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MIGRATORY
SPECIES**

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SAMARKAND STRATEGIC PLAN FOR MIGRATORY SPECIES 2024–2032

(Prepared by the Secretariat)

Summary:

This document reports on progress to implement Resolution 14.1 and Decisions 14.1–14.4 *Samarkand Strategic Plan for Migratory Species*. It proposes draft amendments to Resolution 14.1, the deletion of Decisions 14.1–14.4 and the adoption of new Decisions.

SAMARKAND STRATEGIC PLAN FOR MIGRATORY SPECIES 2024–2032

Background

1. At its 14th meeting, the Conference of the Parties (COP14, 2024) adopted [Resolution 14.1 Samarkand Strategic Plan for Migratory Species 2024–2032](#). The Strategic Plan (SPMS) was designed as a guiding framework for all the work delivered by the Convention supporting the conservation of migratory species. A total of six goals and 23 targets were adopted.
2. In 2024, COP14 adopted the following Decisions on this issue:

14.1 Directed to Parties

Parties are encouraged to:

- a) *implement the Samarkand Strategic Plan for Migratory Species (SPMS) 2024-2032 and ensure linkages with their National Biodiversity Strategies and Action Plans (NBSAPs) and United Nations Sustainable Development Cooperation Frameworks;*
- b) *support the work of the Intersessional Working Group (IWG) on the SPMS and the work of the Secretariat; and*
- c) *report on the implementation of the SPMS through their National Reports, as appropriate.*

14.2 Directed to the Standing Committee

The Standing Committee shall:

- a) *continue the work of the IWG on the SPMS, which will be tasked, with the support of the CMS Secretariat, with developing, for endorsement by the Standing Committee:*
 - i. *the actions needed to implement the SPMS and achieve its goals and targets,*
 - ii. *appropriate baselines for each of the SPMS targets,*
 - iii. *indicators for each of the SPMS targets and a monitoring framework to assess progress against the indicators, and*
 - iv. *agree of a new template for National Reports, aligned to the SPMS by the Standing Committee for use by Parties in their reporting for COP15; and*
- b) *provide advice on the implications of the implementation of the SPMS for the CMS Programme of Work, to better align it with the SPMS and its priorities.*

14.3 Directed to the Scientific Council, Working Groups & Task Forces

The Scientific Council is requested to provide inputs to the IWG on the SPMS, specifically by providing scientific advice on:

- a) *the actions needed to implement the SPMS and achieve its goals and targets,*
- b) *baselines for each of the SPMS targets with a scientific component,*
- c) *indicators for each of the SPMS targets with a scientific component,*
- d) *a monitoring framework to assess progress against the indicators, and*
- e) *guidance for the elaboration of a new template for National Reports, aligned to the SPMS.*

14.4 Directed to the Secretariat

The Secretariat is requested to:

- a) *support the work of the IWG on the SPMS, including a proposal for revising the National Report template for Standing Committee to consider before the 15th meeting of the conference of the Parties drafting of documents for their consideration and the dissemination of its outcomes;*
- b) *raise awareness of the implementation of the SPMS and share experiences in monitoring and reviewing such plans with other multilateral environmental agreements and relevant entities, such as the Convention on Biological Diversity;*
- c) *identify data gaps that could be hindering progress in relation to indicators of the SPMS, and support the filling of those gaps;*
- d) *provide advice on the implications of the implementation of the SPMS for the CMS Programme of Work, to better align it with the SPMS and its priorities; and*
- e) *undertake an assessment of the implementation of the SPMS in time for the next CMS Conference of the Parties (COP15).*

Activities to implement Resolution 14.1 and Decisions 14.4

3. As instructed by Resolution 14.1, during the intersessional period, the Secretariat continued to support the work of the Intersessional Working Group on the Samarkand Strategic Plan for Migratory Species 2024–2032 (IWG SPMS).
4. As per Decision 14.2, on October 2024, a communication was sent to the Standing Committee proposing to resume the work of the IWG SPMS and convene an online meeting to discuss and approve an updated Terms of Reference (TOR) for the Working Group.
5. The first meeting of the IWG SPMS took place online on 23 January 2025. The main objectives were to discuss and approve the IWG TOR and elect its Co-Chairs. The TOR were approved and Ms. Alexandra Macdonald from New Zealand and Ms. Patience Gandiwa from Zimbabwe were elected as Chair and Co-Chair.
6. In February 2025, through [CMS Notification 2025/006](#), members of the Standing Committee and of the Sessional Committee of the Scientific Council were invited to take part as members of the IWG. Representatives of Parties who are not members of the Standing Committee, Scientific Councillors who are not members of the Sessional Committee, and stakeholder organizations were also invited to participate as observers. The final composition of the IWG consisted of 16 members and 7 observers.
7. In parallel, thanks to a voluntary contribution from Switzerland, the CMS Secretariat signed, in February 2025, a contract with the UNEP World Conservation Monitoring Centre (UNEP–WCMC) for a project entitled, ‘Development of the baselines, indicators and monitoring framework of the Samarkand Plan 2024-2032’. This Small Scale Funding Agreement (SSFA) included support from UNEP–WCMC in preparing documents and contributing to the meetings of both the Secretariat and the IWG on the development of such outputs.
8. As agreed in the first meeting of the IWG (23 January 2025), and in coordination with the Co-Chairs and WCMC, the Secretariat organized a series of IWG meetings and interim documents to guide discussions on the proposed monitoring framework for the SPMS, which would include the baselines, indicators and potential actions needed to implement Decisions 14.2–14.4. These meetings took place on 25 February (online), 25 March (in person), 12 June (online) and 10 September (online).

9. As per Decision 14.4 d) and e), the Secretariat carried out a detailed analysis of the alignment of the SPMS and the CMS Programme of Work, with a view to better understanding existing overlaps and gaps, and informing the definition of new indicators, baselines and actions.
10. Once the final version of the document had been agreed by the IWG, its Chair submitted it to the Standing Committee in early October 2025 for final comments. The Standing Committee endorsed the work of the IWG on 20 October, making the document ready for submission to COP15. It is proposed that, once approved by the COP, the document will be incorporated as an Annex to Resolution 14.1.

Discussion and analysis

11. The Secretariat, in coordination with the Co-Chairs of the IWG and UNEP–WCMC, established a two-step process that would involve, firstly, the drafting of a document containing the draft monitoring framework of the SPMS, including the baselines, indicators and potential actions needed to implement the SPMS, to be ready for COP15, and then, once funding was confirmed, a second phase involving delivery of a new template for National Reports, for use by Parties in their reporting for COP16.
12. The work of the IWG ran smoothly thanks to the engagement of both members and observers. Most of the comments received on baselines, indicators and actions focused on ensuring synergies with existing frameworks of other multilateral agreements, reducing the complexity of the baselines and indicators, and adding clarity on the way the proposed actions were being presented.
13. The final document approved by the Standing Committee presents a total of six tables (one for each of the overarching SPMS Goals) that outline the indicators and indicator baselines proposed for each target in the SPMS, as well as the actions that Parties and other key stakeholders could undertake to help deliver the SPMS.
14. A total of 44 indicators are included in this document, proposed as an Annex to CMS Resolution 14.1, drawing on a wide range of data sources. All the 23 SPMS targets have at least one indicator, and 14 of the targets have more than one. Indicators have been identified to measure only the core elements of each target that can be readily assessed using available data. The IWG debated extensively both the indicators and the potential actions under Target 4.3 but could not reach consensus on shortening the number of indicators and potential actions proposed. It was therefore decided that these could be revised at COP15.
15. The CMS National Reports are envisaged as the main mechanism for Parties to report on their progress towards implementing the SPMS (subsequently a revision of their format should be considered from COP15 onwards).
16. The identified knowledge gaps related to the proposed indicators, baselines and actions, as well as the background information used to define the 44 indicators, are explained in an additional Annex to the report. Similarly, existing data sources and indicators that are being used to measure progress under CMS Family Agreements or Memoranda of Understanding (MOUs), and that can play an important role in informing indicators, are listed in an additional Annex.
17. The ‘potential actions’ listed in Tables 1–6 offer guidance to Parties and other stakeholders on the activities that could be undertaken to increase progress towards achievement of the SPMS targets. They are not necessarily linked to a specific indicator. In many cases, the actions correspond to core aspects of the Convention, or activities

that are mandated under existing CMS Resolutions or Decisions. A small number of the listed actions are novel activities that would contribute significantly to the fulfilment of the SPMS, but do not yet correspond to one of the core provisions of the Convention.

18. This document proposes amendment of Resolution 14.1 to include in its Annex the proposed monitoring framework for the SPMS.
19. As per the second phase described in paragraph 11 above, and thanks to an additional voluntary contribution received from Switzerland in July 2025, the Secretariat signed an amendment of the contract with WCMC (see paragraph 7) focusing on the implementation of the monitoring framework to assess progress against the targets of the SPMS and on the provision of clear recommendations on the content and format of the new CMS National Reports. The agreed deadline for the delivery of these two additional tasks is May 2026.

Recommended actions

20. The Conference of the Parties is recommended to:
 - a) adopt the draft amendments to Resolution 14.1 contained in Annex 1 of this document;
 - b) adopt the draft Decisions contained in Annex 2 of this document; and
 - c) delete Decisions 14.1–14.4.

PROPOSED AMENDMENTS TO RESOLUTION 14.1

SAMARKAND STRATEGIC PLAN FOR MIGRATORY SPECIES 2024-2032

NB: Proposed new text is underlined. Text to be deleted is ~~crossed-out~~.

Recalling CMS Resolution 11.2 (Rev.COP12), which defined the 2015-2023 Strategic Plan for the Convention on the Conservation of Migratory Species of Wild Animals (SPMS) and urged Parties and other non-Party States, the CMS Family of instruments, relevant multilateral bodies, intergovernmental organizations, and civil society organizations working towards the conservation of migratory species to integrate the goals and targets of the Strategic Plan within relevant policy and planning instruments; and *further recalling* Decision X/20 of the Conference of the Parties to the Convention on Biological Diversity (CBD), in which CMS is recognized as the lead partner in the conservation and sustainable use of migratory species over their entire range,

Further recalling CBD Decision 15/4 by which the Kunming-Montreal Global Biodiversity Framework (GBF) was adopted, and *recognizing* that many of the GBF goals and targets are relevant to CMS priorities,

Noting that CBD Decision 15/6, inter alia, “recognizes that other biodiversity-related multilateral environmental agreements will contribute to the implementation [...] of the Kunming-Montreal Global Biodiversity Framework, consistent with their mandates and priorities”, and “encourages Parties [...] to facilitate, as appropriate, engagement with and coordination among focal points for other relevant multilateral environment agreements”,

Further noting that CBD Decision 15/6, and its Annex, encourages Parties to include actions to implement commitments and recommendations under the various multilateral environmental agreements (MEAs), as relevant for each country, in their National Biodiversity Strategies and Action Plans (NBSAPs) and to facilitate engagement with and coordination among focal points; and *welcoming* Decision 15/13 that encourages Parties to implement the Convention and other MEAs in a complementary manner, including in reviewing and updating their NBSAPs for the effective implementation of the GBF,

Noting the opportunities through the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction to promote the conservation of migratory species in areas beyond national jurisdiction¹,

Recognizing the challenges faced by Parties, and the specific challenges faced by developing country Parties, in particular least developed countries and small island developing states,

Recalling UN General Assembly Resolution 75/271, “Nature knows no borders: transboundary cooperation – a key factor for biodiversity conservation, restoration and sustainable use”, which highlights the importance of ecological connectivity and transboundary cooperation, with links to the UN Sustainable Development Goals (SDGs), and which references a range of other multilateral frameworks and initiatives, including explicit mention of the Strategic Plan

¹ Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction
https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXI-10&chapter=21&clang=en

for Migratory Species 2015-2023 and the outcomes of CMS COP13,

Further recalling CMS Resolution 12.3, “Manila Declaration on Sustainable Development and Migratory Species”, which aims to promote links between the conservation of migratory species and the UN SDGs,

Noting the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report on Biodiversity and Ecosystem Services published in 2019 and the analysis of the report’s findings in relation to CMS in document UNEP/CMS/COP13/Inf.17,

Noting the CMS Programme of Work on climate change and CMS Resolution 12.21 in which CMS Parties requested the Secretariat to liaise with the Secretariat of the UN Framework Convention on Climate Change to promote synergies and coordinate activities related to climate change policies affecting migratory species,

Noting UNEP/CMS/StC53/Outcome 2: Decision on next steps regarding follow-up to the Strategic Plan for Migratory Species 2015-2023,

Grateful for the work undertaken by the Intersessional Working Group on the SPMS in preparing the ~~new~~ Plan and its annexes – including taking account of lessons learned from experience in implementing the Strategic Plan 2015-2023, the outcomes of the various consultations and online meetings held, and the processes in other multilateral environmental agreements – and in providing substantial contributions to the drafting of the Plan,

Welcoming contributions to the development of the Strategic Plan by Parties and stakeholders through the Intersessional Working Group on the SPMS, and acknowledging that key partnerships to support delivery of the Strategic Plan will include those with other Conventions, civil society, the private sector and regional bodies, and

Mindful of the need to avoid creating additional reporting burdens that risk diverting attention from implementation,

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

1. *Adopts* the Samarkand Strategic Plan for Migratory Species 2024-2032 as contained in the Annex to this Resolution;
2. *Requests* the Secretariat to integrate the goals and targets of the SPMS into work programmes under the Convention, and to take action to raise awareness of the Plan;
3. *Urges* Parties and *invites* non-Parties, the CMS Family of instruments, relevant regional and multilateral bodies, intergovernmental organizations, and civil society organizations working towards the conservation of migratory species to integrate the goals and targets of the SPMS within relevant policy and planning instruments as applicable, and to take action to raise awareness of the Plan;
4. *Invites* the decision-making bodies of CMS instruments to reflect the SPMS in appropriate Decisions and Resolutions at their next meetings;
5. ~~*Confirms* the need for additional intersessional work to support implementation of the SPMS, including developing and defining:~~

- ~~a. Specific actions for the adequate delivery of each goal and target;~~
 - ~~b. baseline data for all SPMS goals and targets; and~~
 - ~~c. indicators for all SPMS targets, drawing as much as possible from existing work, such as that ongoing for Kunming Montreal Global Biodiversity Framework Monitoring Framework;~~
- 6.5 *Requests* the Secretariat to support the implementation of the SPMS, including the compilation of baselines and the monitoring of the indicators identified, and including by strengthening cooperation with relevant multilateral and regional bodies;
- 7.6 *Decides* to keep the implementation of the SPMS under review at the 45th, 16th and 17th Meeting of the Conference of the Parties;
- 8.7 *Recognizes* that a wide range of civil society organizations and other stakeholders make an invaluable contribution to implementing the Convention and to conserving migratory species, and encourages these organizations to report on this work to meetings of the Conference of the Parties;
- 9.8 *Invites* UNEP, Parties, multilateral donors and others to provide financial assistance for the implementation of this Resolution; and
- 10.9 *Repeals* Resolution 11.2 (Rev.COP12) *Strategic Plan for Migratory Species 2015-2023*.

Annex to Resolution 14.1

SAMARKAND STRATEGIC PLAN FOR MIGRATORY SPECIES 2024-2032

SPMS Vision Statement

By 2032, migratory species are thriving and live in fully restored and connected habitats. Goals and Targets 2024-2032

Six Goals are set out below to achieve the Vision of the SPMS. Each of the Goals will be achieved through the fulfilment of the related Targets. Goals and Targets are formulated in such a way as to enable baselines to be readily established, and to facilitate monitoring that effectively tracks the impact of actions in progressing towards achieving the SPMS Goals by 2032.

Goal 1. The conservation status of migratory species is improved.

Target 1.1. By 2029, all migratory species with an unfavourable conservation status are listed in CMS Appendices and are covered by an effectively implemented CMS Instrument and/or Concerted Action.

Explanation: Parties commit to include migratory species with an unfavourable conservation status in CMS Appendices, based on best available science, and to develop and implement effective cooperative conservation and/or management actions, including CMS Instruments, Concerted Actions and other initiatives that deliver tangible and verifiable conservation outcomes.

Target 1.2. By 2029, the conservation status of all migratory species is reviewed regularly, informing priorities for conservation and management action.

Explanation: The conservation status, population trend, range and extinction risk of all migratory species is regularly monitored, including through the State of the World's Migratory Species report, CMS National Reports 2, other assessments and analyses of relevant publications such as those produced by CMS and its Instruments, and information from relevant stakeholders, indigenous peoples and local communities. The conclusions of this regular monitoring supports priority-setting under CMS, including the listing of new migratory species that may need specific conservation actions.

Target 1.3. By 2032, the conservation status of all migratory species listed in CMS Appendices has improved.

Explanation: CMS initiatives have helped to improve the conservation status of all CMS-listed migratory species, thereby contributing to the achievement of the Convention and Goals A and B of the GBF. Conservation efforts should strive to engage relevant stakeholders, including indigenous peoples and local communities.

Goal 2. The habitats and ranges of migratory species are maintained and restored, supporting their connectivity.

Target 2.1. By 2029, all important habitats for migratory species listed in CMS Appendices are identified, assessed and monitored to ensure their functionality and ability to support migratory species throughout their life cycles.

Explanation: Using best available science and information, actions are taken to ensure

² IUCN Red List assessments are the primary source for assessing the conservation status of migratory species. CMS National Reports and EU N2000 reports etc. could also provide additional information if available.

that all habitats, sites and ranges for migratory species are identified, assessed and monitored to understand their functions in migratory processes.

