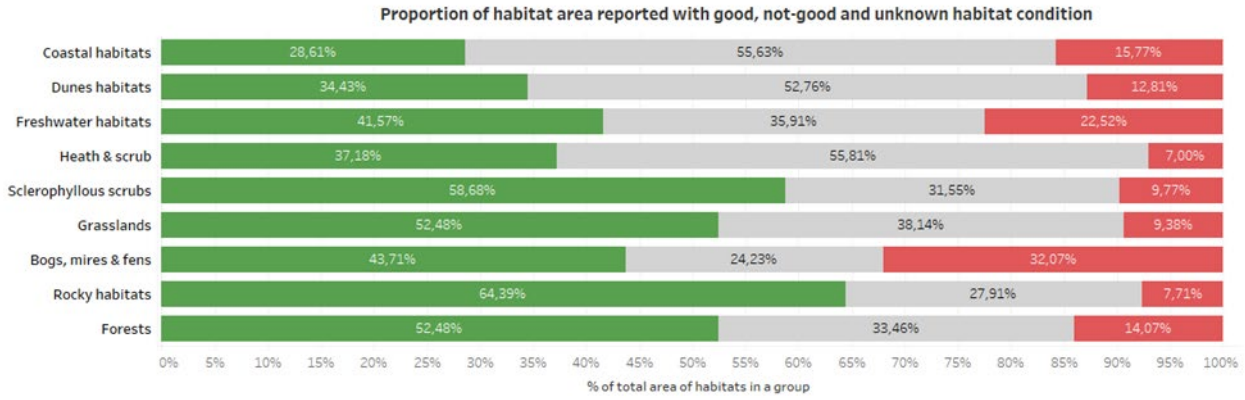
Figure 2. *Conservation status of Mediterranean habitat types (2013-2018) reveals that 71% have an unfavorable conservation status*[15] *(EEA 2020).*



[15] Data used for the figure: https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

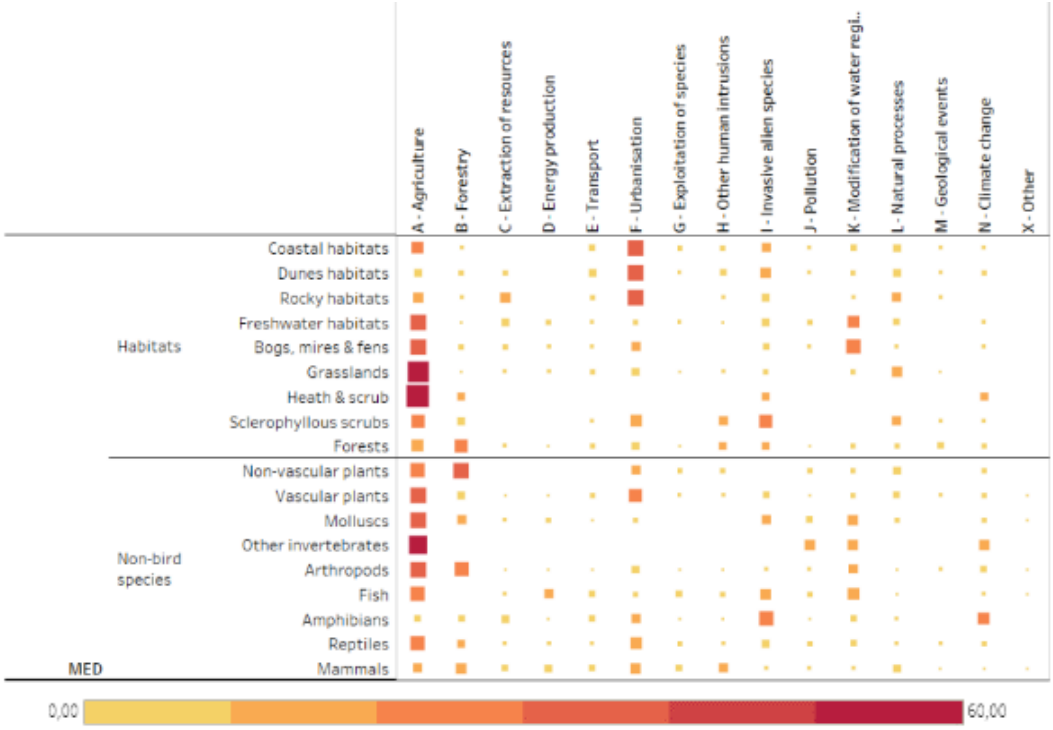
Despite a proportion of unknowns ranging from the 25% to 55% depending on the habitats, Mediterranean habitat types have between one and two thirds of their area in good condition (approx.. 60% for sclerophyllous scrubs and rocky habitats) (Figure 3). Some 50% of forests and grassland areas are in good condition. At the other end of the spectrum, bogs, mires and fens (32%) and freshwater habitats (22.5%) total the broadest areas in not-good condition (Figure 3).

Figure 3: *Proportion of habitat area in the Mediterranean region reported with good, not good and unknown habitat condition (EEA 2020).*



Pressures and threats are identified that help understand the drivers of the poor conservation status of Mediterranean habitats and species (see Section 1 above and Figure 4 below).

Figure 4: *Main pressures and threats for Mediterranean species and habitat types (EEA 2020).*



Over the past years, considerable experience has been collated in the field of habitat restoration in various Natura 2000 sites in the Mediterranean region, through the development of management plans and the implementation of LIFE funded projects. It is however acknowledged that transferring experiences and lessons from one site to another, let alone across borders, is not always effective nor easy to achieve. This session will therefore review different ways in which best practices can be transferred between sites and Member States.

4.1.2. Objectives of the thematic session

The main objectives of this thematic session are to:

1. *Identify priority actions for the restoration of degraded ecosystems in the Mediterranean region, in particular those with the most potential to capture and store carbon or to prevent and reduce the impact of natural disasters.*
2. *Promote exchange of good practice for identifying priorities for restoration actions (including through the PAF) that target habitats and species in the Mediterranean regions and organising their implementation.*
3. *Share experiences on best practice restoration measures undertaken in the Mediterranean region, including from LIFE projects, in view of ensuring upscaling and replicability.*

This session will also identify cooperative actions on how the best practices listed above can be shared between the Natura 2000 policy makers and site managers in various Member States. Part of the discussions will also relate to to Theme 4, capacity building. Key actions for further cooperation and knowledge exchange will be included in the revised roadmap.

4.1.3. Common issues, challenges and approaches

To put biodiversity on the path to recovery by 2030, Member States need to step up the protection and restoration of nature. This should be done by improving and widening our network of protected areas and by developing an ambitious EU nature restoration agenda. Figure 3 shows that all groups of Mediterranean habitat types and species require restoration actions. However, considering that grasslands and other agricultural habitats and species are dealt with in theme 3 (land abandonment, §4.3), the current session will mainly focus on coastal, freshwater and forest ecosystems, as the ones which are most in decline (Figure 3). Bogs and related species have a limited share in the Mediterranean ecosystems and are therefore not included here.

✓ *Freshwater ecosystems restoration*

Europe's Mediterranean biogeographical region is dependent on natural freshwater habitats, especially in the light of climate change. Freshwater habitats have a cooling effect and are an important water supply to many towns and rural villages. Wildlife species do depend on freshwater habitats, springs, ponds, lakes and rivers, and habitat types are often dependent on surface and sub-surface water flows.

Over the years the Mediterranean region overall has lost up to 50% of the wetlands that existed in 1900, and in some regions even more. In Italy, of the 3 million hectares of wetlands that existed at

Roman times, only 19 000 ha remain today. 60 % of Spain's natural wetland areas have been lost (Medwet 2016). At Mediterranean region level, only 14% of freshwater habitats are reported in favourable conservation status (EEA 2020). In particular, river straightening and canalisation have deteriorated these habitats. Spawning grounds are being lost; fish migration routes are being cut off. This has devastating effects for many unique and freshwater specialist organisms.

Freshwater habitats represent 14% of all Mediterranean habitat types respectively, while no less than 65% of freshwater habitats are assessed to have an unfavorable or unknown conservation status. Some 50% of freshwater habitats are covered by Natura 2000. Agriculture (34%) and modification of water regimes (20%) are considered the main pressures for freshwater ecosystems (see Figure 4 above and results from the Article 17 reporting). Human pressures and global warming have resulted in heavily altered and degraded freshwater ecosystems. Low precipitation and increasing water demands in the Mediterranean area have resulted in prolonged drought, shortening periods of water flow, modified non-perennial rivers and streams (Skoulikidis et al. 2017). Dam construction has also heavily impacted streams in Spain, Italy and the Balkans. The major rivers in Portugal and Spain are intensively used for hydropower, specifically the Tajo, Duero and Ebro. Portugal is one of the few countries in Western Europe still planning large dams on tributaries (Schwarz, 2019). Also Croatia has many dams planned and few under construction, some being quite large, whereas Greece plans mostly for smaller dams.

Restoration of freshwater ecosystems and the natural functions of rivers can be done by removing or adjusting barriers that prevent the migration of fish, restoring natural riverbanks, and improving the flow of water and sediments. Water extraction from freshwater habitats should be reduced. Large-scale river and floodplain restoration investments can improve water regulation, flood protection, nursery habitats for fish, and lower nutrient load.

✓ *Forest ecosystems restoration*

Compared to many other habitat types, the coverage of forest habitats by the Natura 2000 network is rather low: it remains below 30 % for six habitats, and only exceeds 50 % for two habitats (Ventura & Múgica, 2017). The new EU Nature Restoration Plan particularly aims for the restoration of those ecosystems with the highest potential for capturing and storing carbon or for preventing and reducing the impact of natural disasters. In the Mediterranean regions this mainly refers to the restoration of forests. Of the forest habitats 52 % is in good condition, the remainder being unknown (33%) or in not-good condition (14%).

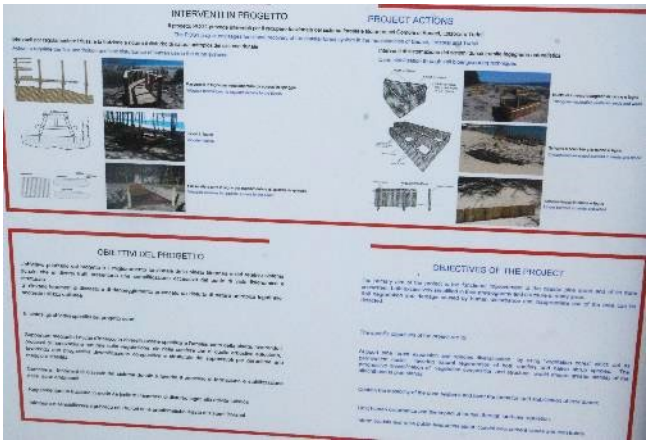
To perform their functions, forest ecosystems need to be restored and preserved in good health. Forestry is considered the main threat to Mediterranean forest habitats and species, followed by agriculture, reported with 24% and 20% for all areas (see Figure 4 above and results from the Article

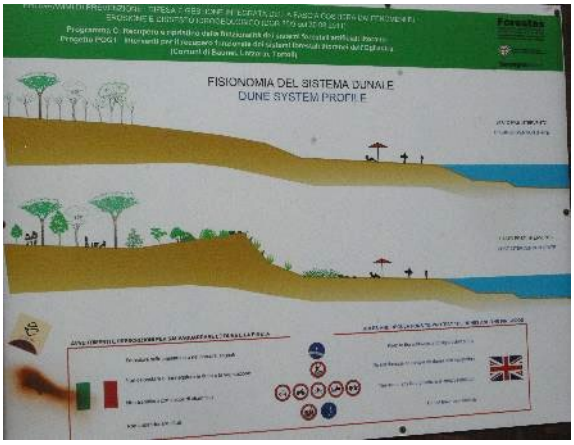
17 reporting). The detailed threats reported under forestry are removal of old, dead or dying trees, clear cutting, conversion of forests and replanting with non-native or non-typical species [16].

