



CONVENTION ON MIGRATORY SPECIES

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PROGRAMME OF WORK ON CLIMATE CHANGE AND MIGRATORY SPECIES

Adopted by the Conference of the Parties at its 11th Meeting (Quito, 4-9 November 2014)

Recognizing that the best available scientific information indicates that action to help migratory species adapt to climate change is urgently required in order to meet the objectives of the Convention; to give proper effect to Articles II and III, and to the instruments adopted under Article IV, whereas at the same time there is a need to expand and refine knowledge concerning the impacts of climate change on migratory species;

Emphasizing the need to coordinate action to help migratory species adapt to climate change within the framework of the CMS instruments;

Acknowledging that recent scientific evidence indicates that the importance of current protected areas and protected area networks for migratory species conservation is not expected to diminish on account of climate change and in many instances may increase;

Recognizing that it will often be necessary to enhance protected areas and networks in order to maximize representativeness and thereby increasing their contribution to migratory species conservation in light of climate change, and to better integrate these into wider landscapes and seascapes;

Mindful of the call on Parties and Signatories to CMS instruments in Resolution 10.19 to enable the full participation in CMS and CMS instruments of States that are not currently within the range of the species involved, but are expected to become Range States in the future due to climate change;

Further recognizing that the understanding of certain terms in the Convention, in particular the term “historic coverage” in Article I(1)(4)(c), should be re-examined in the current era of climate change, bearing in mind that the Convention was concluded before the implications of climate change for migratory species conservation became apparent;

Recalling that Resolution 10.19 of the Tenth Conference of the Parties (COP10) established the position of a COP-Appointed Councillor for Climate Change and requested the preparation of a Programme of Work and the convening of an intersessional Working Group;

Taking note of the report of the Workshop that took place in Guácimo (Province of Limón, Costa Rica) from 9-11 April 2014, and *thanking* the Government of Costa Rica and its

agency for protected areas, SINAC (National System for Conservation Areas), for very effectively hosting this workshop;

Further noting the report of the ACCOBAMS Expert Workshop on the impact of climate change on cetaceans of the Mediterranean and Black Seas that took place in Monaco on 11 June 2014, and its recommendations, including Key Messages to Governments and Others;

Acknowledging with thanks the contributions of the members of the Climate Change Working Group established under the Scientific Council; and

Further acknowledging the key role of the financial donors of this project which made it possible to develop the Programme of Work, in particular the Governments of Germany and Monaco for their voluntary contributions, and SINAC and UNDP for their in-kind contributions;

*The Conference of the Parties to the
Convention on the Conservation of Migratory Species of Wild Animals*

1. *Adopts* the “Programme of Work on Climate Change and Migratory Species” (the POW) annexed to this resolution and *urges* Parties and Signatories to the CMS instruments and *encourages* non-Parties to implement the POW as a matter of priority, if applicable and to the extent possible given the particular circumstances of each Party;
2. *Requests* Parties and Signatories to the CMS instruments to assess what steps are necessary to help migratory species cope with climate change and take action to give effect to the POW on Climate Change;
3. *Requests* the Scientific Council and the Working Group on Climate Change to promote work to address key gaps in knowledge and future research directions, in particular through the analysis of existing long-term and large-scale datasets;
4. *Requests* the Secretariat to ensure the integration of elements of this POW into the Companion Volume of the Strategic Plan for migratory species to ensure mainstreaming of climate change, avoiding duplication, enhancing synergies and cooperation;
5. *Instructs* the Secretariat, in collaboration with Parties and relevant international organizations, subject to the availability of funds, to address specific issues and promote the implementation of the POW and share best practice and lessons learnt in the effective mitigation of climate change impacts, including through the organization of regional workshops;
6. *Calls on* Parties and non-Parties and stakeholders, with the support of the Secretariat, to strengthen national and local capacity for the implementation of the POW and the protection of species impacted by climate change, including, *inter alia*, by developing partnerships with key stakeholders and organizing training courses, translating and disseminating examples of best practice, sharing and implementing protocols and regulations, transferring technology, and promoting the use of online and other tool to address specific issues contained in the POW;

7. *Agrees* that Article I (1) (c) (4) of the Convention, on the definition of “favourable conservation status” could be interpreted as follows in light of climate change:

