

**CMS**

# CONVENTION ON MIGRATORY SPECIES

Distribution: General

UNEP/CMS/Resolution 11.25

Original: English

## ADVANCING ECOLOGICAL NETWORKS TO ADDRESS THE NEEDS OF MIGRATORY SPECIES

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

*Deeply concerned* that habitats for migratory species are becoming increasingly fragmented across terrestrial, freshwater and marine biomes;

*Recalling* Resolution 10.3 on the role of ecological networks in the conservation of migratory species highlighting the critical importance of connectivity for conservation and management in the CMS context, inviting the exploration of the applicability of ecological networks to marine migratory species and assigning to Parties, the Scientific Council and the Secretariat a number of tasks for the 11<sup>th</sup> Meeting of the Conference of the Parties and beyond;

*Also recalling* Resolution 10.19 on climate change urging Parties to maximize species and habitat resilience to climate change through appropriate design of ecological networks, ensuring sites are sufficiently large and varied in terms of habitats and topography, strengthening physical and ecological connectivity between sites and considering the option of seasonal protected areas;

*Reaffirming* Target 10 of the Strategic Plan for Migratory Species 2015-2023 (Annex 1 to Resolution 11.2), which states that “all critical habitats and sites for migratory species are identified and included in area-based conservation measures so as to maintain their quality, integrity, resilience and functioning in accordance with the implementation of Aichi Target 11”, which in turn calls for at least 17% of terrestrial and inland water and 10% of coastal and marine areas being “conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes”;

*Welcoming* the progress made in producing a strategic review on ecological networks thanks to a voluntary contribution from Norway (UNEP/CMS/COP11/Doc.23.4.1.2) and a compilation of case studies illustrating how ecological networks have been applied as a conservation strategy to different taxonomic groups of CMS-listed species (UNEP/CMS/COP11/Inf.22) as requested by Resolution 10.3;

*Expressing satisfaction* with the formal establishment and launch of a Network of Sites of Importance for Marine Turtles within the framework of the CMS Indian Ocean – South-East Asia Marine Turtle Memorandum of Understanding (IOSEA) with particular emphasis on the development of robust criteria intended to lend credibility to the site selection process;

*Recognizing* that transboundary area-based conservation measures including networks of protected and other management areas can play an important role in improving the conservation status of migratory species by contributing to ecological networks and promoting connectivity particularly when animals migrate for long distances across or outside national jurisdictional boundaries;

*Acknowledging* progress made by some Parties and other Range States with the establishment of transboundary area-based conservation measures as a basis for ecological networks and promoting connectivity, for example through the KAZA Treaty on Transfrontier Conservation Areas (TFCA), signed by Angola, Botswana, Namibia, Zambia and Zimbabwe on 18 August 2011, which is a large ecological region of 519,912 km<sup>2</sup> in the five countries encompassing 36 national parks, game reserves, forest reserves and community conservancies, and further *recalling* that the KAZA region is home to at least 50% of all African elephants (Appendix II), 25% of African wild dogs (Appendix II) and substantial numbers of migratory birds and other CMS-listed species;

*Also acknowledging* that the Important Bird Areas (IBAs), both terrestrial and marine, identified by BirdLife International under criteria A4 (migratory congregations) comprise the most comprehensive ecological networks of internationally important sites for any group of migratory species, which should be effectively conserved and sustainably managed under the corresponding and appropriate legal frameworks, taking note in particular of the list of IBAs in Danger which need imminent decisive action to protect them from damaging impacts;

*Taking note with interest* of several IUCN processes which may contribute to the conservation of migratory species and, when adopted, promote ecological networks and connectivity, including the draft IUCN WCPA Best Practice Guideline on Transboundary Conservation drafted by the IUCN WCPA Transboundary Conservation Specialist Group, the IUCN WCPA / SSC Joint Taskforce on Protected Areas and Biodiversity work on a standard to identify Key Biodiversity Areas (KBAs) and the IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force process to develop criteria for identifying Important Marine Mammal Areas (IMMAs);

*Acknowledging* that the ability to increasingly track animals globally will greatly enhance the knowledge base for informed conservation decision making, for example through global tracking initiatives such as ICARUS (International Cooperation for Animal Research Using Space), planned to be implemented on the International Space Station by the German and Russian Aerospace Centres (DLR and Roscosmos) by the end of 2015;