✓ *Coastal ecosystems restoration*

Important terrestrial coastal habitats are coastal wetlands (coastal lakes, lagoons, saltmarshes, salines and intertidal flats), beaches and dune habitats. The wetlands have been discussed above; the focus under the present section is therefore on beach habitats.

The recovery and conservation of less or minimally disturbed coastal dunes should have priority in regional environmental policies. Reconstruction of dune systems by placing artificial barriers to reduce wind velocity and to trap blowing sand is a common practice. It is frequently complemented by the reintroduction of native plant communities in order to recover natural dynamics and biodiversity. Specific barriers to give protection to recently planted areas and developing vegetation are also to be considered (Marzo et al. 2015).





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16 https://tableau.discomap.eea.europa.eu/t/Natureonline/views/sonpressuresandthreatssimplified/Pressuresandthreats?%3Aembed=y&%3AisGuestRedirectFromVizportal=y&%3Adisplay_count=n&%3AshowAppBanner=false&%3Aorigin=viz_share_link&%3AshowVizHome=n

17 Example of a dune and beach restoration project (Sardinia, Picture Theo van der Sluis).

4.1.4. Ideas on opportunities for cooperative work and follow-up

Most important reason for not achieving good conservation status of habitats and species is the poor implementation of management plans and conservation measures (EEA 2020). This counts for all countries and regions. However, restoration can largely contribute to improving conservation statuses. Looking at the differences between current habitat area and favourable reference area as indicated in the most recent national reports under Article 17 (2019) at least 11 000 km^2 of habitat areas needs to be restored. Furthermore, based on the same Art. 17 datasets, an improvement of habitat condition would be required for at least 215 000 km^2.

Co-operative work to upscale restoration could for example include:

- Exchange on national or regional priorities for restoration, and associated measures (e.g. through online platforms);
- Exchange of on-the-ground experiences with restoration of specific habitats or ecosystems;
- Exchange between policy makers on issues relating to designing restoration plans and steering the implementation of such plans.

International training events (e.g. summer schools) on Natura 2000 management restoration issues, with experts and policy officers from various countries as trainers for specific topics, could develop the skills of new experts or managers. At the same time, the trainees would exchange and learn from each other on approaches. Such summer schools could be supported in practice by the Member States by making staff and experts (and possibly facilities) available for training.

The EU-guidance document gives suggestions for action focused on habitat restoration, for forests and freshwater habitats[18]. Climate change can be an important motivation to take action for restoration of ecosystems. Important measures can include increasing the extent of forest and wooded pasture habitats. Allowing trees to grow older and bigger and allowing forest to accumulate more senescent trees and larger amounts of deadwood will have positive impacts on the condition of many habitats and their species and improve the capacity of these habitats to capture and store carbon, thereby contributing to climate change mitigation.

Measures for restoring the migratory populations of fish and other freshwater species may contribute to objectives of good ecological status under the Water Framework Directive, as well as to the EU Biodiversity Strategy target for restoring 25 000 km of free-flowing rivers. Restoring river and floodplain habitats through e.g. relocation of dykes and more dynamic riverbeds will not only benefit habitats and species of rivers and alluvial floodplains, but will also reduce, through the improved capacity for flood retention, the risk of catastrophic flooding to urban areas located downstream, as a

[18] Vassen, F. & C. Romao. Biodiversity Strategy for 2030: Guidance to Member States on how to select and prioritise species/habitats for the 30% conservation improvement target under the strategy. DG-Environment, EEA. Technical Note, NADEG meeting November 2020.

contribution to climate change adaptation and flood prevention. Hydrological habitat restoration measures aimed at increasing the quality and extent of wetland habitats will benefit many protected habitats and species, but may also help replenish depleted groundwater tables and reverse the negative impacts of water overexploitation and contribute to climate change adaptation.

4.1.5. Cases and best practices – additional references

Several handbooks on Natura 2000 management provide knowledge on the restoration of Mediterranean habitat types.

The Cost Action "BOTTOMS-UP"[19] aims at testing forest management measures to improve biodiversity. A large number of tests in different countries are conducted, and the project aims to reach out to Natura 2000 site managers involved in forest management. The challenge is to increase the degree of sustainability of European temperate forest management for biodiversity. The project will gather comprehensive knowledge of European multi-taxonomic forest biodiversity through the collaboration of research groups that collect data locally. It has chosen a bottom-up approach to collect information on multi-taxon biodiversity, structure and management, with a view to inform sustainable forest management. Outcomes include shared research and monitoring tools for forest biodiversity, innovative indicators for sustainable forest management and management guidelines at the stand and landscape scales. They will improve forest management sustainability, ecosystem functioning and provisioning of services.

Some examples of LIFE restoration projects in the Mediterranean region on forests and freshwater habitats are provided in Annex 3.

[20]

[19] https://www.bottoms-up.eu/en/about.html

[20] Mediterranean pond at the SPA Kornati in Croatia, important for invertebrates, amphibians and migratory birds. Author: Theo van der Sluis.

Table 1: *Proactive adaptation measures for Mediterranean forests prioritized by managers and researchers (Mezquida et al. 2020)*

Improve knowledge
Research on the effects of climate change, vulnerability and capacity for adaptation
Transfer scientific knowledge to management
Reduce non-climatic pressures
Restore ecosystems
Manage the impact from public use
Manage livestock to prevent impact on vegetation
Control alien invasive species
Restrict intensive fishing methods
Reduce pollution
Eliminate weirs
Facilitate migration
Create/restore corridors
Eliminate barriers
Enhance heterogeneity
Promote mixed forest masses
Open up forest clearings
Create landscape mosaics
Population management
Reinforce or select the most resistant ecotypes
Change interactions (facilitation, competition)(e.g. clearings to reduce competition)
Increase/strengthen genetic diversity
Reduce water demand/enhance the hydrological cycle
Hydrological improvement of lagoons (canal dredging, sluices, etc)
Take action on water flows in regulated catchment areas
Reduce water extraction
Reduce forest densities
Eliminate forest plantations with elevated water demand
Risk management
Flooding management. Restore fluvial geomorphology. Remove dykes and mounds
Fire management
Prevent coastal storm damage. Restore dunes and coastal wetlands
Attend to ecosystem services
Maintain basins to ensure water catchment and retention
Improve land use (forestry, livestock, agriculture)
Attend to singular elements
Assist the translocation of vulnerable species
Recover threatened species populations
Restore singular habitats (for example, peat bogs)
Create singular habitats (for example, ponds for amphibians)
Monitoring
Monitoring of climatic variables
Monitoring of species or habitats
Monitoring of phenological events
Monitoring of ecological and social processes

[21]

4.2 Theme 2: Defining conservation objectives at site level and monitoring the impact of the measures.

4.2.1. Context

The formulation, monitoring of achievement and revision of conservation objectives are crucial components of Natura 2000 site management. Conservation objectives aim to achieve or maintain the favourable conservation status of habitats and species of Community interest and underpin the adoption of the conservation measures that correspond to the ecological requirements of these habitats and species. This seminar provides an opportunity to discuss challenges, problem solving, best practice and the development of knowledge-sharing.

Natura 2000 sites are designated with the primary aim of protecting the habitats and species of European importance. However they will also play a role in the conservation of habitats and species of national or regional concern.

The first key step is to clarify the definition of "conservation objective" in the context of the Habitats and Birds Directives. The *Commission note on conservation objectives*[22] provides clear guidance on this matter (Box 1).

[21] Pre-desert scrub (Hab 5220*) with Zyziphus lotus, Chamaerops humilis, Stipa tenacissima, Lygeum spartum in SAC Cabo de Gata-Níjar, Almeria (Spain), a sub-desert Mediterranean climate area, with an average annual rainfall of 190 mm, making it the most arid site in Europe. Author: Carlos Sunyer

[22] http://ec.europa.eu/environment/nature/natura2000/management/docs/commission_note/commission_note2_EN.pdf

BOX 1: Conservation objectives in the context of the Habitats Directive

Article 1 states that for the purpose of the Directive "Conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status…".

As stated in Article 2 the overall aim of the Habitats Directive is to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora. The measures taken under the Directive are with a view to ensuring that the species and habitat types covered achieve "favourable conservation status" and that their long-term survival is secured across their entire natural range within the EU. Therefore, in its most general sense, a conservation objective is the specification of the overall target for the species and/or habitat types for which a site is designated in order for it to contribute to maintaining or reaching favourable conservation status.

Conservation objectives are also important in the context of assessing the impact of plans and projects on a Natura 2000 site. Article 6(3) states that "Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives…".

The conservation objectives have to be established at site level and must have full regard to:

- *the ecological requirements of the species and habitat types listed in the Natura 2000 Standard Data Form (i.e. present on the site, except for those whose presence is non-significant according to the SDF);*
- *the local, regional, national conservation status of the habitats and species;*
- *the overall coherence of the Natura 2000 network; and*
- *higher level conservation objectives at national/biogeographical level and the contribution of the site to them.*

In this respect, it should be noted that the workshops organised by the Spanish Ministry of Ecological Transition were *inter alia* triggered by the identified need to establish common conservation objectives and priorities at EU biogeographical level.

4.2.2. Objectives of the thematic session

This theme will cover:

- Share experiences made at different scales (i.e. from site level to the regional level) and use practical examples of establishment of conservation objectives including best practices and

challenges, with reference to the legal obligations set out in the Commission note on conservation objectives as background[23];

- Expand on discussions held in the Spanish workshop(s);
- Share results, methodologies and questions on the monitoring of the efficiency of management measures at different scales;
- Recommend cooperative actions to be shared and included in a new version of the roadmap.

4.2.3. Common issues, challenges, and approaches

It is a challenge to find a balance between short-term and long-term goals. Short-term conservation objectives and plans with immediate effect may be easier to draft and implement, and their achievements may also be easier to monitor. But some crucial conservation and restoration strategies may yield results only in the long term (e.g. 10 years or more).

Conservation objectives and targets are defined at different levels, at site, national, transboundary, or biogeographical level. At site level there can be specific objectives which may not always align with the national targets. Surely, framework and decisions at biogeographical level might influence what might and can be done at national and site levels. Conversely, from the national scale to the biogeographical level there can be marked differences too. For example, if a country sets itself least concern conservation targets for some locally common species that is much rarer in other countries in the biogeographical region, should this influence national prioritisation? Or should a vulnerable habitat that is common elsewhere be disregarded at national level? Put differently, would it be acceptable that the biogeographical-level ranking, would, in turn, influence the national priorities? What would be the mechanism to deal with this?

The different institutional contexts in the different Member States range from centralised to very decentralised, including autonomous regions with their own governments. Therefore, the mechanisms for coordination between the different institutional levels may influence approaches to the definition of priorities as well as international cooperation on this topic.

Several software tools are available for geospatial conservation decision support, to select a network of priority conservation areas, either national, regional or local. Examples are the MARXAN software and the Handbook on the Use of Biodiversity Scenarios in Support of Decision-Making, published by BiodivErsa – Belmont forum (Goudeseune *et al*., 2020). However, it often turns out that scenario's in the end, mostly propose well-known hotspots of critical species or habitats, to the detriment of the development of a holistic vision of all nature values. The quality of base information to decisions will depend not only on the setting of conservation objectives, but on the quality and detail of available

[23] http://ec.europa.eu/environment/nature/natura2000/management/docs/commission_note/commission_note2_EN.pdf

information on natural values. In concrete, the availability of detailed habitat and species mapping and evaluation.

