

# CEEweb for Biodiversity Academy, organised with Eurosite and supported by EKLIPSE

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**“Planning for an Uncertain Future:  
Climate Change, Wetlands and Natura 2000”**



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## 1 Background & Purpose of the Event

Understanding climate change, its perceptible and foreseeable impacts and the role nature-based solutions might play in mitigating these, particularly in cases of floods and droughts mitigation and climate change adaptation, is the key element in order to effectively protect our natural environment.

An important tool to achieve such effective conservation and management of species and habitats is Natura 2000, the largest network of protected sites within the European Union. In addition to that, the extraordinary biodiversity, provisioning and regulating service potential of wetlands, in combination with the importance of this ecosystem for bird and aquatic species and ability to regulate the environment, makes wetlands a key facet of Blue and Green Infrastructure. As of yet, the management of wetlands, both within and outside of the Natura 2000 sites, still does not keep up with the accelerating changes caused by climate change. Therefore, it is essential to adopt the new paradigm of adaptive management, which is essential for a successful long-term conservation of wetlands and other natural areas maintaining a safe environment for human well-being and biodiversity.

Thus, the aim of this workshop was to encourage the shift towards more integrated and adaptive management approaches under relevant policies, benefiting from the existing technology, knowledge and the examples of good practice, and to gradually transform the management plans to consider uncertainty, change and most importantly climate change.

An additional aspect of the workshop was to consider how we can improve the recognition of privately protected areas and their contribution to the protection of Natura 2000 and biodiversity in general, as well as how we can facilitate more engagement of the private land-owners and private sector in general, in nature management.

## 2 Target Group

This event targeted policy makers as well as national and EU authorities, scientists and policy focused NGOs, as well as the site management practitioners. We have hosted national and regional level authorities, managers of protected sites (Natura 2000, national parks and other), as well as scientists, private consultants, members of European Habitats Forum (EHF), Wetlands International, WWF, other European NGOs and members of CEEweb and Eurosite working on national level.

## 3 Workshop Objective

The various relevant sectors mentioned were brought together in order to bridge the gap between the newest strands of resilience thinking and adaptive environmental management that exists in the science sector, with practice related to the policy world, including the EU Biodiversity Strategy, Green Infrastructure Strategy, Water Framework Directive, Habitats and Birds Directive, Floods Directive, Climate Policies and the relevant international conventions. During the 2,5 days-long workshop, the first day focused on policies of the EU influencing the topic of the event with a particular focus on implementation of natural Water Retention Measures (NWRM) by various stakeholders.

Day 2 included a trip to a wetland of Kiskunsag National Park with a subsequent discussion about water and biodiversity management. The day also included a presentation and a discussion on dealing with different funding sources for wetlands restoration and management.

## 4 About CEEweb for Biodiversity

[CEEweb for Biodiversity](#) is a network of non-governmental organizations in the Central and Eastern European region working for 20 years in 20 countries. The mission of CEEweb is the conservation of biodiversity through the promotion of sustainable development. CEEweb works through advocacy, influencing decision making, common projects, capacity building, networking and awareness raising. It targets its members, local, national and international decision makers, NGOs and NGO networks, companies and the scientific community.

## 5 About Eurosite

[Eurosite](#) is working to create a Europe where nature is cared for, protected, restored and valued by all. Eurosite does this by providing practitioners with opportunities to network and exchange experience on

practical nature management. It is a network of site managers, non-governmental and governmental organisations, and individuals committed to their vision. The members are based across Europe - from the Atlantic islands to the Black Sea; and from Scandinavia to the Mediterranean. Nature knows no boundaries: Eurosite believes the future protection and conservation of Europe's nature will only be achieved through international cooperation.

## 6 About the EKLIPSE Mechanism

[EKLIPSE](#) is an EU funded project that aims to set up a sustainable and innovative mechanism to facilitate Science-Policy interface regarding biodiversity and ecosystem services in the EU. One of EKLIPSE's main objectives is to build a Network of Networks: a virtual community of people that are willing and committed to work with colleagues in a transparent and structured way, in order to ensure that the best available knowledge on biodiversity and ecosystem services is used to support decisions that impact the EU environment and our collective wellbeing.

## 7 Lessons Learned

### Working group topics

During the term of the Joint Annual Meeting 6 working groups were formed pursuing various topics within the scope of Climate Change, Wetlands and Natura 2000. Hereinafter, the outcomes of each working group will be outlined and summarized.