According to Article I (1) (c) (4) of the Convention, one of the conditions to be met for the conservation status of a species to be taken as “favourable” is that: “the distribution and abundance of the migratory species approach historic coverage and levels to the extent that potentially suitable ecosystems exist and to the extent consistent with wise wildlife management”. Whereas there is a continued need to undertake conservation action within the historic range of migratory species, such action will increasingly also need to be taken beyond the historic range of species in order to ensure a favourable conservation status, particularly with a view to climate-induced range shifts. Such action beyond the historic range of species is compatible with, and may be required in order to meet the objectives and the obligations of Parties under the Convention;

8. *Urges* Parties and *invites* relevant international organizations, bilateral and multilateral donors to support financially the implementation of the POW including through the provision of financial and other assistance to developing countries for relevant capacity building;

9. *Proposes* the continuation of the Climate Change Working Group until COP12, extending its membership to incorporate expertise from geographical regions currently absent, and to prioritize, facilitate and monitor the implementation of the POW;

10. *Requests* the Secretariat to liaise with the secretariats of relevant MEAs, including in particular the secretariats of the CBD, UNFCCC, UNCCD, Ramsar Convention and World Heritage Convention, in collaboration with/through the Biodiversity Liaison Group, to promote synergies and coordinate activities related to climate change adaptation including, where appropriate, the organization of back-to-back meetings and joint activities; and

11. *Calls on* Parties and the Scientific Council to report progress in implementing the POW, including monitoring and the efficacy of measures taken, to COP12 in 2017, ensuring as far as possible integration into the national reports for CMS.

PROGRAMME OF WORK ON CLIMATE CHANGE AND MIGRATORY SPECIES

Parties and other stakeholders should implement the actions contained in this Programme of Work according to their individual circumstances with a view to maximizing the benefits to migratory species.

A timeline to implement the actions contained in this Programme of Work is proposed after each action. The time categories proposed are the following:

[S]: Short term – Actions to be completed within one triennium

[M]: Medium term – Actions to be completed within two triennia

[L]: Longer term – Actions to be completed within three triennia or longer

Actions to be completed in the medium or longer term should be started as soon as possible, where appropriate.

Measures to facilitate species adaptation in response to climate change

- Prepare species action plans for those species listed on Appendix I considered to be most vulnerable to climate change (*Parties and the Scientific Council, international, intergovernmental and other relevant organizations*). Action plans should be undertaken at an appropriate level (species or management unit level), but measures may be implemented at the national level. For species already covered by existing CMS instruments, those action plans should be developed under those instruments. For other species, range states should work collaboratively to prepare action plans at an appropriate scale. [M]
- Improve the resilience of migratory species and their habitats to climate change, and ensure habitat availability for the full lifecycle of the species, now and in the future, *inter alia* through the following actions:
 - Identify and prioritize areas currently experiencing rapid climate impacts that are important to migratory species. (*Parties, scientific community and conservation stakeholders*); [S]
 - Ensure that individual sites are sufficiently large, holding a variety of habitats and topography. (*Parties, scientific community and conservation stakeholders*); [L]
 - Ensure there is physical and ecological connectivity between sites, aiding species dispersal and colonization when distributions shift. (*Parties, scientific community and conservation stakeholders*); [L]
 - Consider the designation of seasonal protected areas or restrictions on land-use in areas where migratory species occur at critical stages in their lifecycle and would benefit from such protection. (*Parties, scientific community, international, intergovernmental and other relevant organizations*); [M]
 - Undertake specific management to eliminate, counteract or compensate for detrimental impacts of climate change and other potential threats that may interact with or exacerbate climate change. (*Parties, scientific community and conservation stakeholders*); [S]