Relevant sources for biogeographical level conservation objectives and monitoring and their relevance for Member States are:

- New reporting data from the Article 17 on the conservation status at national and biogeographical level. These data, which show the recent reported trend at national level of a species or habitat, allow identifying those habitats and species with an unfavourable conservation status and declining trend.
- Red list data at EU level and the European red list status might be integrated into the prioritisation process. Examples are those mentioned: European red list of vascular plants (Maxted *et al*., 2011) and the European red list of habitats (Janssen *et al.*, 2016).
- Knowledge on successful restoration experiences in Member States. The Red List of habitats at EU28 level for instance also indicates the time required for restoring habitats (with or without intervention).
- Transboundary habitats and their associated species, or rare species present in a few Member States which might be jointly prioritised at the biogeographical level.
- Additional benefits other than biodiversity, namely those from ecosystem services deriving from conservation or restoration of specific habitats, can be used as reinforcing criteria.

4.2.4. Ideas on opportunities for cooperative work and follow-up

Possible co-operative work to improve and develop approaches to conservation objectives and the monitoring of the efficiency of management measures could for example draw on the following strands of reflection:

- Over the last 12 months, EU Member States have submitted their PAFs for the period of the multi-annual financial framework for 2021-2027. These documents identify the priority measures needed over the next 7 years for a full implementation of the EU nature directives, associated funding needs and potential financing sources for these measures. Any agreed mechanism to establish conservation priorities could therefore also be considered in this context.
- The next LIFE programme (2021-2027) will also consider as a priority for funding support any national, transnational or biogeographical region level projects or actions, through a higher ranking of projects, that would fit with an agreed list among habitat/species-sharing countries.
- For any identified conservation priorities that would require transboundary or transnational implementation approaches, follow-up events could be organised, bringing together the relevant actors for preparing transnational project applications or action plans.

- The elements proposed for discussion also offer those who were involved in their preparation an opportunity to highlight the challenges they faced in the drafting of the PAFs and those they foresee in their implementation. The same applies to the restoration plans.

[24]

4.3. Theme 3: Addressing land abandonment in the Mediterranean region.

4.3.1 Context

From the mid-20th century onwards large areas of agricultural land have been abandoned in Europe. Although there is relatively little literature on the spatial and temporal processes, the available figures show that it is one of the most important land use changes at work at present, with specific incidence in the Mediterranean region (Van der Sluis et al. 2014, 2019). In between 1990 and 2000, 2% of the utilised agricultural area in France was abandoned and 8% in Spain, figures that in certain mountain areas can rise up to 70-99% (Plieninger et al., 2016; Pointereau et al. 2008). Some projections for 2030 predict that there will be 5,6 million hectares of abandoned land in the EU and another 20,6 million hectares under high or very high risk of land abandonment (Table 2), accounting for 11,1% of agricultural land, with special incidence in part of the Mediterranean region (Perpiña et al., 2018).

Table 2. *Projection of abandoned land in Mediterranean countries by 2030 (Perpiña et al., 2018)*

MS	**Thousands ha**
Total UE	5.591,6
Spain	1.096,5
France	625,1
Italy	456,3
Greece	179,2
Portugal	132,8
Croatia	41,9
Cyprus	1,4
Malta	0,2

[24] For more than 120 km the river Duero sets the border between Spain and Portugal with a formidable canyon. The abandonment of agriculture in this area has allowed the recovery of the forests over large areas. Today, both sides of the border are part of Natura 2000, forming a large cross-border protected area, In Spain SAC Arribes del Duero 106.032 ha and in Portugal SPA Douro Internacional e Vale do Agueda 50.752 ha. Author: Carlos Sunyer.

This process is largely a result of the decline in viability of traditional farming practices, which occurs mostly but not only in remote and mountainous regions, and also in semiarid areas and even on fertile soils. It is influenced by a complex range of environmental, structural and, above all, socio-economic drivers, often of a local and regional nature (Pointereau et al., 2008; Rey Benayas et al., 2007, Van der Sluis et al. 2019). Especially in arid areas the predicted effects of climate change will increase the risk of land abandonment.

Land abandonment as key regional environmental change driver has important implications for biodiversity. On abandoned agricultural land natural succession starts, resulting in significant environmental changes: herbaceous species are followed by scrub and forest development. The impacts of land abandonment on nature conservation depend on the local context and, therefore, its analysis demands a regional and even a smaller scale approach.

On the one hand, land abandonment results in the disappearance of semi-natural habitats, some of which are very important for biodiversity in Europe such as grasslands, pseudo-steppic areas or dehesas and montados, and their related species (Herrando et al, 2016; Russo, 2006). Many of these habitats depend on HNV farming systems, most with very marginal economic viability due to their low productivity and/or marginal location(Keenleyside et al. 2014). But land abandonment may also affect biodiversity through accumulation of biomass which fuels wildfires whose consequences may include erosion and landslides. Abandonment also results in the loss of land management traditions, i.e. a loss of cultural heritage.

On the other hand, land abandonment can be viewed as beneficial: it allows for large scale and low-cost restoration of forest habitats. In fact, between 1990 and 2005 there was an important gain of forest areas in the Mediterranean as a result of land abandonment in e.g. Spain (+33%), Portugal (+22%), Italy (+19%) and Greece (+14%) (Pointetereau et al. 2008). Land abandonment thus benefits forest species and large mammals (Herrando et al., 2016; Moreira et al, 2007; Russo 2006). Furthermore, following land abandonment, soil processes are restored, increasing carbon sequestration for longer periods of time compared to other terrestrial carbon pools. Therefore, it has been suggested as a significant and low-cost strategy for mitigation of anthropogenic CO_2 emissions (Novara et al., 2017; Bell et al., 2020).

As can be induced from both positions there is much debate about land abandonment. Some scientists, supporters of re-naturalisation, suggest that those aiming to maintain traditional uses underestimate the huge amount of labour, people and CAP funding needed. Others argue that only multifunctional landscapes do sustain residents, suggesting to control the re-vegetation process with productive land use (e.g. HNV farming, forestry, leisure), environmental objectives (wildfire prevention, biodiversity conservation) and preserving cultural landscapes (Lasanta et al., 2015; 2019; Campos et al., 2020; Pais et al., 2020). Although both options impact on biodiversity, land abandonment is not per se good or bad for biodiversity, it all depends on the conservation targets. In fact, one may find arguments both

in favour and against restoration in relation to its potential for the Nature Directives and the EU's biodiversity strategy for 2030[25].

4.3.2. Objectives of the thematic session

The objectives of this thematic session are to:

- Discuss the role of land abandonment for achieving the objectives of the EU Biodiversity Strategy 2030.
- Identify possible rural abandonment management plans (e.g. prioritize areas for HNV farming and areas for abandonment in favour of biodiversity; set rewilding objectives; manage scrub and forest to prevent wild fires)
- Exchange knowledge and best practices of integrated approaches addressing the impact of land abandonment on Natura 2000 sites:
    - Use of CAP and market instruments.
    - Stakeholder involvement (livestock raisers, markets, etc).
- Identify opportunities for transboundary cooperation on integrated Natura 2000 management.

4.3.3 Common issues and challenges

✓ *Lack of information*

Thousands of hectares of valuable habitat are being lost due to land abandonment throughout the region, with important implications for biodiversity. Although there is a growing body of literature on its magnitude, causes and its implications on certain factors, there is little information on its impact on the habitats and species of Community interest or the coherence of the Natura 2000 network.

✓ *Managing land abandonment*

An important risk associated with land abandonment is wildfires. About 65 000 fires occur each year in Europe and about the 85% to the burned area is within the Mediterranean countries. Some 34.000 ha in Natura 2000 sites were affected by fires in 2018 just in the Mediterranean region (San-Miguel-

[25] An example of this dichotomy is present in the Portuguese sectoral plan of Natura 2000 (PSRN2000). On the one hand, it identifies rural abandonment as an opportunity for the regeneration of native vegetation, which in turn implies an increased risk of wild fires. In this sense, it foresees the conservation of the remains of climatic vegetation and the active forest management of the areas in recovery. On the other hand, it recognises that rural abandonment is a threat to the conservation of certain species, and provides for actions to stop it, promoting agricultural practices of high natural value (Resolução do Conselho de Ministros n.º 115-A/2008, Diário da República N.º 139 — 21 de Julho de 2008)

Ayanz et al., 2019). Their main causes are related to land abandonment, and the consequent landscape homogenisation and accumulation of biomass, in a scenario of rising temperatures with a prolonged hot season (Lasanta et al., 2019). On the other hand, fire also sets back succession, replacing forests and scrublands by grasslands, which can contribute to conservation depending on the fire regime (Moreira and Russo, 2007). A potential risk is that the soil is irreversibly degraded: in this case land abandonment can give rise to soil erosion (Lasanta et al., 2019). Therefore, land abandonment demands proper management to minimise negative risks such as wildfires, soil degradation, loss of grazing land or loss of biodiversity (Bell et al., 2020; Campos et al., 2020; País et al., 2020).

✓ *Crosscutting issues with the EU's biodiversity strategy for 2030*

The EU's biodiversity strategy for 2030 aims to step up the protection and restoration of nature through two main pillars: by improving and widening the network of protected areas and by an ambitious EU Nature Restoration Plan. Abandoned lands may play an important role for both. Abandoned lands may make the integration of corridors and the increase in protected areas easier. They may also play a key role in relation to the EU Nature Restoration Plan, with the aim to have significant areas of degraded and carbon rich ecosystems restored by 2030 and to plant three billion new trees.

However, part of the agricultural land where land abandonment may occur, offers stable high-diversity landscape features and opportunities for organic farming with a significant uptake of agro-ecological practices. Focusing action on sites where HNV farming systems can be supported and developed is key.

✓ *Supporting HNV farming*

The Common Agricultural Policy includes measures that can be used to reduce the loss of HNV farming areas (e.g. cross-compliance measures, agri-environmental payments, less favoured areas, Natura 2000 compensations). However, the funding might not reach farmers or might be insufficient, so it is expected that large areas of HNV farming will be lost (Keenleyside et al., 2014). For conservation to be effective, the support should therefore be targeted to very specific sites and could be complemented by other initiatives such as market instruments, which require specific planning and an integrated approaches.

✓ *Cross-border cooperation*

Most Mediterranean countries include mountain ranges, which are usually of great importance for biodiversity and therefore often enshrine Natura 2000 sites. However, these mountainous areas offer marginal agro-economic interest and are therefore highly affected by land abandonment.

The range of opportunities for cross border cooperation is wide and includes e.g. the rewilding of large territories, the preservation of semi-natural habitats or wildfire prevention.

4.3.4. Cases and best practices – additional references

To identify a general response to land abandonment, some projects have looked beyond individual sites into the actual network of Natura 2000 sites. In the southern Massif Central, France, LIFE MIL'OUV (2013-2017) promoted eco-pastoral practices to improve the conservation of open habitats. They worked in 155 farms of which 78 were more intensively engaged in the project, covering 8 800 ha, including 3 700 ha of Annex I habitats of the Habitats Directive. With a different approach, the Spanish LIFE bioDEHESA (2012-2018) promoted an integrated approach for the management of dehesas, for which they created a network of 35 pilot farms.

Other projects have addressed the consequences of land abandonment at site level. An example is the Natura 2000 Prespa Lake in Greece, were the decline of grazing and firewood extraction led to a dangerous degradation of Greek juniper woods. LIFE JunEx (2013-2017) reversed the situation encouraging the return of extensive livestock raising.

Likewise, LIFE Montserrat managed a Spanish Natura 2000 site affected by rural abandonment. Here the landscape was homogenized by the growth of forest, resulting in loss of biodiversity and a significant wildfire risk. The resilience of the forest against wildfires was increased by reducing the density of trees, prescribed burning and mechanical clearing. Meadows and grasslands were also restored for biodiversity and livestock raising. For the long-term maintenance of the results, a silvo-pastoral plan was implemented with the local livestock raisers.

