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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

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**Potential synergies concerning climate change
between the Convention on the Conservation of
European Wildlife and Natural Habitats (Bern
Convention)
and
the European and Mediterranean Major
Hazards Agreement (EUR-OPA)**

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PROLOGUE

The consequences of climate change already have large-scale impacts on many sectors at European and global level. A variety of trends and events such as increasing temperatures, changes in precipitation patterns, sea-level rise, heat waves, forest fires, tropical storms and droughts - to name but a few - threaten economies, ecosystems and human health worldwide. In response to these developments a large number of *mitigation* and *adaptation* activities have been recommended, initiated and / or carried out at Pan-European and global level during the last years.

Adaptation is here understood as “The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities” (IPCC, 2014).

Mitigation is here understood as “a human intervention to reduce the sources or enhance the sinks of greenhouse gases (GHGs)” (IPCC, 2014). Hence, according to the IPCC glossary, the *mitigation* of disaster risk in the sense of lessening the potential adverse impacts, is to be regarded as adaptation.

This report focuses on climate change adaptation as this is more relevant to biodiversity and hazards, being more threatened by the consequences of climate change, and therefore only able to play a minor role in climate change mitigation. However, there are many win-win situations to be taken into account.

The following list can only present those activities (and related documents) that are perceived to be most relevant and most often cited or referred to and / or could play a significant role for potential new activities of the Bern Convention and EUR-OPA.

1. LIST OF ACTIONS ON CLIMATE CHANGE

1.1 Main activities and recommendations produced and carried out within the context of the Bern convention, and with reference to climate change

Establishment of the Bern Convention’s Group of Experts on biodiversity and climate change (2006)

“26th meeting, the Standing Committee to the convention set up a Group of Experts on Biodiversity and Climate Change to exchange information and review the effects of climate change in the biological diversity covered by the convention, and to provide guidance to Parties in developing adaptation and management”

- *Recommendation No. 122 (2006) of the Standing Committee on the conservation of biological diversity in the context of climate change*

1st meeting of the group in 2007

Recommendations adopted afterwards:

- *Recommendation No. 135 (2008) of the Standing Committee, adopted on 27 November 2008, on addressing the impacts of climate change on biodiversity*
 - Including a “guidance to implement the Convention”
- *Recommendation No. 143 (2009) of the Standing Committee, adopted on 26 November 2009, on further guidance for Parties on biodiversity and climate change*
 - Including a “guidance to implement the Convention” that “complements the suggested actions endorsed by the Standing Committee in 2008”
- *Recommendation No. 145 (2010) of the Standing Committee, adopted on 9 December 2010, on guidance for Parties on biodiversity and climate change in mountain regions*
 - Taking into account the report “Impacts of climate change on Mountain Biodiversity in Europe” by Ms Eva Spehn”

- Including a guidance to “Develop specific climate change adaptation policies and action for mountain biodiversity”
- *Recommendation No. 146 (2010) of the Standing Committee, adopted on 9 December 2010, on guidance for Parties on biodiversity and climate change in European islands*
 - Taking into account the report “Climate change and the biodiversity of European islands” by Ms Cordula Epple
 - Including a guidance to “Develop specific climate change adaptation policies and action for island biodiversity”
- *Recommendation No. 147 (2010) of the Standing Committee, adopted on 9 December 2010, on guidance for Parties on wildland fires, biodiversity and climate change*
 - Taking into account the report “Climate change, wildland fires and biodiversity” by Mr Jose Manuel Moreno
 - Including a guidance on actions related to wildland fires and biodiversity within the context of climate change
- *Recommendation No. 152 (2011) of the Standing Committee, adopted on 2 December 2011, on Marine Biodiversity and Climate Change*
 - Taking into account the report: “Impact of Climate Change on Marine and Coastal Biodiversity: current state of Knowledge”, by UNEP-MAP-RAC/SPA
 - Including a guidance proposing actions related impacts of climate change on European marine biodiversity
- *Recommendation No. 158 (2012) of the Standing Committee, adopted on 30 November 2012 on Conservation translocations under changing climatic conditions*
 - → IUCN guidelines for Reintroductions and Other Conservation Translocations, developed by the IUCN SSC Reintroduction Specialist Group
- *Recommendation No. 159 (2012) of the Standing Committee, adopted on 30 November 2012, on the effective implementation of guidance for Parties on biodiversity and climate change*
 - instructs the Bern Convention Group of Experts on biodiversity and climate change
- *Recommendation No. 187 (2016) of the Standing Committee, adopted on 18 November 2016, on communicating on climate change and biodiversity*
 - Recommends to use the guidelines: Communicating climate change and biodiversity to policy makers
[\[https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=090000168064e897\]](https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=090000168064e897)
- *In 2012 an analysis of the implementation of Recommendations made by the Group of Experts on Biodiversity and Climate Change (2006-2011) was carried out by Brian Huntley.*
 - *Including the following conclusions:* “Overall, the conclusion reached is that there is a very real danger that too little will be done too late by many of the parties. This is a depressing conclusion to reach, but it reinforces the need to press all parties to respond actively and swiftly to the recommendations made by the Expert Group, where they have not already done so.” (p. 33). link to main actions? Or list? See table 1 page 11 or report Summary of recommended actions. Conclusions, p 32 and Recommendations p 35)
- During the Standing Committee meeting Strasbourg, 1 - 4 December 2015 a PROGRAMME OF WORK ON CLIMATIC CHANGE AND BIODIVERSITY CONSERVATION was adopted with the following points:
 - *Promote the implementation of agreed recommendations*
 - *Assess species’ vulnerability*

- *Establish and manage protected areas appropriately*
- *Monitor using common approaches*
- *Assess the role of biodiversity in maintaining ecosystem function*
- *Promote research required to advance the work of the Group*
- *Promote appropriate actions to conserve European Arctic species and habitats*
- *Prepare and communicate guidance and toolkits*
- *Co-operate with other institutions*
- In April 2015 a meeting took place of an *ad hoc* Select Group of Experts on Biodiversity and Climate Change underlining the importance of all the previous recommendations and their implementation, particularly Recommendation No. 159 (2012). A first link to EUR-OPA was made during this meeting after a presentation on the “Impact of extreme weather events on local communities and possible response from the local level”
 - *Participants appreciated the interesting presentation but considered that this issue would not really fit under the mandate and resources of the Bern Convention. They decided to rely on more specialized bodies (for instance the UN Office for Disaster Risk Reduction, or the Council of Europe European and Mediterranean Major Hazards Agreement)*
- In June 2017 a 1st meeting of the Restricted Group of Experts on Biodiversity and Climate Change took place. Proposal: to develop synergies between the Bern Convention and the EUR-OPA Major Hazards Agreement, for example:
 - nature-based solutions for disaster risk reduction,
 - ecosystem services’ role in climate change mitigation and adaptation
 - external expert recommended collaboration with PEDRR
 - the Restricted Group agreed that a first step in launching joint Bern/EUR-OPA activities should be:
 - The collection of information on the actions by each of the specialised EUR-OPA Centres in the field of ecosystem restoration and nature-based solutions. This could eventually lead to mapping of the Centres able of doing work for the Bern Convention in the field;
 - sharing of experiences and practices.

Activities without direct link to climate change

- Emerald network of Areas of Special Conservation

The Emerald network is a network of nature protection areas to conserve wild flora and fauna and their natural habitats of Europe. Launched: 1989 by the Council of Europe / Bern Convention

 - The Network involves all the European Union member States, some non-Community States and a number of African States. The European Union -in order to fulfil its obligations arising from the Convention - produced the Habitats Directive in 1992, and subsequently set up the Natura 2000 network. The Natura 2000 sites are therefore considered as the contribution from the EU member States to the Emerald Network
- The European Diploma of Protected Areas, established in 1965, is a diploma awarded by the Council of Europe to protected areas (natural or semi-natural) of exceptional European conservational interest. It is awarded for a five-year period at a time and is renewable. Over 60 areas in 23 states have received the award so far.

1.2 Main activities and recommendations carried out and produced within the context of EUR-OPA and with reference to climate change

The main objectives of the EUR-OPA Major Hazards Agreement are to reinforce and to promote co-operation between member States in a multi-disciplinary context to ensure better prevention, protection against risks and better preparation in the event of major natural or technological disasters.