#### *1 Different global and EU policies supporting wetlands restoration and conservation*

Concerning the exceptionally biodiverse wetlands, there are some good examples for restoration taking place in several European countries. The working group identified some success factors, but also concluded that neither having the right law in place nor financing possibilities nor awareness alone are sufficient to make or deliver remarkable results in restoration work. Even if there is already a law in place, there is no guarantee that the law will be actually implemented (e.g. [Dutch Water Law](#)).

Furthermore, it was indicated that other economic interests should be considered when decisions are made.

#### *1.1 Recommendations to reach success in restoration*

A combination of factors is needed in order to successfully restore wetlands. Most importantly, stakeholders must be included in the process by sharing relevant outcomes with them so that every party can benefit. This also requires that nature conservationists change their attitudes towards considering other parties' interests throughout the whole process. Above that, it is essential having a strong law enforcement in place, that funding for restoration is provided within the new CAP (Common Agricultural Policy) and that new financial instruments for TEN=G are set up. Regarding the role of stakeholders, it is indispensable that experiences between them are exchanged, that they are brought to the policy level and that communication towards all stakeholders regarding their benefits place. Other recommendations contain involving zoos and enhancing synergies between in situ and ex situ conservation and cooperating with them on communication and outreach regarding restoration.

#### *1.2 Concerning the implementation and mainstreaming of Natural Water Retention Measures (NWRM) and Nature-Based Solutions (NBS) several factors were particularly stressed during the workshop:*

For once, the dependency on EU funding for measures can be a limiting factor. A side effect of the EU funding is the creation of so called "hot spots" of projects, which means that regions that are experienced in working with EU grants tend to apply for more EU funding, creating an imbalance with other regions. The overall capacity needs to be more evenly spread across the European Union. At the same time, LIFE grants create the dynamics and a well-defined task for a project to be successful. An often-decisive factor regarding the implementation of NWRM and NBS is the ownership of land.

Moreover, communication and explaining the message you want to impart is crucial. Natural events such as floods and droughts can be helpful to communicate the message or to create political and public support. The concept of NBS has brought a narrative to solutions that already existed. Some

people are not fully aware of the concept, which could also be explained with the existence of various terms (e.g. NBS, GI, ES etc.). However, it is debatable whether unifying terminology would be helpful to increase understanding between different sectors. Furthermore, communication of NBS should not just be about the 'what' but also about 'how' (and 'for whom'), to emphasize we are doing it for people. Platforms ([Openness](#), [Oppla](#)) are suitable for sharing experiences but more effort is needed to improve accessibility for local stakeholders and authorities. Finally, monitoring of effects and capturing evidence is key and should be used for ongoing communication about the effects of measures. Make sure monitoring begins before the start of the project.

## *2. Practice and implementation of NWRM & NBS in Natura 2000*

The discrepancy between short-term gains and long-term benefits may hinder the implementation of effective measures. Apart from that, there has been experience with new business cases for NBS that might support the implementation of further measures. For example, gravel and sand, which become available during floodplain restoration, can be sold to the construction industry.

### *2.1 Local/Regional experiences with implementations of measures*

NGOs with acquired land noticed they were considered serious partner in the region with a certain amount of influence. However, in Romania, changing land ownership still is an administrative burden. In addition to that, community resistance/support have often impacted the implementation and put pressure on politicians.

Another point made is the importance of knowledge of local residents about the function of existing ecosystems. Lack of knowledge can hamper the successful implementation of measures. Traditional relations between farmers and water managers can be persistent but, in some cases, have been overcome.

Moreover, the exchange of experiences and field trips across Europe can inspire promoters of Nature-Based Solutions, as the [Natural Climate Buffers Study Tour](#) has shown by shifting the participants' minds from grey towards green infrastructure.

## *3. Eurosite Management Planning Guide*

At the beginning of the year Eurosite has started a Eurosite Management Planning Expert Group (EMPEG) to collect the existing knowledge and experience within the Eurosite network and distil it in to a new modern and interactive Management Planning Guidance in a form of an online portal. This event was an opportunity to present the overall structure of this work and the progress made so far, as well as to ask for the feedback from participants on the usefulness of this work and their input in terms of the knowledge needs. It was decided that a management planning toolkit would be advantageous, and an international course should be taken. A suggestion was made to get further information about the global strategy for plant conservation by Prof. Maxted. The second issue concerns face-to-face meetings, which would be valuable between representatives of different countries, either national or international. It is important to gather stakeholders together to harvest knowledge of historic management practices. To gather these stakeholders, engagement guidance with examples of successes are essential. Beyond that, it is important to not restrict the number of meetings with stakeholders, but to have as many meetings as necessary to get an agreement among the stakeholders.

The main issue is how to accommodate the requirements of sites with different levels of designation. A suggested solution could be to pool stakeholders from similar sites or those who face similar problems from one single country to another country to provide examples in order to illustrate possible solutions (cf. [Concept of Twinning](#)). Lastly, several references were provided by participants. These can be used in the Eurosite Management Planning Guidance.