Some NGOs break have opted for testing alternative approaches to the financing of HNV farming for nature conservation. Instead of using CAP subsidies they have opted for the use of market instruments, much more difficult but economically sustainable in the long term. Although there are few examples, they have proven to be successful. One of the first initiatives is from SEO-BirLIFE Spain, a LIFE project in the Ebro's Delta (1997-2000). It all started as a demonstration project on eco-friendly rice farming systems. It was so successful that in 2001 a company was created to produce and sell ecologic rice and at present they include products from other Natura 2000 sites (chickpeas, lentils, durum wheat pasta, etc). A LIFE project for the conservation of steppe birds (2016-2020) threatened by the abandonment of extensive agriculture came to a similar result. Initially the project managers focused on providing guidance on sustainable production techniques, but they went on to buy the farmers' harvests, pack them and sell them at trade fairs and to major supermarket chains (legumes, wheat). Today 243 producers are involved in the project.

WWF in Italy manages over a hundred nature reserves or "oasi". To address the loss of biodiversity due to the abandonment of traditional farming, they partnered in 2010 with two farmers' cooperatives and launched Terre dell' Oasi, an initiative to promote sustainable farming in their "oasi". They have also demonstrated the potential of market instruments for maintenance of HNV faming for nature conservation.

The Bearded Vulture reintroduction in Picos de Europa (LIFE12 NAT/ES/000322) with a seemingly far-off goal, has come to similar results. To reduce the risk poisoning they involved livestock farmers in their project. These suffered from low prices for their products, so the project managers identified this as a key to their involvement. They created a quality brand, Pro-Biodiversity, for livestock products produced friendly for the Bearded Vulture, and improved the farmer's net profit by 40-65%. In three years (2018-20) it has doubled the number of associated farmers as well as the lambs sold, encouraging livestock raising and employment in an area hard-hit by rural abandonment.

[26]

4.4. Theme 4: Building capacity for Natura 2000 management.

4.4.1. Context

A wide range of stakeholders is involved in the management of Natura 2000 sites: private landowners, local communities, private companies, NGOs, defence institutions and different administrations (forest and game services, water authorities, protected area authorities, etc).

This context has to be considered in nature conservation decision making. In fact, the Fitness Check of the Birds and Habitats Directives[27] recognised amongst others the need for an increased awareness and involvement of stakeholders.

Natura 2000 management requires different technical skills and functional areas of expertise, which site managers are expected to master, including abilities to:

- *Conduct inventories, define site conservation condition and monitor changes;*
- *Define conservation objectives, prepare management plans and implement appropriate conservation measures;*
- *Assess possible impacts from threats and pressures and, where necessary, develop adaptive management approaches;*
- *Manage Natura 2000 sites with respect to their surroundings, increase ecological resilience and contribute to improvement of the coherence of the Natura 2000 network;*
- *Ensure that land uses and the use of habitats and/ or species does not adversely affect site condition;*
- *Plan and carry out habitat and species restoration projects;*
- *Secure appropriate funding;*

[26] Vegetated sea cliffs with endemic Limonium spp and pre-desert scrub in Mġarr ix-Xini, in Gozo, the second largest island of the Maltese archipelago. It partly falls within the SPA Rdumijiet ta' Għawdex: Ta' Ċenċ (MT0000027) and L-Inħawi ta' Ta' Ċenċ (MT0000034). Source: ERA

[27] Fitness Check of the EU Nature Legislation (Birds and Habitats Direcives). Brussels 16.12.2016. SWD(2016) 472 final

- *Report on the implementation of Directives.*

However, an effective site manager also has to manage the site in relation to the operational context and specific circumstances (Table 3) which requires specific knowledge, skills and competencies in the following areas:

- *Technical nature conservation knowledge: setting appropriate conservation measures, management planning, implementation of actions and monitoring;*
- *Management of people and place: governance arrangements and applied management, such as planning, management and administration of projects, financial, human and technical resources, organisations, as well as policy making, leadership, communication and partnership development. Communication, awareness raising, to involve a wide range of stakeholders;*
- *General personal competencies: ethics, communication, positive attitude, capacity to address problems and make decisions.*

Table 3. *Technical activities (orange): what Natura 2000 site managers are typically expected to know and be able to do. Functional activities (blue): what site managers will require to have or reasonably be expected to develop to be able to do their work (From LIFE17PREDE003 2019).*

Biodiversity assessments	Practical conservation	Development management/conservation measures	Management planning	Consider the socio-economic context	Enable participation
Understand the FCS	New compliance procedures	Integrate conservation measures into other plans	Official reporting	Monitoring species & habitats	Monitoring, preventing & mitigating threats
Understanding legal/policy contexts	Organisational management	Building community support	Working with site owners / resource managers	Communication	Education
Fundraising, mobilising resources	Understanding PAF	Connectivity and Landscape scale conservation	Sustainable use of natural resources	Visitor management – if it is identified as a threat	

Therefore, the implementation of Natura 2000 could be strengthened by improving the professionalisation of Natura 2000 management though a competence-based approach (Figure 5).

Figure 5. *Competence-based approaches to capacity building are based on proven acquisition of the skills, knowledge and attitude needed for effective implementation of tasks and functions (Appleton et al., 2017).*

4.4.2. Objectives of the thematic session

The objectives of this thematic session are to:

- exchange knowledge on the gaps/needs to improve the capacities of the managers of Natura 2000; and
- share ideas and best practices on the development of learning communities and mechanisms, instruments and tools that seem most successful for this purpose.

This session will focus on cooperative actions to share and develop best practices between Natura 2000 policy makers and Natura 2000 site managers across Member States. Identified actions will be included in the revised roadmap.

4.4.3. Common issues and challenges

✓ *Policy, planning and projects: e.g. EU funding instruments for Natura 2000*

Years ago, the possibilities to use the EU Structural and Investment Funds to finance the Natura 2000 was unknown to most Natura 2000 managers. Since then, the situation has improved substantially. The successive reforms of the regulations of EU Structural and Investment Funds, together with the publication of several guidelines by the Commission, and the preparation of the Priority Action Frameworks, has improved the awareness of Natura 2000 managers. Knowledge of and access to the funds could be improved by a competence based approach.

✓ *Stakeholder involvement with a focus on local communities and cultures*

The designation of a site as a protected area or implementing an ecological corridor may result in conflict with stakeholders related to land ownership or the use of resources. To solve these conflicts more societal engagement in the early phases of conservation planning is needed. This engagement may require to develop a wider approach to the Natura 2000 site, promoting economic interests and

other societal goals. It involves the ability to identify and integrate economics, environmental concerns and multiple benefits which meet stakeholders' expectations (Bouwma, 2018).

Stakeholder involvement is key in the implementation of protected areas. Different strategies and approaches for stakeholder engagement can be successful depending on the context and scale, but in any case all should see benefits – not necessarily economic gains, but also cultural benefits, heritage being maintained, protection of intrinsic nature values, etc. The importance of involving stakeholders in the management of protected areas is apparent, and reasons most often cited for doing so are (Keulartz & Leistra, 2008; Rauschmayer, Van den Hove, & Koetz, 2009; Stoll-Kleemann & Welp, 2006; Young et al., 2013):

- Democratic necessity: acknowledges landowner and citizen rights and recognizes their vital role in the management of Natura 2000 areas. In doing so it also increases the legitimacy of nature policies;
- Increased efficiency of site management: in many Natura 2000 sites the management of habitats is undertaken by farmers, private owners, hunters, and other non-state organisations. Effective and efficient management requires their co-operation and support;
- Sharing of knowledge and understanding: all stakeholders have unique different perspectives as to what the problem is and what constitutes a good solution. It is important to involve all (key) players to ensure that the best solutions are found and to build consensus.

However, involving stakeholders requires specific skills, significant investment of time and resources and can increase the complexity of the process of management planning. Participatory management needs to be learnt. Generally, three levels of learning can be identified:

- at the level of individuals, for instance a farmer who has to consider nature in his/her farming methods or a site manager that has to interact with a broad range of stakeholders that might have different views on nature;
- at group level, for instance a committee that develops a management plan and must find new ways of working together or consider new methods for managing sites;
- at institution level, where participatory management in the organisation itself or in decision-making can become embedded in the official procedures. This can also relate to the formal and informal agreements on interdepartmental cooperation of ministries on plans and projects.

Participatory management and planning for Natura 2000 sites present challenges and opportunities for all parties involved. In particular, those in charge need training about what to communicate, how to communicate, how to anticipate, mitigate or avoid conflicts and how to negotiate and build consensus.

4.4.4. Ideas on opportunities for capacity building and follow-up

Co-operative work to upscale capacity building could for example include:

- *Develop an e-platform to collect and exchange information useful for site managers: management plans for specific habitats/species, monitoring, how to communicate, stakeholder involvement, etc.;*
- *Bring together Natura 2000 site managers with the aim of exchanging know how and experiences through peer to peer activities;*
- *International training events (e.g. summer schools) on Natura 2000 management issues, with experts and policy officers from various countries as trainers for specific topics to develop the skills of policy makers or managers. At the same time, the trainees would exchange and learn from each other on approaches. Such summer schools could be supported in practice by the Member States by making staff and experts (and possibly facilities) available for training.*

4.4.5. Cases and best practices – additional references

The preliminary work of the LIFE project e-Natura2000.edu is supporting e-learning and capacity building for Natura 2000 managers (LIFE17PREDE003 2019). It has identified the following five core competences as specifically required for Natura 2000 site managers:

- *Policy, planning and projects: competences in this area are key for site-based Natura 2000 managers working at both site and technical level. Site managers should be technically competent, and at the same time be able to positively engage those who do not have the technical background or expertise, especially when seeking to integrate Natura 2000 with other policies;*
- *Biodiversity conservation: to be able to demonstrate technical know-how on conservation management and the development and implementation of appropriate conservation regimes.*
- *Communication and collaboration: site managers should be able to establish and maintain positive working relations with colleagues, partner organisations, diverse stakeholders and individuals;*
- *Local communities and cultures: competences to ensure that the management of a Natura 2000 site is based on the rights, needs and expectations of people and business that work on, live in or depend on that site;*
- *Awareness and education: identification of the main themes and messages to be promoted to ensure visibility of Natura 2000.*

The LIFE project e-Natura2000.edu, led by the EUROPARC federation, explores the potential of building new approaches and learning methods to improve knowledge and capacity amongst Natura 2000 Managers. The project takes particular account of the need to gain know-how with respect to the development and implementation of effective participatory processes. It takes a competence-based approach, analysing current competence gaps of Natura 2000 site managers from all backgrounds and operating contexts, to establish an effective Natura 2000 management capacity building framework and deliver an innovative set of tools and methods for site managers.

EUROPARC Spain has become a professional forum for Spanish protected areas managers. Its work programme focuses on the improved management of protected areas. They compile and disseminate knowledge and experience among site managers and one of its strategic objectives is to promote the professionalisation and qualification of the personnel working in protected areas. They produce guiding documents related to site management, as management plans, communication, quality standards, ecological connectivity, accessibility and inclusion, etc. Every year since 2001, they offer a master's degree on Protected Areas, and they organise courses for the continuous training of site managers on communication, governance, quality tourism, Natura 2000 marine sites, etc.

The European Landowners Association (ELO) is developing LIFE Land is for Ever to engage private landowners and other stakeholders to better achieve the EU's conservation goals. This includes gap analysis to identify long-term policy opportunities and address landowners' preferences and needs, as well as pilot field projects.

LIFE GOProFOR aims to improve capacities in relation to the management of forest habitats. This LIFE project encourages exchange of knowledge and good practice for the management of biodiversity of forest habitats in Natura 2000 sites. It aims to increase awareness among local authorities managing forests and among the stakeholders who have an impact on their conservation, including the promotion of active forest management. GOProFor also compiles a database of best management practices for all European forest managers, which is easily accessible and searchable with key words and per region. It is online and all Natura 2000 site managers can also contribute with own experiences and results.

LIFE RED Bosques wants to improve the knowledge and training of site managers for the conservation of Mediterranean old growth forests. They have developed guidelines to identify, evaluate and manage old growth forests.

