



CONVENTION ON MIGRATORY SPECIES

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THE ROLE OF ECOLOGICAL NETWORKS IN THE CONSERVATION OF MIGRATORY SPECIES

Adopted by the Conference of the Parties at its 12th Meeting (Manila, October 2017)

Recalling Resolution 10.3 and Resolution 11.25 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 recommending actions for advancing the design and implementation of ecological networks to address the needs of migratory species,

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

Recognizing that habitat destruction and fragmentation are among the primary threats to migratory species, and that the identification and conservation of habitats of appropriate quality, extent, distribution and connectivity are thus of paramount importance for the conservation of these species in both the terrestrial and marine environments,

Recognizing in particular that opportunities for dispersal, migration and genetic exchange among wild animals depend on the quality, extent, distribution and connectivity of relevant habitats, which support both the normal cycles of these animals and their resilience to change, including climate change,

Further recognizing that sites that perform a critical role in a wider system, such as core areas, corridors, restoration areas and buffer zones, may be linked by strategies that, through a concept of ecological networks, address habitat fragmentation and other threats to migratory species,

Considering that the designation of protected areas across very large areas is not always possible and that additional wider landscape measures usually need to be applied in order to address and mitigate anthropogenic changes at the wider landscape scale,

Acknowledging that the practical approach to the identification, designation, protection and management of critical sites will vary from one taxonomic group to another or even from species to species, and that the flyway approach provides a useful framework to address habitat conservation and species protection for migratory birds along migration routes,

Further acknowledging that flyways constitute a specific type of migration corridor, that migratory birds depend on widely separated areas for their survival, and that measures designed to conserve these networks should focus on the breeding grounds, stop-over sites, non-breeding areas and feeding and nesting places,

Noting that the Convention text makes specific reference to habitat conservation, for example in Article III.4, Article V.5e and Article VIII.5e,

Aware that several initiatives aimed at promoting ecological networks are in existence already at different scales, including bird flyway initiatives, protected area programmes under the auspices of relevant Multilateral Environmental Agreements, and initiatives that extend to areas that are not protected,

Further aware that the success of many of these initiatives and programmes depends fundamentally on, *inter alia*, effective international cooperation, including transboundary cooperation, among governments, different conventions, Non Governmental Organizations (NGOs) and other actors,

Considering that migratory species merit particular attention in designing and implementing initiatives aimed at promoting ecological networks, in order to ensure that the areas selected are sufficient to meet the needs of such species throughout their life cycles and migratory ranges,

Recalling Target 11 of the Aichi Biodiversity Targets 2020 approved by the Convention on Biological Diversity in 2010, which states “By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are 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”, is especially relevant for the conservation of terrestrial and marine migratory species,

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,

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,

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,

Further acknowledging that processes, workshops and tools are underway within the Convention on Biological Diversity that can assist in identifying habitats important for the lifecycles of migratory marine species listed under CMS Appendices,

Aware of the importance for the conservation of migratory species of integrating approaches to ecological networks in national environmental planning, including plans currently being developed under the auspices of other Multilateral Environmental Agreements, such as National Biodiversity Strategies and Action Plans (under the Convention on Biological Diversity), as recognized by UNEP/CMS/Resolution 10.18, and National Adaptation Plans (under the United Nations Framework Convention on Climate Change),

Also aware of the importance of promoting cooperation through the competent international and regional organizations where appropriate to seek the adoption of conservation measures to support ecological networks in the marine environment,

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,

Welcoming the progress described in Document UNEP/CMS/Conf.10.33 on bird flyway conservation policy, as well as Resolution UNEP/CMS/10.10 on guidance on global flyway conservation and options for policy arrangements,

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 its gratitude to the Government of Norway for funding the work on the strategic review and case studies on ecological networks intersessionally,

Recognizing the increasing number of national and regional migratory species-related networks globally and *welcoming* the two CMS-linked ecological networks to promote conservation of migratory waterbirds and their habitats: the Western/Central Asian Site Network for the Siberian Crane and other Migratory Waterbirds under the United Nations Environment Programme/Global Environmental Facility Siberian Crane Wetland Project to further implement the MOU concerning the Siberian Crane, as an important step to establish a network to protect migratory waterbirds in this region, and the East Asian - Australasian Flyway Partnership and its East Asian – Australasian Flyway Site Network (as recognized by Resolutions 9.2 and UNEP/CMS/Res.10.10),