## *4. Scientific modelling in management planning and ecosystem services - Possibilities for the broader application of modelling in site management and restoration*

An important factor regarding scientific modelling in management planning and ecosystem services is the size and the scale (site vs. catchment vs. larger) as well as the availability of enough resources for the modelling itself and the needed staff capacity. Besides the development of rapid prototype modelling must consider operational timings and funds of projects. A standard definition of models/modelling (conceptual vs. spatial vs. digital) must be given. On top of that, it would be useful to be able to model changes which are caused by Climate Change. However, the limitations of models must be taken into account.

#### *4.1 The needs and issues to achieve broader application of modelling in planning management and restoration*

- Consistency in models
- Systematic models
- Models should integrate existing planning mechanisms
- Require good-quality data
- 'Quick-and-Dirty'-models would be useful
- Need of 'Open-Source' science principles

#### *4.2 The role of the concept of Ecosystem Services in planning management and restoration actions*

The use of the concept can help to secure funding. Aside from that, a holistic view of ecosystem services is needed, and biodiversity has to be taken into account. There is also a need that decision-makers understand the idea of ecosystem services and the review of Ecosystem approach as described in Convention on Biodiversity document might be necessary.

#### *4.3 Positive examples of integrating modelling and/or the ecosystem services approach into site management and decision-making*

- [Crop Wild Relative Conservation](#) (Globally)
- [UK Coastal Network](#) (UK)
- [Natural Flood Management](#) (UK)
- [Agri-Environment Schemes](#) (EU)
- Population Models of Threatened Species (Globally)
- Protected Area System Design (Globally)

New technology and data techniques such as multi-spectral analysis, artificial intelligence and Unmanned Aerial Vehicles (UAVs) also must be considered and embraced.

#### *5. The role of the European Private Land Conservation Network (ELCN)*

The primary goal of the ELCN is to engage people and specifically land holders in conservation. For a better understanding of private land conservation and Privately Protected Areas (PPAs) in a European Context, clarity on use of key terms (e.g. private governance, PPA etc.) is needed to better understand the scope of the network. Additionally, national reviews of private land stewardship, PPAs and national legal frameworks would be useful. It is important to collaborate with the European Environment Agency (EEA) to report governance of PAs in the Common Database on Designated Areas (CDDA) and encourage national NGOs to report directly to the World Database on Protected Areas (WDPA). The potential projects contain the encouragement for peer-to-peer learning, for example to document and disseminate positive examples of engagement of locals/land owners (and of approaches that did not work), to understand contributions of NGOs (and other private governance entities) to protected area

establishment and management. This could support smaller/emerging NGOs working on land conservation in their work. There is a necessity to research new models of designating, establishing and financing PPAs (e.g. easements, carbon, financing). Besides this, there is a need to understand gaps in current European legislation, to encourage better support for PPAs and to work with CDDA on information base.

If easements are a way forward, then a tracking/monitoring will be required. A combination of methods on this was suggested:

- Satellite monitoring
- Public Database (encouraging public scrutiny)
- Monitoring Project (e.g. every 10 yrs.)

It was noted that initially more detailed and frequent monitoring would be required as 'proof of concept', i.e. to show that easements are (or are not) effective conservation tools in Europe and that peer to peer learning was important but should be carried out as 'group-to-group' not 'person-to-person'.

Several organisations who own/managed private conservation initiatives were suggested as sources of data/partners in ELC:

- Forest Stewardship Council (FSC): as certification mandates a certain percentage of land for conservation
- Hunting concessions
- Zoos
- Engaging owners/managers of areas important for connectivity, buffer zones for PAs and PPAs

Reporting data – challenges and issues were also discussed. The importance of finding incentives (Convention of Biological Diversity Aichi Biodiversity Target 11, national pride etc) was also discussed.

## 6. Risk-Based Decision Making

The outcomes of this workshop addressed the following issues:

- How people interact and decide trade-offs between competing values when making a decision
- How to best engage with experts when you want them to contribute to a decision
- Psychological weaknesses among scientists and how to best anticipate them
- Group dynamics and how to use groups to estimate facts and the outcomes of future events
- How to construct values hierarchies and how to use them to reconcile competing objectives among stakeholders

Recommendations on how to solve these matters were provided. Accordingly, it is crucial to distrust conventional measures of expertise, such as a person's age, experience, publications, memberships, the esteem in which they are held by their peers. None of those things are a guide to a person's ability to make reasonable judgements. Thus, the best strategy is to use a diverse group to have them make independent judgements and find the average of those judgements. Lastly, experts should not be used to make value-trade-offs as it is not their job. We recommend that when you are confronted with a difficult decision with competing stakeholders and different values, that you use structured decision-making to help you to simplify the problem and find acceptable solutions.