Target 2.2. By 2032, all important habitats for migratory species listed in CMS Appendices are protected, effectively conserved, managed and restored through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures.

Explanation: Steps will be taken to establish ecologically representative, well-connected systems of protected areas and other effective area-based conservation measures, to ensure that, among others, the connectivity of all areas of importance for migratory species – as well as other areas that may be ecologically linked to them – is preserved. This could include permanent or temporal legal protection measures to ensure migratory ranges and their habitats are maintained, restored, effectively conserved and managed, and provide important biological functions such as opportunities for feeding, resting and habitat for reproduction.

Target 2.3. By 2032, the loss, degradation and fragmentation of important habitats for migratory species listed in CMS Appendices is reduced, and habitats are restored to ensure that such habitats support their viability.

Explanation: Steps will be taken towards eliminating and/or reducing the negative impacts on migratory species from the loss and degradation of important habitats and ranges because of land-use change and fragmentation. This includes tackling known threats such as unsustainable intensive agriculture, damaging afforestation, urbanization or human-made infrastructure.

Goal 3. Threats affecting migratory species are eliminated or significantly reduced.

Target 3.1. By 2032, any take, use and trade of migratory species listed in CMS Appendices is sustainable, safe and legal, overexploitation is prevented, risk of pathogen spillover is reduced and negative impacts on non-target species and their ecosystems are minimized.

Explanation: Based on the best available knowledge and information, the main drivers of illegal and unsustainable take are identified and analysed for each migratory species to provide a basis for effective conservation and/or management actions, including cooperative actions beyond Range State jurisdictions. Interventions to effectively address the main drivers are undertaken in consultation with relevant stakeholders, indigenous peoples and local communities, and include protection measures for species listed in Appendix I through national legislation, comprehensive and effective enforcement, and management measures to halt illegal and unsustainable take. As a result, there will be no taking of any Appendix I species that is not in compliance with the Convention. Furthermore, steps will be taken towards eliminating any unsustainable take of Appendix II species and non-target CMS-listed migratory species that may also be affected, and towards reducing the risk of pathogen spillover to or from CMS-listed species to prevent the spread of zoonotic diseases. Actions are also taken towards eliminating the incidental mortality such as from bycatch.

Target 3.2. By 2032, the direct mortality of migratory species caused by human-made infrastructure is significantly reduced to levels that are not harmful to species' viability.

Explanation: Steps are taken to eliminate and/or reduce the direct mortality of migratory species caused by infrastructure, including collision, electrocution, disturbance and migratory route deviation. This includes actions to sustainably design and operate such infrastructure and to monitor impacts while in operation.

Target 3.3. By 2032, the negative impacts of pollution including transboundary effects, and poisoning on migratory species and their habitats are reduced to levels that are not harmful to species' viability.

Explanation: Actions are taken to quantify, monitor and reduce or eliminate the negative impacts of pollution from poisoning, artificial lights, chemicals, noise, plastics and other sources on migratory species and their habitats.

Target 3.4. By 2032, the impact of climate change on migratory species and their habitats is reduced through mitigation and adaptation, including through nature-based solutions and/or ecosystem-based approaches and disaster risk reduction actions, while minimizing negative and fostering positive impacts on biodiversity.

Explanation: Actions to eliminate or mitigate the negative impacts of climate change on migratory species are identified. This also includes the research and promotion of conservation and management tools applied to migratory species and the ecosystem services they provide, such as the enhancement of mitigation and adaptation against climate change.

Target 3.5. By 2032, the negative impacts of invasive alien species on migratory species and their habitats are reduced or eliminated.

Explanation: Actions are taken to understand, quantify and eliminate or reduce the negative impact of invasive alien species on migratory species and their habitats.

Goal 4. Implementation of CMS is supported by adequate knowledge, capacity and resources.

Target 4.1. By 2029, Parties have access to relevant information and evidence-based guidance to effectively implement the Convention, its Resolutions and Decisions.

Explanation: Parties play a key role in providing information at a national scale, but this can also be supported by the CMS Secretariat, through facilitation of the State of the World's Migratory Species report and other knowledge products, if resources are available. The availability of this information is critical for decision-making and implementation of the CMS, its Resolutions and Decisions and associated guidance. Parties are able to understand and analyse the best available science and information on species, habitats and ranges in a way that enables them to prioritize and collaboratively take effective conservation action.

Target 4.2. By 2029, Parties have the technical capacity needed to effectively implement the Convention, its Resolutions and Decisions.

Explanation: Parties identify, with the support of the Secretariat and the Scientific Council, the capacity-building activities needed to ensure implementation of the CMS, its Resolutions and Decisions and associated guidance. This can include Party-to-Party support or CMS Secretariat-led support, if possible, and should focus on the use of innovative and cost-effective methods that can be applied globally.

Target 4.3. By 2029, Parties have mobilized or secured resources to implement the Convention, its Resolutions and Decisions.

Explanation: There are sufficient resources available to implement the actions contained in CMS, its Resolutions and Decisions and associated guidance. This includes identifying and agreeing an estimation of the costs associated with developing, implementing and monitoring new CMS instruments and initiatives, so as to ensure their cost-effectiveness and long-term viability.

Goal 5. Implementation of CMS is supported by effective governance, including use of best available science and information, and collaborative working.

Target 5.1. By 2029, Parties have mechanisms in place, including national legislation and enforcement mechanisms where relevant, to fully implement the Convention, its Resolutions and Decisions.

Explanation: Parties can demonstrate that they have national legislation, policies and plans in place that enables them to fully implement the obligations under CMS, especially Articles III and IV. Furthermore, Parties can provide evidence of comprehensive and effective enforcement of the legislation.

Target 5.2. By 2029 and beyond, all Parties inform the COP, through National Reports, of measures taken to implement the Convention, its Resolutions and Decisions.

Explanation: Parties commit to completing National Reports each triennium, and actively contribute to improving the National Reporting process to ensure the best available information on the state of implementation of the CMS mandate. This information is compiled and used for prioritization and adaptation of CMS initiatives for migratory species conservation.

Target 5.3. Parties use best available science, as the basis for evidence-based advice and decision-making to address the conservation of migratory species, their habitats and threats under CMS.

Explanation: Parties commit to use the best available science for decision-making and share information to ensure adequate implementation of the CMS mandate. Through the COP and its subsidiary bodies, Parties collaboratively ensure there is adequate monitoring of the implementation of the CMS mandate and agree to modify, improve or cancel existing initiatives based on best available science, with the aim of increasing their efficiency and impact, taking into account the knowledge of Indigenous People and Local Communities.

Target 5.4. By 2032, CMS provisions are included in relevant national planning processes and policies for the benefit of migratory species and the ecosystem services they provide.

Explanation: The Convention's mandates, provisions and agenda are incorporated into national legislation frameworks and strategies relevant to migratory species (e.g., NBSAPs and NDCs).

Target 5.5. By 2029, Parties work collaboratively with other governments on actions and initiatives to implement CMS, its Resolutions and Decisions and associated guidance.

Explanation: Parties collaborate with other governments through joint concerted actions, species listing proposals and other collaborative actions to implement CMS, its Resolutions and Decisions and associated guidance.

Goal 6. The profile of CMS and synergies with other relevant international frameworks are enhanced.

Target 6.1. By 2026, awareness of the importance of migratory species and their role in providing benefits for people has increased globally.

Explanation: Parties undertake actions, with the support of the CMS Secretariat, that increase the international recognition of the importance of migratory species, their habitats and the ecosystem services they provide.

Target 6.2. By 2026, awareness of the role, purpose and achievements of CMS has increased globally.

Explanation: Parties undertake actions, with the support of the CMS Secretariat, that increase the international recognition of the role of CMS, and its contribution to the strategic goals of other multilateral environmental agreements, IGOs, NGOs and CMS stakeholders.

Target 6.3. By 2032, the total number of Parties to the Convention has increased from 133 to 160, surpassing 80 per cent of the countries recognized by the UN.

Explanation: Parties, with the support of the CMS Secretariat, undertake actions to increase the accession of new Parties to the Convention, facilitating cooperation for the benefit of migratory species.

Target 6.4. By 2032, provisions that support CMS are included and strengthened in other relevant international instruments, policies and initiatives, and in the strategic priorities of relevant stakeholders for the benefit of migratory species.

Explanation: CMS mandates, provisions and priorities are taken into consideration in the decisions and initiatives of other environmental and sustainable development-related international instruments, policies and initiatives, including under the UN (e.g., NBSAPs, NDCs), as well as in relevant stakeholder strategic processes.

PROPOSED MONITORING FRAMEWORK FOR THE SAMARKAND STRATEGIC PLAN FOR MIGRATORY SPECIES 2024–2032

Introduction

Tables 1-6 outline the indicators and indicator baselines that are proposed for each target in the Samarkand Strategic Plan for Migratory Species 2024–2032 (SPMS), as well as potential actions that Parties and other key stakeholders could undertake to help deliver these objectives. The proposed indicators, baselines and actions have been prepared by UNEP–WCMC, with substantive input and guidance from the Intersessional Working Group on the SPMS and the Secretariat, to support the implementation of Decisions 14.1–14.4 and Resolution 14.1.

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Indicators

Indicators for SPMS targets were identified using a set of guiding principles. These draw partly on the criteria adopted during the 15th meeting of the Conference of Parties to the Convention on Biological Diversity to select indicators for the monitoring framework ([CBD/COP/DEC/16/31](#)) for the Kunming-Montreal Global Biodiversity Framework (KMGBF), and partly on additional considerations specific to CMS. The guiding principles applied, where possible, are:

- indicators are specific enough to robustly measure relevant trends
- based on publicly available data
- underpinned by a methodology that has undergone scientific peer review or equivalent scrutiny
- updated on a time scale relevant to the eight-year SPMS period

- actively maintained over the long term
- ease of communication
- the need to prioritize metrics that ensure alignment with other multilateral environmental agreements (links to the monitoring framework for the KMGBF are highlighted in the table)
- broadly applicable to the full range of CMS-listed species, the diverse habitats they rely on and their varied ecological requirements.

A total of 44 indicators are included in Tables 1–6, drawing on a wide range of data sources. All of the 23 SPMS targets have at least one indicator, and 14 of the targets have more than one indicator. Following the guiding principles described above, indicators have been identified to measure only the core elements of each target that can be readily assessed using available data. The CMS National Reports are envisaged as the main mechanism for Parties to report on their progress towards fulfilling the SPMS. Eighteen (39%) of the proposed indicators would need to be informed by Parties through their CMS National Reports; five through existing questions, six through modifications to existing questions, and seven through entirely new questions. One additional indicator will be informed by Parties responses to the CMS National Legislation Programme (NLP). Consistent with a light-touch, streamlined approach to monitoring progress towards the SPMS, 15 (34%) of the proposed indicators would be based on global-level data or analyses, and would not require additional reporting from Parties. This proposed group of indicators predominantly track progress towards the targets included within SPMS Goals 1, 2 and 3, and would provide global-level insights relevant to the SPMS targets (e.g. tracking the global conservation status of CMS-listed species, or the global coverage of important habitats for CMS-listed species by protected and conserved areas). Additionally, it is envisaged that the data needed to calculate several other indicators would be collected by the CMS Secretariat (nine indicators) or compiled by the CMS Scientific Council (one indicator) or by the Secretariat with support from the Scientific Council (one indicator). Background information on the proposed indicators, including a summary of the caveats and gaps in knowledge that should be considered when interpreting them, can be found in **Annex Table 1**.

Existing data sources and indicators that are being used to measure progress under CMS Family Agreements or Memoranda of Understanding (MOUs) can play an important role in filling gaps in indicator coverage. These additional ‘**supporting indicators**’ are highlighted in **Annex Table 2**. Although these data sources and indicators are necessarily taxon- and region-specific, they have been referenced in cases where they can provide information that complements the set of broadly relevant indicators; for example, by enabling specific elements of a target to be measured that would otherwise not be quantified adequately. It is envisaged that these data sources and indicators would provide supporting information in any analysis of progress towards the SPMS goals and targets; the reporting of these data and indicators would occur separately in processes managed under the different CMS Instruments.

Potential Actions

The actions listed in Tables 1–6 offer guidance to Parties and other key stakeholders (e.g. the CMS Secretariat, Scientific Council) on the high-level activities that could be undertaken to increase progress towards achievement of the SPMS targets. This guidance is focused on delivering each target and is not necessarily linked to a specific indicator. While most align with existing mandates under CMS Resolutions, Decisions or obligations set out in the Convention text, scaling up their implementation – including expanding to additional taxonomic groups or geographic regions – would further enhance progress towards achieving the SPMS targets. The most relevant mandates for the actions are noted in Table 1, where these are readily identifiable. It is recommended that the actions be considered in the context of these

mandates. A small number of actions are new. While they do not yet correspond to one of the core provisions of the Convention, or an existing Resolution or Decision, they could contribute significantly to the fulfilment of the SPMS. New actions are highlighted in bold in the Potential Action(s) column of Table 1.

Proposed indicators, baselines and actions corresponding to the Samarkand Strategic Plan for Migratory Species targets.

Table 1. Goal 1: The conservation status of migratory species is improved.

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 1.1. By 2029, all migratory species with an unfavourable conservation status are listed in CMS Appendices and are covered by an effectively implemented CMS Instrument and/or Concerted Action.</p> <p><i>Explanation:</i> Parties commit to include migratory species with an unfavourable conservation status in CMS Appendices, based on best available science, and to develop and implement effective cooperative conservation and/or management actions, including CMS Instruments, Concerted Actions and other initiatives that deliver tangible and verifiable conservation outcomes.</p> <p>Target 1.2. By 2029, the conservation status of all migratory species is reviewed regularly, informing priorities for conservation and management action.</p> <p><i>Explanation:</i> The conservation status, population trend, range and extinction risk of all migratory species is regularly monitored, including through the <i>State of the World's Migratory Species</i> report, CMS National</p>	<p>1.1.1: Percentage of globally threatened and Near Threatened migratory species that are listed in the CMS Appendices (Global; Main data source: CMS Appendices (Species+ database), IUCN Red List).</p> <p>1.1.2: Percentage of globally threatened and Near Threatened Appendix II-listed species that are covered by an active CMS Instrument and/or Concerted Action (Global; Main data sources: IUCN Red List, CMS Secretariat, CMS Appendices (Species+ database)).</p> <p>1.2.1: Percentage of known migratory species that have been assessed globally by the IUCN Red List within the last ten years (Data Deficient species, with insufficient information for a proper assessment of conservation status, are counted as not assessed) (Global; Main data source: IUCN Red List).</p> <p>Corresponding KMGBF Monitoring Framework indicator: adapted from 21.CY.4: <i>Proportion of known species assessed through the IUCN Red List (complementary indicator for Target 21).</i></p>	<p>1.1.1: 47% of globally threatened and Near Threatened migratory species are currently CMS-listed (Data source: State of the World's Migratory Species 2024, underpinning data).</p> <p>1.1.2: Baseline information has not yet been compiled. Suggested baseline year: 2024.</p> <p>1.2.1: Baseline information has not yet been compiled. Suggested baseline year: 2024.</p>	<p>1.1.a) Parties are encouraged to submit listing proposals that focus on non-CMS-listed migratory species with an unfavourable conservation status, for the consideration of the COP, accompanied, to the maximum extent possible, with a proposed Instrument or Concerted Action. (Key mandates: Resolution 12.28 (Rev.COP14), Resolution 13.7.)</p> <p>1.1.b) Priority gaps in the coverage of Concerted Actions and/or CMS Instruments, should be filled by Parties, working collaboratively with other Range States, to develop proposals for Concerted Actions, or develop new or expand existing CMS Instruments.</p> <p>1.2.a) The conservation status of migratory species should be comprehensively reviewed by the Scientific Council at regular intervals, through the development of the <i>State of the World's Migratory Species</i> report at each alternate COP, supported by the publication of reviews and assessments focusing on specific taxonomic groups or issues. (Key mandates: Resolution 14.4.)</p> <p>1.2.b) Emerging trends or threats affecting the conservation status of migratory species, and novel opportunities for their conservation, should be systematically identified, monitored and brought to the attention of the COP, including by Parties via the CMS National Reports.</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Reports, other assessments and analyses of relevant publications such as those produced by CMS and its Instruments, and information from relevant stakeholders, Indigenous Peoples and local communities. The conclusions of this regular monitoring supports priority-setting under CMS, including the listing of new migratory species that may need specific conservation actions.</p>	<p>1.2.2: Categorical indicator: number of migratory species covered by assessments and/or analyses of conservation status during the previous triennium (Scoring system: 0, no assessments conducted; 1, assessments conducted that are relevant to all migratory species OR specific taxonomic groups of migratory species only, including through CMS Instruments; 2, assessments conducted that are relevant to all migratory species AND specific taxonomic groups) (Convention-level; Main data source: CMS Secretariat).</p>	<p>1.2.2: Baseline score (2024): 2/2; during the previous triennium, the conservation status of CMS-listed species was comprehensively assessed through the State of the World's Migratory Species report, produced for COP14 (2024). Other assessments that were relevant to specific taxonomic groups of migratory species included the Raptors MOU Conservation Status Assessment Report and the AEWA Report on the Conservation Status of Migratory Waterbirds in the Agreement Area.</p>	
	<p>1.2.3: Percentage of Parties that are regularly updating national-level species conservation assessments (e.g. National Red Lists or equivalent) that consider CMS-listed species (Party-level; Main data source: CMS National Reports).</p>	<p>1.2.3: No baseline. The information needed to calculate this indicator would need be obtained from changes to an existing question in the CMS National Reports (Q.XI.1 in Section XI. on the <i>Conservation Status of Migratory Species</i>).</p>	
<p>Target 1.3. By 2032, the conservation status of all migratory species listed in CMS Appendices has improved.</p>	<p>1.3.1: Red List Index (RLI) disaggregated for CMS-listed species (Global; Main data source: IUCN Red List).</p>	<p>1.3.1: The RLI disaggregated for CMS-listed species had a value of 0.66; over the period 1988-2020 there was a downward RLI trend, this longer-term baseline should aid interpretation of RLI trends (Data source: State of the World's Migratory Species, based on IUCN Red List version 2022-2).</p>	<p>1.3.a) The key messages and recommendations of the State of the World's Migratory Species, and from other relevant reviews and assessments as described in Target 1.2, should be considered by Parties when setting priorities for conservation action.</p>
<p><i>Explanation:</i> CMS initiatives have helped to improve the conservation status of all CMS-listed migratory species, thereby contributing to the achievement of the Convention and Goals A and B of the KMGBF. Conservation efforts should strive to engage relevant stakeholders,</p>	<p>Corresponding KMGBF Monitoring Framework indicator: <i>optional disaggregation of A.3 Red List Index (headline indicator for Goal A and Target 4).</i></p>	<p>1.3.2: Percentage of CMS-listed species that have stable or increasing population trends (the total number of CMS-listed species, and the number of</p>	
	<p>1.3.2: Percentage of CMS-listed species that have stable or increasing population trends (the total number of CMS-listed species, and the number of</p>	<p>1.3.2: According to the IUCN Red List, 519 CMS-listed species (44%) had an increasing or stable population trend (12% were increasing; 31% were stable;</p>	

Target	Indicator(s)	Baseline(s)	Potential Action(s)
including Indigenous Peoples and local communities.	stable/increasing CMS-listed species, will be reported alongside the overall percentage) (Global; Main data source: IUCN Red List).	44% were decreasing; 13% had an unknown population trend; total number of CMS-listed species: 1,189 species) (Data source: State of the World's Migratory Species, based on IUCN Red List version 2022-2).	