- *Its field of competence covers disaster risk reduction, in particular; knowledge, prevention, preparedness, risk management and post-crisis analysis*
- *Linked to specialised Euro-Mediterranean Centres to develop projects, both at national and regional levels, which aim to improve the awareness of and resilience to major risks within the population*

Recommendations with a direct link to climate change and its impacts:

- Recommendation 2009 - 1 on Vulnerability of Cultural Heritage to Climate Change, adopted at the 57th meeting of the Committee of Permanent Correspondents of the EUR-OPA Agreement, Dubrovnik, Croatia, 15-16 October 2009
 - *Following a workshop on “Climate Change and Cultural Heritage” in Ravello, Italy, May 2009*
- Recommendation 2010 - 1 of the Committee of Permanent Correspondents on reducing vulnerability in the face of climate change, adopted at the 12th Ministerial Session of the EUR-OPA Agreement, Saint Petersburg, Russian Federation, 28 September
 - *Based on the conclusions of a workshop on climate change impact on water related and marine risks 26-27 October 2009, Murcia, Spain, including a number of presentations underlining the link with Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA).*

including the recommendation:

- *Reinforce the disaster risk reduction agenda and integrate it with the climate change agenda*
- *Recognise the role of cooperation and solidarity*
- Recommendation 2011 - 2 of the Committee of Permanent Correspondents on preventing and fighting wildland fires in a context of climate change, adopted at the 61st meeting of the Committee of Permanent Correspondents of the EUR-OPA Agreement, Yerevan, Armenia, 29-30 September 2011
 - *Recommendations based on the Conference Statements of the 5th International Wildland Conference and the Conclusions and Recommendations of the Regional Sessions IV and V in Europe and the Mediterranean of the same conference*
- Recommendation 2012 – 1 of the Committee of Permanent Correspondents on ecosystem-based disaster risk reduction, adopted at the 62nd meeting of the Committee of Permanent Correspondents of the European and Mediterranean Major Hazards Agreement (EUR-OPA), Strasbourg, France, 26-27 April 2012
 - *Followed by the publication: “[Ecosystem Approach to Disaster Risk Reduction](#)” (May 2013)*
- Draft Recommendation CM/Rec(2018)03 of the Committee of Ministers to member States on cultural heritage facing climate change: increasing resilience and promoting adaptation
 - Recommendations to the member states:
 - ensure the inclusion of cultural heritage in their policies and strategies for adaptation to climate change;
 - assess the economic value of cultural heritage lost to climate change.

- Consider the - Recommendation 2009 - 1 on Vulnerability of Cultural Heritage to Climate Change of the EUR-OPA Agreement

1.3 Main activities at Pan-European level with reference to climate change

The main player for activities at Pan-European level is the European Commission (EC), elaborating the policy framework and its European Environment Agency (EEA), establishing the respective knowledge base, even though the overarching political body of the EU does not cover all European countries. In addition, there are other agencies of the European Union such as the European Centre for Disease Prevention and Control (ECDC) or the Executive Agency for Health and Consumers (EAHC), acting on behalf of the European Commission and covering EU Member States. Beyond the work of the European Union and its Commission, there are a number of sector-related truly pan-European entities such as the European Forest Institute or the European Forum for DRR United Nations International Strategy for Disaster Reduction Secretariat - Europe (UNISDR Europe). In addition to these institutions, there are a number of non-governmental Europe-wide organisations and initiatives of which the most important ones are listed later in this document (p12).

1.3.1 Adaptation

A great milestone for climate change adaptation efforts within Europe and by the EC in dealing with climate change issues is represented by the 'EU Strategy on Adaptation to Climate Change' [COM(2013) 216 final of 16 April 2013], which was adopted in 2013 and aims at contributing to a more climate-resilient Europe (EC, 2013). In 2016, the EC launched an evaluation of the EU Adaptation Strategy to examine the implementation and achievements of the Strategy. This evaluation is still ongoing and is planned to be completed **by the end of 2018**.

This EU Adaptation Strategy states three main objectives:

1. Promoting actions by member states → national adaptation strategies & other activities focusing on sub-national scale such as Covenant of Mayors for Climate and Energy.
2. Climate-proofing' action at EU level → this leads to a number of sector-specific actions (see below 'EC - Climate-proofing with sector-specific aspects').
3. Improved information / knowledge base → leads to Climate Adapt and the EEA + JRC + H2020 activities (see below 'EC - Improved information / knowledge base' and 'Platforms to share information about climate change').

EC - Climate-proofing with sector-specific aspects:

- 1 Infrastructure: One of the key instruments through which the European Union attempts to increase the climate resilience of infrastructure is regional policy (European Regional Development Fund and Cohesion Fund).
- 2 Agriculture: in the reform version of the CAP 2014-2020, adaptation has gained greater prominence, nominating 'the sustainable use of natural resources and climate action' one of the three core objectives of the CAP. Also, climate mitigation plays an important role for agricultural activities.
- 3 Forestry:
 - Green Paper with options for a EU approach to the protection of forests and to information about forest resources and their condition (Green Paper on Forest Protection and Information in the EU: Preparing forests for climate change SEC(2010)163 final COM/2010/0066 final).
 - [Communication on a new EU Forest Strategy](#) (from 2013, adopted in 2014).
- 4 Marine, fisheries and coastal areas: Regulation (EU) No 1255/2011 of the European Parliament and of the Council of 30 November 2011 establishing a Programme to support the further development of an Integrated Maritime Policy (1).

5 Water management:

- the blueprint to Safeguard Europe's Water resources - Communication from the Commission (COM(2012)673).
- EU Water Framework Directive and the follow-up The Groundwater Directive 2006/118/EC.
- The EU Floods Directive 2007/60/EC on the assessment and management of flood risks entered into force on 26 November 2007.
- 2012 Water Scarcity and Droughts Policy Review (part of the blueprint mentioned under the 1st bullet point).

6 Biodiversity:

- Biodiversity Strategy, adopted in 2011: Communication from the Commission: Our life insurance, our natural capital: an EU Biodiversity Strategy to 2020 (COM(2011) 244). A mid-term review of this Strategy (COM/2015/0478 final) showed that success was predominantly at a local level.
- Based on the results of the mid-term review, the European Parliament adopted a Resolution on 2 February 2016 with defined additional measures.
- Other relevant initiatives comprise
 - Invasive Alien Species - IAS Regulation 36 entered into force in 2015.
 - Mapping and Assessment of Ecosystems and their Services – MAES.
 - BEST – voluntary scheme for Biodiversity and Ecosystem Services in Territories of European overseas.
 - Natura 2000: network of core breeding and resting sites for rare and threatened species to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the [Birds Directive](#) (Directive 2009/147/EC) and the [Habitats Directive](#) (Habitats Directive 92/43/EEC).

7 Green Infrastructure

- Communication from the Commission: Green Infrastructure (COM(2013) 249 final) – adopted by EC on May 6, 2013.
- European Parliament resolution on green infrastructure, 12 December 2013.

8 Health

- Commission Staff Working Document as an accompanying document to the EC's climate change adaptation strategy, called "Human, Animal and Plant Health Impacts of Climate Change" {COM(2009) 147 final}

9 Soil

- The loss of organic soil matter and soil biodiversity also contributes to a decreasing resilience of ecosystems to climate change and is addressed by the Thematic Strategy for Soil Protection, including a ten-year work programme for the European Commission (Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - Thematic Strategy for Soil Protection [SEC(2006)620] [SEC(2006)1165])

10 DRR:

European Civil Protection Mechanism

- COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL AND THE COMMITTEE OF THE REGIONS Strengthening EU Disaster Management: rescEU Solidarity with Responsibility (COM/2017/0773 final).

- Proposal for a DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism (COM/2017/0772 final - 2017/0309 (COD)).
- Council Regulation (EU) 2016/369 of 15 March 2016 on the provision of emergency support within the Union.

DRR - EC Activities aiming at the global level

- The EU adopted a Communication on an EU strategy for supporting disaster risk reduction in developing countries in February 2009: Communication from the Commission to the Council and the European Parliament - EU strategy for supporting disaster risk reduction in developing countries {SEC(2009) 217} {SEC(2009) 218} {SEC(2009) 220}.
- An [Action Plan for Resilience in Crisis Prone Countries 2013-2020](#) was adopted in June 2013.

EC - Improved information / knowledge base

Research to support the EC:

- The Joint Research Centre's (JRC): Institute for Environment and Sustainability (IES) in Ispra, continues to provide research knowledge on climate change impacts, adaptation and mitigation.
- The EC's Disaster Risk Management Knowledge Centre (DRMKC)¹ launched in 2015 to improve knowledge and help enhance EU and Member States' resilience to disasters and their capacity to prevent, prepare and respond to emergencies through a strengthened interface between science and policy. In 2017, the DRMKC (managed from JRC) released the first report in the series: Poljanšek, K., Marin Ferrer, M., De Groeve, T., Clark, I., (Eds.), 2017: Science for disaster risk management. Knowing better and losing less. The second one is under preparation and is planned to be published in 2020.
- The European Research Council's mission is to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, on the basis of scientific excellence.
- Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020). There are several 'societal challenges' identified by the programme that are linked to climate change (adaptation as well as mitigation):
 - Climate action, environment, resource efficiency and raw materials;
 - Health, demographic change and wellbeing;
 - Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bio-economy;
 - Secure, clean and efficient energy;
 - Smart, green and integrated transport.