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,

Noting with pleasure the widespread recognition of the recently developed Critical Site Network Tool under the African-Eurasian Flyways GEF Project, also known as Wings over Wetlands, as an innovative and effective instrument for underpinning the management of important sites for waterbirds in the African-Eurasian Waterbird Agreement area, and which *inter alia* sets those sites in their flyway context,

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 km² 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),

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,

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 the 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,

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,

Welcoming global databases such as MoveBank which make tracking data available to conservation planners and to the public, and which are likely to assist in the identification of critical conservation sites, and

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) in 2017,

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

1. *Calls on* Parties and Signatories of CMS Memoranda of Understanding to consider the network approach in the implementation of existing CMS instruments and initiatives;
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. *Encourages* Parties and other Range States, when identifying areas of importance to migratory terrestrial, avian and aquatic species, to take into account and make explicit by description, schematic maps or conceptual models the relationship between those areas and other areas which may be ecologically linked to them, in physical terms, for example as connecting corridors, or in other ecological terms, for example as breeding areas related to non-breeding areas, stopover sites, feeding and resting places;
5. *Invites* Parties and other Range States and relevant organizations to 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 while taking into account resilience to change, including climate change, and existing ecological networks;
6. *Urges* Parties and other Range States and partners to 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, including through further designation of Wetlands of International Importance (Ramsar Sites) for migratory waterbirds and other migratory wetland-dependent taxa;
7. *Highlights* the added value of developing ecological networks under CMS where no other network instruments are available, as for example with the West Central Asian Flyway Site Network and the East Asian-Australasian Flyway Site Network, and *urges* Parties and *invites* Range States to strengthen management of existing network sites and their further development through designation and management of additional sites;
8. *Further encourages* Parties and relevant organizations, when implementing systems of protected areas, and other relevant site- and area-based conservation measures, to:
 - a) select areas in such a way as to address the needs of migratory species as far as possible throughout their life cycles and migratory ranges;
 - b) set network-scale objectives for the conservation of these species within such systems, including by restoration of fragmented and degraded habitats and removal of barriers to migration; and
 - c) cooperate internationally for the achievement of such objectives;
9. *Invites* Parties, in collaboration with other Multilateral Environment Agreements (MEAs), NGOs and other stakeholders, as appropriate, to enhance the quality, monitoring, management, extent, distribution and connectivity of terrestrial and aquatic protected areas, including marine areas, in accordance with international law including UNCLOS, 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, taking into account the wider landscape and seascape;
10. *Further invites* Parties and other States as well as relevant international fora, as appropriate, to explore the applicability of ecological networks to marine migratory species, especially those that are under pressure from human activities such as over exploitation, oil and gas exploration/exploitation, fisheries and coastal development;
 11. *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;
 12. *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;
 13. *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;
 14. *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;
 15. *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;
 16. *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;
 17. *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;
 18. *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;
 19. *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;
20. *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;
 21. *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;
 22. *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;
 23. *Further 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;
 24. *Requests* Parties and *invites* all other Range States, partner organizations, relevant funding agencies and the private sector to provide adequate, predictable and timely financial resources and in-kind support to assist in implementing the recommendations within this Resolution, including those in the Annex;
 25. *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;
 26. *Invites* the Global Environment Facility (GEF) in making its funding disbursement decisions to give support to activities that will assist in taking forward the areas of work defined in the present Resolution, in particular, to support improved habitat management at the site level through the use of tools and resources developed specifically for the conservation of migratory species in their flyway, migratory path or ecological network context, and to support the sharing of information and experience;
 27. *Calls on* MEAs, other intergovernmental organizations and relevant Non-Governmental Organizations to support the implementation of the present Resolution, including by sharing information and by collaborating in the technical work described above;
 28. *Urges* Parties, the scientific community and other organizations to support the use of existing databases for research aimed at scientifically based conservation decisions within the CMS framework and other policy fora;
 29. *Urges* CMS National Focal Points and Scientific Councillors to work closely with relevant organizations such as the European Space Agency and its Focal Points to support new

technology developments such as the ICARUS experiment to track the movement and fate of migratory animals globally;

30. *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;
31. *Urges* Parties, the Scientific Council and the Secretariat to address outstanding or recurring actions; and
32. *Repeals*
 - a) Resolution 10.3, *The Role of Ecological Networks in the Conservation of Migratory Species*; and
 - b) Resolution 11.25, *Advancing Ecological Networks to Address the Needs of Migratory Species*.

Annex to Resolution 12.7**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.¹

¹ 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".