Table 2. Goal 2: The habitats and ranges of migratory species are maintained and restored, supporting their connectivity.

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 2.1. By 2029, all important habitats for migratory species listed in CMS Appendices are identified, assessed and monitored to ensure their functionality and ability to support migratory species throughout their life cycles.</p> <p><i>Explanation:</i> Using best available science and information, actions are taken to ensure that all habitats, sites and ranges for migratory species are identified, assessed and monitored to understand their functions in migratory processes.</p>	<p>2.1.1: Percentage of Parties that have fully or to a large extent identified all important habitats and sites for CMS-listed species at the national level (Party-level; Data source: CMS National Reports).</p>	<p>2.1.1: As of 2023, 14% of reporting Parties indicated that critical habitats and sites for migratory species had been fully identified in their country; an additional 45% of reporting Parties indicated that these critical habitats and sites had been identified to a large extent (Data source: Analysis of CMS National Reports to COP143; Q.XIII.1).</p>	<p>2.1.a) Sites and areas that provide important habitats for CMS-listed species – and the migratory pathways that connect them – should be identified across their entire life cycle. Parties should work collaboratively with relevant partners and organizations to support their recognition as Key Biodiversity Areas (KBAs), Important Marine Mammal Areas (IMMAs), Important Shark and Ray Areas (ISRAs) or Important Marine Turtle Areas (IMTAs) when the relevant qualifying criteria are met, or their inclusion within other regional or national site networks, as appropriate. (Key mandates: Resolution 12.13, Resolution 14.7, Resolution 14.16.)</p> <p>2.1.b) Parties should establish, support and/or expand regular monitoring of ecological networks and sites of importance for CMS-listed species, to allow for early detection of changes in site condition, rapid identification of threats and timely action to maintain site integrity. (Key mandates: Resolution 14.16.)</p>
	<p>2.1.2: Percentage of CMS-listed species for which at least one important site has been recognized through an existing site identification initiative (Global; Data source(s): Key Biodiversity Area database, IMMA, ISRA and IMTA databases, other relevant site identification initiatives).</p>	<p>2.1.2: 61% of CMS-listed species are trigger species for at least one Key Biodiversity Area (Data source: State of the World's Migratory Species; underpinning data analysed in 2023). Baseline information on the number of IMMAs, ISRAs and IMTAs that have been identified for CMS-listed species has not yet been compiled.</p>	
	<p>2.1.3: Percentage of Key Biodiversity Areas triggered by CMS-listed species that have been monitored in the previous ten years (Global; Data source: Key Biodiversity Area database; other recognized site identification schemes, where sufficient monitoring data are available).</p>	<p>2.1.3: 33% of the 9,469 Key Biodiversity Areas that have been triggered by one or more CMS-listed species have undergone a monitoring assessment (Data source: State of the World's Migratory Species; underpinning data analysed in 2023).</p>	

³ The analysis was based on based on the 55 National Reports that were received by 11/06/2023 (representing 41% of the 133 CMS Parties).

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 2.2. By 2032, all important habitats for migratory species listed in CMS Appendices are protected, effectively conserved, managed and restored through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures.</p> <p><i>Explanation:</i> Steps will be taken to establish ecologically representative, well-connected systems of protected areas and other effective area-based conservation measures, to ensure that, among others, the connectivity of all areas of importance for migratory species – as well as other areas that may be ecologically linked to them – is preserved. This could include permanent or temporal legal protection measures to ensure migratory ranges and their habitats are maintained, restored, effectively conserved and managed, and provide important biological functions such as opportunities for feeding, resting and habitat for reproduction.</p>	<p>2.2.1: Mean percentage of the area (and total area, in km²) of important sites for CMS-listed species (as defined above for Target 2.1) that is covered by protected and conserved areas (Global; Data sources: World Database on Protected Areas (WDPA), World Database on Other Effective Area-based Conservation Measures (WD-OECM), World Database of KBAs, IMMA, ISRA and IMTA databases, other relevant site identification initiatives).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>CMS-specific version of headline indicator for Target 3 that can be disaggregated – 3.1 Coverage of protected areas and other effective area-based conservation measures, disaggregated by areas of importance for biodiversity.</i></p> <p>2.2.2: Percentage of monitored Key Biodiversity Areas (identified for CMS-listed species) in favourable condition (Global; Data sources: World Database of KBAs).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>CMS-specific version of 2.CY.2: Proportion of key biodiversity areas in favourable condition (complementary indicator for Target 2).</i></p>	<p>2.2.1: 49% of the total area covered by the 9,469 Key Biodiversity Areas triggered by CMS-listed species is covered by protected and conserved areas (Data source: State of the World's Migratory Species; underlying data analysed in 2023). Baseline information has not yet been compiled on levels of protected and conserved area coverage for IMMAs, ISRAs and IMTAs that have been identified for CMS-listed species.</p> <p>2.2.2: 53% of monitored Key Biodiversity Areas that were identified as being important for CMS-listed species are in favourable condition. 42% of monitored Key Biodiversity Areas that were identified as being important for CMS-listed species are experiencing 'low' or 'moderate' levels of pressure (Data source: State of the World's Migratory Species and associated analyses; underlying data analysed in 2023).</p>	<p>2.2.a) Important habitats for CMS-listed species, including the areas needed to maintain connectivity and support the movement of migratory species throughout their entire life cycle, should be prioritized by Parties for designation as protected areas, other effective area-based conservation measures and ecological corridors. This includes considering important habitats for CMS-listed species in the designation of high seas marine protected areas established through the Agreement on Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement). (Key mandates: Resolution 14.16.)</p> <p>2.2.b) Parties should enhance efforts to monitor and improve the effectiveness of area-based conservation efforts for CMS-listed species, including the quality of management, equitable governance and progress towards achieving conservation outcomes. (Key mandates: Resolution 14.16.)</p> <p>2.2.c) Parties and other relevant organizations, including the Global Partnership on Ecological Connectivity (GPEC), should support the Scientific Council in efforts to fill knowledge gaps on issues related to ecological connectivity and migratory pathways, and ensure that this scientific information can be translated into a format that can inform decision-making with respect to area-based conservation efforts and spatial planning. (Key mandates: Resolution 14.16.)</p> <p>2.2.d) Parties should contribute data to the World Database on Ecological Corridors, once fully developed, to track the location and characteristics of areas that are governed and managed to maintain and restore ecological connectivity, to improve how ecological connectivity is tracked globally, and to enable identification of gaps and the effective targeting of new conservation measures. (NEW action)</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 2.3. By 2032, the loss, degradation and fragmentation of important habitats for migratory species listed in CMS Appendices is reduced, and habitats are restored to ensure that such habitats support their viability.</p>	<p>2.3.1: Percentage of rivers globally that remain free-flowing over their entire length (Global; Data sources: HydroSHEDS, Grill et al. 2019).</p>	<p>2.3.1: As of 2019, 37% of rivers greater than 1,000 km in length were assessed as 'free-flowing' over their entire length (Grill et al. 2019).</p>	<p>2.3.a) Parties should take action to restore important habitats for CMS-listed species, including by restoring degraded and fragmented habitats in order to increase the connectivity between sites, and by removing obstacles to migration (Main mandates: Resolution 14.16.)</p>

Explanation: Steps will be taken towards eliminating and/or reducing the negative impacts on migratory species from the loss and degradation of important habitats and ranges because of land-use change and fragmentation. This includes tackling known threats such as unsustainable intensive agriculture, damaging afforestation, urbanization or human-made infrastructure.

Table 3. Goal 3: Threats affecting migratory species are eliminated or significantly reduced.

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 3.1. By 2032, any take, use and trade of migratory species listed in CMS Appendices is sustainable, safe and legal, overexploitation is prevented, risk of pathogen spillover is reduced and negative impacts on non-target species and their ecosystems are minimized.</p> <p><i>Explanation:</i> Based on the best available knowledge and information, the main drivers of illegal and unsustainable take are identified and analysed for each migratory species to provide a basis for effective conservation and/or management actions, including cooperative actions beyond Range State jurisdictions. Interventions to effectively address the main drivers are undertaken in consultation with relevant stakeholders, Indigenous Peoples and local communities, and include protection measures for species listed in Appendix I through national legislation, comprehensive and effective enforcement, and management measures to halt illegal and unsustainable take. As a result, there will be no taking of any Appendix I species that is not in compliance with the Convention. Furthermore, steps will be taken towards eliminating any unsustainable take of Appendix II species and non-target CMS-listed migratory species that may also be affected, and towards reducing the risk</p>	<p>3.1.1: Threat from take, use and trade to all CMS-listed species: Red List Index showing trends in extinction risk driven by utilization, for CMS-listed species (Global; Data source: IUCN Red List).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>CMS-specific version of 5.CT.1 Red List Index (impacts of utilization for used species) (component indicator for Target 5).</i></p> <p>3.1.2: Measures to prevent the overexploitation of CMS Appendix II-listed species: Percentage of Parties that have effective measures (legal instruments, other policy frameworks or administrative measures) supported by compliance mechanisms to prevent the overexploitation of CMS Appendix II-listed species, including impacts on non-target species and ecosystems</p>	<p>3.1.1: To aid interpretation of trends, the baseline for this indicator should be based on a longer time series, rather than an individual year. When analysed in 2023, the Red List Index showing the impacts of utilization on CMS-listed bird and mammal species showed a negative trend from 1988-2020 (Data source: Strategic Plan for Migratory Species 2025-2023 – Final Progress Report). Utilization was defined broadly in this analysis, encompassing both direct and indirect impacts on CMS-listed species or their habitats from hunting/trapping, fisheries and harvesting of aquatic resources, logging and plant harvesting. To align with Target 3.1, a narrower definition of utilization is proposed for this indicator (see Annex Table 1 for further details).</p> <p>3.1.2: No baseline. The information needed to calculate this indicator would need to be obtained from a new question in the CMS National Reports.</p>	<p>3.1.a) The best available knowledge and information should be compiled and analysed by Parties to identify the direct and indirect drivers of illegal and unsustainable taking for all CMS-listed species. (Main mandates: Resolution 11.31 (Rev.COP14).)</p> <p>3.1.b) Policies and initiatives to address illegal and unsustainable taking of CMS-listed species should be developed and implemented, or existing measures strengthened (for example, by expanding collaborative international and regional approaches for tackling this threat to new regions or taxonomic groups) by Parties, working in collaboration with local communities and other key stakeholders. (Main mandates: Resolution 11.16 (Rev.COP14); Resolution 11.31(Rev.COP14), Resolution 13.3.)</p> <p>3.1.c) The enforcement of legislation and other measures related to the taking of CMS-listed species should be enhanced, where needed, by Parties, including by building the capacity of relevant organizations (for example, police, customs). (Main mandates: Resolution 11.16 (Rev.COP14); Resolution 11.31(Rev.COP14).)</p> <p>3.1.d) Robust systems to collect, analyse and share data on population estimates and cumulative levels of taking should be developed and operationalized by Parties, in order to inform the adaptive science-based management of CMS Appendix II-listed species, and increase the sustainability of any take, use or trade. (Main mandates: Resolution 11.16 (Rev.COP14); Resolution 11.31(Rev.COP14), Resolution 12.15.)</p> <p>3.1.e) Strategies should be developed by Parties to prevent, prepare for and respond to wildlife-related health risks and emergencies related to CMS-listed species. (Main</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
of pathogen spillover to or from CMS-listed species to prevent the spread of zoonotic diseases. Actions are also taken towards eliminating incidental mortality such as from bycatch.	(Party-level; Data source: CMS National Reports).		mandates: Resolution 12.6 (Rev.COP14) , Resolution 14.18.) 3.1.f) Best practice bycatch mitigation strategies, and measures to reduce the risk of fisheries-induced mortality for CMS Appendix I and II-listed species, should be identified and implemented by Parties across all relevant fisheries, including on the high seas. (Main mandates: Resolution 12.22.)
Target 3.2. By 2032, the direct mortality of migratory species caused by human-made infrastructure is significantly reduced to levels that are not harmful to species' viability. <i>Explanation:</i> Steps are taken to eliminate and/or reduce the direct mortality of migratory species caused by infrastructure, including collision, electrocution, disturbance and migratory route deviation. This includes actions to sustainably design and operate such infrastructure and to monitor impacts while in operation.	3.2.1: Red List Index showing trends in extinction risk driven by infrastructure-related threats, for migratory and CMS-listed species (Global; Data source: IUCN Red List). 3.2.2: Percentage of Parties that have legislation and regulations on Environmental Impact Assessments (EIA) and Strategic Environmental Assessments (SEA) that considers possible impediments to migration caused by human-made infrastructure (Party-level; Data source: CMS National Reports).	3.2.1: Baseline information has not yet been compiled. To aid interpretation of trends, the baseline for this indicator should be based on a longer time series, rather than an individual year. 3.2.2: As of 2023, 76% of reporting Parties confirmed that migratory species are accounted for in legislation and regulations on EIAs and SEAs (Data source: Analysis of CMS National Reports to COP14 ; Q.VI.5).	3.2.a) The negative impacts of human-made infrastructure on threatened migratory species and their habitats should be minimized, by prioritizing the avoidance of impacts on critical habitats through robust planning and impact assessment processes, and where required, by implementing measures to mitigate negative impacts. These efforts should be supported by following available guidance, such as the Guidelines for Addressing the Impact of Linear Infrastructure on Large Migratory Mammals in Central Asia and CMS Energy Task Force (ETF)-endorsed guidance on the Sustainable deployment of renewable energy technologies and power lines (see also Action 5.1.c)). (Main mandate: Resolution 7.2 (Rev.COP14) , Resolution 10.11 (Rev.COP13) , Resolution 11.27 (Rev.COP13) .) 3.2.b) Parties should actively engage with the CMS Energy Task Force (ETF) to support its expansion to increase its membership and broaden its geographic reach. (Main mandate: Resolution 11.27 (Rev.COP13) .) 3.2.c) Measures to reduce the risk of vessel strikes on marine megafauna should be promoted and implemented by Parties, including appropriate routing and speed limitation measures, where required. (Main mandate: Resolution 14.5.) 3.3.a) CMS best practice guidelines to reduce and mitigate the negative impacts of pollution should be followed and promoted by Parties, including the International Light Pollution Guidelines for Wildlife , the Guidelines to Prevent
Target 3.3. By 2032, the negative impacts of pollution including transboundary effects, and poisoning on migratory species and	3.3.1: Red List Index showing trends in extinction risk driven by pollution, for migratory and CMS-listed species (Global; Data source: IUCN Red List).	3.3.1: Baseline information has not yet been compiled. To aid interpretation of trends, the baseline for this indicator	