5. Workshops organised by the Spanish Ministry for Ecological Transition and the Demographic change

The monitoring and assessment of the conservation status of habitat types clearly require harmonized procedures if unambiguous and rigorous diagnoses of their status and trends at the biogeographic region scale are to be achieved, to underpin the adoption of appropriate conservation measures. This harmonization process has taken place in the EU in the implementation of the Water Framework Directive and the Marine Strategy Framework Directive, but, unfortunately, it remains pending for the Habitats Directive.

In the second Mediterranean Natura 2000 Seminar, as a result of the exchange of experiences and technical discussions in the working groups, a number of weaknesses were identified, which make it considerably more difficult to assess the conservation status of habitat types of Community interest on the Community biogeographical scale.

The resolution of these weaknesses can be channelled through a set of specific workshops on a biogeographic region scale. These workshops should be aimed both at presenting the common problems and the approaches taken by each of the Member States of the Mediterranean region, as well as at resolving specific issues and, above all, at drawing up a Road Map on how to jointly tackle the resolution of the problems highlighted in each of the workshops, including a detailed work plan and its articulation through projects or other common activities. Accordingly, the conclusions[28] of the second Natura 2000 Mediterranean Seminar explicitly proposed the following thematic workshops for this purpose:

- *Workshop on Common habitat definitions and interpretation.*
- *Inter-calibration Workshop with in situ testing to assay Member State national methods.*
- *Workshop on development of action plans for HCI and species at biogeographical level.*
- *Workshop on developing science-based protocols to evaluate pressures and threats and how to include these in the evaluation matrix of the conservation status.*

[28] http://ec.europa.eu/environment/nature/natura2000/platform/documents/second-mediterranean-natura-2000-seminar/2nd_Mediterranean_Seminar_draft_report.pdf

The Spanish Ministry for Ecological Transition and the Demographic Challenge (MITERD) committed to continue this line of work in the Mediterranean region at community level and, consequently, decided to organise five monographic workshops to address these issues.

The general objective of these five workshops is to raise and channel the way to solve the most important problems regarding the need for harmonization of procedures on a biogeographic scale highlighted in the second Natura 2000 Mediterranean Seminar. It is intended that the final product of each of the workshops will be a technical document which, on the basis of experiences and specific examples, will establish a coordinated programme of work between Member States to achieve the particular objective of each workshop, contributing significantly to the fulfilment of the Roadmap for the Mediterranean biogeographical region and, ultimately, Action 6 of the *Action Plan for nature, people and the economy* beyond 2020.

Workshop 1. Identification of key features essential for the definition of habitat types of Community interest.

This Workshop was held in Madrid in November 2019. 21 representatives from 7 Member States of the Mediterranean region participated, as well as representatives from the EC and from the consortium of the Natura 2000 Biogeographical Process.

The main targets of this first Mediterranean Workshop on definition of habitat types of Community interest were as follows:

- *To assess the state of the art regarding the interpretation of HCIs in the different EU Member States of the Mediterranean Biogeographical Region (MED_BR).*
- *To identify problems and challenges for a common interpretation of HCIs as well as illustrative examples across the Mediterranean Biogeographical Region.*
- *To establish criteria for drafting an agreed Interpretation Manual of the Habitat types of Community Interest in the Mediterranean Biogeographical Region, which is comprehensive, scientifically robust and appropriate for managing and conserving the HCIs.*

The **general conclusion** of this Workshop was that there is a clear need of harmonization of criteria used for definition and interpretation of HCIs in the Mediterranean biogeographical region. In order to do so:

- An Interpretation Manual of HCIs for the Mediterranean biogeographical region is required.
- All primary attributes (composition, structure and function) of biodiversity, as well as ecological factors (both abiotic and biotic), must be considered and included in the relevant definitions of HCIs. The relative importance of each of them shall depend on the specific HCI.
- Scale (both temporal and spatial) and successional and catenal relationships must also be considered in the definitions.

- Information existing in EU Member States of the Mediterranean region is intended to be collected for further analysis in search of a common approach.

For this reason, the following **Roadmap** for drafting an Interpretation Manual of HCIs for the Mediterranean biogeographical region was agreed:

1. Establishing a working group formed by representatives of Member States of the Mediterranean biogeographical region and a platform for exchanging information.
2. Designing a form intended for collecting information from all Member States of the Mediterranean region.
3. Contributing to the form by Member States, through designated national focal points.
4. Fund-raising for networking and drafting the interpretation manual.
5. Monitoring of results.

Workshop 2. Formalisation of criteria and approaches to set favourable reference values of habitat types of Community interest.

Reference values are used for the assessing the overall conservation status of habitats and species of Community interest. They are built around four parameters whose values are the thresholds to determine the conservation status. Therefore, the values used by Member States as reference are of major importance.

This Workshop was held in Madrid in November 2019. 15 representatives from 7 Member States of the Mediterranean region participated, as well as representatives from the EC and from the consortium for the Natura 2000 Biogeographical Process.

The main targets of this first Mediterranean Workshop on Favourable Reference Values were as follows:

- *To know (and share) whether there are criteria, standardized procedures or proposals by the Member States of the Mediterranean Biogeographical Region to establish the FRV of the Habitat types of Community Interest (HCIs), either following or not the new EU guidelines —this requires previous reporting by the MED_BR Member States prior to the Workshop.*
- *To perform a practical common exercise to test possible approaches to establish the FRV of some HCIs.*
- *To explore the possibilities to establish a procedure for upscaling the results of the evaluation of the Range and the Area covered / Population parameters from the Member States level to that of the biogeographic region.*

Conclusions were reached as a result of the group work and the voting carried out by the participants, the following points were established to follow for the assessment of the favourable reference values for habitat types:

- There is a clear need to harmonize criteria and define the main ecological factors (biotic and abiotic)

- Among the criteria to consider when harmonizing is, among others, the clear definition of current values vs their potential distribution.
- At the MS level, it is important to define the area-species curve and the potential distribution of the habitat types.
- At the biogeographic region level, clear definition of habitat types and their subtypes in addition to the above.

Points established on the **Roadmap** are as follows:

6. Establishment of a common database to all Mediterranean MS.
7. Establishment of common guidelines-methodologies.
8. Homogenization of methodological and conceptual criteria.

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Workshop 3. Formulation of protocols for the standardised assessment of the 'Structure and Function' parameter of habitat types of Community interest.

'Structure and functions' represent one of the four parameters used to assessing the conservation status of habitat types of Community interest (HCIs) when reporting under Article 17 of the Habitats Directive. While habitat structure is considered to be the group of components of a habitat type, including biotic and abiotic features, functions, which are usually more difficult to measure, represent the set of ecological processes occurring at different spatial and temporal scales.

Following an initial preparatory webinar on this issue, this Workshop aimed at establishing the basis for a coordinated work plan to develop standardized protocols for the assessment of the 'Structure

[29] Participants of the first Spanish Natura 2000 workshop (November 2019). Author: Carlos Sunyer.

and functions' parameter, and therefore, of the conservation status of HCIs, based on the reference ecological characteristics of different groups of habitat types.

The previous webinar was held online in November 2020 and was attended for 14 representatives from 7 Member States of the Mediterranean region as well as representatives from the EC, the consortium of the Natura 2000 Biogeographic Process, and the European Environment Agency.

The Workshop was held online in March 2021 with the attendance of 15 representatives from 7 Member States of the Mediterranean region, as well as representatives from the consortium of the Natura 2000 Biogeographic Process, the European Environment Agency and the European Topic Centre on Biological diversity.

The main targets of this first Mediterranean Workshop on the assessment of the 'Structure and functions' of habitat types were the following:

- *To assemble and review the procedures for the assessment of the 'Sstructure and functions' of HCIs in the Mediterranean Biogeographical Region (MED_BR) —this requires previous reporting by the MED_BR Member States prior to the Workshop.*
- *To agree a roadmap for developing standardized protocols to assess the 'Structure and functions' parameter of HCIs, and their upscaling from local to national / biogeographic region level.*

Conclusions were reached as a result of the group work and the voting carried out by the participants. The items that stood out the most as the main needs in the assessment of the 'Structure and function' parameter were the following:

- Need of common definitions, approaches and/or standardized criteria for the assessment of S&F.
- Definition of common or comparable indicators and parameters
- Establishment of a General procedure/methodology (manual)
- Need of common definitions and interpretation of habitats and sub-types*WK1
- Definition of a general working plan and a road-map is necessary.

The main points established on the **Roadmap** are as follows:

1. Elaboration of a manual for a general procedure/methodology on the assessment of the 'Structure and function' parameter
2. Ensure the maintenance of a network or discussion forum that allows the sharing of experiences and information.
3. Request a common project in specific European calls for the Mediterranean region.

Workshop 4. Standardised procedures for assessing pressures and threats affecting the conservation status of habitat types of community interest.

One of the most complex and relevant elements to carry out this assessment, which has received less attention, has been the identification, assessment and quantification of pressures and threats, and their effect on different habitat types.

Likewise, these pressures and threats are a key element when it comes to assessing the 'Future prospects' of different types of habitat, which represent the direction of the expected change in their conservation status in the near future.

This assessment requires an examination of the current status and the trends already observed (pressures) and which are expected for the future (threats), together with conservation measures adopted to avoid, contain or mitigate them.

Following an initial preparatory webinar on this issue, this Workshop aimed to establish the bases of a common working methodology to assess the pressures and threats, as well as a roadmap for the cooperative development of the corresponding protocols, adapted to the ecological characteristics of the different groups of habitat types of Community interest.

The previous webinar was held online in November 2020 and was attended for 21 representatives from 7 Member States of the Mediterranean region as well as representatives from the EC, the consortium of the Natura 2000 Biogeographic Process, and the European Environment Agency.

The Workshop was held on line in March 2021 with the attendance of 20 representatives from 7 Member States of the Mediterranean region, as well as representatives from the consortium of the Natura 2000 Biogeographic Process, the European Environment Agency and the European Topic Centre on Biological diversity.

The specific targets of this first Mediterranean Workshop on procedures for assessing pressures and threats were to:

- *Define the concepts relating to pressures and threats within a space-time framework.*
- *Present the approaches and protocols carried out thus far in the different MED_BR Member States aimed at assessing the intensity of pressures and threats, as well as their impact on the types of habitat of Community interest.*
- *Identify the common issues and difficulties when it comes to implementing protocols for the assessment of pressures and threats affecting the types of habitat of Community interest.*
- *Harmonise the existing lists of pressures and threats within the context of the Habitats Directive with different lists of pressures and threats. As far as possible, integration with other Community Directives, particularly the Water Framework Directive and the Directive on the reduction of emissions of certain atmospheric pollutants (Directive 2016/2284).*
- *Identify public and accessible information sources to assess pressures and threats to the types of habitat of Community interest.*
- *Adapt systems for quantifying pressures and threats to different habitat types.*

- *Establish a roadmap to design and implement common protocols for identifying and assessing pressures and threats to types of habitat of Community interest in the MED_BR, which will include the assessment of possible funding lines for the development of these protocols.*

The **conclusions** of the Workshop are synthesized in the following points:

- Need to maintain active communication between the different Member States to allow harmonization of the evaluation of Pressures and Threats.
- Declaration of the need to establish a common technical work procedure that determines the conceptual framework, the definition of terms and concepts and the methodologies for evaluating Pressure and Threats.
- Incorporation of quantitative criteria in the standardization of indicators, thresholds and reference values that report the impact of the different Pressures and Threats on Habitats of Community Interest
- Need to obtain a knowledge based on scientific evidence of the impact of Pressures and Threats in the conservation of Habitats.

Convenience of establishing a **Roadmap**, which considers as priority steps:

1. Build a common general protocol for the assessment of Pressures and Threats.
2. Ensure the maintenance of a network or discussion forum that allows the sharing of experiences and information.
3. Request a common project in specific European calls for the Mediterranean region.
4. Carry out a common exercise, such as the development of a technical guide for evaluating the impact of Pressures and Threats in certain habitats.