Information on the environment to support the EC:

- The European Environment Agency (EEA) is an agency of the European Union with the task of providing sound, independent information on the environment in Europe. The EEA is an information source for those involved in developing, adopting, implementing and evaluating environmental policy, and also the general public. The EEA currently has 33 member countries and six cooperating countries. The 33 member countries include the 28 European Union Member States together with Iceland, Liechtenstein, Norway, Switzerland and Turkey.
- Relevant EEA reports recently published:

¹ <https://drmkc.jrc.ec.europa.eu/>

- EEA, 2017, Climate change, impacts and vulnerability in Europe — An indicator-based report.
 - EEA, 2017, Climate change adaptation and disaster risk reduction in Europe - Enhancing coherence of the knowledge base, policies and practices.
 - EEA 2017, Green Infrastructure and Flood Management Promoting cost-efficient flood risk reduction via green infrastructure solutions.
 - EEA 2016, Flood risks and environmental vulnerability — Exploring the synergies between floodplain restoration, water policies and thematic policies.
 - EEA 2015, Exploring nature-based solutions — The role of green infrastructure in mitigating the impacts of weather- and climate change-related natural hazards.
 - EEA 2015, The State of nature in the EU. Results from reporting under the nature directives 2007–2012.
- EIONET: The European environment information and observation network is a partnership network of the EEA and its member and cooperating countries. Through Eionet, the EEA brings together environmental information from individual countries concentrating on the delivery of timely, nationally validated, high-quality data.

Platforms to share information about climate change issues

- Climate Adapt (<https://climate-adapt.eea.europa.eu/>)

The European climate adaptation platform Climate-ADAPT aims to support Europe in adapting to climate change. It is an initiative of the European Commission in collaboration with the European Environment Agency (EEA) helping users to access and share information on:

- Expected climate change in Europe
- Current and future vulnerability of regions and sectors
- National and transnational adaptation strategies
- Adaptation case studies and potential adaptation options
- Tools that support adaptation planning.

Climate Adapt also provides an overview of National Adaptation Platforms in Europe. Climate Adapt has quickly established itself as the major information hub in Europe for questions related to climate change adaptation.

There are a number of additional platforms to foster the exchange of information about climate change, which focus on particular topics or sectors. For example:

- WISE - Water Information System for Europe (<https://water.europa.eu/>) as the European information gateway to water issues,
- Placard interchange <https://www.placard-network.eu/about-us/> PLACARD's (PLATform for Climate Adaptation and Risk reDuction) mission is to be the recognised platform for dialogue, knowledge exchange and collaboration between the Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) communities,
- MSP <https://www.msp-platform.eu/> dedicated to Marine Spatial Planning

Selected additional pan-European initiatives dealing with climate change

- EIT Climate-KIC (<https://www.climate-kic.org>) – INNOVATION: EIT Climate-KIC is a European knowledge and innovation community, working to accelerate the transition to a zero-carbon economy, supported by the European Institute of Innovation and Technology, focusing on innovation that helps society mitigate and adapt to climate change
- JPI Climate – (<http://www.jpi-climate.eu/home>) - RESEARCH

Connecting Climate Knowledge for Europe is a pan-European intergovernmental initiative gathering European countries to jointly coordinate climate research and fund new transnational research initiatives that provide useful climate knowledge and services for post-COP21 Climate Action.

- United Nations Economic Commission for Europe (UNECE)
<https://www.unece.org/mission.html>
UNECE's major aim is to promote pan-European economic integration, one topic is Greening the economy in the pan-European region
- UNISDR - Regional Office for Europe <https://www.unisdr.org/europe>
Starting from the Sendai Framework for Action the UNISDR – office Europe partly covering also climate related risks.
- EFI – (<https://www.efi.int/about>) The European Forest Institute is an international organisation established by European States. It conducts research and provides policy support on forest-related issues, connecting knowledge to action.
- The European Network of Heads of Nature Conservation Agencies (ENCA, <https://www.encanetwork.eu/home>) is an informal network which fosters the exchange of information and collaboration amongst its partners. It identifies future challenges and offers information and advice to decision-makers in the fields of nature conservation and landscape protection. ENCA brings together expertise in scientific evidence gathering and analysis, knowledge of practical implementation, and experience in administration and policy advice related to biodiversity, landscape and ecosystem goods and services.

Selected additional pan-European non-governmental initiatives dealing with biodiversity issues within the context of climate change

- Overarching: The Green 10, which is a coalition of ten of the largest environmental organisations and networks active at the European level. This group works to ensure that the European Union protects the climate, the local environment, biodiversity and human health within and beyond its borders.
<https://green10.org/> CEE (Central and Eastern Europe) Bankwatch Network, Birdlife, CAN (Climate Action Network), EEB (European Environmental Bureau), Friends of the Earth, Greenpeace, Heal (Health and Environment Alliance), Friends of Nature, Transport & Environment, WWF (World Wide Fund For Nature).
- The EUROPARC Federation is a network for Europe's natural and cultural heritage. The Federation works to improve the management of Protected Areas in Europe through international cooperation, exchange of ideas and experience, and by influencing policy. EUROPARC carries out numerous activities concerning the relations between climate change and protected areas. They organise conferences, carry out webinars and have recently published a manual entitled "Adaption to Climate Change in Protected Areas".
<https://www.europarc.org>
- Euronatur Foundation: The aim of the foundation is to preserve the European natural heritage in all its diversity. The initiative focuses on endangered wild animals as well as valuable natural and cultural landscapes. An important approach in the foundation's work is to connect people and nature in order to achieve long-term success for the projects for the protection of wild animals and their habitats in Europe. In its work the foundation emphasises the role of nature as a means of absorbing greenhouse gases.
<https://www.euronatur.org/>

- WWF Europe – The WWF’s European Policy Office helps shape EU policies that impact on the European and global environment. WWF works to ensure that the EU develops and implements an ambitious post 2020 Biodiversity Strategy and advocates for a strong EU leadership position at the UN Convention on Biological Diversity COP in 2020

http://www.wwf.eu/what_we_do/biodiversity/

- EBCD – European Bureau for Conservation & Development. Founded in 1989, EBCD is an international environmental non-governmental organization based in Brussels, with the main objective of promoting the conservation and sustainable use of natural renewable resources both in Europe and worldwide. It supports science-based solutions, full stakeholder participation, due consideration for socio-economic aspects and for cultural diversity.

<http://ebcd.org/ebcd/>

- CEEweb for Biodiversity is a network of non-governmental organizations in the Central and Eastern European region that has been working for over 20 years in 20 countries. Their mission is the conservation of biodiversity through the promotion of sustainable development. CEEweb for Biodiversity was founded in 1994 (under the name of Central and East European Working Group for the Enhancement of Biodiversity), with the support of the European Union and two Hungarian NGOs; the National Society of Conservationists and Green Action. One primary aim of the organization is to assist in the implementation of international tasks under the Convention on Biological Diversity. Presently CEEweb is the only network in operation which has been set up and run by nature conservation NGOs in Central and Eastern Europe.

Sectoral focus: agriculture

- EFNCP - European Forum on Nature Conservation and Pastoralism - is the only European organisation focusing on the maintenance of low-intensity livestock farming. This type of farming is widespread on less productive land in many European countries, typically using semi-natural pastures and meadows. It is the most important farming for conserving biodiversity across Europe, and for other environmental services, such as managing water-catchments and preventing wild fires.

1.3.2 Mitigation

In 1996 the EU adopted a target of a maximum 2°C rise in global mean temperature, compared to pre-industrial levels. Against this background the European Climate Change Programme (ECCP) was launched in June 2000 by the European Union's European Commission. The goal of the ECCP is to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol. The EU emissions trading system (EU ETS) is meant to represent a cornerstone of the EU's policy to combat climate change.

The EU has set itself targets for reducing its greenhouse gas emissions progressively up to 2050. Key climate and energy targets are set in the:

- ✓ 2020 climate and energy package
- ✓ 2030 climate and energy framework

These targets are defined in order to create passage for the EU to achieve the transformation towards a low-carbon economy as detailed in the 2050 low-carbon roadmap (“2050 low-carbon roadmap” COM(2011) 112 final).

Additional to these generic policies are sector policies touching the topic of climate change mitigation in one or another for the most relevant sectors, such as:

- Transport: WHITE PAPER Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system (COM/2011/0144 final)
- Agriculture: with its Common Agricultural Policy (CAP), with the latest reform decided in 2013 and implemented in 2015.