*Recognizing* that to meet their needs throughout their life history stages marine migratory species depend on a range of habitats across their migratory range whether in marine areas within and/or beyond the limits of national jurisdiction;

*Also recognizing* that CMS's approach to coordinated conservation and management measures across a migratory range can contribute to the development of ecological networks and promote connectivity that are fully consistent with the law of the sea by providing the basis for like-minded Range States to take individual actions at national level and regarding their flag vessels in marine areas within and beyond the limits of national jurisdiction and to coordinate these actions across the migration range of the species concerned;

*Aware* of the United Nations General Assembly Ad Hoc Open-ended Informal Working Group to Study Issues Relating to the Conservation and Sustainable Use of Marine

Biological Diversity Beyond Areas of National Jurisdiction, including its deliberations with respect to area-based conservation measures and environmental impact assessment in marine areas beyond the limits of national jurisdiction;

*Recalling* Resolution 10.3 acknowledging that the processes, workshops and tools underway within the Convention on Biological Diversity can assist in identifying habitats important for the life cycles of marine migratory species listed on the CMS Appendices;

*Welcoming* the progress made in the process being undertaken by the Convention on Biological Diversity, which has convened regional workshops covering approximately 68% of world ocean areas, to scientifically describe Ecologically or Biologically Significant Marine Areas (EBSAs);

*Considering* that some of the scientific criteria applied to describe EBSAs are particularly relevant to marine migratory species, namely ‘special importance for life history stages of species’, ‘importance for threatened, endangered or declining species and/or habitats’, ‘vulnerability, fragility, sensitivity or slow recovery’ and ‘biological productivity’;

*Recognizing* that the description of areas meeting the scientific criteria for EBSAs has been undertaken on an individual site basis and that scientific guidance for selecting areas to establish a representative network of marine protected areas is provided in Annex II to CBD COP decision IX/20;

*Also recognizing* the importance of promoting the development of ecologically coherent networks of EBSAs;

*Aware* that marine migratory species provide a useful basis to further review the potential contribution of the scientific data and information used to describe EBSAs to the development of ecological networks and the promotion of connectivity by exploring whether these data and information could contribute to identifying areas meeting the needs of marine migratory species which use multiple habitats throughout the stages of their life history and across their migration range; and

*Welcoming* as a contribution to the strategic review on ecological networks, the Global Ocean Biodiversity Initiative (GOBI) review of EBSAs and marine migratory species undertaken to determine how marine migratory species have factored in the description of EBSAs and, through the use of preliminary case studies on cetaceans, seabirds and marine turtles, to explore the potential for the scientific data and information describing EBSAs to contribute to the conservation of migratory species in marine areas within and beyond the limits of national jurisdiction, particularly with respect to ecological networks and connectivity;

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

1. *Expresses its gratitude* to the Government of Norway for funding the work on the strategic review and case studies on ecological networks intersessionally;
2. *Takes note* of the compilation of case studies on ecological networks (UNEP/CMS/COP11/Inf.22);