Workshop 5. Development of action plans for habitat types of Community interest at biogeographical level.

The objective of the workshop is to harmonize methodologies and structure in the Action Plans for the Conservation status of habitat types of Community interest at biogeographical level.

To contribute to this objective, the European Commission has recently supported the elaboration and implementation of Action Plans for two habitat types. These Action Plans aim to guide the actions required to maintain and restore the habitat types at a favourable conservation status across its range in the EU.

This Workshop aims to develop a methodology for the elaboration of action plans for habitat types of Community interest at the biogeographical region level, focusing on the Mediterranean region. This methodology could however be applicable to any biogeographical region across the EU.

The Workshop was held on line in November 2020 with the attendance of 18 representatives from 7 Member States of the Mediterranean region, as well as representatives from the consortium of the Natura 2000 Biogeographic Process and from the EC.

The main targets of this first Mediterranean Workshop on Habitat Action Plans are as follows:

- To set out the detailed content of an Action Plan to maintain and restore to favourable conservation status a habitat type on the biogeographic region scale.
- To discuss and design the methodology for the elaboration of action plans for habitat types of Community interest
- To test the main steps and proposed methods for the elaboration of a Habitat Action Plan on a selected and characteristic habitat type of the Mediterranean region, i.e. 9320 *Olea* and *Ceratonia* forests.
- To discuss the best approaches and a roadmap for the elaboration of habitat action plans in the Mediterranean region.

The conclusions of the Workshop were clustered in different topics, according to the contents of an action plan. A synthesis of them is detailed below:

- The overall objective of the Action Plan should be to maintain/restore favourable conservation status (FCS) of the habitat type in question, as appropriate.
- This will require maintaining or improving the relevant parameters: range, area, structure and function, future prospects), depending on their status (favourable, unfavourable-inadequate, bad), as well as preventing and reducing the pressures and threats that could affect the habitat status.
- Specific and quantitative conservation and restoration objectives and targets should be formulated in the habitat action plan.
- The action plans should include a description of all the necessary actions and measures to achieve the objectives set. Actions should be specific and connected with the pressures and threats identified. It is considered important to have detailed specifications and proper targets for the implementation of the actions.
- Actions should be implemented where they can be most effective. Appropriate criteria could be defined for selection or prioritisation of the sites where certain actions.
- Coordinated action at the biogeographical level may be necessary to improve some particular aspects and to address some pressures, which should be properly considered in the action plan. Priorities for habitat restoration could also be set at the regional level.
- Actions outside Natura 2000 need to be considered. The need to expand the protected areas networks the achieve the target set in the EU Biodiversity Strategy (up to 30% of land and sea area) may be relevant for habitats that may require further protection outside the Natura 2000 network.
- Guidelines for implementation of the measures could be included in the action plan, as well as all the relevant aspects for their implementation.

- Monitoring the implementation of the plan and its effectiveness will require defining and operational framework including appropriate and relevant indicators.
- The need to define clear responsibilities and an appropriate time plan, as well as to identify the necessary funding for the planned actions are considered very relevant.
- It is necessary to agree on the responsibilities for implementation of the action plan. The relevant bodies and people responsible for implementation and monitoring of the action plan should be clearly identified.
- This governance system should be defined and established in the action plan.
- The ecological services and the benefits provided to society by the habitat could be defined and explained in the action plan.
- The action plan could be presented using a framework that defines and links the objectives to the relevant actions, responsibilities, timing, priorities, and indicators.

The following next steps were identified and discussed:

1. A review of the 1st version of the table of contents prepared in this Workshop should be done after the next Workshops on harmonisation procedures (W3 and W4) to integrate their results and conclusions of relevance for habitat action plans. This will be done on April 8th.
2. A revision/improvement with MS participation could be also envisaged.
3. The results of this Workshop should be presented in the next Mediterranean Biogeographical Seminar (May 2021).
4. Further elaboration of methods and guidelines for the compilation of habitat action plans could be promoted (working group, workshops).
5. A project to support compilation of habitat action plans with the participation of all Mediterranean MS could be formulated. The elaboration of an action plan for a particular habitat would be useful to apply the results of the other workshops on harmonisation of procedures (WS 1 o 4).

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ANNEXES

31

Annex 1: Mediterranean biogeographical roadmap (2017-2020)

During the Second Mediterranean Natura 2000 seminar, a significant range of subjects for future development and concrete collaboration was identified during the course of the working groups' discussions, and a Road Map was agreed for further development[32]. This annex outlines the events that has been arranged in concern with the follow-up proposed in Second Mediterranean Seminar.

The Agenda	What and wen has been done	Where
• *Working group on common standardised Mediterranean biogeographical guidelines, following an ecosystem approach and incorporating complementary variables for certain habitats.*	• *Workshop. Assessment of the structure and function of habitat types of community interest (Spanish Ministry Ecological transition)* ✓	Madrid (Spain)
• *Centralisation of all Member State manuals and documents of HCI definition and interpretation available (if possible, translated into English).*	✓	
• *Workshop on common habitat definitions and interpretation*	• *Workshop. Definition of habitat types of community interest (HCIs). (Spanish Ministry Ecological transition)* ✓ *25-27.11.2019* ✓ • *Cooperating for grassland conservation (15 Eurasian Grassland Conference)*	Madrid (Spain) Sulmona (Italy)

[31] In the Mediterranean region still are large areas managed under HNV farming systems. Author: Theo van der Sluis

[32] https://ec.europa.eu/environment/nature/natura2000/platform/documents/second_mediterranean_seminar/2nd_Mediterranean_Seminar_Report.pdf

The Agenda	What and wen has been done	Where
	✓ *7-6-2018*	
• *Online framework to share all the Mediterranean experiences on setting Favourable Reference Values (translated)*	✓	
• *Working group on approaches to setting Favourable Reference Values at the biogeographical-region level (through an INTERREG or LIFE project) "feature by feature" (groups of habitats and species).*	• *Workshop. Criteria and approaches to set favourable reference values. (Spanish Ministry Ecological transition)* ✓ *28-29-11-2009*	Madrid (Spain)
• *National seminars to promote integration of data within each Member State*		
• *Intercalibration workshop within situ testing to assay Member State national methods and calibrate them on given sites.*	• *Workshop. Definition of habitat types of community interest (HCIs). (Spanish Ministry Ecological transition)* ✓ *27.11.2019*	Madrid (Spain)
• *LIFE project involving all Member States to work on intercalibration methods and to establish the ecological network of sites with favourable conservation status as reference*		
• *Workshop on criteria for establishing the restoration priorities and guidelines on habitat restoration.*	• *Establishment of the basic content of action plans at biogeographical level (Spanish Ministry Ecological transition)*	
• *Prioritisation tools based on better scientific knowledge and taking into account HCI conservation status in all biogeographical regions where they are present.*		
• *Workshop on development of action plans for HCI and species at biogeographical level. LIFE project for gathering previous best practices, then funding action plans*	• *Establishment of the basic content of action plans at biogeographical level (Spanish Ministry Ecological transition)*	
• *Projects about monitoring systems at the biogeographical scale.*	• *New technologies and citizen science in Natura 2000 monitoring (IV Eurosite N2000 monitoring workshop)* ✓ *9-11.04.2019*	Doñana, (Spain)
• *Best practices exchange on local awareness and common language/ground in communication.*	✓	

The Agenda	What and wen has been done	Where
• *Encourage plan integration in Natura 2000 sites.*	• *Exploring landscapes boundaries and Natura 2000, with a view to trans-boundary management and co-operation towards the achievement of Natura 2000 objectives.* ✓ *6.7.2008*	Mende, (France)
• *Guidelines for efficient and effective stakeholder collaboration. Twinning programmes.*	✓	
• *Thematic networking event on stakeholder involvement and land stewardship, with competent authorities and steering groups at various levels.*	✓	
• *Steering committees and thematic groups to work towards a good long-term relationship with local communities*	✓	
• *Technical workshop on developing science-based protocols to evaluate pressures and threats and how to include these in the evaluation matrix of the conservation status.*	• *Standardised procedures for assessing pressures and threats to habitat types. (Spanish Ministry Ecological transition)*	
• *Workshop on citizen science & early warning systems.*	• *New technologies and citizen science in Natura 2000 monitoring (IV Eurosite N2000 monitoring workshop)* ✓ *9-11.04.2019*	Doñana, (Spain)
• *Workshop on developing tools to identify high-risk areas (map of pathways) to inform a response system, based on several data inputs.*	✓	
• *Bring up at the EU working group on Invasive Alien Species the need to know IAS lists from neighbouring countries in order to be alert to incoming threats.*	✓	
• *Coordinate and send a joint statement to the EC from Mediterranean nature organisations on the region-specific solutions that could be integrated into the next CAP.*		

Annex 2: List of some follow-up and networking events

- *Cooperating for grassland conservation (Sulmona, Italy 2018), focused on habitat definition and interpretation; Favourable reference values; Action plans for grassland conservation at biogeographical level, EU-funding and cohesion policy[33]. It was organised within the 15th Eurasian Grassland Conference organised by the Eurasian Dry Grassland Group (EDGG) together with the Sapienza University of Rome and the Majella National Park.*

- *Exploring landscapes boundaries and Natura 2000 (Mende, France 2018), with a view to trans-boundary management and co-operation towards the achievement of Natura 2000 objectives.*

- *New technologies and citizen science in Natura 2000 monitoring (Doñana, Spain, 2019)[34], focused on the possibilities of the latest technologies, as remote sensing, environmental DNA and drones, but also on the strong potential of citizen science. This workshop was the 4th Eurosite Natura 2000 monitoring workshop.*

- *Ecosystem services provided by vultures, was a networking event organised by the Spanish French Interreg Ecogyp (2019-2020).*

- *A round of 5 workshops organized in 2019, 2020 and 2021 by the Spanish Ministry of Ecological Transition (see Section 5 above).*

✓

✓ *The GoProFor project organized November 2019 a network event in Palermo, with a focus on the development of forest management training programmes in Natura 2000 sites throughout the EU. The focus was on identifying training needs of forest managers and practitioners, and to develop appropriate training programmes for them. Participants from the EU-LIFE programme and the European Commission were present, as well as representatives of various Member States. Participants from institutions, non-governmental organisations and other stakeholders interested in joining this initiative to develop national training plans were invited.*

[33] https://ec.europa.eu/environment/nature/natura2000/platform/documents/Report_Sulmona_networking_event_final.pdf

[34] https://ec.europa.eu/environment/nature/natura2000/platform/events/pdf/Report%20Donana%20.pdf

Figure 8. *Sessions during Sulmona's networking event*

- *ISPRA (Italy) hosted an online event to discuss the assessment and management of Natura Freshwater Habitats. The event, November 2020, was covering all biogeographical regions of Europe.Concerted efforts have been made to develop a network of relevant freshwater contacts across EU Member States to help focus on tackling key generic issues associated with Natura freshwater habitats - focussing specifically on ecological rationale, to help underpin consistent and effective management of the Natura 2000 network and achievement of favourable conservation status.*

Figure 8. *Sessions during Doñana's networking event*

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Annex 3: Examples of LIFE projects focusing on restoring habitats and species in the Mediterranean region.