- Energy: Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the promotion of the use of energy from renewable sources (recast) COM/2016/0767 final/2 - 2016/0382 (COD)

Knowledge and information about climate change mitigation is supported by the

- JRC – via reports such as
 - “Mitigating Climate Change : Renewables in the EU” of its Directorate C - Energy, Transport and Climate (<https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/mitigating-climate-change-renewables-eu-cutting-greenhouse-gas-emissions-through-renewables>) or
 - “Assessment of EU agricultural GHG mitigation policies highlights production effects and costs <https://ec.europa.eu/jrc/en/news/assessment-eu-agricultural-ghg-mitigation-policies-highlights-production-effects-and-costs>
- EEA – via reports such as
 - “Mitigating climate change” (<https://www.eea.europa.eu/soer-2015/europe/mitigating-climate-change>) or
 - “AGRICULTURE AND THE GREEN ECONOMY” (<https://www.eea.europa.eu/themes/agriculture/greening-agricultural-policy/greening-the-cap-paper>)

Also, a number of non-governmental Europe-wide organisations tackle the topic of climate change mitigation, for example:

- EUROPARC Federation
- Euronatur
- WWF – Europe
- CAN - Europe
- European Climate Foundation
- Friends of the Earth – Europe
- Birdlife international
- CI (Conservation International) Europe

1.4 Main activities at global level with reference to climate change

The main player for activities at global level is the United Nations (UN) with their various global programmes covering specific sectors and activities. As an international organisation representing 193 member states, the United Nations’ activities are paramount for actions concerning the global problems and challenges of climate change. Besides the UN there are numerous non-governmental organisations, programmes and initiatives tackling issues of climate change adaptation and particularly mitigation at the global scale.

1.4.1 Main UN – programmes and initiatives relate to climate change

The specific climate change related UN convention, the “United Nations Framework Convention on Climate Change (UNFCCC)” is an international environmental treaty adopted on 9 May 1992 and opened for signature at the Earth Summit in Rio de Janeiro (1992). It entered into force in 1994, after a sufficient number of countries had ratified it and is the main international treaty on fighting climate change. Its objective is to prevent dangerous man-made interference with the global climate system. The UNFCCC first of all targets climate change mitigation and the reduction of greenhouse gas (GHG) emissions. The framework defines non-binding limits on greenhouse gas emissions for individual countries. It does not contain any enforcement mechanisms but outlines how specific international treaties (called "Protocols" or "Agreements") may be negotiated to specify further action. Most important outcomes of UNFCCC activities are:

- The Kyoto Protocol, with the role of setting emissions targets for developed countries that are binding under international law and covering two commitment periods, the first of which lasted from 2008-2012. The second one runs from 2013-2020.
- The Paris Agreement, aimed at limiting global warming to less than 2°C, and pursue efforts to limit the rise to 1.5°C. The Paris Agreement entered into force on November 4, 2016. It includes, for the first time, a Global Adaptation Goal and constitutes the link to Sustainable Development Goals (SDGs).

Most of the UN activities tackling climate change are linked to the Promotion of Sustainable Development as one of its five key action areas. One of the most prominent of these activities is Intergovernmental Panel on Climate Change (IPCC). It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a scientific view on the current state of knowledge on climate change and its potential environmental and socio-economic impacts. The IPCC frequently publishes overarching Assessment Reports (ARs) composed of the full scientific and technical assessment of climate change, as well as Special Reports providing an assessment of a specific topic. Currently, the IPCC is in its Sixth Assessment cycle. During this cycle, the Panel will produce three Special Reports, a Methodology Report on national greenhouse gas inventories and the Sixth Assessment Report (AR6). Two recent and relevant IPCC reports of the last years are:

- The 'SREX' report titled "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" published in 2012 and representing a milestone in linking climate change adaptation with disaster risk reduction
- The AR5 with a Synthesis Report published in 2014 with new concepts on how to address and visualize climate risks and related uncertainties <http://www.ipcc.ch/report/ar5/syr/>

The work of the IPCC is predominantly focusing on the collection and summary of information and knowledge on all climate change issues.

The UN body to address Disaster Risk Reduction is the UNISDR with the mandate "to serve as the focal point in the United Nations system for the coordination of disaster reduction and to ensure synergies among the disaster reduction activities of the United Nations system and regional organizations and activities in socio-economic and humanitarian fields".

- The current Sendai Framework (<https://www.unisdr.org/we/inform/publications/43291>) is a 15-year voluntary, non-binding agreement that maps out a broad, people-centered approach to disaster risk reduction, succeeding the Hyogo Framework for Action that was in force from 2005 to 2015. It clearly points out the links between DRR and CCA.

The main UN player for the topic of adaptation is UN Environment. Its Climate Change Adaptation Unit focuses on 4 priority areas:

- Ecosystem-based adaptation - Implementing projects that utilize biodiversity and ecosystem services as part of a holistic adaptation strategy.
- Knowledge, analysis and networking - Spreading vital adaptation knowledge through well-connected global networks.
- Access to adaptation finance - Helping countries to gain access to funds for building resilience and national capacity.
- Adaptation policy and planning.

Other relevant UN Environment activities:

- UN Environment hosts the World Adaptation Science Programme (PROVIA), which is a joint initiative between UN Environment and the World Meteorological Organisation and organises the biannual 'Adaptation Future' conferences.
- The Convention on Biological Diversity (CBD) is an international legally-binding treaty with the three main goals of: conservation of biodiversity; sustainable use of biodiversity; and fair

and equitable sharing of the benefits arising from the use of genetic resources. Its Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets link to climate change impacts.

- UN-REDD: The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries was launched in 2008 and builds on the convening role and technical expertise of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).
- Convention on the Conservation of Migratory Species of Wild Animals (CMS). As an environmental treaty under the aegis of the United Nations Environment Programme, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States through which migratory animals pass - the Range States - and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.
- CAFF (Conservation of Arctic flora and Fauna) is the biodiversity working group of the Arctic Council. CAFF serves as a vehicle to aid cooperation concerning species and habitat management and utilization, to share information on management techniques and regulatory regimes, and to facilitate more knowledgeable decision-making.
- Arctic Monitoring and Assessment Programme (AMAP). AMAP's objective is "providing reliable and sufficient information on the status of, and threats to, the Arctic environment, and providing scientific advice on actions to be taken in order to support Arctic governments in their efforts to take remedial and preventive actions relating to contaminants".

Other relevant UN programmes:

- UNCCD, established in 1994, the United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment and development to sustainable land management. The UNCCD 2018-2030 Strategic Framework (https://www.unccd.int/sites/default/files/relevant-links/2018-08/cop21add1_SF_EN.pdf) addresses climate change adaptation and mitigation issues.
- UNESCO is the United Nations Educational, Scientific and Cultural Organization with the duty to reaffirm the humanist missions of education, science and culture. UNESCO adopted the UNESCO Strategy for Action on Climate Change in 2012 which is currently being updated (<http://unesdoc.unesco.org/images/0016/001627/162715e.pdf>)

In 1971 UNESCO launched the Man and the Biosphere Programme (MAB). MAB is an intergovernmental scientific programme that aims to establish a scientific basis for the improvement of relationships between people and their environments. MAB has adopted a new MAB Strategy 2015-2025, together with an associated Lima Action Plan 2016-2025, to guide the MAB Programme and the World Network of Biosphere Reserves, both strongly linked with climate change issues

1.4.2 A key selection of global non-governmental organisations, programmes and initiatives related to climate change

- The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together. Founded in 1948, IUCN has evolved into the world's largest and most diverse environmental network. It harnesses the experience, resources and reach of its 1,300 member organisations and the input of some 13,000 experts. IUCN sees itself as the global authority on the status of the natural world and the measures needed to safeguard it. IUCN's expertise and extensive network aim to provide a solid foundation for a large and diverse portfolio of conservation projects around the world. Combining the latest science with the traditional knowledge of local communities, these projects intend to work on the reversal of habitat loss, the restoration of ecosystems and

the improvement of people's well-being. IUCN congresses have produced several key international environmental agreements including the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species (CITES), the World Heritage Convention, and the Ramsar Convention on wetlands (see below). IUCN is involved in data gathering and analysis, research, field projects, advocacy, and education. It assesses the impacts of climate change on species and ecosystems. Through its work on ecosystem-based mitigation, adaptation and disaster risk reduction, it also highlights the important role of nature-based solutions to climate change.

An external review of IUCN during the preparation phase of the current work programme has underlined IUCN's unique ability to convene government and civil society members, as well as experts, indigenous peoples' groups and other partners, in pursuit of conservation and sustainable development objectives. The current work of the IUCN programme has been aligned around three main work themes:

- valuing and conserving nature's diversity,
- advancing effective and equitable governance of the use of nature,
- deploying nature-based solutions to climate, food and development challenges.

This 2017-2020 IUCN Programme recognises the most important UN Frameworks (such as the Agenda 2030, the Paris Agreement, as well as the Sendai Framework) in their role of providing an overarching agenda for its work and links its objectives and activities to the various relevant Sustainable Development Goals.