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>their habitats are reduced to levels that are not harmful to species' viability.</p> <p><i>Explanation:</i> Actions are taken to quantify, monitor and reduce or eliminate the negative impacts of pollution from poisoning, artificial lights, chemicals, noise, plastics and other sources on migratory species and their habitats.</p>	<p>Corresponding KMGBF Monitoring Framework indicator: CMS-specific version of 7.CT.4 Red List Index (impact of pollution) (component indicator for Target 7).</p> <p>3.3.2: Percentage of Parties that have measures in place to reduce the negative impacts of pollution on migratory species (across the full range of relevant pollution types) (Party-level; Data source: CMS National Reports).</p>	<p>should be based on a longer time series, rather than an individual year.</p> <p>3.3.2: No baseline. The information needed to calculate this indicator would need to be obtained from a new question in the CMS National Reports.</p>	<p>the Risk of Poisoning to Migratory Birds, the CMS Family Guidelines on Environmental Impact Assessments for Marine Noise-generating Activities and CMS Technical Series Publication No. 46 on marine noise. (Main mandates: Resolution 11.15 (Rev.COP14), Resolution 12.14, Resolution 13.5 (Rev.COP14).)</p> <p>3.3.b) Measures should be implemented by Parties to reduce the harmful impacts of environmental toxins and contaminants on threatened migratory species and their food sources, including lead ammunition, pesticides, oil pollution and other chemical pollutants (Main mandates: Resolution 7.3 (Rev.COP12), Resolution 11.15 (Rev.COP14), Resolution 13.6.)</p> <p>3.3.c) Collaborative action should be taken by Parties to combat plastic pollution in all environments, including by addressing the conclusions of the report, Impacts of Plastic Pollution on Freshwater Aquatic, Terrestrial and Avian Migratory Species in the Asia and Pacific Region. (Main mandate: Resolution 12.20.)</p>
<p>Target 3.4. By 2032, the impact of climate change on migratory species and their habitats is reduced through mitigation and adaptation, including through nature-based solutions and/or ecosystem-based approaches and disaster risk reduction actions, while minimizing negative and fostering positive impacts on biodiversity.</p> <p><i>Explanation:</i> Actions to eliminate or mitigate the negative impacts of climate change on migratory species are identified. This also includes the research and promotion of conservation and management tools applied to</p>	<p>3.4.1: Red List Index showing trends in extinction risk driven by climate change, for migratory and CMS-listed species (Global; Data source: IUCN Red List).</p> <p>3.4.2: Number of migratory species for which Parties have conducted climate change vulnerability assessments (Party-level; Data source: CMS National Reports).</p>	<p>3.4.1: Baseline information has not yet been compiled. To aid interpretation of trends, the baseline for this indicator should be based on a longer time series, rather than an individual year.</p> <p>3.4.2: No baseline. The information needed to calculate this indicator would need to be obtained from a new question in the CMS National Reports.</p>	<p>3.4.a) The resilience of migratory species and their habitats to climate change should be strengthened by Parties by, inter alia, expanding and ensuring the connectivity of networks of protected and conserved areas, as well as other key sites important for migratory species; monitoring existing site networks to detect climate-related threats; undertaking specific management to address climate-driven declines in site quality; and restoring degraded habitats. (Main mandates: Resolution 12.21 (Rev.COP14).)</p> <p>3.4.b) Climate change vulnerability assessments for CMS-listed species (prioritizing Appendix I-listed species) should be conducted by Parties, at national, regional and international scales, to identify those species most susceptible to climate change. (Main mandates: Resolution 12.21 (Rev.COP14).)</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>migratory species and the ecosystem services they provide, such as the enhancement of mitigation and adaptation against climate change.</p>			<p>3.4.c) Single and/or multi-species action plans should be developed and implemented by Parties for migratory species considered to be most vulnerable to climate change, utilizing the framework outlined in Annex 2 to Resolution 12.21 (Rev.COP14). (Main mandates: Resolution 12.21 (Rev.COP14).)</p>
<p>Target 3.5. By 2032, the negative impacts of invasive alien species on migratory species and their habitats are reduced or eliminated.</p> <p><i>Explanation:</i> Actions are taken to understand, quantify and eliminate or reduce the negative impact of invasive alien species on migratory species and their habitats.</p>	<p>3.5.1: Red List Index showing trends in extinction risk driven by invasive alien species, for migratory and CMS-listed species (Global; Data source: IUCN Red List).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>CMS-specific version of 6.CY.1 Red List Index (impacts of invasive alien species) (complementary indicator for Target 6).</i></p> <p>3.5.2: Percentage of Parties that have measures in place for eradicating and controlling invasive alien species that are affecting CMS-listed species (Party-level; Data source: CMS National Reports).</p> <p>Corresponding KMGBF Monitoring Framework indicator: related to the binary indicator for target 6 (6.b 'Number of countries adopting relevant regulations, processes and measures to reduce the impact of invasive species') and binary indicator question 6.3 ('Does your country have measures in place for eradicating or controlling invasive alien species?').</p>	<p>3.5.1: Baseline information has not yet been compiled. To aid interpretation of trends, the baseline for this indicator should be based on a longer time series, rather than an individual year.</p> <p>3.5.2: No baseline. The information needed to calculate this indicator would need to be obtained from a new question in the CMS National Reports.</p>	<p>3.5.a) Measures should be implemented by Parties to prevent and mitigate the negative impacts of invasive alien species on threatened migratory species, including by developing action and management plans for the species and pathways of greatest concern. (Main mandate: Resolution 11.28.)</p> <p>3.5.b) Scientific Council should consider the findings of the IPBES Thematic Assessment of Invasive Alien Species and their Control.</p>

Table 4. Goal 4: Implementation of CMS is supported by adequate knowledge, capacity and resources.

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 4.1. By 2029, Parties have access to relevant information and evidence-based guidance to effectively implement the Convention, its Resolutions and Decisions.</p> <p><i>Explanation:</i> Parties play a key role in providing information at a national scale, but this can also be supported by the CMS Secretariat, through facilitation of the <i>State of the World's Migratory Species</i> report and other knowledge products, if resources are available. The availability of this information is critical for decision-making and implementation of the CMS, its Resolutions and Decisions and associated guidance. Parties are able to understand and analyse the best available science and information on species, habitats and ranges in a way that enables them to prioritize and collaboratively take effective conservation action.</p>	<p>4.1.1: Mean percentage of CMS-listed species covered by active systematic population monitoring schemes providing relevant national-level information, across all Parties (Party-level; Data source: CMS National Reports).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>the number of species and taxonomic groups covered by systematic population monitoring schemes is suggested as an example of the type of information that could contribute to the assessment of headline indicator 21.1 on biodiversity information for the Kunming-Montreal Global Biodiversity Framework (see metadata factsheet for further details).</i></p> <p>4.1.2: Percentage of Parties confirming that they have identified the most important pressures adversely affecting CMS-listed species in their country, across the full range of relevant taxonomic groups (Party-level; Data source: CMS National Reports).</p> <p>4.1.3: Percentage of CMS-listed species for which data are available in any of the existing CMS Atlas on Animal Migration modules (Convention-level; Data source: CMS Scientific Council).</p>	<p>4.1.1: No baseline. The information needed to calculate this indicator would need to be obtained from a new question in the CMS National Reports, asking Parties to provide information on the number/coverage of CMS-listed species by relevant population monitoring schemes (see Annex Table 1 for further details).</p> <p>4.1.2: No baseline. The information needed to calculate this indicator would be obtained through changes to the CMS National Reports (e.g. section X of the CMS National Reports on 'Threats and pressures affecting migratory species; including obstacles to migration').</p> <p>4.1.3: Baseline information has not yet been compiled. Suggested baseline year: 2024.</p>	<p>4.1.a) Up-to-date scientific evidence on the distribution of all CMS-listed species should be compiled from the best available sources and made accessible, providing a robust scientific basis for the determination of Range State status, in line with Article VI.1.</p> <p>4.1.b) Support should be provided by Parties to strengthen and expand internationally coordinated efforts to collect and analyse scientific information on threatened migratory species and their habitats, including data on long-term trends in population abundance, habitat extent and quality, and the scale and intensity of pressures.</p> <p>4.1.c) Data on the movements of CMS-listed species, and on the location of existing infrastructure, should be collected, updated, analysed and made accessible through the continued development of the CMS Atlas on Animal Migration, and by fostering collaboration with other relevant institutions and platforms, with a focus on translating movement data into actionable insights that can support decision-making (Main mandates: Resolution 11.17 (Rev.COP14), Resolution 11.24 (Rev.COP13).)</p> <p>4.1.d) Existing CMS-endorsed guidelines or management tools should be updated and refined, and additional guidance developed, for topics where feedback from key stakeholders suggests this would be beneficial.</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 4.2. By 2029, Parties have the technical capacity needed to effectively implement the Convention, its Resolutions and Decisions.</p> <p><i>Explanation:</i> Parties identify, with the support of the Secretariat and the Scientific Council, the capacity-building activities needed to ensure implementation of the CMS, its Resolutions and Decisions and associated guidance. This can include Party-to-Party support or CMS Secretariat-led support, if possible, and should focus on the use of innovative and cost-effective methods that can be applied globally.</p>	<p>4.2.1: Percentage of Parties reporting technical capacity support needs to be addressed (Party-level; Data source: CMS National Reports).</p>	<p>4.2.1: During the reporting period for COP14, 75% of reporting Parties indicated that they required support with the ‘exchange of information & know-how’ in order to build sufficient capacity to implement obligations under CMS (Data source: Analysis of CMS National Reports to COP14; Q.XVIII.3). Other relevant categories of assistance that were selected in response to Q.XVIII.3 included ‘technical assistance’ (65% of reporting Parties), ‘education/training/mentoring’ (44% of reporting Parties) and ‘other skills development’ (44% of reporting Parties) (Data source: Analysis of CMS National Reports to COP14).</p>	<p>4.2.a) Action should be taken by Parties, the Standing Committee and Secretariat to identify the priority technical capacity needs – at the national, regional and Convention level – that should be addressed in order to ensure the effective implementation of the Convention, its Resolutions and Decisions.</p> <p>4.2.b) An increased number of capacity-building activities (e.g. workshops, training programmes, other support initiatives) should be undertaken, as part of a cross-cutting capacity-building programme, convened by the Secretariat to enhance Parties’ technical capacity and address the gaps identified under 4.2.a). (NEW action)</p>
<p>Target 4.3. By 2029, Parties have mobilized or secured resources to implement the Convention, its Resolutions and Decisions.</p> <p><i>Explanation:</i> There are sufficient resources available to implement the actions contained in CMS, its Resolutions and Decisions and associated guidance. This includes identifying and agreeing an estimation of the costs associated with developing, implementing and monitoring new CMS instruments and initiatives, so as to ensure their cost-effectiveness and long-term viability.</p>	<p>4.3.1: Percentage of the total funds needed to effectively implement the Convention, its Resolutions and Decisions that have been fully secured, including for the PoW (Convention-level; Data source: CMS Secretariat).</p> <p>4.3.2: Percentage of Parties reporting an increase or stability in the level of resources mobilized for conservation activities specifically benefiting CMS-listed species, relative to baseline levels (Party-level, Data source: CMS National Reports).</p>	<p>4.3.1: Baseline information has not yet been compiled. Suggested baseline period: triennium from 2024-2026.</p> <p>4.3.2: Q.XIX.2 of the current CMS National Reports asks whether Parties have received financial or other resources for conservation activities relating to migratory species. During the reporting period prior to COP14, 56% of reporting Parties indicated that they had received resources for conservation activities specifically benefiting migratory species, with 74% of these Parties reporting that resourcing levels had increased or stayed the same, relative to</p>	<p>4.3.a) Action should be taken by the Secretariat to develop an improved understanding of current expenditure relevant to CMS implementation and projected financial resource needs required to ensure effective implementation of the Convention. (NEW action)</p> <p>4.3.b) Action should be taken to mobilize or secure additional resources to support the implementation of the Convention, its Resolutions and Decisions.</p> <p>4.3.c) Parties and the Secretariat are encouraged to continue to engage with the Global Environment Facility (GEF) programme to ensure migratory species projects are considered within GEF rounds. For Parties and other CMS stakeholders that are eligible, GEF funding should be sought and secured for an increased number of projects designed to achieve conservation goals for migratory species and their habitats. (Main mandate: Resolution 10.25 (Rev.COP14).)</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
	<p>4.3.3: Amount of resources (financial or in-kind) provided by Parties to the Secretariat, NGOs, IGOs or other Parties to implement the Convention, its Resolutions and Decisions, including (but not limited to) support for attendance of delegates from developing countries to CMS meetings (Party-level; Data source: CMS National Reports).</p> <p>4.3.4: Percentage of Parties that are developed countries that have increased the provision of financial resources to developing countries to implement the Convention, its Resolutions and Decisions (Party-level; Data source: tbd).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>related to headline indicator D.1 'International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems'.</i></p> <p>4.3.5: Financial resources provided from Parties that are developed countries to developing countries to implement the Convention, its</p>	<p>the previous triennium (Data source: Analysis of CMS National Reports to COP14; Q.XIX.2).</p> <p>4.3.3: No baseline. Suggested baseline period: triennium from 2024-2026. It is assumed that a new question in the CMS National Reports would be needed to gather the data required.</p>	<p>4.3.d): Parties should assess the resources (financial or in-kind) provided to implement the Convention.⁵</p>

⁵ The IWG could not reach consensus on Potential Actions under Target 4.3

Target	Indicator(s)	Baseline(s)	Potential Action(s)
	<p>Resolutions and Decisions (Convention-level; Data source: tbd).</p> <p>Corresponding KMGBF Monitoring Framework indicator: <i>related to headline indicator D.1 'International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems'.⁴</i></p>		

⁴ The IWG could not reach consensus on Indicators under Target 4.3.

Table 5. Goal 5: Implementation of CMS is supported by effective governance, including use of best available science and information, and collaborative working.

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 5.1. By 2029, Parties have mechanisms in place, including national legislation and enforcement mechanisms where relevant, to fully implement the Convention, its Resolutions and Decisions.</p> <p><i>Explanation:</i> Parties can demonstrate that they have national legislation, policies and plans in place that enables them to fully implement the obligations under CMS, especially Articles III and IV. Furthermore, Parties can provide evidence of comprehensive and effective enforcement of the legislation.</p>	<p>Article III: Appendix I-listed species</p> <p>5.1.1: Percentage of Parties that have fully prohibited the taking of all Appendix I-listed species by transposing appropriate legal measures into their domestic legislation, in line with CMS Article III.5 (Party-level; Data source: CMS National Reports).</p> <p>5.1.2: Percentage of Parties reporting a high degree of enforcement of and compliance with the domestic legislation used to implement CMS Article III.5 (Party-level; Data source: CMS National Reports).</p> <p>5.1.3: Percentage of Parties that have enacted legislation or have implemented other domestic measures to address elements of CMS Article III.4 including, III.4.a) the conservation and restoration of habitats and III.4.b) activities or obstacles that seriously impede or prevent migration (Party-level; Data sources: CMS National Reports; potentially supplemented by</p>	<p>5.1.1: As of 2023, 84% of the 54 reporting Parties have stated that taking was prohibited for all Appendix I species within their country (Data source: Analysis of CMS National Reports to COP14; Q.IV.1). Given the recent low response rates for the CMS National Reports, insights from the CMS National Legislation Programme could potentially be used as an additional source of information to establish the baseline.</p> <p>5.1.2: No baseline. The information needed to calculate this indicator (on enforcement and compliance) would need to be obtained from a new question in the CMS National Reports, or an extension to an existing question on the prohibition of taking in accordance with CMS Article III.5 (Q.IV.1).</p> <p>5.1.3: No exact baseline. The information needed to calculate this indicator could potentially be obtained through adjustments to existing CMS National Report questions or further in-depth analysis of CMS National Legislation Programme (NLP) responses. Q.XIII.3 of the current CMS national reporting template asks whether Parties have adopted any <i>new</i> legislation or other domestic measures in response to CMS</p>	<p>5.1.a) Where required, national legislation should be adopted, reviewed or amended by Parties to fully and effectively prohibit all modes of taking for CMS Appendix I-listed species, in line CMS Article III.5, and taking into account any recommended actions received by participating countries via the CMS National Legislation Programme. (Main mandates: Resolution 12.9.)</p> <p>5.1.b) Compliance with national legislation relevant to the prohibition of take for CMS Appendix I-listed species should be strengthened by Parties, where required, by increasing the capacity of and awareness levels among enforcement, legislative, prosecution and judicial authorities, and by engaging with local communities.</p> <p>5.1.c) Parties should ensure planning and development processes include good quality Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) procedures that consider possible impacts on threatened migratory species at an early stage of the planning process, including obstacles to migration and cumulative effects, in line with CMS Article III.4 b).</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
	<p>insights from the CMS National Legislation Programme, if available).</p> <p>5.1.4: Number of Parties that have participated in the CMS National Legislation Programme by submitting a completed questionnaire to the Secretariat (Party-level; Data source: CMS National Legislation Programme).</p>	<p>Article III.4.a). Although 45% of the 54 reporting Parties indicated that they had adopted new legislation or measures during the most recent reporting period prior to COP14, this question does not address pre-existing legislation or gaps (Data source: Analysis of CMS National Reports to COP14; Q.XIII.3). Similarly, Q.X.2 asks whether Parties have adopted <i>new</i> legislation or other domestic measures in response to CMS Article III.4.b) during the current reporting period (38% of reporting Parties had done so) (Data source: Analysis of CMS National Reports to COP14; Q.X.2).</p> <p>5.1.4: As of 2024, 70 Parties had submitted a completed National Legislation Programme questionnaire to the CMS Secretariat (Data source: CMS Secretariat).</p>	
<p>Target 5.2. By 2029 and beyond, all Parties inform the COP, through National Reports, of measures taken to implement the Convention, its Resolutions and Decisions.</p> <p><i>Explanation:</i> Parties commit to completing National Reports each triennium, and actively contribute to improving the National Reporting process to ensure the best available information on the state of implementation of the CMS mandate. This information is compiled and used for prioritization and adaptation of CMS</p>	<p>5.2.1: Percentage of Parties that have submitted National Reports to the Conference of the Parties (Convention-level; Data source: CMS Secretariat).</p>	<p>5.2.1: 41% of the 133 Parties to CMS submitted National Reports to COP14 (Data source: Analysis of CMS National Reports to COP14).</p>	<p>5.2.a) National Reports should be submitted to the CMS Secretariat by Parties at least six months before each meeting of the Conference of the Parties, in accordance with Article VI.3 of the Convention. (Main mandates: Article VI.3, Resolution 12.5 (Rev.COP14).)</p> <p>5.2.b) Potential obstacles and/or constraints in preparing National Reports, including gaps in the required information, should be identified by the Secretariat in cooperation with Parties (Main mandate: Resolution 12.5 (Rev.COP14).)</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>initiatives for migratory species conservation.</p> <p>Target 5.3. Parties use best available science, as the basis for evidence-based advice and decision-making to address the conservation of migratory species, their habitats and threats under CMS.</p>	<p>5.3.1: Percentage of Scientific Council recommendations that have been adopted without significant alterations at each Conference of the Parties (Party-level; Data source: CMS Secretariat, CMS Scientific Council).</p>	<p>5.3.1: Baseline information has not yet been compiled. The information needed to calculate this indicator would need to be compiled by the Scientific Council, with support from the Secretariat.</p>	<p>5.3.a) To improve the effectiveness of conservation interventions under CMS, evidence-based approaches, best practices and lessons learned on key issues relevant to the conservation of migratory species and their habitats should be widely shared between all relevant stakeholders.</p>
<p><i>Explanation:</i> Parties commit to use the best available science for decision-making and share information to ensure adequate implementation of the CMS mandate. Through the COP and its subsidiary bodies, Parties collaboratively ensure there is adequate monitoring of the implementation of the CMS mandate and agree to modify, improve or cancel existing initiatives based on best available science, with the aim of increasing their efficiency and impact, taking into account the knowledge of Indigenous People and local communities.</p>			
<p>Target 5.4. By 2032, CMS provisions are included in relevant national planning processes and policies for the benefit of migratory species and the ecosystem services they provide.</p>	<p>5.4.1: Percentage of Parties that have integrated CMS provisions and/or migratory species into their National Biodiversity Strategies and Action Plans (NBSAPs), or other relevant national planning processes and policies (Party-level; Data source: CMS National Reports).</p>		<p>5.4.a) The actions needed to achieve the goals and targets outlined in the Samarkand Strategic Plan for Migratory Species (such as the priority recommendations outlined in the <i>State of the World's Migratory Species</i> report) should be integrated into NBSAPs under revision by Parties. (Main mandates: Resolution 14.1, Resolution 14.3.)</p>
<p><i>Explanation:</i> The Convention's mandates, provisions and agenda are incorporated into national legislation frameworks and strategies relevant to migratory species (e.g., NBSAPs and NDCs).</p>			<p>5.4.b) Considerations related to the conservation of threatened migratory species and their habitats should be integrated into national spatial planning processes and tools by Parties, in both terrestrial, inland waters and marine environments; these tools and processes should also be</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 5.5. By 2029, Parties work collaboratively with other governments on actions and initiatives to implement CMS, its Resolutions and Decisions and associated guidance.</p> <p><i>Explanation:</i> Parties collaborate with other governments through joint concerted actions, species listing proposals and other collaborative actions to implement CMS, its Resolutions and Decisions and associated guidance.</p>	<p>5.5.1: Percentage of Parties that have collaborated with other governments through joint Concerted Actions, CMS listing proposals and other collaborative actions to implement CMS (Party-level; Data source: CMS National Reports).</p>	<p>5.5.1: 38% of reporting Parties participated in the implementation of Concerted Actions (Data source: Analysis of CMS National Reports to COP14; Q.XII.3). Q.XII.1 of the CMS National Reports additionally asks whether Parties have initiated or participated in the development of new CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II species. These existing questions may need to be adjusted or consolidated to fully align with Indicator 5.5.1.</p>	<p>used to inform decision-making in relation to the placement of protected areas and future infrastructure development.</p> <p>5.5.a) A greater number of collaborative opportunities or mechanisms should be pursued and developed by Parties to conserve and enhance the connectivity of transboundary habitats for threatened migratory species; projects should explore the potential for these areas to be designated as transfrontier conservation areas (TFCAs) and for the negative impacts of any border walls and fences to be mitigated. (Main mandates: Resolution 14.16.)</p> <p>5.5.b) To improve the management of transboundary populations of threatened migratory species, there should be increased data sharing between countries and with other relevant international bodies.</p> <p><i>Actions 1.1.a) and 1.1.b) under Target 1.1 are also of relevance to this Target.</i></p>