Project title	Project code
The CONVIVE-LIFE will improve the conservation status of habitats and species of Community interest by restoring ecological and hydrodynamic functioning	LIFE14 NAT/ES/001213
The general goal of LIFE CAÑADAS is to enhance the role of the Spanish network of drove roads as green infrastructure that provides connectivity between Natura 2000 sites	LIFE18 NAT/ES/000930
LIFE-SALINAS aims at the conservation of Audouin's gull (Larus audouinii) and two priority habitat types, Mediterranean salt steppes and Coastal dunes with Juniperus spp.	LIFE17 NAT/ES/000184
LIFE IN COMMON LAND is a demonstration project whose main objective is to improve the conservation status of three priority habitats listed in Annex I of the Habitats Directive - Atlantic wet heaths, raised bogs and blanket bogs - in Serra do Xistral	LIFE16 NAT/ES/000707
The overall objective of the LIFE FLUVIAL project is to improve the conservation status of Atlantic river corridors in the Natura 2000 network	LIFE16 NAT/ES/000771
The main objective of the LIFE Tritó Montseny project is to improve the conservation status of the Montseny brook newt and its riparian habitat	LIFE15 NAT/ES/000757
The LIFE Marbled duck PSSO project aims at restoring optimal breeding conditions for two of the most threatened and vulnerable duck species at EU level in remaining wetlands in Sicily	LIFE18 NAT/DE/000797
The overall objective of the LIFE DIOMEDEE project is to protect seabirds and habitat types against invasive alien species (IAS), within the Gargano National Park, Italy.	LIFE18 NAT/IT/000920
LIFE FORESTALL aims to protect, restore and manage the Valle Averto Oasis (78 ha) Nature 2000 site in the Venetian Lagoon, Italy.	LIFE18 NAT/IT/001020

[35] Many habitats and species of the Mediterranean region are dependent on the survival of High Nature Value farming systems. In the picture a mosaic of Mediterranean arborescent matorral with dehesas (6310). Picture: Carlos Sunyer.

GoProFOR LIFE encourages the exchange of knowledge and good practice for biodiversity of forest habitats in Natura 2000 sites. The aim is to increase awareness among local authorities and stakeholders on the conservation of habitats and species.	LIFE17 GIE/IT/000561
LIFE Brenta 2030 supports implementation of the river Brentas river basin management plan (2015-2021) and approved conservation measures for the Veneto regions Natura 2000 sites.	LIFE18 NAT/IT/000756
The LIFE project is the first inter-sectorial cooperation and integrated management initiative focusing on Croatian rivers. It aims to implement EU Directives (e.g., Water Framework, Floods, Birds and Habitats) to solve river ecosystem problems	LIFE14 NAT/HR/000115
Dinara back to LIFE aims to protect and restore dry grassland habitats and their characteristic species in Natura 2000 network sites in the Dinara Mountains of Croatia	LIFE18 NAT/HR/000847
The main objective of the LIFE-KEDROS project is to maintain the priority habitat in the Koilada Kedron-Kampos Natura 2000 network site in good conservation status	LIFE15 NAT/CY/000850
The main aim of the LIFE PRIMED project is to improve the conservation status of habitats and species in the Nestos Delta and Palo Laziale woods Natura 2000 sites in Greece and Italy	LIFE17 NAT/GR/000511
LIFE Avaloirs will improve the conservation status of wet and dry heaths, bogs, bog woodland, and scree habitats, along with abandoned hay meadows, in Natura 2000 sites in the Normandy-Maine Regional Nature Park, France.	LIFE17 NAT/FR/000007
The LIFE SALLINA project will restore around 400 ha of salt marshes in three targeted Natura 2000 sites; of which 290 ha is coastal lagoons and Atlantic salt meadows, two habitats listed in the Habitats Directive.	LIFE17 NAT/FR/000519
restore 700 ha of priority grassland habitats of the Habitats Directive, and ensure the long-term conservation of 1 000 ha of two priority grassland habitats, Semi-natural dry grasslands and scrubland facies on calcareous substrates and Xeric sand calcareous grasslands, with the eradication of invasive alien species.	LIFE18 NAT/FR/000698
LIFE WolFlux's overarching goal is to promote the ecological and socio-economic conditions needed to support a viable wolf population in the south of the Douro river. A series of actions will be taken to help reduce the main threats to this carnivore.	LIFE17 NAT/PT/000554
The objective of LIFE STRŽEN is to improve the conservation status of the Habitats Directive priority habitat, Turloughs, by restoring the former Stržen riverbed, with positive effects, an increased infiltration that will improve conditions for fish, invertebrates, birds and mammals.	LIFE16 NAT/SI/000708

Annex 4: List of additional LIFE projects relevant for the Mediterranean region

Project Title	Project N	Country	Theme			
			1	2	3	4
DRAVA LIFE - Integrated River Management	LIFE14 NAT/HR/000115	HR	x			x
LIFE EUROTURTLES – Actions for improving the conservation status of the EU sea turtle populations	LIFE15 NAT/HR/000997	HR	x	x		x
LIFE Artina - seabird conservation network in the Adriatic	LIFE17 NAT/HR/000594	HR	x	x		x
Dinara back to LIFE - Management planning and restoration of Dinara dry grasslands	LIFE18 NAT/HR/000847	HR	x		x	x
LIFE HEALTHY FOREST - Early detection and management to reduce forest decline by IAS and pathogenic agents	LIFE14 ENV/ES/000179	ES		x	x	
LIFE IrekiBAI - Open rivers: Improving connectivity and habitats of rivers shared by Navarra and Gipuzkoa	LIFE14 NAT/ES/000186	ES	x			x
LIFE Anillo Verde - Green Belt of Bay of Santander: connecting nature and city	LIFE14 NAT/ES/000699	ES	x			
LIFE Olivares Vivos - Olive Alive: Towards the design and certification of biodiversity friendly olive groves.	LIFE14 NAT/ES/001094	ES	x		x	
CONVIVE-LIFE - Integration of human activities in the conservation of the N2000 in the littoral of Cantabria	LIFE14 NAT/ES/001213	ES	x			
LIFE LEMA - Intelligent marine LittEr removal and Management for local Authorities	LIFE15 ENV/ES/000252	ES	?			
LIFE_Redcapacita2015 - Networks of knowledge and training for the management of Mediterranean forest	LIFE15 GIE/ES/000809	ES		x		x
LIFE SOUTHERN WOLVES - The wolf of Andalusia: changing attitudes	LIFE15 GIE/ES/000962	ES				x
LIFE-IP INTEMARES - Integrated, Innovative and Participatory Management for N2000 in the Marine Environment	LIFE15 IPE/ES/000012	ES		x		x
LIFE STEPPE FARMING – Sustainable farming for steppe bird's conservation	LIFE15 NAT/ES/000734	ES	x	x		x
LIFE Trit Montseny - Conservacion del Triton del Montseny (Calotriton arnoldi).	LIFE15 NAT/ES/000757	ES	x	x		x
LIFE BACCATA - Conservation and restoration of Mediterranean Taxus baccata woods (9580*)	LIFE15 NAT/ES/000790	ES	x	x		x
LIFE Ricot - Conservation of the Duponts lark (Chersophilus duponti) and its habitat	LIFE15 NAT/ES/000802	ES	x	x		x
LIFE OREKA Mendian - Conservation and management of Basque mountain grasslands	LIFE15 NAT/ES/000805	ES	x	x		x
LIFE REMoPaF - Recovery of Endangered Mollusc Patella Ferruginea by Artificial Substrates in Mediterranean Sea	LIFE15 NAT/ES/000987	ES	x	x		x
LIFE- ZEPAURBAN - Management of Urban SPAs in Extremadura for the conservation of Lesser kestrel	LIFE15 NAT/ES/001016	ES		x		x
LIFE Euro Bird Portal - online bird portal data to display spatiotemporal patterns of bird distribution	LIFE15 PRE/ES/000002	ES	?			
LIFE NATURA 2000 + BEAR - Living in N2000 and living with bears	LIFE16 GIE/ES/000621	ES		x		x
LIFE PALUDICOLA - Habitat restoration for the Spring and Autumn migration of the Aquatic Warbler	LIFE16 NAT/ES/000168	ES	x	x		x
AQUILA a-LIFE - Bonelli's Eagle recovery by working together for an electricity grid suitable for birds	LIFE16 NAT/ES/000235	ES	?			

LIFE OSO COUREL - Actions to favour Cantabrian brown bear expansion to new territories.	LIFE16 NAT/ES/000573	ES	x	x		
LIFE IN COMMON LAND - Managing land in common, a sustainable model for conservation and rural development	LIFE16 NAT/ES/000707	ES	x	x		x
LIFE ALNUS - Restoration, conservation and governance of the Alnus alluvial forests in the Mediterranean Region	LIFE16 NAT/ES/000768	ES	x			x
LIFE FLUVIAL - Improvement and sustainable management of river corridors of the Iberian Atlantic Region	LIFE16 NAT/ES/000771	ES	x			x
LIFE REFOREST - Erosion prevention and flora restauration of burnt FOREST through innovative solutions	LIFE17 ENV/ES/000248	ES	?			
LIFE-SALINAS - Conservación de los hábitats y aves acuáticas en el LIC y ZEPA ES0000175	LIFE17 NAT/ES/000184	ES	x	x		
LIFE STOP Cortaderia - Urgent measures for controlling the spread of Pampa Grass (Cortaderia selloana)	LIFE17 NAT/ES/000495	ES	x	x		x
LIFE BIORGEST - Innovative Forest Management Strategies to Enhance Biodiversity in Mediterranean Forests.	LIFE17 NAT/ES/000568	ES		x	x	
LIFE MIDMACC - Mid-mountain adaptation to climate change	LIFE18 CCA/ES/001099	ES	?			
LIFE MycoRestore - Innovative use of mycological resources for resilient & productive Mediterranean forests	LIFE18 CCA/ES/001110	ES	?			
LIFE ADAPTA BLUES - Adaptation to climate change through management and restoration of European estuaries	LIFE18 CCA/ES/001160	ES	?			
LIFE CAADAS - Conservation and restoration of drove roads to enhance biodiversity and connectivity of N2000	LIFE18 NAT/ES/000930	ES	x			
LIFE GYPCONNECT - Restoration of connections between the Alpine and Pyrenean populations of bearded vulture	LIFE14 NAT/FR/000050	FR	x			
LIFE BioCorridors - Cross-border corridors: demonstrating a transboundary ecological network	LIFE14 NAT/FR/000290	FR	x			
LIFE Baie de l'Aiguillon - Preservation, restoration and valuation of coastal habitats of European interest	LIFE14 NAT/FR/000669	FR	x			
LIFE CROAA - Control strategies of alien invasive Amphibians in France	LIFE15 NAT/FR/000864	FR	x			
LIFE IP Marine Habitats - Nature Integrated Project for effective and equitable management of marine habitats	LIFE16 IPE/FR/000001	FR		x		x
LIFE HABITATS CALANQUES - Integrated management on coastal habitats suburban of Calanques	LIFE16 NAT/FR/000593	FR		x		x
LIFE VISON - Conservation of the European Mink and associated community interest species and habitats	LIFE16 NAT/FR/000872	FR	x			
LIFE-AGESCIC - Achieve Good Environmental Status for Coastal Infrastructures Construction	LIFE17 ENV/FR/000233	FR	?			
LIFE Avaloirs - Restoration of heathlands and bogs on avaloirs hills and its associated wildlife	LIFE17 NAT/FR/000007	FR	x			
LIFE SALLINA - Sustainable Actions on Loire Lagoons for Improvement and Assessment	LIFE17 NAT/FR/000519	FR	x			x
LIFE Oxyura - Eradicate the Ruddy duck to save the endangered White-headed duck from extinction.	LIFE17 NAT/FR/000542	FR	x			
LIFE VALBONNE - Restoration of priority habitats and species in the Valbonne military camp	LIFE18 NAT/FR/000698	FR	x			
FRESh LIFE - Demonstrating Remote Sensing integration in sustainable forest management	LIFE14 ENV/IT/000414	IT				x
Life4MarPiccolo - A New LIFE for Mar Piccolo	LIFE14 ENV/IT/000461	IT	x			x
LIFE FutureForCoppiceS - Shaping future forestry for sustainable coppices in southern Europe	LIFE14 ENV/IT/000514	IT			x	
LIFE IP GESTIRE 2020 - Nature Integrated Management to 2020	LIFE14 IPE/IT/000018	IT		x	x	
LIFE EREMITA - Coordinated actions to preserve residual populations of forest and freshwater insects	LIFE14 NAT/IT/000209	IT	x	x		x
LIFE UNDER GRIFFON WINGS – Implementation of best practices to rescue griffon vultures in Sardinia	LIFE14 NAT/IT/000484	IT	x			