- Formally established in 2008, the Partnership for Environment and Disaster Risk Reduction (PEDRR) is a global alliance of UN agencies, NGOs and specialist institutes. As a global thematic platform of the International Strategy for Disaster Reduction (ISDR), PEDRR seeks to promote and scale-up implementation of ecosystem-based disaster risk reduction and ensure it is mainstreamed in development planning at global, national and local levels, in line with the Sendai Framework for Disaster Risk Reduction. It provides technical and science-based expertise and applies best practices in ecosystems-based DRR approaches. The PEDRR vision is: "Resilient communities as a result of improved ecosystem management for disaster risk reduction (DRR) and climate change adaptation (CCA)".
- The Ramsar Convention on Wetlands, is an intergovernmental treaty with 170 contracting parties that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The Ramsar resolution X.24 from 2008 specifically addresses Climate change and wetlands.
- The Organisation for Economic Co-operation and Development (OECD) is an intergovernmental economic organisation with 36 member countries, founded in 1961 to stimulate economic progress and world trade. The OECD climate change work is focusing on how to move countries towards low-emissions and climate resilient pathways, and how to improve the effectiveness of the global climate regime. A focus of the OECD work is on climate financing and related investments.
- **weADAPT** is a collaborative platform on climate adaptation issues. It allows practitioners, researchers and policy-makers to access credible, high-quality information and connect with one another. (<https://www.weadapt.org/>). It is supported by the Stockholm Environment Institute. weADAPT has been established in 2007.
- **WWF**, founded in 1961, works in 100 countries and is now supported by nearly 5 million members worldwide. WWF's way of working combines global reach founded in science, with the intention of involving action from the local to the global level. The WWF mission is to conserve nature and reduce the most pressing threats to the diversity of life on Earth. Its work is organised around six areas: climate, food, fresh water, wildlife, forests, oceans. Since 1998 the WWF has been publishing the "Living Planet Report" every two years. This report is based on the Living Planet Index and ecological footprint calculations. The Living Planet Report is one of the world's leading, science-based analyses on the health of the planet and the impact

of human activity. The 2018 report has found an overall decline of 60% in the population sizes of vertebrate species from 1970 to 2014 it names the Convention on Biological Diversity and the Sustainable Development Goals as the key international frameworks for protecting nature and enhancing biodiversity.

- The World Resources Institute (WRI) is a global research and non-profit organization that was established in 1982 with funding from the MacArthur Foundation. It spans more than 50 countries, with offices in the United States, China, India, Brazil, Indonesia and more. Its work focuses on six critical issues at the intersection of environment and development: climate, energy, food, forests, water, and cities and transport.

Other globally active organizations dealing with conservation issues include:

- Conservation International (CI)
- Greenpeace
- The Nature Conservancy (TNC)

1.5 Examples of practical measures that could support the implementation of previously stated recommendations.

Measures for actions in the field of biodiversity and climate change that have already been tested or implemented, are numerous. They cover a wide range of sectors (forest, water, soil, cross-sectorial etc.), thematic fields (knowledge, management, capacity building etc.) and spatial scales (from local to global).

It is not within the means of this report to cover the enormous variety of measures in all these fields and at all spatial scales. However, a few good practical examples are listed in this chapter. These have been selected guided by those recommendations which have been found to be the least considered by the Bern convention Member States. The selection of these least considered recommendations is based on the results of the report written by B. Huntley in 2012: “AN ANALYSIS OF THE IMPLEMENTATION OF RECOMMENDATIONS MADE BY THE GROUP OF EXPERTS ON BIODIVERSITY AND CLIMATE CHANGE (2006-2011)”, and comprise:

- Enhance the adaptive capacity of vulnerable species and develop respective climatic change adaptation/mitigation plans.
- Improve knowledge and understanding of the role of wildfire in ecosystem dynamics.
- Implement adaptive management practices and strategies.

With these recommendations in mind the following list of “good practice” examples have been identified in order to make suggestions of possible practical solutions. This list of examples can only serve as a sample of practical actions and is by no means exhaustive. The suggested reports and projects are broadly connected to one or more of the above cited least considered recommendations rather than a direct response to each recommendation.

Selected measures as good practice examples

Reports

- Secretariat of the Convention on Biological Diversity- CBD Technical Series No. 41: “CONNECTING BIODIVERSITY AND CLIMATE CHANGE MITIGATION AND ADAPTATION:” (2009). Key Messages from the Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change This report has been welcomed by the Bureau of the Conference of the Parties to the Convention on Biological Diversity. <https://www.cbd.int/doc/publications/ahteg-brochure-en.pdf>
- Secretariat of the Convention on Biological Diversity- CBD Technical Series No. 5: IMPACTS OF HUMAN-CAUSED FIRES ON BIODIVERSITY AND ECOSYSTEM FUNCTIONING, AND THEIR CAUSES IN TROPICAL, TEMPERATE AND BOREAL FOREST BIOMES. (2001). (<https://www.cbd.int/doc/publications/cbd-ts-05.pdf>)

- EC's Joint Research Centre: Forest fire danger extremes in Europe under climate change: variability and uncertainty. EUR 28926 EN (2017) (<https://ec.europa.eu/jrc/en/publication/forest-fire-danger-extremes-europe-under-climate-change-variability-and-uncertainty>)

Projects:

- EC's LIFE Programme:
- LIFE MixForChange - Innovative management strategies for climate change adaptation of mixed sub-humid Mediterranean forests. The main aim of the project is to contribute to the adaptation to climate change of European mixed sub-humid Mediterranean forests by increasing their resilience, ensuring their conservation and enhancing their productive, environmental and social functions
- LIFE-MONTADO-ADAPT – ‘from the need to the adaptation’. LIFE-MONTADO-ADAPT has two objectives:
 - Introduction of innovative adaptation technologies in Portuguese and Spanish Montado and Dehesa landscapes and communities, through the demonstration of sustainable and profitable Integrated Land Use (ILU) systems, which help restore the landscape's multi-functional character and its contribution to socioeconomic development, environmental services, biodiversity conservation and carbon sequestration.
 - Maximisation of the transformational impact of these adaptation technologies and ecosystem services, and the securing of their replication and up-scaling, through a farmer-to-farmer ILU adoption plan, developed commercialisation channels, sustainability and carbon certification, and a marketing plan for regional produce.
- LIFE PASTORALP - Pastures vulnerability and adaptation strategies to climate change impacts in the Alps. The overall aim of the LIFE PASTORALP project is to reduce vulnerability and increase resilience of alpine pasture agriculture by assessing and testing adaptation measures, increasing capacity building and developing improved management strategies for climate change adaptation. The achievement of this goal will be based on a solid science-based knowledge of future climate change impacts on pastoral communities located in two national parks (the Parc National des Ecrins in France and the Parco Nazionale Gran Paradiso in Italy) in the western Alps, as examples of the alpine environment.
- LIFE ADAPTAMED - Protection of key ecosystem services by the adaptive management of climate change endangered Mediterranean socio-ecosystems. The LIFE ADAPTAMED project aims to mitigate the negative effects of climate change on key ecosystem services in three representative Mediterranean NPAs of socio-economic importance:
 - A Mediterranean wetland: Doñana Nature Space (a nature & national park and biosphere reserve);
 - A Mediterranean high mountain range: Sierra Nevada nature area (a nature & national park and biosphere reserve); and
 - A sub desert Mediterranean coastal area: Cabo de Gata Nature Park (also a biosphere reserve).
- LIFE MONTSERRAT - Integrated silvopastoral management plan: An innovative tool to preserve biodiversity and prevent wildfires. The LIFE Montserrat project aims to:
 - Develop ecosystem-based measures to increase the resilience and stability of forests against fires.
 - Contribute to the conservation and improvement of biodiversity in the Montserrat area, with habitats and species of high conservation value included in the EU Birds and Habitats directives.

- Contribute to biodiversity conservation by increasing connectivity through the creation of a mosaic of scrub, natural grasslands and forests that will link two Natura 2000 sites.
- USAID project: “*Mainstreaming climate change in biodiversity planning and conservation in the Philippines*”. The main aim is to integrate adaptation to a changing climate into biodiversity planning and management in the Philippines. There are seven specific objectives:
 - Support the Department of Environment and Natural Resources in the preparation of a national action plan for climate-change adaptation for biodiversity conservation.
 - Facilitate developing mechanisms and measures to integrate climate-change considerations in biodiversity project planning and implementation at the Protected Areas and Wildlife Bureau and the Forest Management Bureau of the Department and its partners.
 - Support assessing the likely human responses to climate change in the proximity of protected areas and the resulting threats to conservation and develop World Agroforestry Centre appropriate adaptation strategies that mitigate these threats.
 - Support the formulation of climate-change adaptation strategies and measures in order to enhance biodiversity conservation.
 - Showcase how climate change can be integrated into biodiversity conservation projects in four pilot sites.
 - Assist in building the capacity of the Department of Environment and Natural Resources, other government agencies and NGOs in mainstreaming climate change in biodiversity conservation

Capacity building initiatives

- Global Climate Change Alliance (GCCA) Support Facility
 - GCCA Global Learning Event 2012. Background document. Addressing climate change through disaster risk reduction and coastal zone management experience. (http://www.gcca.eu/sites/default/files/gcca_tp_drr_final_2012-09-03_0.pdf)
 - Mainstreaming climate change in national, sector and local policies and strategies (http://www.gcca.eu/sites/default/files/GCCA/module5_pacific_2011-01-28.pdf)

2. MATRIX

The attached matrix is structured with rows showing thematic fields of actions / activities and columns showing types of actions / activities. Hence, each cell in the matrix represents a particular combination of thematic field and type of action / activities. The institution(s) or programme(s) covering this particular combination are then named in this field.