Table 6. Goal 6: The profile of CMS and synergies with other relevant international frameworks are enhanced.

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 6.1. By 2032, awareness of the importance of migratory species and their role in providing benefits for people has increased globally.</p> <p><i>Explanation:</i> Parties undertake actions, with the support of the CMS Secretariat, that increase the international recognition of the importance of migratory species, their habitats and the ecosystem services they provide.</p>	<p>6.1.1. Number of activities designed to raise awareness of the importance of migratory species and the actions needed to conserve them, that have been conducted, produced or supported by Parties, directed towards: a) general audiences, b) lecturers, teachers or students, c) local communities (including hunters, fishers and farmers) and d) journalists and media professionals. (Party-level; Data source: CMS National Reports).</p>	<p>6.1.1.a-d) No baselines available. The information needed to calculate indicators a)-d) would need to be obtained from changes to an existing question in the CMS National Reports (Q.V.I. in Section V on <i>Awareness</i>).</p>	<p>6.1.a) Actions to raise awareness of migratory species globally could include the development of a concerted, multilingual awareness campaign by the Secretariat, which could support a proposal by Parties to recognize a UN day dedicated to migratory species and their conservation.</p> <p>6.1.b) The production and distribution of documentaries, podcasts and educational materials focusing on migratory species by the Secretariat should be expanded.</p> <p>6.1.c) Mechanisms to promote enhanced media coverage of CMS, and to facilitate improved communication with journalists and media professionals, should be explored and developed by the Secretariat.</p> <p>6.1.d) Parties and other stakeholders should strengthen publicity efforts highlighting the importance of migratory species, and the threats they face.</p>
<p>Target 6.2. By 2032, awareness of the role, purpose and achievements of CMS has increased globally.</p> <p><i>Explanation:</i> Parties undertake actions, with the support of the CMS Secretariat, that increase the international recognition of the role of CMS, and its contribution to the strategic goals of other multilateral environmental agreements, IGOs, NGOs and CMS stakeholders.</p>	<p>6.2.1: Engagement with CMS educational and multimedia materials, measured through views or listens (Convention level; Data source: CMS Secretariat).</p> <p>6.2.2: Number of media articles, reports, TV / radio / internet shows mentioning CMS (Global level; Data source: CMS Secretariat via Meltwater).</p> <p>6.2.3: Number of scientific articles mentioning CMS and/or the <i>State of the World's Migratory Species</i> report (Convention level; Data source: CMS Secretariat).</p>	<p>6.2.1: Baseline information has not yet been compiled/analysed. Suggested baseline year: 2024.</p> <p>6.2.2: Baseline information has not yet been compiled/analysed. Suggested baseline period: annual mean over period between successive COPs (2025-2027).</p> <p>6.2.3: Baseline information has not yet been compiled/analysed. Suggested baseline year: 2024.</p>	<p>6.2.a) Options for expanding the Convention's online presence should be considered by the Secretariat, such as increasing the amount of multilingual content, exploring novel communication techniques to reach different audiences (such as Indigenous Peoples and local communities), refreshing and regularly updating digital platforms, and expanding social media activities.</p> <p>6.2.b) Action should be taken by Parties, with support from the Secretariat, to increase the level of engagement between CMS and the private sector, including by promoting the use of relevant CMS guidelines, and participation in CMS working groups, task forces and other bodies.</p>

Target	Indicator(s)	Baseline(s)	Potential Action(s)
<p>Target 6.3. By 2032, the total number of Parties to the Convention has increased from 133 to 160, surpassing 80 per cent of the countries recognized by the UN.</p>	<p>6.3.1: The number of new Parties that have ratified CMS during the period of the Samarkand Strategic Plan for Migratory Species (Convention-level; Data source: CMS Secretariat).</p>	<p>6.3.1: In 2024, there were 133 Parties to the Convention (Data source: CMS Secretariat).</p>	<p>6.2.c) Mechanisms should be developed by the Secretariat, in collaboration with Parties, to increase the involvement of the academic research community in the work of CMS, including by facilitating dialogue between academic researchers and policymakers, to develop a shared understanding of how research can fill existing and future data needs and knowledge gaps in relation to threatened migratory species.</p> <p>6.3.a) CMS Parties and the Secretariat should take action to encourage non-Parties to join CMS and its Agreements, especially taking into account the needs of CMS-listed species and key gaps hindering regional or migration-route level cooperation.</p> <p>6.3.b) CMS Secretariat should report to Parties on its initiatives to encourage non-Parties to join CMS.</p>
<p><i>Explanation:</i> Parties, with the support of the CMS Secretariat, undertake actions to increase the accession of new Parties to the Convention, facilitating cooperation for the benefit of migratory species.</p>	<p>6.4.1: Percentage of multilateral environmental agreements explicitly referencing CMS provisions in their decisions, resolutions and/or policies (Convention-level; Data source: CMS Secretariat and other MEA websites).</p>	<p>6.4.1: Baseline information has not yet been compiled/analysed. Suggested baseline year: 2024.</p>	<p>6.4.a) Action should be taken by Parties to ensure that other relevant international instruments, policies and initiatives address environmental issues affecting threatened migratory species and their habitats, and strengthen provisions to combat these issues, where possible. (Main mandates: Resolution 11.10 (Rev.COP14).)</p> <p>6.4.b) Parties should consider raising issues of concern for marine migratory species in relevant international bodies, including Regional Fisheries Management Organizations (RFMOs) and the International Seabed Authority (ISA), and by engaging with the BBNJ Agreement and its processes, including by supporting the development of robust, modern and uniform Environmental Impact Assessment for activities with potential impacts on marine migratory</p>
<p><i>Explanation:</i> CMS mandates, provisions and priorities are taken into consideration in the decisions and initiatives of other environmental and sustainable development-related international instruments, policies and</p>			

Target	Indicator(s)	Baseline(s)	Potential Action(s)
initiatives, including under the UN (e.g., NBSAPs, NDCs), as well as in relevant stakeholder strategic processes.			<p>species in areas within and beyond national jurisdictions. (Main mandates: Resolution 11.10 (Rev.COP14), Resolution 13.3.)</p> <p>6.4.c) Scientific Council should engage in relevant scoping and review processes for the IPBES assessment of integrated biodiversity inclusive spatial planning and ecological connectivity and a second global assessment of biodiversity and ecosystem services, with a view to ensure that CMS priority elements are addressed. (Main mandate: Resolution 10.8 (Rev.COP14).)</p>

Annex Table 1: Background information, relevant data considerations, caveats and knowledge gaps relating to the indicators, baselines and actions proposed for the Samarkand Strategic Plan for Migratory Species targets.

Goal 1. The conservation status of migratory species is improved.

Target 1.1. By 2029, all migratory species with an unfavourable conservation status are listed in CMS Appendices and are covered by an effectively implemented CMS Instrument and/or Concerted Action.

Background information on indicators and baselines:

- Target 1.1 focuses on whether or not migratory species with an 'unfavourable' conservation status have been listed in the CMS Appendices. While Article I.1.c) of CMS defines the circumstances when conservation status will be taken as 'favourable', data on all or several of the four elements of this definition are currently missing across many migratory species. Therefore, for Indicators 1.1.1 and 1.1.2, data from the IUCN Red List is used to determine unfavourable status. For these indicators, species categorized as globally Extinct in the Wild, Critically Endangered, Endangered, Vulnerable and Near Threatened by the IUCN Red List are considered to have an unfavourable status, consistent with the [Guidelines for Assessment of Appendix I and II Listing Proposals](#) (UNEP/CMS/Resolution 13.7/Annex 1).
- Indicator 1.1.1 is based on a list of the world's non-endemic migratory species, compiled from known data sources that document evidence of migratory behaviour. These sources are, for avian taxa: a list of species meeting the CMS movement criteria maintained by the CMS COP-appointed co-Councillor for birds; for other taxa: the IUCN Red List of Threatened Species (species classified as 'Full Migrants'); the Global Register of Migratory Species (GROMS); and migratory sharks and rays identified by [Fowler \(2014\)](#). Endemic status is determined using information on countries of occurrence obtained from the IUCN Red List (countries where the species' presence is classified as 'Extant', 'Possibly Extant', 'Possibly Extinct' or 'Presence Uncertain' and where the origin is classified as 'Native', 'Reintroduced' or 'Origin Uncertain'). Given the incomplete nature of information that is available on migratory behaviour, is important to note that any list of migratory species will be non-exhaustive and subject to change (see notes on possible updates to these lists in '*Relevant data considerations, caveats and knowledge gaps*' below). A disaggregation of the indicator by taxonomic group could be calculated to provide additional insights.
- Indicator 1.1.2 focuses on *active* CMS Instruments and/or Concerted Actions, as no readily available data exist on the *effectiveness* of these instruments. Baseline information for Indicator 1.1.2 has not yet been compiled but could be calculated using the data from the IUCN Red List and a comprehensive list of active CMS Instruments and/or Concerted Actions and the species to which they apply (which could be obtained from the CMS website and Species+).

Relevant data considerations, caveats and knowledge gaps:

- *Higher-level listings for birds:* Guidance would be needed from the CMS Secretariat and Parties as to which species from the higher-level listings for birds should be included in any analysis of indicators for CMS-listed species for Goals 1-6, noting the advisory list of 86 avian species, which belong to aggregated families and genera included in Appendix II and which have a significant proportion of individuals that cyclically and predictably cross one or more national jurisdictional boundaries and that have an unfavourable conservation status, contained in [Resolution 14.19](#).
- *Gaps in information on conservation status:* not all known migratory species have been assessed by the IUCN Red List, with recognized gaps in assessment of migratory freshwater fish and insects. Some migratory species have also been categorized by the IUCN Red List as Data Deficient.
- *Differences in definitions of migration:* Indicator 1.1.1 utilizes data from various sources to identify *migratory* species. However, it is important to note that definitions of migration differ and whether or not non-avian species meet the CMS movement criteria has not been verified at the time of writing.
- *Possible updates to information on migratory behaviour:* across some taxonomic groups, the migratory status of many individual species remains unknown or unresolved, meaning that any attempt to generate a list of *all* migratory species from the available data is bound to be non-exhaustive. The availability of information on migratory behaviour also differs between taxonomic groups; in particular, lists of migratory fish and insects are currently likely to be incomplete. Other credible sources of data on the migratory status of different taxonomic groups could be used to improve the baseline data used to identify migratory species as/when they become available, especially datasets that compare species' behaviour against the CMS definition of "migration". Ultimately, **information on migratory status** from datasets such as the IUCN Red List, GROMS and Fowler (2014) **could be replaced with species lists developed in line with the CMS definition**, that have been reviewed as part of CMS processes, as they become available (as has already been done for birds).
- *Changes in the underlying list of globally threatened and Near Threatened migratory species through time:* Indicator 1.1.1 is based on a list of globally threatened and Near Threatened non-endemic migratory species (described in detail above). Small changes in this list are likely to occur over time, due to improvements in the availability of information on conservation status (resulting in more species being assessed by the IUCN Red List) or migratory behaviour (resulting in changes to the core list of migratory species), some species being assessed differently (e.g. moving from Least Concern to globally threatened or Near Threatened, or vice versa), or because of shifts in taxonomy (e.g. species splits). Similarly,

Indicator 1.1.2 relies on an underlying list of globally threatened and Near Threatened CMS-listed species, which may also be subject to change. Changes to the lists of species underpinning Indicators 1.1.1 and 1.1.2 may impact the overall percentages that are reported. For this reason, the numerator and denominator will be included alongside both indicators, making it easier to understand whether changes in the overall percentage represent genuine progress towards the target. For example, for Indicator 1.1.1, the number of CMS-listed globally threatened and Near Threatened migratory species and total number of globally threatened and Near Threatened migratory species will be reported. A decrease in the overall percentage for Indicator 1.1.1 could occur if many more non-CMS species are assessed and categorized as globally threatened or Near Threatened; this would be captured by an increase in the absolute value of the denominator.

- *Time lags in assessment:* It is important to note that species assessments for the IUCN Red List can become outdated, if there are time lags between on-the-ground changes in conservation status and the publication of the next assessment. The frequency of updates also varies between taxonomic groups, making outdated assessments more likely for some groups of migratory species than others.
- *Unfavourable conservation status:* both Indicators 1.1.1 and 1.1.2 use a definition of unfavourable conservation status that includes globally threatened and Near Threatened species (see above). It is important to note that this excludes some species classified by the IUCN Red List as Least Concern that may not meet the Article 1.1.c) definition of favourable conservation status, because of a more recent population decline, or due to depleted abundance or a restricted distribution, relative to historic baselines.

Elements of Target 1.1 that are not covered by Indicators 1.1.1 and 1.1.2:

- *Effectiveness of CMS Instruments and/or Concerted Actions:* Indicator 1.1.2 measures the coverage of CMS-listed species by active Instruments and/or Concerted Actions; currently no methodologies have been developed to quantify their effectiveness in line with the original aims of Target 1.1.