- Consider expanding existing protected area networks to cover important stop-over locations and sites for potential colonisation, and *ensure the effective protection and appropriate management of sites to maintain or to increase the resilience of vulnerable populations to extreme stochastic events. Ensure effective monitoring of the site network in order to detect threats, and act on any deterioration in site quality, implementing specific actions to address important threats to sites.* This may include increasing both the number and size of protected sites. (*Parties, scientific community, international, intergovernmental and other relevant organizations including conservation stakeholders*); [M]
- Integrate protected areas into wider landscapes and seascapes, ensure appropriate management practices in the wider matrix and undertake the restoration of degraded habitats and landscapes/seascapes (*Parties, scientific community and conservation stakeholders*); [L]
- Establish, maintain and regularly review a comprehensive, inter-jurisdictional inventory of current protected areas and candidate high priority protected areas in order to coordinate future conservation efforts. (*Parties, scientific community and conservation stakeholders*); [S]
- Cooperate in respect of transboundary protected areas and populations, ensuring that barriers to migration are to the greatest possible extent eliminated or mitigated, and that migratory species are managed under commonly agreed guidelines. Where appropriate, this should be done within the framework of applicable CMS instruments. (*Parties, scientific community, international, intergovernmental and other relevant organizations*); [S] and
- Identify migratory species that have special connectivity needs - those that are resource, area, and or dispersal limited. (*Parties, scientific community and conservation stakeholders*); [S]
- Consider ex-situ measures and assisted colonization, including translocation, as appropriate, for those migratory species most severely threatened by climate change while bearing in mind the need to minimize the potential for unintended ecological consequences, in line with CBD COP Decision X/33 on Biodiversity and Climate Change, para 8(e). (*Parties, Scientific Council, and conservation stakeholders*).[L]
- Periodically monitor the effectiveness of conservation actions in order to guide ongoing efforts and apply suitable adaptive responses as appropriate. (*Parties and scientific community*). [M]

Vulnerability assessment

- Identify and promote a standardized methodology for evaluating species' vulnerability to climate change that includes the whole life-cycle of the species concerned. This may require the development and communication of new tools as appropriate. (*Parties, Scientific Council, scientific community, international, intergovernmental and other relevant organizations*).[S]
- Undertake vulnerability assessments of Appendix I and II listed species at an appropriate (e.g. regional) scale, as the first priority. (*Parties, scientific community, international, intergovernmental and other relevant organizations*). [S]
- Once completed, undertake climate change vulnerability assessments for other migratory species to identify those most susceptible to climate change. (*Parties, scientific community, international, intergovernmental and other relevant organizations*).[M]

- Determine which species vulnerable to climate change should be listed or uplisted on the CMS Appendices, as appropriate. (*Parties*). [S]

Monitoring and research

- Coordinate research and monitoring efforts in relation to the impacts of climate change across the CMS Family. (*Parties / Signatories to CMS instruments*). [S]
- Undertake research on the status, trends, distribution and ecology of migratory species. This would include identifying knowledge gaps and may require the use and refinement of existing technologies and tools (e.g. remote sensing), the development of new ones, promotion of citizen science, and coordination / knowledge exchange to improve capacity. (*Parties, scientific community*).[S]
- Develop an understanding of migratory routes, how they are changing (e.g. using existing recoveries of ringed birds and new tracking technologies) and the connectivity between populations (e.g. using genetic approaches) to identify key sites, locations and appropriate management units for particular species. (*Parties, scientific community*).[M]
- Identify key breeding and stopover locations, as well as key wintering sites (hotspots) for migratory species, and focus the monitoring of environmental change on these locations. (*Parties, scientific community*). [M]
- Develop and implement monitoring regimes that are adequate to distinguish declines in populations from transboundary range shifts; diagnose the causes of decline, and to help analyse the impact of climate change on migratory species, *inter alia* through the following measures:
 - Identify and carry out research on the impacts of climate change on migratory species, including the impact on habitats and on local (human) communities dependent on the ecosystem services provided by these species. Such research should consider impacts across the full life-cycle cycle of the species concerned. (*Scientific community*); [L]
 - Establish appropriate monitoring of habitat extent and quality and the abundance of key resources / interacting species (e.g., keystone prey or major predators) to identify changes and to inform vulnerability assessments. (*Parties, scientific community*); [M]
 - Establish and collate monitoring of other threats, to help identify synergistic threats and correctly attribute observed changes to climate change or to other causes. This may require the use and refinement of existing technologies and tools (e.g. remote sensing), the development of new ones, promotion of citizen science, and coordination / knowledge exchange to improve capacity. (*Parties, scientific community*); [M]
 - Ensure that monitoring is maintained in the long term, using comparative methodologies. This will require significant knowledge exchange and guidance from countries where these techniques have been developed. (*Parties, scientific community, international, intergovernmental and other relevant organizations*); [L]
 - Communicate and share monitoring results regularly with neighbouring and other range states (*Parties, international, intergovernmental and other relevant organizations*); [M]
 - Model projected future impacts of climate change to inform vulnerability assessments and action plans. (*Scientific community*); [S] and