3. *Endorses* the recommendations made in the strategic review on ecological networks (UNEP/CMS/COP11/Doc.23.4.1.2), included in the Annex to this Resolution;
4. *Requests* Parties and *invites* all other Range States, partner organizations and the private sector to provide financial resources and in-kind support to assist in implementing the recommendations within this Resolution, including those in the Annex;
5. *Encourages* Parties to provide financial resources and in-kind support to underpin and strengthen existing ecological network initiatives within the CMS Family of instruments, including the Western/Central Asian Site Network for the Siberian Crane and other Migratory Waterbirds, the Critical Site Network of the African Eurasian Waterbird Agreement, the newly launched CMS/IOSEA Network of Sites of Importance for Marine Turtles and the East Asian – Australasian Flyway Site Network;
6. *Calls upon* Parties to develop transboundary area-based conservation measures including protected and other area systems, when implementing the CMS ecological network mandate and to strengthen and build upon existing initiatives, including the KAZA TFCA;
7. *Urges* Parties to promote ecological networks and connectivity through, for example, the development of further site networks within the CMS Family or other fora and processes, that use scientifically robust criteria to describe and identify important sites for migratory species and promote their internationally coordinated conservation and management, with support from the CMS Scientific Council, as appropriate;
8. *Invites* Non-Parties to collaborate closely with Parties in the management of transboundary populations of CMS-listed species, including by joining CMS and its associated instruments, to support the development and implementation of ecological networks globally;
9. *Urges* Parties to address immediate threats to national sites important for migratory species within ecological networks, making use, where appropriate, of international lists of threatened sites, such as the ‘World Heritage in Danger’ list of UNESCO, the ‘Montreux Record’ of Ramsar and the ‘IBAs in Danger’ list of BirdLife International;
10. *Also urges* Parties to monitor adequately ecological networks to allow early detection of any deterioration in quality of sites, rapid identification of threats and timely action to maintain network integrity, making use where appropriate of existing monitoring methods, such as the IBA Monitoring Framework developed by BirdLife International and the International Waterbird Census coordinated by Wetlands International;
11. *Invites* the Convention on Biological Diversity, the Ramsar Convention on Wetlands, the World Heritage Convention, the IUCN World Commission on Protected Areas (WCPA) and others to use existing ecological networks, such as the Important Bird Areas of BirdLife International, to assess and identify gaps in protected area coverage, and secure conservation and sustainable management of these networks, as appropriate;
12. *Requests* Parties to adopt and implement those guidelines developed within CMS and other relevant processes, which aim to promote connectivity and halt its loss, for example through the provision of practical guidance to avoid infrastructure development projects disrupting the movement of migratory species;

13. *Encourages* Parties, other Range States and relevant organizations to apply the IUCN WCPA Best Practice Guideline on Transboundary Conservation, the IUCN WCPA / SSC Joint Taskforce on Protected Areas and Biodiversity's Key Biodiversity Areas standard and the criteria for identifying Important Marine Mammal Areas (IMMAs) developed by the IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force once adopted by IUCN;
14. *Calls upon* Parties and *invites* other Range States and relevant organizations to use tools such as Movebank, ICARUS and other tools to better understand the movements of CMS-listed species, including the selection of those endangered species whose conservation status would most benefit from a better understanding of their movement ecology, while avoiding actions which may enable the unauthorised tracking of individual animals and facilitate poaching;
15. *Encourages* CMS Parties to engage in the ongoing work taking place within the Convention on Biological Diversity to develop EBSA descriptions, noting that CBD COP decision XI/17 states that the description of areas meeting the EBSA scientific criteria is an evolving process to allow for updates;
16. *Calls on* Parties, other Range States, relevant organizations and individual experts in the research and conservation community to collaborate with and participate actively in the EBSA process and mobilize all available data and information related to migratory marine species, to ensure that the EBSA process has access to the best available science in relation to marine migratory species;
17. *Invites* Parties, other Range States and competent international organizations to consider the results of the initial GOBI review (UNEP/CMS/COP11/Inf.23) with respect to EBSAs and marine migratory species as they further engage in the EBSA process and *further invites* a more in-depth review by GOBI to explore the potential for the scientific data and information describing EBSAs to contribute to the conservation of migratory species in marine areas within and beyond the limits of national jurisdiction, particularly with respect to ecological networks and connectivity;
18. *Requests* the Secretariat to share the results of the initial GOBI review with relevant fora including the Convention on Biological Diversity;
19. *Encourages* Parties and the Secretariat to bring this resolution and the experience of CMS relevant to identifying pathways for marine migratory species, critical habitats and key threats, and promoting coordinated conservation and management measures across a migratory range in marine areas to the attention of the United Nations General Assembly Ad Hoc Open-ended Informal Working Group to Study Issues Relating to the Conservation and Sustainable Use of Marine Biological Diversity Beyond Areas of National Jurisdiction; and
20. *Reaffirms* Resolution 10.3 on Ecological Networks and *urges* Parties, the Scientific Council and the Secretariat to address outstanding or recurring actions.

## **Annex to Resolution 11.25**

### **RECOMMENDATIONS FOR FURTHER ADVANCING THE DESIGN AND IMPLEMENTATION OF ECOLOGICAL NETWORKS TO ADDRESS THE NEEDS OF MIGRATORY SPECIES**

The recommendations below are derived from the report “Ecological networks - a strategic review of aspects relating to migratory species” which was compiled in response to a request in COP Resolution 10.3 (2011), and was provided to COP11 as document UNEP/CMS/COP11/Doc.23.4.1.2.