## 8 Final Remarks

In terms of good examples of the successful wetland restoration projects there are good examples in several European countries. Some success factors were recognized, but the main message is that neither having the right law in place, nor financing possibilities, nor awareness alone are sufficient to

make or deliver remarkable results in restoration work. A combination of factors is always needed, and other economic interests should be considered when decisions are made. Most importantly, stakeholders have to be included in the process from the very beginning by sharing relevant outcomes with them so that every party can benefit. Unifying terminology could be helpful to increase understanding between different sectors. Furthermore, the communication around the NBS should not just be about the 'what' but also about 'how' (and 'for whom'), to emphasize we are doing it for people. More exchange of experiences and field trips across Europe can inspire promoters of Nature-Based Solutions,

Production of a Management Planning Guidance was welcomed by the participants. As one of the most important issues the stakeholder involvement was highlighted by the participants. Further areas of attention could be: more and better considerations of plant genetic resources (e.g. crop wild relatives) conservation in management planning; and how to accommodate the requirements of sites with different levels of designation. Exchange visits between stakeholders from similar sites or those who face similar problems from one country to another to provide examples in order to illustrate possible solutions is still a valued approach.

Practical application of scientific modelling and the ecosystem services concept definitely has a role to play in the planning for site management and restoration, however, there are still issues that need to be addressed before they can be applied at a broader scale. There are good examples on the possible applications, but it seems that more capacity building and knowledge exchange on this topic is required.

It seems that the possible important roles for the future European Private Land Conservation Network (ELCN) could be perhaps to have a role in monitoring and validating the new private land conservation tools such as e.g. conservation easements. Also, the Network should work with the relevant European organisations on creating more recognition for the work of PPAs and other private land conservation models.

And finally, the risk-based decision making seems to be a very useful approach for making decisions around complex issues such as those related to climate change. A more broader training courses on this topic could be welcomed by the conservation community, according to the feedback from the participants.

It seems evident that network organisations focused on knowledge exchange and cross-border cooperation, such as CEEweb for Biodiversity and Eurosite, will continue to play an important role in taking forward the above listed themes, in capacity building and raising awareness about them, as well as in resolving potential issues around these themes.

## **9 Case studies**

### **9.1 Slovenia - [Wetman Project](#)**

The main objective of the "Conservation and Management of Freshwater Wetlands in Slovenia – WETMAN" project was the restoration and improvement of conditions of six Slovene wetlands. The pilot areas Pohorje bogs, Vrhe, Planik, Zelenci, Gornji kal and the Mura oxbow lake near Petišovci are also classified as Natura 2000 areas. The project objectives were aimed at improving or establishing favourable conditions for fifteen endangered plant and animal species and habitats of Community importance, which can be found in these areas. In the course of the project the hydrological conditions were improved, the overgrowth removed, the invasive alien fish species in Gornji kal and Mura oxbow lakes removed, the destruction of endangered habitats and the disturbance of endangered species prevented by building footpaths in Zelenci and in Pohorje bogs, guidelines for management of pilot areas prepared and integrated into sector plans, which ensured a sustainable conservation of pilot areas. Field actions were supported by awareness raising action both on national and local level. As



the project applicant, the Institute of the Republic of Slovenia for Nature Conservation invited the following partners to cooperate: Institute for Water of the Republic of Slovenia, Slovenia Forest Service, Fisheries Research Institute of Slovenia, Municipalities Ruše and Kranjska Gora and RTV Slovenia.

### 9.2 Bulgaria - [Wetlands Restoration & Pollution Reduction GEF Project](#)

The development objective of the Wetlands Restoration and Pollution Reduction Project for Bulgaria is that local communities and local authorities in the Persian Nature Park and Kalimok/Brushlen Protected Site areas adopt sustainable natural resources management practices. There are two main project components. First, in the initial phase of this component, marshland will be recovered and restored in two already identified sites to demonstrate the use of wetlands as nutrient sinks. Additional sites are expected to be identified and restored later during project implementation. The GEF funds will finance consultancy services for the elaboration of detailed engineering designs, baseline surveys, and the supervision of construction and rehabilitation activities of small infrastructure which will regulate water flows. Grant support is being sought for consultant services pre-feasibility and feasibility studies, design of restoration activities, and needed civil works. The second component supports the next step towards sustainable resource management and protection within the two protected sites by funding the preparation of protected areas management plans at the two sites. It moves on to then support the implementation of priority actions identified in these plans; strengthens monitoring programs for water quality, biodiversity, socioeconomic indicators, and health risks; builds a public awareness and education campaign; and strengthens land/water management institutions.