Given the extent of this study, neither the list of institutions and programmes nor the identified activities and actions of these organisations can be defined as exhaustive. However, the content of chapter 1 and the matrix reflect the emphasis on topics and types of action of the main players at European and global level.

Note: the matrix is provided in form of an Excel Sheet called “Matrix_CCIssues_activities_finalReport_10Nov.xlsx”

3. ACTION PLAN

3.1 Gaps, weaknesses and requirements concerning activities linked to climate change

The proposed recommendations take into account the previous work carried out within the context of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the European and Mediterranean Major Hazards Agreement (EUR-OPA), as well a multitude of policies and activities at pan-European and global level. It focuses on potential synergies of the Bern Convention and EUR-OPA in the field of climate change mitigation and adaptation.

Chapter 1 and chapter 2 have shown that there exist numerous initiatives and programmes at pan-European and global level addressing the key issues of climate change adaptation as well as mitigation – sometimes with more and sometimes with less success. There is no uncovered thematic field identifiable which would call for new actions by the Bern Convention and / or EUR-OPA. However, this does not mean that there are not many activities with a certain urgency that could be pursued by the joined forces of the Convention and the Agreement. The following list identifies potential niches to be filled by the Bern Convention and EUR-OPA, as well as identifiable gaps and requirements for action, partly linked to thematic work but also addressing more general issues. The niches, gaps and requirements for action cited below are the basis for the recommendations that follow.

- There are no thematic fields that are not covered by any institution or programme. However, analysis of the various strategies and activities, as well as reviews and evaluations of them, often show weak performance concerning cross-sector work. Also, transfer of work across spatial scales levels could often be strengthened. That is, the up- and down-scaling of knowledge, activities, tools etc. could be fostered.
- The work of the EC is in most cases limited to the EC Members States. The Council of Europe and its member states reach beyond that and could hence offer a transfer of knowledge and practices beyond the EC borders.
- Many reviews of programmes and activities express their concern that problems are known, the knowledge required to act exists, and recommendations have been given to push action, but too little is carried out and put into practice – be it the translation into policies or implementation on the ground.
- The most obvious field of synergy between the Bern Convention and EUR-OPA is Environment based Adaptation (EbA) and nature-based solutions for disaster risk reduction. Recently this topic has gained the attention of many initiatives and experts. However, awareness concerning this topic is often still very low amongst many practitioners, such as risk managers and civil engineers.
- So far, the work carried out within EUR-OPA is coined by a ‘traditional’ Disaster Risk Reduction (DRR) approach, looking predominantly at fast onset hazards such as earthquakes, floods, fires, storms or technical accidents. Some of these hazards have a link to weather and climate. However, climate risks are often related to slower developments and creeping stresses such as water reduction / droughts and heat waves. When looking for synergies with the Bern Convention, it could be advantageous to take a stronger look at these types of climate risk and the potential for mitigating them, for example through the greening of urban areas in order to reduce the risk of heat waves.
- From the outside, the work of the Council of Europe is first and foremost recognized within the fields of human rights, justice and democracy. The Council’s work in the field of biodiversity and particularly hazard mitigation is less well known and activities could be carried out to increase visibility in this area.
- Climate change adaptation is of course critical when considering appropriate responses to climate change impacts that are already felt today and those to come in the near future. However, mitigation is required to reduce such impacts long-term. Comparing the ambitious targets set by the UN protocols and the European Climate Change Programme with the lack

of success in reaching these targets so far achieved, it is clear that there is an urgent requirement for action in reducing greenhouse gas emissions. Any synergic action supporting climate change mitigation should therefore be recognized and supported!

3.2 Recommendation 1 – Invest further in EbA and nature-based solutions

Background:

Although increasingly recognised as valuable and a particularly cost-efficient risk reduction approach, the awareness of EbA and nature-based solutions and their implementation need to be further supported. EbA and nature-based solutions are the most obvious adaptation measures which reflect synergies between the Bern Convention and EUR-OPA.

Overall Objective:

- Awareness of the advantages of EbA and nature-based solutions, as well as their cost-effectiveness, is increased within the CoE member states, the CoE research centres and beyond.

Specific Objectives:

- The team of the Bern Convention and EUR-OPA is recognised as a relevant actor at the global level for promoting EbA and nature-based solutions.
- The knowledge of cost / benefits of EbA and nature-based solutions as well as the role of biodiversity in maintaining ecosystem functions is increased.
- The acceptance of EbA and nature-based solutions as climate change mitigation and adaptation measures is enlarged.

Activities:

1. Initiate applied research studies that examine and highlight the cause and effect relationships in the context of EbA, ideally with a focus on the link between biodiversity/ecosystem service and natural hazards. Possible topics could include:
 - An assessment of the role of biodiversity in maintaining ecosystem functions.
 - An investigation into positive and negative feedback loops and their economic costs or benefits.
 - A collection and the analysis of good practice examples in the most vulnerable environments (mountains, wetlands, arid land etc.).
 - **When:** YEAR 1-3.
 - **Who:** CoE research centres and/or other research entities. The request could be an open call for member states' research institutions.
 - **Why and for whom:** The results should contribute to knowledge development in the field, target group: academia and experts (practitioners).
 - **Outcome:** Reports summarising the studies' research results. Implementation of adaptation measures in a number of test sites, supervised by the EUR-OPA centres.
2. Increase the visibility of the CoE with respect to this topic, intensify networking with existing initiatives tackling EbA and nature-based solutions in general and their connection with disaster risk reduction in particular (for example: EEA, PEDRR, UN ISDR etc.). Promote and disseminate the importance and relevance of the subject as well as the results of your studies through a variety of media tools and educational / university channels
 - a. Carry out an analysis of platforms and networks of relevance to the topic (CoE is partner of PEDRR and can be found in the Climate – ADAPT website but is for example missing on the WE ADAPT platform).
 - **When:** YEAR 1.

- **Who:** This work could be done, for example, by an interim student.
 - **Why and for whom:** The results of this study are for internal use and to identify useful future fields of activities.
 - **Outcome:** Report
- b. Organise and implement a workshop / expert meeting at the CoE premises focusing on the interlinkage between biodiversity, ecosystems and disaster risk reduction and related cost-benefits. This event would best be planned after the end of the studies proposed under Activity 1 and could include the presentation of their results.
- **When:** YEAR 4.
 - **Who:** Selected experts and researchers who have been involved in the studies proposed under activity 1.
 - **Why and for whom:** This will generate knowledge, fosters visibility of the CoE as relevant actor in this field for scientists, experts and the interested public.
 - **Outcome:** The publication of a report on the cost -efficiency of EbA and nature-based solutions addressing DRR and biodiversity issues with respective good practices.
- c. Increase the presence of the CoE and improve its visibility in relevant networks and on respective platforms. This should be initiated soon as an ongoing, continuous process starting with the improvement of the CoE websites on this topic.
- **When:** YEAR 1-5.
 - **Who:** Technical experts in cooperation with communication experts.
 - **Why and for whom:** Increase visibility of the CoE and awareness of the topic amongst scientists, experts and the interested public.
 - **Outcome:** Presence of the CoE work on all larger and relevant platforms and networks.

3.3 Recommendation 2 – Explicitly address both risks to rapidly and slowly developing climate hazards in the EUR-OPA agenda

Background:

Potential synergies between the Bern Convention and EUR-OPA are linked to extreme events induced by changing climate conditions and / or weather phenomena. So far, EUR-OPA predominantly focuses on rapid hazardous events such as – in the case of climate-linked events – floods, fires, storms etc. However, many climate risks are related to slowly developing events such as water scarcity or droughts, an increasing number of high temperature nights during summer periods or the invasion of disease vectors. In addition, these risks often have a direct link to biodiversity threats. Both types of hazardous events should be taken into account.

Overall Objective:

- The link between approaches to address the risks of slowly deteriorating climate conditions and those of sudden hazard processes has been strengthened and is reflected in the joint work of the Bern Convention and EUR-OPA.

Specific Objectives:

- The Bern convention explicitly recognises the risks that rapidly evolving hazards represent for biodiversity and nature conservation, in particular in view of changing climate conditions.
- EUR-OPA explicitly recognises the increasing risk of disasters triggered by slowly evolving hazardous processes, in particular in view of changing climate conditions.
- The respective websites have been updated concerning the various types of climate related risks and at least two research centres are tackling this topic.