### **RE-STATED FUNDAMENTALS FROM RESOLUTION 10.3**

An agenda for action on ecological networks in the CMS context was set out in Resolution 10.3, and it remains applicable. The key points are summarized (in paraphrased form) below. The main opportunities for the future consist of increasingly making these provisions operational.

Resolution 10.3 invites and encourages Parties and others to (inter alia):

- collaborate to identify, designate and maintain comprehensive and coherent ecological networks of protected sites and other adequately managed sites of international and national importance for migratory animals;
- enhance the quality, monitoring, management, extent, distribution and connectivity of terrestrial and aquatic protected areas, including marine areas, so as to address as effectively as possible the needs of migratory species throughout their life cycles and migratory ranges, including their need for habitat areas that offer resilience to change (including climate change);
- make explicit the relationship between areas of importance to migratory species and other areas which may be ecologically linked to them, for example as connecting corridors or as breeding areas related to non-breeding areas, stopover sites, feeding and resting places;
- make full use of all existing complementary tools and mechanisms for the identification and designation of critical sites and site networks for migratory species and populations, for example by further designations of wetlands of international importance (Ramsar sites);
- select areas for relevant protection and conservation measures in such a way as to address the needs of migratory species as far as possible throughout their life cycles and migratory ranges;
- set network-scale objectives for the conservation of migratory species within protected area and equivalent area-based conservation systems, relating for example to restoration of fragmented habitats and removal of barriers to migration.

## **FURTHER RECOMMENDATIONS FOR ADVANCING THE DESIGN AND IMPLEMENTATION OF ECOLOGICAL NETWORKS**

Other opportunities and recommendations arising from the Strategic Review are set out under the sub-headings below. Points marked with an asterisk (\*) have been informed by examples of useful practices revealed by case studies compiled by the CMS Secretariat and presented in document UNEP/CMS/COP11/Inf.22.

### **Defining network objectives**

1. Define a common purpose to which all the constituent areas contribute, and a shared vision amongst all the cooperating entities\*.
2. Be clear as to the conservation function being performed by the system as a whole, as well as by any one site within it.
3. Define objectives for sufficiency and coherence of the system overall, in terms of its functional integrity, representativity, risk-management, ecological viability and distribution objectives, as appropriate.

### **Ensuring that networks have a sufficiently holistic scope**

4. As well as formally protected areas, consider including other special sites, connecting corridors, community-managed lands, the wider fabric of landscape/seascape they sit within, and the ecological processes that bind them together.
5. Take a holistic view of how these various ingredients all interrelate.
6. Aim to cater where appropriate for the entire migratory range and migratory lifecycle requirements of the animals concerned.
7. Consider how the network will address temporal factors as well as spatial ones; for example in behaviour of the animals or in the distribution of water, food, temperature, wind, sight-lines/visibility, predators, prey and human interference; such that critical factors that distribute in the landscape according (for example) to a seasonal succession are catered for sufficiently.
8. Incorporate socioeconomic factors, ensuring the network takes account of the needs of people, their livelihoods and social customs where appropriate\*.

### **Ensuring the functional benefits of connectivity**

9. Design the network according to the functional ecological needs at stake, including both spatial and temporal dimensions, as well as those factors which are limiting conservation success\*.
10. Consider how the “connectivity” dimension of the network can contribute to the elimination of obstacles to migration, including disturbance, habitat fragmentation and discontinuities in habitat quality as well as the more obvious physical obstacles.
11. Be clear about the functional relationships between places that are important in supporting the process of migration at an ecosystem level and a network scale.
12. Be clear how particular individual contributions in the network add up to its intended total result.
13. Where possible, test assumptions about intuited connectivity factors, e.g., the assumed importance of structural factors in the landscape.