- Continue to identify indicator species and/or composite indicators as a proxy for wider migratory species assemblages, habitats and ecosystems, and regularly report on the state of those indicators. (*Scientific community, Parties, NGOs*). [L]
- Periodically conduct research to test the effectiveness of, and assess the risks associated with, species adaptation measures in response to climate change. (*Parties, scientific community*). [L]
- Continue to fill the information gaps through research and monitoring, in order to make explicit the associated synergies and any trade-offs between biodiversity conservation, mitigation and adaptation efforts. (*Parties, scientific community*). [L]

Climate change mitigation, human adaptation, and land use planning

- Identify, evaluate, prioritize and reduce the additional impacts on migratory species resulting from changes in human behaviour due to climate change (the so-called “tertiary effects”). (*Parties, relevant organizations*).[L]
- Develop and/or revise environmental sensitivity and zoning maps, to include critical and important sites for migratory species, as an essential tool for sustainable land use planning and management and adaptation projects. (*Parties, scientific community, NGOs*). [S]
- Use the environmental sensitivity and zoning maps to inform the selection of sites for climate change mitigation projects, such as renewable energy projects. (*Parties*).[M]
- Develop general guidelines for mitigation and human adaptation projects to ensure that they are not harmful to migratory species. (*Scientific Council*).[S]
- From the general guidelines develop step down guidelines at the national level for mitigation and adaptation projects to ensure that they are not harmful to migratory species. (*Parties, scientific community, NGOs, energy, agriculture, forestry, transport and other sectors*). [M]
- Ensure that an environmental impact assessment is conducted prior to undertaking major adaptation and mitigation projects, as well as exploration and production projects, taking into account impacts on migratory species. (*Parties, energy sector*). [S]
- Make the monitoring of environmental impacts a standard requirement for major climate change mitigation and adaptation projects, exploration and production projects and for land use planning. (*Parties, energy sector*). [M]
- Ensure that projects incorporate adaptive management in mitigation and adaptation activities. (*Parties*). [S]
- Recognizing that there is considerable uncertainty regarding the potential effectiveness of offsetting as an approach to compensate for detrimental impacts of mitigation and human adaptation; undertake research to inform assessments of the likely role of compensatory or offsetting approaches designed to reduce and prevent detrimental impacts of mitigation and adaptation projects upon migratory species. (*Parties, scientific community*). [S]
- Develop and apply appropriate methodologies to consider potential cumulative impacts of mitigation and adaptation projects across the entire life-cycle of migratory species, including breeding, wintering and stop-over sites, as well as impacts upon migratory routes. These should be applied at regional, national or international population levels, as appropriate. (*Parties, scientific community*). [M]
- Ensure that where impacts on migratory species are significant, renewable energy and other climate change mitigation or adaptation structures are operated in ways that eliminate or minimize negative effects on migratory species (for example, including short-term shutdowns or higher turbine cut-in speeds, with regard to wind farms). (*Parties, energy sector*).[S]

- Ensure that any climate change mitigation and adaptation action has appropriate social and environmental safeguards in place at all stages, taking into account the needs of CMS-listed species. (*Parties, multilateral development banks, and energy sector*). [M]
- Ensure that the best available scientific information on the impacts of climate change on migratory species is accessible and useable for planning and decision-making. (*Parties, scientific community*). [L]