Activities:

1. Analyse and prioritise activities that support the integration of slowly evolving climate risks more explicitly into EUR-OPA activities. Analyse and prioritise activities that support the integration of climate-related rapid evolving risks more explicitly into the Bern Convention activities. This should include (but is not limited to): strategic objectives and concrete work plans, presentation on internet websites and affiliated research centres.
 - **When:** YEAR 1.
 - **Who:** Consultant or a CoE research centre.
 - **Why and for whom:** The results should be the base for further actions towards the overall objective of this recommendation.
 - **Outcome:** A report based on desk research and interviews with relevant actors that summarises and prioritises actions to better integrate slow and rapid evolving climate-related disasters.
2. Organise and implement an internal workshop addressing common approaches to address slow and rapid evolving climate-related disasters.
 - **When:** YEAR 1.
 - **Who:** A moderator and all relevant actors within the CoE.
 - **Why and for whom:** to discuss the outcomes of activity 1 and to agree on the next steps to be taken in order to progress towards the overall objective. Comment: Ideally this would be carried out in accordance with recommendation 4: the development of a strategy with respect to the synergies between the Bern convention and EUR-OPA.
 - **Outcome:** Workshop minutes summarizing the outcome of the meeting.
3. The various activities identified with the help of activity 1+2 of this recommendation are carried out.
 - **When:** YEAR 2-3.
 - **Who:** Consultant or a CoE research centre.
 - **Why and for whom:** These working steps should implement the tasks, which have been agreed upon under activity 2 and should bring both the Bern Convention and EUR-OPA to develop common approaches in the field of the various types of climate related risks.
 - **Outcome:** The outcomes to be envisaged conform with the identified working steps and should at least include updated websites and explicit expertise concerning the topic in the CoE research centres.

3.4 Recommendation 3 – Link the Council of Europe’s work more coherently to the International Frameworks SDG, Paris Agreement and SFDRR

Background:

After the initial years of conceptual development, the International UN Frameworks, particularly the Sustainable Development Goals (SDG), the Paris Agreement and the Sendai Framework for Disaster Risk Reduction and the related indicators / reporting activities, are currently entering the phase of implementation. Combined efforts of the Bern Convention and EUR-OPA could support these efforts as well as bring visibility to both initiatives at a global level.

Objective:

- The work of the Bern Convention and EUR-OPA is more strongly linked to and supports the relevant UN Frameworks.

Specific Objectives:

- The institutional connection between the Bern convention as well as EUR-OPA and the various UN agencies responsible for the relevant UN Frameworks is strengthened (UNFCCC, UNISDR, UNCCD, UN Environment etc.).
- Within the activities of the Bern convention and EUR-OPA there is an explicit consideration of achievements in relation to the goals and indicators of the 2020 agenda, the Sendai Framework and the Paris Agreement.

Activities:

1. Reinforce the connections between CoE and relevant UN agencies by active participation in meetings related to Agenda 2030. Invite UN personnel to relevant Bern Convention / EUR-OPA meetings and involve them in activities where possible and useful.
 - **When:** From YEAR 1, ongoing.
 - **Who:** Senior management of the Bern Convention and EUR-OPA.
 - **Why and for whom:** Achieve a better mutual understanding and knowledge of both the CoE and the UN mechanisms and frameworks.
 - **Outcome:** Closer connections between staff of the Bern Convention and EUR-OPA with staff from various UN agencies.
2. Integrate UN Frameworks and particularly relevant goals of the 2030 Agenda into the future work of the Bern Convention and EUR-OPA. Ensure that future recommendations are in line with the SDGs and that reporting of achievements of activities are supporting the respective indicators where possible. Participation in meetings related to Agenda 2030. Invite UN personnel to relevant Bern Convention / EUR-OPA meetings and involve them in activities where possible and useful.
 - **When:** From YEAR 1, ongoing.
 - **Who:** Senior management of the Bern Convention and EUR-OPA
 - **Why and for whom:** Better align the Bern Convention and EUR-OPA activities with those of the UN and their relevant Frameworks.
 - **Outcome:** Consideration of UN Frameworks in future documents and achievements of the Bern Convention and EUR-OPA.

3.5 Recommendation 4 – Develop a strategy for working on the synergies between Bern Convention and EUR-OPA

Background:

The recommendations 1 – 3 described in this report in the preceding chapters are based on a very theoretical knowledge of the structures, interests, target groups and capacities of the Bern Convention and of EUR-OPA. The plan of action proposed in this context within this report should therefore be embedded in a strategy for the work on the synergies of the both agreements. This strategy should be developed as a joint effort with the involvement of the main actors of Bern Convention and EUR-OPA. The here proposed action plan should then be adapted accordingly.

Overall Objective:

- A common vision of the Bern Convention and EUR-OPA in how to work on synergies of the both initiatives exists. An example of potential synergies between the Bern Convention and EUR-OPA on climate change and landscape fire management is given in Annex II.

Specific Objectives:

- A five years strategy has been developed to describe the vision and envisaged activities related to the synergies of the Bern Convention and EUR-OPA.
- The relevant actors have agreed on specific objectives and a respective set of tangible and ideally measurable indicators to assess the success of their endeavors.
- A detailed plan of action is developed naming required resources and a detailed time line.

Activities:

- Implement the process of a strategy development, best by one person responsible for its management. This should include the Preparation and carrying out of a moderated internal workshop with participation of actors from the Bern Convention and EUR-OPA.
 - **When:** YEAR 1
 - **Who:** A designate project manager with support of all relevant actors within the CoE
 - **Why and for whom:** to clarify and agree on a common vision and strategy to pursue over the next five years, as guidance for the involved staff of the Bern Convention and EUR-OPA with the thematic focus on climate change adaptation but also mitigation.

Outcome:

- A strategy paper including a vision, general and specific objectives, an action plan, required resources and related schedule.

3.6 Additional recommendations

- AR 1: Improve CoE's impact:

Many excellent recommendations have been formulated by the Bern convention and EUR-OPA but have not been taken up or implemented. One possibility could be to cooperate more closely with the research centres in order to achieve a greater implementation of the proposed actions. The centres could be supported through promotion by the CoE, The CoE could help them in networking with other expert entities and in receiving external funding that could allow them to work more intensively on the implementation of recommendations.

- AR 2: measure CoE's impact:

Often recommendations are given but it is difficult to understand if these recommendations have been taken up. Sometimes this work is undertaken through a special evaluation involving great effort. It is suggested that the formulation of recommendations or other activities should always be undertaken with an idea as to how the success or failure could be recorded. This could help with the focus on the most realistic recommendations and to improve the measurement and assessment of future activities.

- AR 3: Increase of CoE's visibility:

The Council of Europe is known for its work in the fields of justice, human rights and democracy, but less in relation to biodiversity or hazards. The valuable work being carried out in this area within the context of the Bern Convention, and particularly the less known EUR-OPA, should be better promoted and disseminated. A stronger link to the European Commission work could support this – taking note that the EC may well appreciate the possibility that the CoE can offer, of reaching out to European countries outside the EU.

- AR 4: Include the promotion of climate change mitigation:

In order to reduce risks to climate change impacts in the long term, climate change mitigation, that is the reduction of GHG emissions, needs to be pursued. Progress achieved so far is small compared with the ambitious targets formulated - at national, European and global scales. The Council of Europe should push for climate change mitigation where ever possible.

ANNEX I

TERMS OF REFERENCE

Stefan Schneiderbauer, Expert on climate change

Aim

Identify thematic areas for the development of synergies on climate change between the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the European and Mediterranean Major Hazards Agreement (EUR-OPA). Define relevant joint activities on climate change mitigation and adaptation applied to biodiversity conservation and disaster risk reduction.

Methodology

- ✓ M1: Study the Bern Convention including the Emerald Network and the European Diploma of Protected Areas, and EUR-OPA objectives and programme of work, in particular what has already been done in relation to climate change.
- ✓ M2: Study what other environmental conventions/directives and international organisations (EU, UN, etc) are doing on climate change.
- ✓ M3: On the basis of existing initiatives, assess gaps and needs at Pan-European and global level to mitigate the impact of climate change and natural disasters, for example; nature-based solutions and ecosystem approach.
- ✓ M4: Identify actions for which the Bern Convention and EUR-OPA could have an added value compared to existing international initiatives.
- ✓ M5: Identify possible synergies between the Bern Convention and EUR-OPA on climate change, as well as with other environmental legal instruments and international organisations.

Outcome

- ✓ O1: Draft a Report listing the existing actions on climate change at Pan-European and global level, recommending new activities to be implemented by the Bern Convention and EUR-OPA for which they could have an added value, recommending synergies between the Bern Convention and EUR-OPA and with other environmental treaties and international organisations.
- ✓ O2: Develop a matrix connecting different climate change matters dealt by international organisations/conventions and the Bern Convention and EUR-OPA to highlight possible synergies and identify new fields of action.
- ✓ O3: Provide an Action Plan with short and long term objectives, activities, expected results, outcomes and a calendar of actions.
- ✓ O4: Present the Report and the Action Plan to the Groups of Experts on protected areas and climate change in 2019 and reflect relevant comments and suggestions made in the documents.