Target 1.2. By 2029, the conservation status of all migratory species is reviewed regularly, informing priorities for conservation and management action

Background information on indicators and baselines:

- Indicator 1.2.1 is based on the proportion of known migratory species that have been assessed recently (<10 years ago) by the IUCN Red List at the global level and for which **adequate information** was available to evaluate the species' extinction risk. As the 'Data Deficient' categorization reflects a lack of information about the conservation status of the species, Data Deficient species are counted as 'not recently assessed', for the purposes of this indicator. Since the IUCN Red List is the primary source of globally comparable data on species' global conservation status, the indicator provides a measure of the availability of reliable, up-to-date information on conservation status for migratory species as a whole. Indicator 1.2.1 is a modified version of a complementary indicator for target 21.Y.4 in the Monitoring Framework for the Kunming-Montreal Global Biodiversity Framework (see [CBD/COP/16/31](#)).
- Indicator 1.2.2 reflects whether formal, large-scale, multi-species assessments relevant to the conservation status of migratory species have been conducted during the previous triennium, and the scope of these assessments. The indicator is based on a scoring system ranging from 0 to 2: a zero score would result from no large-scale assessments or analyses being conducted at all; a score of one indicates that comprehensive assessments OR taxon-specific assessments or analyses have been conducted; the maximum score of two indicates that comprehensive AND taxon-specific assessments have been undertaken. Comprehensive assessments are those that are relevant across the full range of CMS-listed species (e.g. reports such as the *State of the World's Migratory Species* or similar). Taxon-specific assessments include those that are relevant only to specific taxonomic groups of CMS-listed species, including reports produced by other CMS Instruments (e.g. [AEWA Conservation Status](#) reports or [Raptors MOU Conservation Status Assessment](#) reports); these taxon-specific analyses have greater scope to include more species-specific information and to provide recommendations that are tailored to a particular context.
- Indicator 1.2.3 addresses the availability of national-scale information on the conservation status of migratory species. It examines whether Parties have a process in place to regularly update national-level species assessments that consider CMS-listed species (e.g. regular updates to National Red Lists, or equivalent processes). The data needed to calculate this indicator could be obtained from changes to the current question XI.1 in the CMS National Reports, which asks Parties for updates on "major changes in the conservation status of migratory species" in their country. This question could be modified in order to obtain more consistent information from Parties on changes in national conservation status of CMS-listed species, as well as whether Parties have a process in place to regularly update national-level assessments, and the frequency and extent of any such updates.

Relevant data considerations, caveats and knowledge gaps:

- The process for producing the list of known migratory species used in Indicator 1.2.1 is described in detail above (see '*Background information*' for Target 1.1). To facilitate interpretation of changes in Indicator 1.2.1 that may arise from changes to this underlying list of species, both the numerator and denominator will be reported alongside the overall percentage (as above). There are challenges assessing the extent to which data on the conservation status of migratory species is "informing priorities for conservation and management action"; this element of Target 1.2 is not addressed by Indicators 1.2.1-1.2.3.

Target 1.3. By 2032, the conservation status of all migratory species listed in CMS Appendices has improved.

Background information on indicators and baselines:

- Indicators 1.3.1 and 1.3.2 are based on the IUCN Red List of Threatened Species™. This data source provides authoritative, comparable information on global extinction risk for the vast majority of CMS-listed species (all but one of the 1,189 CMS-listed species listed prior to COP14 had been assessed by the IUCN Red List; Data source: [State of the World's Migratory Species](#)).
- The Red List Index (RLI), disaggregated for CMS-listed species, has been selected as the basis of Indicator 1.3.1 as it provides a robust measure of aggregate trends in global extinction risk over time for this group of species, based on a methodology revised by [Butchart et al. \(2007\)](#). The RLI tracks genuine changes in the number of species in each IUCN Red List extinction risk category, excluding changes in status that arise through changes in taxonomy, or that can be attributed to improvements in information. RLI values range from 1 (all species are categorized as Least Concern) to 0 (all species are categorized as Extinct). While lower RLI values indicate that a group species is closer to extinction, a steeper RLI slope indicates that all species within the group are moving faster towards extinction. The RLI can also be calculated at the national level based on repeated assessments of national extinction risk (i.e. National Red Lists), if such assessments are available. A disaggregation of the indicator by taxonomic group could be calculated to provide additional insights, subject to data availability.
- Indicator 1.3.2 uses data from the IUCN Red List to track the proportion of CMS-listed species experiencing positive or stable population trends. It provides complementary information to Indicator 1.3.1, focusing on the number of species with positive evidence for upward or stable trends. Although reductions in population size are a key determinant of a species' ultimate extinction risk category (see [Guidelines for using the IUCN Red List Categories and Criteria](#)), the "current population trend" field is not used when applying the IUCN Red List criteria. Under the IUCN Red List criteria, a species' extinction risk also depends on other variables such as the overall size of the population and its geographic range.

Relevant data considerations, caveats and knowledge gaps:

- *Considerations relevant to the IUCN Red List:* Indicators 1.3.1 and 1.3.2 rely on information from the IUCN Red List, and as such, are subject to some of the same caveats highlighted above in relation to the indicators for Target 1.1. Notably, while the IUCN Red List database undergoes regular updates (partial updates to some of the species within the list typically occur 1-2 times per year), there can be a time lag before individual species are reassessed (e.g. all birds are reassessed every 4-5 years, with longer time lags before re-assessment for other taxonomic groups). Even though the IUCN Red List criteria allow projected future trends to be considered, there may be delays before concerning trends relevant to individual species are detected. Species assessments can therefore become outdated and may not reflect more recent changes in the factors that influence biodiversity loss (Indicator 1.2.1 provides a measure of how many assessments for migratory species were conducted within the last ten years).
- *Caveats associated with the Red List Index:* Indicator 1.3.1 is based on changes in the broad IUCN Red List categories that quantify the extinction risk faced by species at the global level. Changes in the Red List Index will not be sensitive to changes in the abundance and distribution of species within a broad category of extinction risk (e.g. declines in the abundance or distribution of Least Concern species, if these trends fall below the threshold needed for re-categorization to Near Threatened). It is also important to consider the impact of shifting baselines on the Red List Index, which is based on species assessments that consider declines occurring within a specific time window ([Costelloe et al. 2016](#)). This global picture can also be complemented by national-level RLI trends based on national-scale assessments. While national-level RLI trends are likely to be more sensitive to the local factors influencing the rate of biodiversity loss, national-level trends may be based on assessment methodologies that vary between countries. Issues with comparability may arise if different countries use different assessment methodologies that are not directly comparable to the IUCN global standards. Additionally, as noted by [Raimondo et al. \(2022\)](#), differences in countries' capacity to repeatedly assess species across all of the relevant taxonomic groups can potentially drive some of the differences in national-level RLI trends between countries.
- *Caveats associated with Indicator 1.3.2:* specifically in relation to Indicator 1.3.2, it should also be noted that population trends can be classified as 'unknown', for species where information on population trajectories is lacking. By focusing on species that are increasing/stable, the indicator avoids misclassifying shifts from the 'decreasing' category to 'unknown' as a success.
- *General limitations of aggregate indices:* aggregate indices such as the RLI (Indicator 1.3.1) have the potential to mask variability in trends between taxonomic groups, species and regions. This can make it challenging to determine whether the aggregate index is representative of the trends being experienced by most species or instead represents the average of highly divergent trends. It is important to note that an increase in the value of Indicator 1.3.1 does not necessarily imply that an improvement in conservation status has occurred for all of the species that are listed in the CMS Appendices. For example, for Indicator 1.3.1, further analysis of the data underpinning the indicator would be needed to determine precisely *how many* CMS-listed species have experienced an improvement in their conservation status.
- *Other aspects of conservation status:* CMS Article 1.1.c provides a definition of conservation status that takes into account the distribution and abundance of migratory species relative to historic baselines, as well as the ability of a species to form a viable component of its ecosystems. However, these aspects of "favourable" status currently lack robust global

indicators that can be applied across all CMS-listed species. For example, the recovery status of species' populations can be tracked using the [UCN Green Status of Species](#), which provides information on whether species are present, form viable populations and have recovered to sufficient levels to perform ecological functions across all parts of their range. However, at present, too few CMS-listed species have undergone Green Status assessments to include this metric as an indicator. Similarly, another aspect of conservation status are changes in species' distribution, but no methodology currently exists that can be used to reliably quantify this for all CMS-listed species at the global level.

Goal 2. The habitats and ranges of migratory species are maintained and restored, supporting their connectivity.

Target 2.1. By 2029, all important habitats for migratory species listed in CMS Appendices are identified, assessed and monitored to ensure their functionality and ability to support migratory species throughout their life cycles.

Background information on indicators and baselines:

- Indicator 2.1.1 measures the level of self-reported progress made by individual Parties in identifying important habitats and sites for migratory species in their country, using information from the CMS National Reports (Q.XIII.1, an existing question in the reporting template).
- Indicator 2.1.2 provides a measure of the progress made globally towards the identification of important sites across all CMS-listed species, focusing on sites that have been recognized through existing global or regional site identification initiatives. 'Important sites' include the [Key Biodiversity Areas](#) (KBAs), [Important Marine Mammal Areas](#) (IMMAs), [Important Shark and Ray Areas](#) (ISRAs) and [Important Marine Turtle Areas](#) (IMTAs) for which CMS-listed species occur at qualifying levels for at least one of the KBA, IMMA, ISRA or IMTA criteria (and potentially other relevant site identification initiatives, as appropriate, see *below*). Although there are some differences between these site types (see [Plumptre et al., 2024](#)), all four global initiatives use standardized scientific criteria to identify sites or discrete portions of habitat that contribute significantly to the global persistence of biodiversity across all taxonomic groups (KBAs) or that are important to marine mammal or shark/ray species and have the potential to be managed for conservation (IMMAs and ISRAs). While the criteria for recognizing IMTAs have been developed, no IMTAs have yet been identified ([IUCN WCPA Technical Note](#)). [CMS Resolutions 12.13](#) and [14.7](#) acknowledge the IMMA and ISRA criteria, and request Parties to identify specific areas where the identification of IMMAs could be particularly beneficial and to support with identification of ISRAs. Where sites are not already recognized as KBAs, IMMAs, ISRAs and IMTAs, and where spatial data are available for analysis, the list of 'important sites' for CMS-listed species defined above could include sites listed in networks developed under CMS Instruments (e.g. [AEWA Critical Site Network](#), [IOSEA Marine Turtle MoU Network of Sites of Importance for Marine Turtles](#), [Raptors MOU List of international important sites](#)) or in relevant regional networks (e.g. [East Asian-Australasian Flyway Partnership Site Network](#), [Western Hemisphere Shorebird Reserve Network](#)).
- A score of 100% for Indicator 2.1.2 indicates that at least one important site has been recognized through the KBA, IMMA, ISRA and/or IMTA processes for all CMS-listed species.
- Indicator 2.1.3 measures the progress made towards monitoring important sites for migratory species, focusing on systematic monitoring that has been undertaken in Key Biodiversity Areas. A score of 100% for Indicator 2.1.3 indicates that all KBAs triggered by CMS-listed species have undergone a site-level assessment of pressures, site condition and conservation actions within the last ten years, following the Important Bird Area (IBA) or [KBA monitoring protocol](#) (currently under development, based on the IBA monitoring scheme). Indicator 2.1.3 focuses on KBAs specifically, since standardized information on site condition and pressures are not widely available for IMMAs, ISRAs and IMTAs (see also Indicator 2.2.2, which focuses on trends in the condition of these sites).
- Disaggregations of Indicators 2.1.2 and 2.1.3 by geographic region and by taxonomic group could be calculated to provide additional insights.

Relevant data considerations, caveats and knowledge gaps:

- *Important sites in the context of CMS:* Indicator 2.1.1 relies on information gathered through the CMS National Reports. Q.XIII.1 of the National Reports currently asks whether "critical habitats and sites for migratory species" have been identified (the wording used to refer to sites differs from the language used in Target 2.1, which refers to "important habitats"). The guidance tip for Q.XIII.1 states that "CMS does not have formal definition of what constitutes a 'critical' site or habitat for migratory species. It is left to report compilers to work with any interpretations which may be in existing use at national level, or to use informed expert judgement".
- *Indicator baselines based on information from the CMS National Reports:* Indicator 2.1.1, and several other indicators throughout this document, rely on data obtained from Parties' responses in the CMS National Reports. Recent attempts to compare progress in implementation over successive triennia have previously been hampered by the fact that a relatively low number of Parties have submitted reports in all reporting periods (e.g. 32% of Parties submitted National Reports to both COP13 and COP14; see [Analysis of CMS National Reports to COP14](#)).
- *General limitations of global site identification initiatives:* Indicators 2.1.2 and 2.1.3 measure progress towards the identification and monitoring of globally significant sites for CMS-listed species, focusing on the discrete, spatially delineated areas of important habitat that have been recognized as meeting the global criteria for KBAs, IMMAs, ISRAs or IMTAs, as well as potentially including any additional sites identified through other relevant initiatives. Broader areas of habitat lying outside of these important sites are still likely to be

important for the conservation of migratory species, particularly for maintaining connectivity between different parts of a species' range, or for migratory species that occur at low densities across a very wide geographical area. Knowledge on additional important sites for CMS-listed species also exists outside of these core online databases. Although these gaps can be partially filled by supplementing data from global platforms with data from regional site networks, sites of importance are still being identified and are poorly documented for many less-studied species. Information on important sites may also sit outside of the formal databases and can be challenging to access (e.g. in data that exists in the wider scientific literature, unpublished knowledge held by scientists, Indigenous Peoples and local communities).

- *Relationship between the KBA Standard and the criteria for other site types:* differences between the [KBA Standard](#) and the criteria for other site types exist. For example, while KBAs are defined sites that can be managed as a single unit (e.g. a protected area, or through other effective area-based conservation measures), many IMMAs and ISRAs cover a large area where the appropriate management response may relate more to policy measures (e.g. fisheries management measures). These initiatives also take different approaches to migratory corridors: while KBAs are intended to be recognized only for stop-over or bottleneck sites under Criterion D1 on demographic aggregations (see [IUCN, 2016](#)), ISRAs may include broader migratory corridors ([Boyd et al., 2025](#)). Similarly, while the KBA Standard relies on quantitative thresholds to determine whether sites qualify as KBAs, the ISRA criteria are specifically aimed at sharks and rays, for which data are often limited, and uses a mixture of quantitative and qualitative thresholds ([Hyde et al., 2022](#)). According to a recent analysis, approximately one fifth of ISRAs could be recognized as KBAs; a greater number of ISRAs could potentially be recognized as KBAs if more species-level information (for example, on the locations and size of demographic aggregations) were to become available ([Boyd et al., 2025](#)).
- *Adequacy of the network of identified sites for CMS-listed species:* Indicator 2.1.2 assesses progress towards the identification of important sites across all CMS-listed species, highlighting advances made towards the closure of taxonomic gaps in site identification. Importantly, Indicator 2.1.2 does not measure whether the current site network adequately covers all of the important habitats used by CMS-listed species (i.e. whether important sites have been identified across all parts of their range, at all life stages or in all stages of their annual cycle).

Target 2.2. By 2032, all important habitats for migratory species listed in CMS Appendices are protected, effectively conserved, managed and restored through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures.

Background information on indicators and baselines:

- Indicator 2.2.1 measures global levels of protection for sites that are recognized as being important for CMS-listed species, using the same definition of an 'important site' as outlined above for Indicators 2.1.2 and 2.1.3. This definition encompasses [Key Biodiversity Areas](#) (KBAs), [Important Marine Mammal Areas](#) (IMMAs), [Important Shark and Ray Areas](#) (ISRAs) and [Important Marine Turtle Areas](#) (IMTAs) for which CMS-listed species occur at qualifying levels for at least one of the KBA, IMMA, ISRA or IMTA criteria, as well as sites identified through other relevant regional site identification initiatives (see '*Background information*' for Indicator 2.1.2). Since efforts to identify important sites for CMS-listed species are ongoing, the area covered by these sites is expected to expand over time. To account for this, and to ensure that changes in the value of Indicator 2.2.1 can be interpreted correctly, the area (km²) covered by protected and conserved areas will be reported alongside the overall percentage. This will enable the rate of expansion of the protected and conserved area network to be determined in both relative (percentage) and absolute (area) terms. A disaggregation of the indicator by geographic region could be calculated to provide additional insights.
- Indicator 2.2.2 addresses the element of Target 2.2 that refers to the *effective conservation* and/or *management* of important habitats for CMS-listed species. It measures the proportion of monitored Key Biodiversity Areas (KBAs) triggered by CMS-listed species that have 'good' or 'moderate' **condition** status scores and/or the proportion that are experiencing 'low' or 'medium' levels of **pressure**. The indicator is based on condition and pressure assessments conducted by a variety of stakeholders (including local groups, government staff and volunteers) at individual sites, using the standardized system provided by the [Important Bird Area \(IBA\) Monitoring Framework](#), which is currently being expanded to cover all KBAs. Condition (or state) assessments are based on the population size of the CMS-listed trigger species at the site, or on measures of the area and/or quality of the habitat on which the trigger species depends. Pressure assessments are based on information on the severity and scope of the specific threats that are known to affect the CMS-listed trigger species found at the site, or knowledge about pressures affecting the site as a whole. 'Severity' refers to the rate of population decline over 10 years or three generations that has been reported for the trigger species at the site, while 'scope' refers to the proportion of the trigger species' population at the site that has been affected. While condition scores provide a more direct measure of the status of the species at the site, it is important to note that population trends at a site for a given migratory species may be influenced by factors elsewhere in its migratory range. All condition and pressure assessments are based on a precautionary 'weakest-link' approach, meaning that the lowest (least favourable) condition score and the highest threat impact score at each site (among all trigger species) determines the overall score for the KBA. According to the latest information on KBA monitoring, monitoring assessments are generated by a range of possible stakeholders, including site managers, members of KBA Partners, KBA National Coordination Groups, local communities or Indigenous Peoples.