### 9.3 Latvia - [Kemeri National Park](#)

Established in 1997, Kemeri National Park was one of Latvia's first national parks. It contains 380 km<sup>2</sup> of diverse habitats including a number of EU importance such as bog woodland, black alder swamps, raised bogs (including one of the largest intact examples of such a habitat type in Europe), rich fens, coastal dunes etc. Altogether some 30 habitat types listed in the Habitats Directive and Bern Convention are found here. Protected birds like *Botaurus stellaris* (12-15 booming males) and *Aquila pomarina* (8-15 pairs) have also been recorded within the Park. Threats had emerged to the conservation status of the habitats and species. These were linked to land use changes which had drained wetland environments and many of the hay meadows were becoming increasingly overgrown following the abandonment of traditional agricultural practices by local farmers. Urbanisation and visitor pressure were also noted as representing ongoing problems for the Park's nature assets.

The main objective of the LIFE project involved helping to implement a pre-prepared management plan. Land acquisition was a priority for the project which aimed to purchase around 730 ha of meadows and restore 450 ha of the natural floodplain meadows. Another key goal was to identify mechanisms for mainstreaming the LIFE project's methodology on a long-term basis. The project achieved its objectives and provided useful capacity building experience for Latvian authorities involved in nature conservation work. Drainage ditches in the Lielais Kemeri bog were blocked to restore more natural hydrological flows. Engineering works at a sluice gate system constructed the country's first artificial fish migration infrastructure. Introducing livestock to graze the meadows by river Slampe was a first step in shifting to away from mechanised hay-making methods towards self-sustainable meadow management in Kemeri national park. Many useful lessons were learnt during the forging of closer cooperation between landowners, farmers and local communities. Outcomes here led to more land in the park being managed from a conservation perspective. Project processes and results also provided valuable learning experiences for Latvian nature bodies as well as education services. Schools were encouraged to visit and study the project works as part of their curriculum. This included involving pupils in part of the project's environmental monitoring work.

#### 9.4 Romania - [Ciobarciu Wetland Restoration](#)

The short-term project objectives were to create 250 ha of wetland, carried out in four polders by raising the water level of the embanked area with a regulating water outlet structure; creating a variety of habitats - from dry land to spots with deep water - by digging and opening up of old river meanders that have been filled up.

The project is a good experience in the field of ecological restoration, involving purchase of land, participatory planning and cooperation with other organizations, including NGOs.

The project also had long term objectives related to the creation of a network of wetlands, integration and nature and water policies, the implementation of European directives and the strengthening environmental NGOs and education.

The Ciobarciu project was evaluated at the end of the project by the project team and by a Romanian University, who interviewed 55 inhabitants of villages where the (previous) owners lived. After a period of five years, the project was evaluated again.

A number of benefits were achieved throughout the project including the involvement of locals in decision-making, which led to support for changes; the increase of public access; the improvement of recreational opportunities; improved water quality and the restoration of important habitats. The project can be described as a good example for project development by including the local community and as a good example for land purchase for the purpose of ecological restoration. The quality of a crucial water bird migratory route was improved. 105 species of bird were in the local fauna list, including 29 bird species from Annexe 1 of the Birds' Directive and 19 from the Romanian Red Book of Vertebrates. Eight fish species were recorded a year from the flooding, along with various amphibians, reptiles and small mammals.

#### 9.5 Poland - [Wetlands Conservation and Restoration in Kampinos National Park](#)

Rare wetland habitats and associated species are present within the Natura 2000 network site, Puszcza Kampinowska. The site's integrity has however been compromised by excavation works associated with the Łasica Channel and several other minor channels, which has contributed to the gradual drying of the wetlands. Challenges remain in restoring the target sites to a state where they are capable of achieving their full potential as environmental assets. Research has identified the type of remedial habitat actions that needs to be taken to overcome such nature conservation challenges.

The main objective of the project is to implement the actions that have been identified as needed for properly restoring and maintaining wetland habitats at Puszcza Kampinowska. The following project actions are planned: Permanently increasing moisture content around the most valuable fragments of Puszcza Kampinowska wetland habitats; Halting secondary succession in wet meadows (Molinion and Arrhenatherion type meadows); Reducing conflicts between the interests of local communities and those of nature conservation; and

Collating the project experiences to produce benchmark solutions for water management on naturally-valuable areas (including workable options that facilitate the coexistence of wildlife and human economic activity).