ANNEX II

POTENTIAL SYNERGIES CONCERNING CLIMATE CHANGE BETWEEN THE BERN CONVENTION AND EUR-OPA: LANDSCAPE FIRE MANAGEMENT

Rationale

Nature Conservation and Disaster Risk Reduction policies in Europe reflect a limited awareness of the dual role and the interconnectedness of landscape fires. On the one side, natural fires and the use of fire as a cultural-historic tool in land use have shaped natural and cultural ecosystems of high conservation value. On the other side, uncontrolled wildfires constitute a major threat to the sustainable functioning of ecosystems and to human health and security. The occurrence of extremely dangerous wildfires throughout Europe over the last few years indicate that fire regimes are changing as a consequence of climate change – but significantly driven by land-use change and socio-economic changes as well. The fires affecting Portugal and Greece in 2017 and 2018 are striking examples for wildfires becoming an increasing security problem. The wildfires affecting Central and Northern Europe in 2018 reveal the impact of regional climate change resulting in an unprecedented vulnerability of the temperate/sub-boreal landscapes to droughts and fire.

The Fire Ecology Research Group, which was established in Freiburg (Germany) 1979 and expanded to the function of Global Fire Monitoring Center (GFMC) in 1998, is performing the role of a Euro-Mediterranean Specialized Center under EUR-OPA since 2007. GFMC has systematically collected, archived / documented and evaluated the state-of-the-art and progress in landscape fire management in Europe and globally, with special emphasis on changing fire regimes as a consequence of climate change and socio-economic and demographic changes. The main task of GFMC is to build and strengthen the Science-Policy Interface (SPI) within countries and at regional / international levels, aiming at bringing the state-of-the-art in landscape fire science to the community of practitioners and to policy making bodies responsible for environment protection, sustainable land-use, climate change mitigation and adaptation, and disaster risk reduction.

GFMC services provided to EUR-OPA Major Hazards Agreement and relevant for the Bern Convention

The history of collaborative efforts between GFMC and EUR-OPA, including past achievements, are provided on the websites of GFMC and EUR-OPA:

- <http://gfmc.online/programmes/europe-org/coe.html>
- <https://europa-projects.ext.coe.int/en/centre/18-global-fire-monitoring-center.html>

In summary, GFMC provides the following services:

- ✓ Advisory services in the field of natural and anthropogenic wildfires (including disasters / emergencies), in particular on governance, legislation and cross-border cooperation:
- ✓ Advisory services on supporting vulnerable groups with regards to self-protection / self-defence against wildfires (including gender equality in connection with risk management), based on community participation (community-based fire management including wildfire prevention, appropriate use of land-use fires, wildfire preparedness, wildfire defence – see GFMC's earlier engagement in the development of related guidelines (one of the relevant products developed by GFMC under the sponsorship of EUR-OPA were the Guidelines Defence of Villages, Farms and Other Rural Assets against Wildfires: Guidelines for Rural Populations, Local Communities and Municipality Leaders in the Balkan Region. These guidelines meanwhile have been translated from the English base version to Greek, for the use in the Former Yugoslav Republic of Macedonia, BCMS, and Ukrainian and also adapted and translated for the use in Mongolia.
- ✓ <http://gfmc.online/manag/cbifm.html>
- ✓ Scientific-technical advisory services on:

- ✓ Ecosystem-based approach/nature-based solutions and mitigation measures for disaster risk management: Fire management per se is a nature-based approach and needs to be promulgated to the community of practitioners.
- ✓ Climate change adaptation, environmental and natural resources management: Here fire management is extremely critical since the occurrence, impacts and vulnerabilities of and to wildfires are increasing all over Europe.
- ✓ Development of environmental resilience, particularly in connection with climate change phenomena:
- ✓ Assistance of the EU-OPA Secretariat in drafting strategies and policies for the protection of cultural heritage in the context on major risks, community-based approach and risk management: http://gfmco.online/manag/CBFiM_12.html.
- ✓ Scientific and technical advisory services to develop social network and smartphone applications to inform the population and vulnerable groups in the management of major hazards (alert, information and active participation of the population including vulnerable groups): <http://gfmco.online/manag/cbifm.html>.

GFMC services potentially be provided to the Bern Convention and relevant for the EUR-OPA Major Hazards Agreement

The use of fire in conservation and the protection of conservation areas against destructive wildfires is considered part of Integrated Fire Management (IFM), based on the following considerations:

There are a diverse range of cultural and natural habitats in Europe that have co-evolved with cultural fire practices or natural fire. Maintaining the functioning and biodiversity of such habitats may require the (re)introduction of prescribed management fires both in cultural and natural habitats. In some cases, prescribed fire may be newly introduced to replace or mimic anthropogenic or natural disturbances that are needed to keep the system functioning. For instance, high-conservation value *Calluna vulgaris* heathland ecosystems, often have a history of multiple disturbances, e.g. grazing, mowing, sod-cutting, intensive harvest of biomass for energy provision and controlled application of fire for inducing the regeneration of overaged ecosystems that are subject to ecological succession towards brush and forest cover. In many European heathland ecosystems mechanical methods or grazing cannot be applied, or are selective or costly – and here the application of prescribed fire is offering a substitution tool.

Among other, GFMC's engagement and expertise is documented here:

- ✓ - The White Paper "Use of Prescribed Fire in Land Management, Nature Conservation and Forestry in Temperate-Boreal Eurasia": <http://gfmco.online/wp-content/uploads/EFNCN-White-Paper-2010-1.pdf>
- ✓ - An example of a practice-oriented recent publication "Development of technologies and methods for the application of prescribed fire for the management of *Calluna vulgaris* heathlands contaminated by unexploded ordnance (UXO): Problems and first experiences gained in a research and development project in Germany": The publication addresses the role of fire and other disturbances on high-conservation value areas on active and former military exercise areas: <http://gfmco.online/globalnetworks/seurope/GFMC-Publication-RX-Burning-UXO-Terrain-2016.pdf>

Furthermore, the expertise and leadership of the GFMC is documented and for download of the website of the Eurasian Fire in Nature Conservation Network:

- <http://gfmco.online/programmes/natcon/natcon.html>

A broader collection of reports on fire – including fire damages – in protected areas in Europe and globally is found here:

- http://gfmco.online/manag/CBFiM_13.html

According to the assessment of GMFC many policies, management plans and practices in the conservation of European wildlife and natural habitats do not yet sufficiently consider approaches of Integrated Fire Management (IFM) in which the use of prescribed fire is a key element.

GMFC is able to provide the following services:

- ✓ Analytical reports (assessments, gap analysis, synthesis, conclusions): Specifically, where IFM measures are required
- ✓ Monitoring visits and preparing monitoring reports: In candidate areas where fire management including prescribed burning has not yet been introduced
- ✓ Preparation of strategies, recommendations and other policy documents: Advisory services for IFM are key expertise of GMFC
- ✓ Policy advice in specific areas (Environmental impact assessments and strategic environmental assessments of development projects, education in environment matters, climate change and biodiversity, Bern Convention species conservation, threatened species Action Plans, etc.): The same refers.
- ✓ Legal advice on the Bern Convention provisions
- ✓ Awareness raising and communication campaigns (on fire-management related matters)

Finally, the GMFC had addressed the consequences of climate change on fire regimes (including the relevance to the Bern Convention) in the White Paper “Vegetation Fires and Global Change. Challenges for Concerted International Action. A White Paper directed to the United Nations and International Organizations” (2013), for complete download see here:

- <http://gfmco.org/wp-content/uploads/Vegetation-Fires-Global-Change-UN-White-Paper-GFMC-2013.pdf>

Conclusions

During the past four decades the GMFC has served numerous countries in Europe to develop fire management policies – addressing both the prevention and defence of wildfires, and the use of natural and prescribed management fires with their benign effects – and capacitating national stakeholders as well as civil society – notably through involvement of local communities. The sponsorship of EUR-OPA is crucial and proven effective and efficient.

The GMFC has observed that decision-making in fire management in Europe (as elsewhere in many countries / regions) is primarily based on ad-hoc political considerations. Unfortunately, the science community in Europe is still calling for more fundamental research instead of attempting to work actively at the SPI and bring the existing scientific-technical knowledge to practice. The wildfire crisis in Portugal in 2017 and in Greece 2018 revealed that the national community of scientists, which belong to the most advanced in Europe, did not have any tangible impact on fire management policies, planning and practice at landscape level.

In conclusion of this essay: The GMFC supports a concept to create synergies between the Bern Convention and EUR-OPA by acknowledging the multi-faceted role of fire in the environment that may exert both threats and benefits for conservation goals and the security of society. Emphasis should be given to the ongoing and future impact of climate change on fire regimes, which bear the risk of increasing occurrence and severity of wildfires affecting the natural, cultural and urban-industrial landscapes of Europe and globally – including their habitats for endangered species – with dangerous consequences on human health and security.