Relevant data considerations, caveats and knowledge gaps:

- *Coverage element of Target 2.2:* Indicator 2.2.1 measures the coverage of specific ‘important sites’ by area-based conservation measures. This is likely to be less relevant for the CMS-listed species that occur at low densities over a vast geographical area (e.g. some nomadic species, or some species of migratory birds that display weak migratory connectivity where individuals from the same breeding region are spread over a large non-breeding range at low densities, or *vice versa*). Importantly, as highlighted above in reference to Target 2.1, many important sites have yet to be identified, or have yet to be documented as part of the KBA, IMMA, ISRA or IMTA processes, for a range of CMS-listed species (see [State of the World’s Migratory Species](#) for a more detailed overview). For example, comparatively few KBAs have been triggered for CMS-listed aquatic mammals, fish and terrestrial mammals. Notable geographic gaps in the KBA site network also exist for specific regions, particularly in the Caribbean, Central and South America and Oceania. While significant progress has been made towards identifying IMMAs and ISRAs across many regions, the identification of IMMAs and ISRAs is an ongoing process, with current gaps existing for some marine areas. While the criteria and guidelines for recognizing IMTAs have been developed, the process to identify the first IMTAs is currently ongoing (IUCN WCPA Technical Note).
- *Effectiveness element of Target 2.2:* Indicator 2.2.1 provides a proxy for the “effectively conserved” element of Target 2.2, by tracking the condition and/or pressures affecting Key Biodiversity Areas (KBAs) identified as being important for CMS-listed species (standardized information on site condition and pressures are not widely available for IMMAs, ISRAs and IMTAs). The indicator focuses on *monitored* KBAs, including both *protected* and *unprotected* sites. So far, approximately one third of all KBAs that have CMS-listed trigger species have undergone monitoring assessments. Protected area management effectiveness (PAME) assessments, reported in the Global Database on Protected Area Management Effectiveness ([GD-PAME](#)), can also be used to understand the quality of management at the site level. Given that PAME assessments have only been conducted for a subset of protected areas to date (as of 2024, 6.8% of protected areas in the WDPA), and do not always capture information on the impact of management on biodiversity outcomes ([Protected Planet Report 2024](#); [Maxwell et al., 2020](#)), an indicator based on PAME assessments would currently yield limited insights. Work is under way under Protected Planet to develop a system enabling the detailed reporting on all elements of *effectiveness*, including the results of PAME assessments, but this system is not currently operational ([Protected Planet Report 2024](#)).
- *Equitable governance element of Target 2.2:* A true picture of the extent to which systems of protected and conserved areas are equitably governed is currently challenging to obtain, due to a paucity of data on governance *quality*. While the Site-level Assessment for Governance and Equity (SAGE) tool, developed by the International Institute for Environment and Development (IIED) provides data on the quality and equity of governance, these assessments have only been completed by a very small minority of protected and conserved areas globally: 0.22% of the area covered on land and 0.001% of the marine area covered ([Protected Planet Report 2024](#)).
- *Well-connected element of Target 2.2:* assessing the “well-connected” element of Target 2.2 is challenging, since the ability of organisms to move between protected sites varies dramatically between taxonomic groups and environments (Brodie et al., 2025). Robust ‘functional’ connectivity indicators, capable of capturing how easily migratory animals move between protected and conserved areas, have not yet been developed in a way that is relevant to more than a few taxonomic groups of CMS-listed species. Although four connectivity indicators (ProtConn, ProNet, PACT-Connectedness and the Protected Area Isolation Index, or PAI) have been adopted as component or complementary indicators for Target 3 of the Kunming-Montreal Global Biodiversity Framework, these measures have only been validated for use in the terrestrial realm. ProtConn, ProNet and PARC-Connectedness are ‘structural’ metrics that provide insights on the physical linkages and spatial configuration of terrestrial protected area networks (see [Protected Planet Report 2024](#)); the relevance of these indicators to specific taxonomic groups of migratory species (e.g. long-distance migratory birds) has not been evaluated. By contrast, PAI assesses the connectivity of the world’s terrestrial protected and conserved areas from the perspective of moving mammals, by accounting for the impact of human pressures on the ability of mammals to move through unprotected landscapes. PAI is therefore likely to provide relevant insights for some CMS-listed terrestrial mammals. Global-level updates for this indicator are likely to feature in future editions the [Protected Planet](#) report, making it unnecessary to conduct a CMS-specific analysis. Finally, the lack of operational connectivity indicators for the marine environment has been noted as a major gap ([Metaxas et al., 2024](#)) and is an area of active research; an indicator that measures protection levels for important habitats used by marine migratory species, taking into account whether areas are protected at either ends of their migration route, is currently being developed and is likely to provide insights that are highly relevant for CMS.
- *Steps towards progress towards enhancing connectivity for migratory species:* some areas that are currently governed and managed with the aim of improving or maintaining ecological connectivity may not be fully represented in the [World Database on Protected Areas](#) (WDPA) or [World Database on Other Effective Area-based Conservation Measures](#) (WD-OECM). This is often because they have not been formally designated in their entirety as protected areas or OECMs but rather recognized specifically as ecological corridors. The World Database on Ecological Corridors (WDEC) has been proposed as a global tracking tool to address this gap. The database is still under development (see action 2.2.d).

Elements of Target 2.2 that are not covered by Indicators 2.2.1 and 2.2.2:

- Global indicators capable of robustly assessing *actual* levels of “management effectiveness” and “equitable governance” for protected and conserved areas are currently lacking, as well as robust functional connectivity indicators that can be applied to a wide range of migratory species.

Target 2.3. By 2032, the loss, degradation and fragmentation of important habitats for migratory species listed in CMS Appendices is reduced, and habitats are restored to ensure that such habitats support their viability.

Background information on indicators and baselines:

- Indicator 2.3.1 addresses both the ‘degradation’ and ‘fragmentation’ elements of Target 2.3 with respect to freshwater ecosystems, which provide vital habitat for many aquatic CMS-listed species (e.g. migratory fish, aquatic mammals). Based on a methodology developed by [Grill et al. \(2019\)](#), ‘free-flowing rivers’ are defined as those rivers with a Connectivity Status Index (CSI) value at or above 95% over their entire length, from the source to outlet. The CSI takes into account the threat posed to fluvial ecosystems by multiple pressures, by incorporating ‘pressure indicators’ on the degree of longitudinal river fragmentation (e.g. from dams), the degree of regulation (i.e. alteration of natural water flow regimes), sediment trapping, consumptive water use (e.g. for irrigation, or industry), urbanization and road density. Datasets for the various pressure indicators are ultimately combined into a single modelling framework, primarily relying on hydrographic maps from the [HydroSHEDS](#) database. The [source code](#) enabling calculation of the indicator has been made publicly available under GNU General Public License v3.0 as part of the original Grill et al. (2019) paper, with additional documentation relevant to the analysis detailed elsewhere [online](#) by the World Wildlife Fund for Nature (WWF). Indicator 2.3.2 is of specific relevance to multiple CMS-listed species, as highlighted by the inverse relationship between the degree of extinction risk facing aquatic megafauna and the total length of free-flowing river habitat available within their distribution ranges ([He et al. 2021](#)).

Relevant data considerations, caveats and knowledge gaps:

- *Incomplete ecosystem coverage:* Indicator 2.3.1 provides general insights on the status of **freshwater** (fluvial) ecosystems globally. Although free-flowing rivers are of crucial importance to multiple CMS-listed species, Indicator 2.3.1 is not specifically targeted towards rivers that provide important habitat for species listed in the CMS Appendices. The lack of indicators capable of assessing the loss, degradation and/or fragmentation of important habitats for migratory species in the **marine environment** is a **major gap**. There are currently no well-established **terrestrial** indicators that can be applied in a targeted way to **specific sites of importance** for CMS-listed species (i.e. to the subset of sites identified through Indicator 2.1.1). The lack of indicators capable of assessing the loss, degradation and/or fragmentation of important habitats for migratory species in the **marine environment** also remains a major gap.
- *Indicators under development that may be able to address gaps:* in the future, the lack of a targeted indicator for **terrestrial sites of importance** for CMS-listed species could potentially be filled by the Ecosystem Integrity Index (EII) – a multidimensional index that aims to measure the structure, composition and functioning of ecosystems, relative to natural baselines, at 1 km² spatial resolution. To assess structure, the EII incorporates remote-sensing derived information on the cumulative intensity of anthropogenic pressures (derived from the [Human Modification Index](#)); compositional integrity is measured through the use of the Biodiversity Intactness Index, which quantifies how the abundance and composition of species in an area have been altered by human pressures (using the PREDICTS database); the third component, functional integrity, is based on measurements of alterations to net primary productivity, derived from remotely sensed spatial layers. Once the application of the EII to networks or systems of discrete sites for migratory species has undergone further validation, this metric could potentially be applied to the terrestrial sites identified through Indicator 2.1.1.

Elements of Target 2.3 that are not covered by Indicator 2.3.1:

- The restoration element of Target 2.3 is not explicitly covered by Indicator 2.3.1.

Goal 3. Threats affecting migratory species are eliminated or significantly reduced.

Target 3.1. By 2032, any take, use and trade of migratory species listed in CMS Appendices is sustainable, safe and legal, overexploitation is prevented, risk of pathogen spillover is reduced and negative impacts on non-target species and their ecosystems are minimized.

Background information on indicators and baselines:

- Indicator 3.1.1 addresses the **outcome** of Target 3.1 by estimating trends in the global extinction risk (i.e. IUCN Red List category) of all CMS-listed species driven only by the negative impacts of utilization or the positive impacts of its management. All other changes are excluded, whether from improved knowledge or genuine impacts of other threats or their control. Although the [IUCN Threats Classification Scheme](#) (version 3.3) ‘Biological Resource Use’ threat category includes some threats that only impact migratory species indirectly (e.g. logging and wood harvesting, gathering of terrestrial plants), this indicator would be based on changes in species’ extinction risk driven by the following sub-categories of threat: 5.1 Hunting & collecting terrestrial animals and 5.4 Fishing & harvesting aquatic resources. These threat sub-categories encompass both the pressure from intentional biological resource

use and unintentional impacts (e.g. incidental catch of non-target species). Additionally, it should be noted that Red List Index trends driven by utilization may only be available for a subset of CMS-listed species in particular taxonomic groups for which sufficient data is available.

- Indicator 3.1.2 addresses a key element of the **response** to the threat posed by take, use and trade to CMS-listed species: the existence of effective measures, supported by compliance mechanisms, to prevent the overexploitation of Appendix II-listed species. The indicator integrates consideration of non-target species and ecosystems that may also be affected. The information needed to calculate Indicator 3.1.2 would need to be collected from new questions in the CMS National Reports. Questions could focus on Appendix II-listed species in general or alternatively provide an option for Parties to provide information on specific taxonomic groups. These could be adapted from a set of potential binary indicator questions produced as part of an expert workshop convened to develop approaches to support CBD Parties in measuring progress towards Target 5 of the KMGBF.

Relevant data considerations, caveats and knowledge gaps:

- Since the taking of Appendix I-listed species is prohibited under CMS Article III.5, with a narrow range of limited exceptions, Indicator 3.1.2 **focuses on Appendix II-listed species only**. As prohibiting the taking of Appendix I-listed species is a core obligation of CMS Parties, the need to implement this provision through national legislation and via enforcement mechanisms is addressed by Indicators 5.1.1 and 5.1.2. These indicators may also be relevant to consider when assessing progress towards Target 3.1.
- None of the indicators outlined above specifically capture trends in the impact of incidental catches on the populations of non-target species, or impacts on the populations of species caught as byproduct. The [Bycatch Management Information System](#) contains fisheries- and observer-reported data on bycatch of sharks, rays, seabirds, sea turtles and cetaceans in oceanic tuna and billfish fisheries, but no well-established indicators tracking bycatch trends over time across multiple taxonomic groups of CMS-listed species could be identified.

Elements of Target 3.1 that are not covered by Indicators 3.1.1-3.1.2:

- Unmeasured elements of Target 3.1 include the “risk of pathogen spillover” arising from any take, use and trade in CMS-listed species.

Target 3.2. By 2032, the direct mortality of migratory species caused by human-made infrastructure is significantly reduced to levels that are not harmful to species' viability

Background information on indicators and baselines:

- Indicator 3.2.1 addresses the **outcome** of Target 3.2 by estimating trends in the global extinction risk (i.e. IUCN Red List category) of all CMS-listed and/or all migratory species driven only by the negative impacts of human-made infrastructure or the positive impacts of measures to mitigate infrastructure-related threats. All other changes are excluded, whether from improved knowledge, or genuine impacts of other threats or their control. Although the [IUCN Threats Classification Scheme](#) (version 3.3) does not contain a broad category for the threat to species caused by human-made infrastructure, this indicator could be based on changes in species' extinction risk driven by sub-categories of infrastructure-related threat that *may* cause direct mortality to migratory species: 3.3. Renewable Energy and 4. Transportation & Service Corridors (includes 4.1. Roads & Railroads, 4.2 Utility & Service Lines, 4.3 Shipping Lanes, 4.4 Flight Paths). Threats arising from '3.1. Oil & Gas Drilling', '3.2. Mining & Quarrying' and infrastructure-related threats falling under the broad category '7. Natural System Modifications' (such as '7.2.9 Small dams', '7.2.10 Large dams' and '7.2.11 Dams (size unknown)') are not considered under the indicator. Threats resulting from '9.6.1 Light Pollution' are considered under Indicator 3.3.1 (artificial illumination can increase mortality arising from collisions with buildings, for migratory birds).
- Indicator 3.2.2 is a **response** indicator that focuses on the collective progress made by Parties to combat the threat posed by infrastructure development by integrating migratory species considerations into Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs). EIAs and SEAs identify risks and potential biodiversity impacts at the planning stage of infrastructure and/or development projects; robust EIA and SEA procedures can help to ensure that impacts on migratory species are avoided and/or minimized.

Relevant data considerations, caveats and knowledge gaps:

- Indicator 3.2.1 focuses on the outcome of Target 3.2 by tracking changes in species' extinction risk for which pressures associated with human-made infrastructure have been identified as the *primary* driver. Red List Index trends driven by infrastructure-related threats may only be available for a subset of CMS-listed species (i.e. taxonomic groups for which sufficient data is available). An alternative, and potentially more responsive, measure of progress towards achieving Target 3.2 might involve monitoring trends in infrastructure-driven mortality over time. While some databases collate this type of information (e.g. [Global Bird Collision Mapper](#), which collates data on avian collisions with buildings), most of these datasets are limited in geographical scope, restricted to certain taxonomic groups and have not been validated for use in indicators. Animal movement data is also increasingly being combined with information on mortality events (e.g. records of collisions with energy infrastructure, [Serratosa et al. 2024](#)) or proxies for mortality (e.g. vessel traffic, [Nisi et al. 2024](#)), but robust indicators based on these approaches have not yet been developed.
- While Indicator 3.3.2 provides information on whether Parties have EIA and SEA processes in place that can account for the distinct needs of migratory species, this information is not sufficient to confirm how *stringently* or *effectively* EIAs and SEAs are being applied. In response to Q.IV.5 of the CMS National Reports, 49% of reporting Parties described

challenges or lessons learned in relation to the application of EIAs and SEAs to migratory species during the most recent triennium; a lack of scientific knowledge, insufficient resources and low levels of compliance with EIA/SEA recommendations were among the most commonly reported challenges ([Analysis of CMS National Reports to COP14](#)).

Target 3.3. By 2032, the negative impacts of pollution including transboundary effects, and poisoning on migratory species and their habitats are reduced to levels that are not harmful to species' viability.

Background information on indicators and baselines:

- Indicator 3.3.1 addresses the **outcome** of Target 3.3 by estimating trends in the global extinction risk (i.e. IUCN Red List category) of all CMS-listed and/or all migratory species driven only by the negative impacts of pollution or the positive impacts of measures to control pollution. The focus on extinction risk in this metric is closely linked to the wording of Target 3.3, which references "species viability". All other changes are excluded, whether from improved knowledge, or genuine impacts of other threats or their control. The [IUCN Threats Classification Scheme](#) includes a high-level pollution category (IUCN threat category 9. Pollution) that covers a wider range of pollution types (defined as threats from the "introduction of exotic and/or excess materials or energy from point and nonpoint sources").
- Indicator 3.3.2 addresses the **response** from Parties by tracking whether measures have been implemented to reduce negative impacts of pollution on migratory species, across the full range of relevant pollution types highlighted in the *Explanation* for Target 3.3: a) poisoning, b) artificial light, c) anthropogenic noise, d) chemicals, and e) plastic pollution. The information needed to calculate this indicator would need to be obtained via a new question in the CMS National Reports: this question could be designed so that the measures taken by Parties to reduce pollution could be disaggregated by pollution types a)-e).

Relevant data considerations, caveats and knowledge gaps:

- Indicator 3.3.1 focuses on the outcome of Target 3.3 by measuring changes in species' extinction risk for which pollution is the *primary* driver. It should be noted that Red List Index trends driven by pollution may only be available for a subset of CMS-listed species in particular taxonomic groups for which sufficient data is available. This indicator could potentially be complemented by additional metrics that quantify global trends in actual levels of pollution that are known to impact CMS-listed species, although these metrics would not be focused specifically on CMS-listed species or their habitats. Relevant metrics that have been adopted as part of the Monitoring Framework for the Kunming-Montreal Global Biodiversity Framework (KMGBF) include: 7.1. Index of coastal eutrophication (headline indicator for Target 7), 7.2. Pesticide environment concentration and/or aggregated total applied toxicity (headline indicator for Target 7) and 7.CT.3 Plastic debris density (component indicator for Target 7).