Expected results: The project expects to achieve the following: Rehabilitation of 125 ha of land in the Natura 2000 network site via land purchases from private owners; Increase the water content in soil on some 6 000 ha; Slowing of water drainage of water from the project area, enabling the groundwater table to rise to 0-20 cm below the ground in late summer time (in the vicinity of watercourses); Construction of 40 weirs and a 6.6 km dyke with 21 gates, and removal of 3.3 km of old drainage ditches; Establishment of mowing regimes on the purchased meadows and drafting of management guidelines covering beaver populations, weirs, and other hydrological factors for Łasica. Results are anticipated to improve the conservation status and range of habitat types listed in Annex I of the Habitats Directive (Riparian forests, Tilio-Carpinetum forests, fresh meadows of Arrhenatherion type and Molinion type meadows). Protected bird species benefiting from the project will include the Eurasian bittern (*Botaurus stellaris*), corncrake (*Crex crex*) and lesser spotted eagle (*Aquila pomarina*).

Education and awareness-raising measures co-funded by the project will help to foster greater support

and capacity for nature conservation work in the project area in particular and the Natura 2000 network in general.

#### 9.6 Lithuania - [Restoration of Amalvas and Žuvintas Wetlands](#)

Žuvintas biosphere reserve is situated in the southern part of the central Lithuanian lowlands, formed in a depression of the oval limnoglacial swampy plain. The Žuvintas and Amalvas mires dominate the area. Žuvintas mire (6 847 ha) is the largest in Lithuania and consists of bogs (71 %), transitional mires (17%) and fens (12%). There are three lakes in the territory as well as several smaller marshy lakes within Žuvintas mire. Forests cover some 6000 ha. An important feature of the area is a rich diversity of forest, bog, fen and aquatic plant communities. In total 1 058 species of plants are recorded in the Žuvintas biosphere reserve. Lake vegetation is very dense – more than half of the lake surface is covered by aquatic plants - bulrush, reed etc. - forming floating islands very characteristic to the Žuvintas region. The biosphere reserve is best known, however, for its bird species. Of the 300 registered species in Lithuania, 257 species are found in the reserve and 134 breed in the area. The WETLIFE project aimed to restore the natural hydrological and ecological functions of the Amalvas and Žuvintas wetlands in order to achieve a favourable conservation status for the bog, swamp wood and lake habitats of these pSCIs. A particularly important aspect of achieving this was to find an optimum balance between farming practices and wetland conservation. The principal planned interventions to achieve restoration of the wetland habitats were: Land purchase and land-use compensation; Reconstruction of the Amalvas polder; blocking of drainage channels in Amalvas and Žuvintas; restoration of the natural wetland water levels Amalvas and Žuvintas; support of grazing activities; to promote public and stakeholder understanding of the importance of the wetland habitats the project also planned the following actions: The WETLIFE project successfully intervened to reverse degradation processes in 1 158 ha of targeted wetland in the Žuvintas biosphere reserve. The project is an example of successful wetland restoration that can be easily replicated. Restoration work at the Amalvas polder allowed natural water levels over 638 ha during autumn, winter and early spring. Water management rules were initiated to ensure maintenance of ground water level in the peaty soils 30-60 cm from the surface during the farming season. Grazing was initiated over 30 ha of peatland with restored hydrological regime in Amalvas polder, protected by an electric fence. The project delivered new management regulations for the Žuvintas Lake as well as the Amalvas polder. Guidelines on farming in peatlands were developed and discussed with local farmers highlighting the ecological and economic benefits from application of more sustainable farming methods.

#### 9.7 Slovakia - [Zahorie Lowland](#)

In Slovakia, wetlands are among the most seriously threatened natural ecosystems. They represent unique habitats for many plant and animal species and are important for biodiversity conservation and for stabilising the water regime of the landscape. They retain water from rain and snow, only releasing the water slowly through natural processes of evaporation and out-flow.

During the preceding two decades, the total wetland area in Slovakia had declined dramatically and the vast majority of remaining natural and semi-natural wetlands were seriously threatened by human activities. The main cause of the decline were changes in the natural water regime, brought about by extensive drainage, peat extraction and land-reclamation schemes - mostly to provide more agricultural land, but also as part of intensification of forest management.