### **Other design factors**

14. Tailor the given network to the particular migratory patterns of the animals concerned, and to whether they travel over land, in water or through the air.
15. Be clear about the role of any “critical” sites in the system, such as temporarily highly productive stopover sites or migration “bottlenecks”, and ensure they are included.
16. Plan according to a recognition that the system overall may only be as strong as its most ecologically vulnerable component\*.
17. Consider using a combination of connecting “hotspots”, buffering the core, providing “spare” capacity at times of ecological stress and disruption, and otherwise spreading risks across multiple locations\*.
18. Select areas against an appropriate timeframe for defining the range of natural variation.
19. Take account of site use that may be intermittent and less than annual, but a form of site-fidelity nonetheless.
20. Include capacity for variability and resilience to change, as well as covering normal cycles of migration.
21. Include consideration of less visible aspects of functional connectivity, such as genetics, trophic processes and climate risk factors (in the latter case for example by providing for species dispersal and colonization when distributions shift).
22. Where necessary, build a network by joining relevant existing site-based conservation systems together\*.

### **Assessing risks**

23. Assess the risks, if any, of potential unwanted consequences of increased connectivity in respect of non-target species, such as disease organisms, problematic predators, ecological competitors and invasive species; and the potential for exacerbating certain kinds of human pressures.

### **Knowledge and engagement**

24. Base network design and operation on well-researched science; but also make good use of local wisdom\*.
25. Genuinely involve stakeholders (i.e. by going beyond mere consultation, to include active engagement in and influence over the design and operation of the network, thus building a broader base of “ownership” in the process)\*.
26. Make appropriate use of “flagship species” to promote wider conservation agendas\*.

### **The implementation regime**

27. Ensure consistency and coordination of management and policy responses from one place to another.
28. Where appropriate, create sufficiently strong, broad and influential institutional structures, backed by an explicit formal agreement\*.
29. Adopt an “adaptive management” approach (adjusting in the light of experience)\*. In particular, consider any need to adapt the network’s design and/or coverage in light of shifting baselines, novel ecosystems and changes related to climate change (while guarding against spurious claims of irrecoverable change based on ulterior motives).



## USEFUL AREAS FOR FURTHER WORK

1. Assess existing individual ecological networks in relation to the conservation needs of migratory species, using the recommendations and good practice points in this Annex as a guide, and addressing both (i) the functionality of the network for supporting migratory species and migration, and (ii) provisions in relevant governing frameworks and guidance for ensuring that migratory species aspects are taken fully into account.
2. Explore options for obtaining globally synthesized information about the results of the implementation of actions defined in Resolution 10.3 paragraph 7 (to assess whether Parties are addressing as effectively as possible the needs of migratory species throughout their life cycles and migratory ranges by means of ecological networks and enhanced habitat connectivity) and paragraph 9(i) (to assess the extent to which and the manner in which existing major protected area systems and initiatives aimed at promoting ecological networks address the needs of migratory species throughout their life cycles and migratory ranges).
3. In the context of the Strategic Plan for Migratory Species 2015-2023 (Annex 1 to Resolution 11.2), investigate the scope for indicators used for target 10 (on area-based conservation measures for migratory species) to shed light specifically on network-related aspects such as representativity and connectivity.
4. Seek opportunities to direct relevant research (for example on animal distributions, movement patterns, gap analyses of networks) towards further improving knowledge and understanding of the design and implementation of ecological networks in ways which provide optimal benefits for migratory species.
5. Seek opportunities to pursue collaboration and synergy in particular with the OSPAR and Helcom Commissions regarding further development of network coherence assessment methodologies to take account of migration and migratory species.
6. Develop guidance on ways of using network coherence as a yardstick for assessing proposals for habitat compensation in relevant circumstances (building on the principle adopted in the European Union for the Natura 2000 network).
7. Develop guidance on approaches to compensating for irrecoverable loss of functionality, extent and other values of ecological networks.
8. Build further knowledge and capacity, through continuing to bring together relevant existing tools and guidance; and by developing new tools, guidance and training where necessary.
9. Promote further transfer of experience, synergies and consistent approaches to issues relating to ecological networks throughout the whole family of CMS instruments/initiatives.
10. Use appropriate fora of collaboration among multilateral environmental agreements to promote synergies and consistent approaches to issues relating to ecological networks, supported by the findings of the CMS Strategic Review<sup>1</sup>.

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<sup>1</sup> Note that Resolution 10.3 inter alia “requests the Secretariat, subject to availability of resources, to work with Parties and the Scientific Council and other international and regional organizations, including the Convention on Biological Diversity, in organizing regional and sub-regional workshops to promote the conservation and management of critical sites and ecological networks among Parties”.