LIFE PonDerat - Restoring the Pontine Archipelago ecosystem through management of invasive species	LIFE14 NAT/IT/000544	IT	x	x		
LIFE WetFlyAmphibia - Conservation of amphibians and butterflies of open wet areas and their habitats	LIFE14 NAT/IT/000759	IT	x			
LIFE SILIFFE - River Functionality Index as planning instrument for a good governance of Sile's ecosystem	LIFE14 NAT/IT/000809	IT	x	x		x
LIFE Risorgive - Conservation of biodiversity in the Municipality of Bressanvido	LIFE14 NAT/IT/000938	IT	x			x
LIFE ConRaSi - Measures for the conservation of Bonelli's eagle, Egyptian vulture and Lanner falcon in Sicily	LIFE14 NAT/IT/001017	IT	x	x		x
LIFE MOTTLES - Monitoring ozone injury for setting new critical levels	LIFE15 ENV/IT/000183	IT				x
LIFE MARINAPLAN PLUS - innovative technology for a sustainable marine and coastal seabed management plan	LIFE15 ENV/IT/000391	IT	?			
LIFE Net pro Net - Una rete di volontari per contribuire alla gestione attiva della Rete Natura 2000	LIFE15 GIE/IT/000897	IT				x
Clean Sea LIFE - Clean Sea Life	LIFE15 GIE/IT/000999	IT	?			
RE.LIFE - Re-establishment of the Ribbed Limpet (Patella ferruginea) in Ligurian MPAs	LIFE15 NAT/IT/000771	IT	x			
IdroLIFE - Conservation and management of freshwater fauna within an ecological corridor	LIFE15 NAT/IT/000823	IT	x			
LIFE GRANATHA - Growing avian in Apennine's Tuscany heathlands	LIFE15 NAT/IT/000837	IT	x			x
CalMarSi LIFE - Integrated conservation of Calendula maritima Guss.	LIFE15 NAT/IT/000914	IT	x			
FLORANET LIFE - Safeguard and valorization of the plant species of EU interest in the Natural Parks of the Abruzzo	LIFE15 NAT/IT/000946	IT	x			x
LifeTicinoBiosource - Enhancing Biodiversity by Restoring Source Areas for Priority and Other Species	LIFE15 NAT/IT/000989	IT	x			
LIFE SEPOSSO - Environmental governance for the Posidonia oceanica Sustainable transplanting Operations	LIFE16 GIE/IT/000761	IT	x			
LIFE 4 Oak Forests – Management tools for increasing structural and compositional biodiversity in oak forests	LIFE16 NAT/IT/000245	IT	x	x		
LIFE REDUNE - Restoration of dune habitats in Natura 2000 sites of the Veneto coast	LIFE16 NAT/IT/000589	IT	x			
LIFE EGYPTIAN VULTURE - Measures for the conservation of the Egyptian vulture in Italy and the Canary Islands	LIFE16 NAT/IT/000659	IT	x			
LIFE LAGOON REFRESH - Coastal lagoon habitat (1150*) and species recovery by restoring the salt gradient	LIFE16 NAT/IT/000663	IT	x			
ROC-POP-LIFE - Promoting biodiversity enhancement by Restoration of Cystoseira POPulations	LIFE16 NAT/IT/000816	IT	x			
GOProFOR LIFE - Good practices implementation network for forest biodiversity conservation	LIFE17 GIE/IT/000561	IT	x			x
LIFE SAFE-CROSSING - Preventing Animal-Vehicle Collisions – Demonstration of Best Practices	LIFE17 NAT/IT/000464	IT	?			
LIFE PALU QdP - Participatory Agroforestry development: a tool for restoring and sustaining	LIFE17 NAT/IT/000507	IT	x			x
LIFE Nat.Sal.Mo - Recovery of S. macrostigma: innovative techniques and participatory governance tools	LIFE17 NAT/IT/000547	IT	x			x
LIFECALLIOPE - Coastal dune habitats, sublittoraL sandbanks, marine reefs	LIFE17 NAT/IT/000565	IT	?			
LIFE FALKON - Fostering the breeding range expansion of central-eastern Mediterranean Lesser Kestrel	LIFE17 NAT/IT/000586	IT	x			
LIFE Perdix - Italian Grey Partridge reintroduction in Italy	LIFE17 NAT/IT/000588	IT	x			x
LIFEorchids - Improving the conservation status of critically endangered orchid communities in western Italy	LIFE17 NAT/IT/000596	IT	x	x		x

LIFE SAMFIX - SAving Mediterranean Forests from Invasions of Xylosandrus beetles and associated pathogenic fungi	LIFE17 NAT/IT/000609	IT	x			x
LIFE GREENCHANGE - Green infrastructures for increasing biodiversity in Agro Pontino and Maltese rural areas	LIFE17 NAT/IT/000619	IT	x			x
GreenChainSAW4LIFE – Green energy and smart forest supply chain as drivers for a mountain action plan	LIFE18 CCM/IT/001193	IT	?			
LIFE SySTEMiC - Close-to-NAture forest sustainable management practices under climate changes	LIFE18 ENV/IT/000124	IT	?			
LIFE 4 POLLINATORS - Involving people to protect wild bees and other pollinators in the Mediterranean	LIFE18 GIE/IT/000755	IT				x
LIFE Marbled duck PSSO - Habitat recovery and management actions to increase Marbled duck population	LIFE18 NAT/DE/000797	IT	x			
LIFE MEDTURTLES – Collective actions for improving the conservation status of sea turtles	LIFE18 NAT/IT/000103	IT	x			x
LIFE4FIR - In situ and ex situ conservation strategies to secure the critically endangered Abies nebrodensis	LIFE18 NAT/IT/000164	IT	x			
LIFE LANNER* - Urgent conservation actions for Lanner* falcon (Falco biarmicus feldeggii)	LIFE18 NAT/IT/000720	IT	x			
LIFE Brenta 2030 – Good governance and innovative financing schemes for biodiversity	LIFE18 NAT/IT/000756	IT	x			x
LIFE DRYLANDS - Restoration of dry-acidic Continental grasslands and heathlands in Natura 2000 sites	LIFE18 NAT/IT/000803	IT	x			x
LIFE LETSGO GIGLIO - Less alien species in the Tuscan Archipelago: new actions to protect Giglio island habitats	LIFE18 NAT/IT/000828	IT	x			
LIFE ELIFE - Elasmobranchs Low-Impact Fishing Experience	LIFE18 NAT/IT/000846	IT	?			
LIFE MILVUS - Measures for the conservation of the Red kite in Calabria Region (Italy) and Corsica Island (France)	LIFE18 NAT/IT/000917	IT	x			x
LIFE DIOMEDEE - Protection of seabirds and habitats in Tremiti (Diomedee) Islands and other Apulian SCI's	LIFE18 NAT/IT/000920	IT	x			
LIFE WOLFALPS EU - Coordinated actions to improve wolf-human coexistence at the alpine population level	LIFE18 NAT/IT/000972	IT	x			x
LIFE FORESTALL - Restoration of Alluvial Forests and Cladium mariscus habitats in Ramsar and Natura 2000 sites	LIFE18 NAT/IT/001020	IT	x			
LIFE Arcipelagu Garnija - Securing the Maltese islands for the Yelkouan Shearwater Puffinus yelkouan	LIFE14NAT/MT/000991	MT	x			x
LIFE Rupis - Egyptian Vulture and Bonellis Eagle Conservation in Douro/Duero Canyon	LIFE14 NAT/PT/000855	PT	x			
LIFE LINES - Linear Infrastructure Networks with Ecological Solutions	LIFE14 NAT/PT/001081	PT				x
LIFE AGUEDA – Conservation and management actions for migratory fish	LIFE16 ENV/PT/000411	PT	x			
LIFE RELICT - Preserving Continental Laurissilva Relics	LIFE16 NAT/PT/000754	PT	x			
LIFE WolFlux - Decreasing socio-ecological barriers to connectivity for wolves south of the Douro river	LIFE17 NAT/PT/000554	PT	?			
LIFE LANDSCAPE FIRE - New methodologies for forest fire prevention	LIFE18 ENV/PT/000361	PT	x		x	x
LIFE Ilhas Barreira - Conserving the Barrier Islands in Algarve to protect priority species and habitats	LIFE18 NAT/PT/000927	PT	x			
LIFE TO GRASSLANDS – conservation and management of dry grasslands in eastern Slovenia	LIFE14 NAT/SI/000005	SI	x		x	
LIFE ARTEMIS - Awareness Raising, Training and Measures on Invasive alien Species in forests	LIFE15 GIE/SI/000770	SI	x			
LIFE Lynx - Preventing the extinction of the Dinaric-SE Alpine lynx population	LIFE16 NAT/SI/000634	SI	x			
LIFE for LASCA - Urgent measure to conserve nearly extinct species Protochondrostoma genei	LIFE16 NAT/SI/000644	SI	x			
LIFE STRŽEN - Improvement of N2000 statuses with renaturation of Stržen's riverbed on intermittent Cerknica Lake	LIFE16 NAT/SI/000708	SI	x			

LIFE AMPHICON - Amphibian conservation and habitat restoration	LIFE18 NAT/SI/000711	SI	x			

Annex 5: List of some Interreg projects relevant for the Mediterranean region

Project name	Country leading	Mediterranean countries	Other countries	Main objectives	Seminar themes			
					1	2	3	4
CHRISTA Culture and Heritage for Responsible, Innovative and Sustainable Tourism Actions	Cyprus	Cyprus, Greece, Italy, Spain and Portugal	BG, RO, BE, LV, SE	Protect and preserve natural and cultural heritage assets and deploy them for the development and promotion of innovative, sustainable and responsible tourism strategies, including intangible and industrial heritage, through interpretation and digitisation				x
INVALIS Protecting European Biodiversity from Invasive Alien Species	Greece	Greece, Portugal, Spain, France and Italy	RO, LV	Improve environmental policies, by supporting policy measures for the prevention, early detection and control of IAS.	x			x
CD-ETA Collaborative Digitization of Natural and Cultural Heritage	Bulgaria	Spain, Italy and Greece	EE, SI	Improve adoption of the digitization policy for natural and cultural heritage and to be prepared the implementation of best practices into the participating regions, according to their needs				x
OUR WAY PreservatiOn and promotion of cUltural and natural heRitage through GreenWAYs	Spain	Spain and France	IE, BE, PL, HU, BG	Contribute to the conserving, protecting, promoting and developing natural and cultural heritage using Greenways by improving policy instruments related to the cultural and natural quality of the territories				x
IMPACT Innovative Models for Protected Areas: exChange and Transfer	Spain	Spain and Italy	BE, DE, LT, RO	Changing management policies to promote productive activities in and around protected areas without compromising biodiversity conservation. Interregional cooperation will help to achieve this goal				x
BID-REX From Biodiversity Data to Decisions: enhancing natural value through improved regional development policies	Spain	Spain and Italy	UK, BE, HU, SI	Enhance natural value preservation through improved regional development policies by creating/reinforcing the link between relevant biodiversity data and conservation decision-making processes				x

BIOGOV Celebrating Biodiversity Governance	The Netherlands	Spain	BE, SE, PL, RO, BG, SI	Improvement of natural and cultural heritage policies, through participatory governance, by way of stakeholder cooperation.				x
PROGRESS PROmoting the Governance of Regional Ecosystem ServiceS	Italy	Italy and Spain	IE, HU, LV, RO	Initiate a process of policy change to the conservation of biodiversity and the maintaining nature's capacity to deliver the goods and services.				x


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