The overall objective of the project was to contribute to the development of the Natura 2000 network in Slovakia and the conservation of habitats and species at national level. The project aimed to restore eight proposed Sites of Community Interest (pSCI) in the Zahorie Lowland, within which are found a network of mountain rivers and ponds, bogs, dunes, and riparian and alder forests. The project aimed to restore the original water conditions at the eight project sites to enhance the quality of the river and adjacent habitats. It planned to do this by restoring river banks, installing five small weirs and filling in over a kilometre of drainage ditches. It also planned to construct a system of fish bypasses. These actions targeted improvement of the conservation status of some 1800 ha, as well as benefiting a

number of species. The WETREST project succeeded in improving the conservation status of the habitats and species at eight Sites of Community Importance (SCIs). The project constructed one large weir and a fish by-pass on the Rudava River. The project also restored meadows along the Rudava River, removing woody vegetation and herbaceous weeds from 178.4ha. The actions were deemed to have improved the conservation status of the areas with noticeable improvements in the water regimes. The habitat improvements should enable wetland tree species such as the European alder to prosper at the expense of pine in the long run. The beneficiary already noticed higher numbers of wetland species of orchid, dragonfly, butterfly, beaver and stork.

#### 9.8 the Netherlands

The Dutch Coalition Natural Climate Buffers is working on nature-based solutions for climate change. Participation in the LIFE integrated project 'Delta Nature', initiated and coordinated by the Dutch Ministry of Economic Affairs, is facilitating them to finance a small staff to coordinate the work by its eight collaborative partners. Eurosite members Natuurmonumenten and the Dutch State Forest Service (Staatsbosbeheer) belong to this coalition. In June 2017 the Coalition has hosted the Eurosite Climate Buffers Study Tour.

The Coalition already exists since 2008. Helped by a significant national grant up to 2015 its members were able to start and execute 20 field pilots, in which nature development and restoration could be designed in a way that important 'blue ecosystem services' could be delivered to society. These pilots, in extent varying from the 'green' façade of the office of Birdlife Netherlands to the 2.500 hectares natural water retention area 'Onlanden' near the capital city of the northern province Groningen, are nature-based answers for water-related climate adaptation.

In some projects wind and water driven 'sand motors' or shore lands are protecting marine or inland coastal areas against sea level rise and giant storms. In others, new or extended wetlands already proved to function as liable natural water retention measures for buffering inland flooding or water shortage situations. Last but not least in two pilots the water quality could be improved for multifunctional purposes. In all cases important wetland species and habitats benefitted significantly and nature related recreation and its economy could be facilitated. In many pilots the natural solutions proved to be cheaper for the water authorities than traditional civil engineering methods. The Coalition already produced a database of more than 200 potential new natural climate buffers. In the coming years the partners will try to persuade public and private stakeholders to realise some of these, with the aim to make nature-based solutions 'mainstream'.

## 10 References

### **Presentation by Eef Silver**

Title: Practices of natural water retention measures and Nature-Based Solutions in Natura 2000 and water management at national and regional level (Working group 2)

### **Presentation by Clive Hurford and Henk Zingstra**

Title: Eurosite Management Planning (Working group 3)

### **Presentation by Paul Leadbitter**

Title: The use of modelling in land management (Working group 4)

### **Presentation by Sue Stolton**

Title: An introduction to the concept and development of privately protected areas

### **Presentation by Mark Burgman**

Title: Structured judgement and decision making (Working group 6)

### **Presentation by Kristijan Čivić**

Title: Summary of workshops

**Presentation by Nigel Maxted**

Title: Mutually beneficial collaboration: bridging the Protected Area / Agrobiodiversity divide?

**Presentation by Evelyn Underwood**

Title: Financing Nature-Based Solutions for long-term water management

**Presentation by Paul Vertegaal**

Natural Climate Buffers in the Netherlands

**Presentation by CEEweb for Biodiversity**

Title: Wetland restoration case studies

**Presentation by Clive Hurford**

Title: New technologies for Natura 2000 monitoring

**Presentation by Kristijan Čivić**

Title: Fostering Private Land Conservation in Europe, LIFE – ELCN

**ANNEX - Programme**

**Tuesday 25 September 2018**

*Location: Rubin Wellness & Conference Hotel (Dayka Gábor u. 3, 1118 Budapest, Hungary)*

**8.30 - 9.00** Registration

**9:00 - 9:15** Welcome and opening

*Stefan Versweyveld, Eurosite President*

*Csaba Mezei, General Secretary of CEEweb*

*Eszter Kelemen, Environmental Social Science Research Group*

**9:15 - 9:35** EKLIPSE - intersection of science, policy and practice in Nature-based Solutions, [presentation](#) by *Eszter Kelemen, Environmental Social Science Research Group*

**9:40 - 10:00** POLICY - How the EU policy is supporting wetlands conservation and restoration [presentation](#) by *Monika Kotulak, CEEweb for Biodiversity*

**10:05 - 10:25** POLICY AND PRACTICE - EU funding supporting Nature-based Solutions projects in Central and Eastern Europe [presentation](#) by *Laura Palomo - Rios, Executive Agency for SMEs*