Knowledge exchange and capacity-building

- Increase awareness of the impacts of climate change on migratory species. (*Parties, scientific community, international, intergovernmental and other relevant organizations*). [L]
- Utilize the relevant IPCC reports and other reviews for background information on climate change impacts and compile and disseminate relevant information. (*Parties and Scientific Council*). [L]
- Commission technical reviews and best-practice guidelines and encourage the publishing, sharing and distribution of periodic scientific reviews on the following topics (*Parties and scientific community*): [S]
 - the impacts of climate change on migratory species;
 - the potential for conservation management to increase the resistance, resilience and adaptation of migratory species populations to climate change; and
 - the impacts of anthropogenic climate change adaptation and mitigation on migratory species.
- Disseminate the outcomes of these reviews through the CMS website and workspace, where possible translating the results of those reviews into different languages. (*Scientific Council*). [S]
- Establish a series of regional and sub-regional or national workshops involving scientists, NGOs, national focal points for all relevant environmental conventions, policy makers and managers to exchange and discuss information. (*Parties, Scientific Council, scientific community, international, intergovernmental and other relevant organizations*). [S]
- Establish better links between developing country needs and developed country research through CMS family instruments to promote collaboration, coordination and actions. (*Parties / Signatories to CMS instruments*). [L]
- Increase the capacity of natural resource managers and other decision makers and enhance their ability to address the impacts on climate change on migratory species, including through the following actions:
 - Undertake an assessment of training needs on climate change and migratory species at the national level. (*Parties*); [S]
 - Develop training on the use of existing and emerging tools for managing impacts of climate change on migratory species (GIS, statistical analysis etc.). (*Parties, scientific community*); [S]
 - Explore and build on existing training courses and work with professional societies, academia, technical experts and natural resource agency training professionals to address key needs and augment adaptation training opportunities. (*Parties, NGOs and scientific community*); [S]
 - Identify and engage with key players who have experience in training opportunities for climate change, monitoring and modelling, and share that knowledge. (*Parties, international, intergovernmental and other relevant organizations*); [S]

- Develop and encourage the use of existing webinars and e-learning courses on climate change and migratory species. (*Parties, NGOs, scientific community*); [M] and
- Increase scientific and management capacity, including through university courses up to the PhD level, to address climate change impacts on migratory species. (*Parties, scientific community*). [M]
- Develop a baseline curriculum for webinars and e-learning courses to build capacity on climate change and migratory species among natural resource professionals and decision makers. (*Secretariat, Scientific Council, scientific community*). [M]
- Contribute technical and scientific information on climate change and migratory species to the national and central clearing house mechanism of the CBD. (*Parties, scientific community, NGOs and other relevant organizations*). [L]
- Invite the CBD COP to encourage its national focal points to make the national clearing house mechanisms available for information on migratory species and climate change. (*Parties*). [S]
- Monitor the effectiveness of capacity building efforts on climate change and migratory species. (*Parties*). [L]

Cooperation and implementation

- Coordinate measures to facilitate species adaptation in response to climate change across the various CMS instruments. (*Parties / Signatories to CMS instruments*). [L]
- Work closely with and provide national UNFCCC Focal Points with expert guidance and support on how migratory species can be affected by human mitigation and adaptation activities, such as renewable energy and bio-energy development, and to collaborate closely in order to develop joint solutions aimed at minimizing negative impacts on migratory species. (*CMS Focal Points and Scientific Councillors*). [L]
- Promote cooperation and synergies on climate change actions amongst the CMS family instruments, including organising back-to-back meetings. (*Secretariat*). [L]
- Consolidate the CMS Climate Change Working Group as a means to advise, promote and implement actions. This could include the prioritisation and promotion of specific projects to funders. (*Scientific Council*). [S]
- Develop mechanisms for the promotion and implementation of best practices of migratory species management in light of climate change, with particular focus on hotspots. (*Parties*). [M]
- Strengthen synergies with the Secretariats of the CBD, UNFCCC, UNCCD, Ramsar Convention, World Heritage Convention, IWC, Arctic Council and CAFF, Bern Convention, and other international instruments and arrangements. (*Secretariat*). [L]
- Engage in and support CMS work related to climate change. (*CBD, UNFCCC, UNCCD, Ramsar Convention, World Heritage Convention, IWC, Arctic Council and CAFF, Bern Convention, and other international instruments and arrangements such as the Inter-American Convention (IAC) for the Protection and Conservation of Sea Turtles, international mechanisms such as the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), and other relevant international instruments and arrangements*). [L]
- Make use of available funding mechanisms to support the maintenance of ecosystem services, with the close involvement of local communities, in order to improve the conservation status of migratory species. (*Parties and relevant stakeholders*). [S]

- Put in place those legislative, administrative, management and other measures necessary to implement the actions set out in this programme of work, including the incorporation of such measures in national climate change strategies, National Biodiversity Strategies and Action Plans (NBSAPs), protected area management plans, and other relevant policy instruments and processes. (*Parties and non-parties*). [L]
- Provide financial, technical, advisory and other appropriate support for the implementation of this programme of work. (*Parties, UNEP, multilateral development banks and other national and international donors*). [S]