**10:30 - 10:50** PRACTICE - How practical restoration work can be done to support wetlands as mitigation and adaptation measures for climate change [presentation](#) by *Eef Silver, Wetlands International*

**10:55 - 11:15** SCIENCE - What are the scientific proofs of wetlands benefits for the climate? [presentation](#) by *Marjolein Sterk, Wageningen University*

**11:15 - 11:45** coffee break

**11:45 - 13:15** working groups, round 1 (please find more information below)

**13:15 - 14:15** lunch

**14:15 - 15:30** Afternoon session

**14:15 - 14:35** An introduction to the concept and development of privately protected areas – [presentation](#) by *Sue Stolton, IUCN WCPA Privately Protected Areas and Nature Stewardship*

### Specialist Group

**14:40 - 15:00** Fostering Private Land Conservation in Europe (LIFE-ELCN) – [presentation](#) by *Kristijan Čivić, Network Development Manager ELCN and Eurosite*

**15:05 - 15:25** Adaptive approaches to Natura 2000 management and roles of expert and NGO networks in the exchange of good practice - *presentation by Frank Vassen, Policy Officer Nature Protection Unit, Directorate-General Environment, European Commission*

**15:30 - 15:50** Farmer's Pride - Developing a network to protect Europe's Crop Wild Relatives – [presentation](#) by *Prof. Nigel Maxted, University of Birmingham*

**15:50 - 16:15** coffee break

**16:15 - 17:45** working groups, round 2 (please find more information below)

**17:45 - 18:30** Working group rapporteurs provide a short summary to organisers

**18.00 - 19.15** Wetlands and Climate Change Working Group meeting

**20.00 - 20.30** Euro Cocktail and light dinner at Korona Pension

### Working Group topics:

1. Different global and EU policies and directives supporting wetlands restoration and conservation - how they are translated to national and regional level? [facilitated](#) by *Klára Hajdu*
2. Practices of implementation NWRM and NBS in Natura 2000 and water management in national and regional levels [facilitated](#) by *Eef Silver*
3. Key Points for Management Planning Guidance - Feedback to Eurosite's Planning Guide [facilitated](#) by *Henk Zingstra and Clive Hurford*
4. Use of scientific modelling in management plans & management in relation to changes in Ecosystem Services [facilitated](#) by *Paul Leadbitter, North Pennines AONB*
5. Fostering Private Land Conservation in Europe [facilitated](#) by *Kristijan Čivić*
6. Risk based decision making – A crash course in risk based and robust decision making, and how using these tools can help identify the levels of exposure and vulnerability within a system, the potential impact or losses from change or a hazardous event and how these can be used to develop adaptation actions [facilitated](#) by *Mark Burgman, author of [Risks and Decisions for Conservation and Environmental Management](#)*

### Wednesday, 26 September 2018

#### Field Trip: Kiskunság National Park

**7.30** Bus departed from Rubin Hotel

**9:15 - 9.30** Arriving in Kecskemét (House of Nature, Headquarters of the Kiskunsag National Park, Kecskemét, Liszt F. u. 19.) and welcome by the host

**9:30- 11:30** Financing Nature-Based Solutions for long-term water management [Presentation](#) by *Evelyn Underwood, IEEP*, followed by case studies from participants

**12:00- 13:00** Lunch in the Három Gúnár Rendezvényház, Kecskemét

**13:00- 13:45** Travel to the field.

**13:45 - 14:30** Presentation: Diapering of natron lakes and groundwater decline in the Kiskunsag region. Location: Lake Kondor (46°55'19.37" – 19°24'33.58") Presenter: *Ferenc Pál Szabó, ranger.*

**14:45 – 15:30** Travel to Lake Böddi (natron lake). There is a current [LIFE project](#) regarding the rehabilitation of the lake.

**15:30 - 16:00** Presentation on natron lakes and the LIFE project. Location: Lake Böddi (46°46'27.97" – 19°06'56.82". Presenter: *Andras Bankovics*, project manager.

**17:00** Travel to Rubin Wellness & Conference Hotel, Budapest, for the evening programme

**20:00** Dinner and evening programme: Twinning & Knowledge market and networking

### Thursday, 27 September 2018

**9:00 - 10:30** Final recommendations on:

- how to change decision-making strategies into more long-term, based on science;
- the incorporation of Ecosystem Services and Nature-based Solutions in regional policies and practice (including management of land)

**10:30 - 11:00** Final remarks

**11:00 - 11:30** coffee break

**11:30 - 14:00** Annual General Meetings of CEEweb and Eurosite (members only)

**14:00 - 15:00** Lunch

**15.00** Goodbye



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