Target 3.4. By 2032, the impact of climate change on migratory species and their habitats is reduced through mitigation and adaptation, including through nature-based solutions and/or ecosystem-based approaches and disaster risk reduction actions, while minimizing negative and fostering positive impacts on biodiversity.

Background information on indicators and baselines:

- Indicator 3.4.1 addresses the **outcome** of Target 3.4 by estimating trends in the global extinction risk (i.e. IUCN Red List category) of all CMS-listed and/or all migratory species driven only by the negative impacts of climate change or the positive impacts of measures to mitigate climate change ([IUCN Threats Classification Scheme](#): 11. Climate change & severe weather). All other changes are excluded, whether from improved knowledge, or genuine impacts of other threats or their control.
- Indicator 3.4.2 provides a measure of the progress Parties have made towards undertaking climate change vulnerability assessments at an appropriate scale (national, regional, international) for CMS-listed and non-CMS-listed migratory species. Called for by [Resolution 12.21 \(Rev.COP14\)](#), climate change vulnerability assessments are needed to understand which migratory species are at greatest risk from the negative impacts of climate change and which conservation measures are needed to mitigate these impacts. The information needed to calculate this indicator would need to come from a new CMS National Report question on the number, species coverage and scale of any climate change vulnerability assessments undertaken by Parties.

Relevant data considerations, caveats and knowledge gaps:

- Indicator 3.4.1 focuses on the outcome of Target 3.4 by measuring changes in species' extinction risk for which climate change is identified as the *primary* driver. These trends may only be available for a subset of CMS-listed species in a restricted set of taxonomic groups for which sufficient data is available. Due to the broad nature of the IUCN Red List extinction risk categories, the Red List Index showing trends driven by climate change may not sufficiently sensitive to track climate change impacts on CMS-listed species; changes in population trends, or changes in species' ranges at the margins of their current distribution, are likely to be more responsive indicators of emerging climate change impacts. Alternatives to Indicator 3.4.1 could include multi-species metrics that compare the population trends of cold- and warm-adapted species (e.g. measures such as the Community Temperature Index; [Devictor et al. 2012](#)), which have been developed for birds in European countries using data from systematic monitoring schemes ([Gregory et al. 2009](#); see [Climate change impact indicator for European birds](#)). However, indicators of this type are likely to only be available for specific taxonomic groups (e.g. birds) in regions for which large-scale and long-term monitoring data are available ([Barton et al. 2023](#)).

Elements of Target 3.4 that are not covered by Indicators 3.4.1 and 3.4.2:

- *Monitoring the implementation of measures to facilitate species adaptation in response to climate change*: A wide range of taxon-specific conservation measures can potentially be undertaken to facilitate the adaptation of migratory species to climate change, making it challenging to obtain comparable insights on this element of Target 3.4 from the CMS National Reports. There is an urgent need to fill this gap and to develop and test metrics that are capable of measuring the long-term effectiveness of climate change adaptation measures ([Barton et al., 2023](#); [Pearce-Higgins et al. 2022](#)).

Target 3.5. By 2032, the negative impacts of invasive alien species on migratory species and their habitats are reduced or eliminated.

Background information on indicators and baselines:

- Indicator 3.5.1 addresses the **outcome** of Target 3.5 by estimating trends in the global extinction risk (i.e. IUCN Red List category) of all CMS-listed and/or all migratory species driven only by the negative impacts of invasive alien species or the positive impacts of their control. All other changes are excluded, whether from improved knowledge, or genuine impacts of other threats or their control.
- Indicator 3.5.2 tracks the **response** from Parties by assessing whether measures for controlling the threat posed by invasive alien species are in place, using information that would need to be obtained via a new question in the CMS National Reports. Information gathered by CBD Parties to report against the Kunming-Montreal Global Biodiversity Framework binary indicator for target 6.b could help inform the formulation of the question as well as Parties' response to this question. Insufficient implementation of policies and measures designed to manage biological invasions has been noted as a significant global gap ([IPBES 2023](#)). Alternatively, a question could be developed on the consideration of migratory species within measures to prevent the spread of invasive alien species, which represents the most cost-effective solution to this threat ([IPBES 2023](#)).

Relevant data considerations, caveats and knowledge gaps:

- The [Global Register of Introduced and Invasive Species](#) (GRIIS), maintained by the IUCN SSC Invasive Species Specialist Group, represents a key source of information underpinning Kunming-Montreal Global Biodiversity Framework headline indicator 6.1 on the rate of invasive alien species establishment. Although further work would be needed to define the list of invasive alien species most relevant to CMS-listed species, overall trends in the spread and prevalence of invasive alien species will be of relevance to CMS; maintaining and updating GRIIS would therefore help to improve global understanding of this threat. It should also be noted that quantifying invasion trends remains challenging due to substantial spatial and temporal variation in efforts to monitor invasive species ([McGeoch et al. 2023](#)). Standard approaches and tools capable of measuring surveillance effort have not yet been developed ([McGeoch et al. 2023](#)).

Goal 4. Implementation of CMS is supported by adequate knowledge, capacity and resources.

Target 4.1. By 2029, Parties have access to relevant information and evidence-based guidance to effectively implement the Convention, its Resolutions and Decisions.

Background information on indicators and baselines:

- Indicator 4.1.1 evaluates progress towards achieving Target 4.1 by measuring the availability of population abundance data from systematic monitoring schemes across CMS-listed species. Population monitoring data is needed to produce robust trend estimates for individual species and broader taxonomic groups, and as highlighted in the [metadata factsheet](#) for KMGBF headline indicator 21.1, it is one of the key types of information required to quantify status and trends in biodiversity. While the CMS-specific information needed to calculate Indicator 4.1.1 would need to be obtained from Parties through a new question or sub-question in the CMS National Reports, the close linkages with the suggested approach for headline indicator 21.1 means that Parties may be able to answer this question using a specific subset of the data needed to meet CBD reporting requirements. It is important to note that the methodology for KMGBF headline indicator 21.1 is still in very early stages of development, with no defined timeline for when it will become operational. A potential new question in the CMS National Reports could ask Parties to estimate the approximate number or percentage coverage of CMS-listed species by systematic monitoring schemes that provide nationally relevant data (i.e. schemes operating at the national level, or internationally coordinated schemes that a country is participating in, that provide relevant insights). The question could be asked in relation to all CMS-listed species (potentially most relevant to Indicator 4.1.1) and/or for broad taxonomic groups of CMS-listed species (to provide additional useful insights concerning gaps in monitoring, and to recognize progress made by Parties for specific groups).
- Indicator 4.1.2 captures whether or not Parties have access to relevant information that helps them to determine the most significant threats facing specific taxonomic groups of CMS-listed species at the national level. Understanding the most damaging pressures that need to be addressed nationally represents a key step in setting priorities for conservation action. The information needed to calculate this indicator could potentially be obtained through changes to an existing question in the CMS National Reports (e.g. Q.X.1, which asks Parties to identify which of the following pressures are having an adverse impact on migratory species and their habitats).

- Indicator 4.1.3 measures the availability of information on migration routes and migratory connectivity that is contained within current modules of the [CMS Atlas on Animal Migration](#). Information on migratory routes at the global and regional level represents an important part of the knowledge that can support Parties' efforts to implement CMS, by helping to identify drivers of population decline and to avoid development impacts on migratory routes. The development of the CMS Atlas on Animal Migration is a long-term initiative that currently contains four modules: an [Atlas for migratory mammals in the Central Asian region](#), the [Eurasian African Bird Migration Atlas](#), the [Marine Turtle Breeding and Migration Atlas](#) ('TurtleNet') and the [Global Atlas on Ungulate Migration](#). Furthermore, the [Migratory Connectivity in the Ocean \(MiCO\)](#) initiative aims to inform the Atlas of Animal Migration.

Relevant data considerations, caveats and knowledge gaps:

- Relevant information to effectively implement the Convention, its Resolutions and Decisions:* Indicators 4.1.1 and 4.1.2 address two of the information sources most likely to be relevant to management considerations for CMS-listed species. While data on the populations and pressures facing specific groups of migratory species are crucial, Parties are likely to require a much broader range of species- and habitat-related information in order to effectively implement CMS. The regular production of reviews on the conservation status of CMS-listed species (see Target 1.2 and Indicator 1.2.2) provides an important means of sharing relevant information to support priority-setting under CMS. This could be further supported by guidelines on specific implementation matters.

Elements of Target 4.1 that are not covered by Indicators 4.1.1-4.1.3:

- Gaps in the evidence-based guidance needed to implement the Convention, its Resolutions and Decisions:* Information on the specific topics where additional (or updated) guidance documents are urgently required by Parties is currently lacking. Although it would be possible to quantify the number of guidance documents produced by the CMS Secretariat during each triennium, without this information on levels of need, it would be challenging to gauge whether levels of guidance are sufficient to meet the needs of Parties. Once key information gaps for individual Parties have been documented, it would potentially be possible to track progress towards filling them.

Target 4.2. By 2029, Parties have the technical capacity needed to effectively implement the Convention, its Resolutions and Decisions.

Background information on indicators and baselines:

- Indicator 4.2.1 reflects the overall percentage of Parties reporting the need for technical assistance (or other types of assistance) in order to build sufficient capacity to implement obligations under CMS and relevant Resolutions. The indicator provides a measure of the overall scale of the technical capacity gap, as reported by Parties in the CMS National Reports (Q.XVIII.3). There may be a need for further guidance on or refinement of the multiple-choice options that are listed as possible answers to this Q.XVIII.3, as several currently relate to technical capacity; current options include 'Funding support', 'Technical assistance', 'Education/training/mentoring', 'Other skills development', 'Provision of equipment or materials', 'Exchange of information & know-how', 'Research & innovation', 'Mobilizing volunteer effort (e.g. citizen science)', 'Other (please specify)'. Additionally, to help fulfil action 4.2.a), Q.XVIII.3 (or another existing question, such as Q.XVIII.1) could be adapted to gather specific information from Parties on their priority technical capacity gaps. This information could be combined with Parties' responses to the CMS National Legislation Programme questionnaire (on support needs in relation to the implementation of CMS Articles III.4.a) and III.4.b) in order to inform the capacity-building activities needed to deliver Target 4.2. Information gathered by CMS Parties that are also Parties to the Convention on Biological Diversity (CBD) may also be relevant to this question (e.g. reporting against the binary indicator question 20.b in the Monitoring Framework for the Kunming-Montreal Global Biodiversity Framework), since gaps in the technical capacity needed to effectively implement CMS may overlap with capacity gaps needed to deliver on broader biodiversity goals.

Relevant data considerations, caveats and knowledge gaps:

- Measuring the outcomes of capacity-building activities:* While indicator 4.2.1 provides a measure of overall technical capacity needs, it does not track the reach or impact of capacity-building activities that are being implemented to address these gaps, or whether capacity-building effort is being directed towards the most pressing needs. The raw number of capacity-building activities taking place under CMS could be tracked to provide insights towards progress, but this may be challenging to interpret without some measure of capacity-building outcomes.

Target 4.3. By 2029, Parties have mobilized or secured resources to implement the Convention, its Resolutions and Decisions.

Background information on indicators and baselines:

- Indicator 4.3.1 focuses on the measuring the difference between the estimated costs associated with effectively implementing the Convention, its Resolutions and Decisions and the actual level of funding secured or mobilized by the CMS Secretariat and Parties. This indicator could be informed by action 4.3.a) and reflects the degree of success in securing resources for the implementation of the Convention. Indicator 4.3.1. includes an assessment of the proportion of the CMS Programme of Work (PoW) that has been fully funded over the previous triennium to measure how successful the Convention has been in securing funding to deliver certain key activities. This could be calculated based on the proportion of discrete PoW activities that have been funded, or in terms of the total estimated costs of the PoW, depending on data availability.

- Indicator 4.3.2 complements Indicator 4.3.1 by providing a measure of the change in resource mobilization for conservation activities specifically benefiting migratory species, at the level of individual Parties. The information needed to evaluate Indicator 4.3.2 would be obtained from Q.XIX.2 of the CMS National Reports (specifically the follow-up question on overall levels of resourcing).
- Indicator 4.3.3 focuses on the amount of resources (financial and in-kind) provided by Parties to other CMS stakeholders (including other Parties, the Secretariat, NGOs and IGOs) in their efforts to implement the Convention, including (but not limited to) direct transfers of resources from developed countries to developing countries. The IWG could not reach consensus on the indicator for 4.3.4. Therefore, three possible options have been presented.

Relevant data considerations, caveats and knowledge gaps:

- Indicator 4.3.2 is designed to reflect trends in resourcing levels directed specifically towards migratory species conservation. It should be noted that Q.XIX.2 of the CMS National Reports requests Parties to provide an estimate of trends in resourcing levels, compared to the previous triennium. There may be a need to adjust this question, to enable longer-term trends in resourcing levels to be tracked over successive triennia.

Goal 5. Implementation of CMS is supported by effective governance, including use of best available science and information, and collaborative working.

Target 5.1. By 2029, Parties have mechanisms in place, including national legislation and enforcement mechanisms where relevant, to fully implement the Convention, its Resolutions and Decisions.

Background information on indicators and baselines:

- *Indicator 5.1.1:* Article III.5 of CMS establishes that for species listed in Appendix I, CMS Parties are obliged to prohibit the taking of these species, with a narrow set of exceptions. Taking encompasses “taking, hunting, fishing, capturing, harassing, deliberate killing, or attempting to engage in any such conduct”. Indicator 5.1.1 tracks the percentage of Parties reporting that they have fully prohibited taking in line with Article III.5, using information from the CMS National Reports (Q.IV.1). The assessment of progress towards this element of Target 5.1 can also be informed by analysis of responses provided to the CMS [National Legislation Programme](#) (NLP) questionnaire, which can provide further information on which of the five modes of taking have been fully prohibited. Although not all Parties have participated in the NLP (70 out of 133 Parties, as of 2024), the detailed analysis of legislation provided by the NLP represents an additional source of information on the baseline state of implementation regarding Article III.5, that can complement insights obtained from the CMS National Reports.
- *Indicator 5.1.2:* Measures the extent to which the domestic legislation used by Parties to implement Article III.5 of CMS on the prohibition of take is being enforced and complied with. The information needed to evaluate this indicator could potentially come from a new question in the CMS National Reports or a revision of the existing Q.IV.1 on legislation adopted to prohibit the taking of Appendix I-listed species. One possible approach to a new question could potentially involve asking Parties whether they have conducted a review of enforcement of and compliance with domestic legislation relevant to CMS Article III.5, and if yes, whether the assessed level of enforcement and compliance is high (full compliance or enforcement), moderate (partial compliance or enforcement), low (low levels of compliance or enforcement), none (no enforcement/compliance) or unknown.
- *Indicator 5.1.3:* Under Article III.4, CMS Parties that are Range States of Appendix I species are also directed: “a) to endeavour to conserve, and where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction; b) to prevent, remove, compensate for or minimize, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species; and c) to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species”. Indicator 5.1.3 quantifies the percentage of Parties that are taking appropriate measures to address Articles III.4 a) and III.4 b). Indicator 5.1.3 could be calculated through changes to the existing CMS National Report questions that address Articles III.4.a) and III.4.b). Alternatively, it could be calculated through the analysis of responses provided by participating Parties to the NLP questionnaire on whether legislation and/or other domestic measures are in place that address Articles III.4.a) and III.4.b) (see the ‘*Relevant data considerations, caveats and knowledge gaps*’ section below for further details). It should be noted that information on the implementation of Article III.4 c) is not currently collected through the CMS National Reports or the NLP.
- *Indicator 5.1.4:* tracks the number of CMS Parties that have participated in the [CMS National Legislation Programme](#) by submitting a completed questionnaire to the Secretariat, providing further details on their implementation of Articles III.4 a), III.4 b) and III.5.

Relevant data considerations, caveats and knowledge gaps:

- *Implementation of CMS Article III.5:* Indicators 5.1.1 and 5.1.2 focus on tracking Parties’ progress towards implementing CMS Article III.5. A more systematic and in-depth evaluation of the mechanisms Parties have in place to ensure compliance would be needed to fully evaluate the extent to which any domestic legislation implementing Article III.5 is being enforced and/or complied with.

- *Implementation of CMS Article III.4:* While Parties' responses to the NLP could readily be used to determine the number of Parties that report having legislation or other domestic measures in place to address Articles III.4 a) and/or III.4 b), a more detailed analysis of the contents of these laws would be needed to understand the current state of implementation. It should be noted that a lack of resourcing means that this more detailed analysis is not currently carried out by the CMS Secretariat, limiting the picture that existing analyses of NLP responses can currently provide.
- *Relevance of Indicator 1.1.2 to Target 5.1:* Indicator 1.1.2 is also relevant to Target 5.1, since it assesses the degree of progress in implementing Article IV.3 of CMS, which establishes that Parties that are Range States of migratory species listed in Appendix II "shall endeavour to conclude agreements where these would benefit the species and should give priority to those species in an unfavourable conservation status". Indicator 1.1.2 assesses the progress towards the implementation of this core provision, by quantifying the proportion of Appendix II-listed species with an unfavourable conservation status that are covered by global or regional Agreements, a Memorandum of Understanding (MOUs) or a Concerted Action (for further details, see the 'Background information' for Indicator 1.1.2).

Target 5.2. By 2029 and beyond, all Parties inform the COP, through National Reports, of measures taken to implement the Convention, its Resolutions and Decisions.

Background information on indicators and baselines:

- The National Reporting process is the official mechanism by which Parties provide information to the decision-making bodies of CMS on measures taken to implement the Convention. Indicator 5.2.1 tracks the percentage of Parties that have submitted National Reports each triennium before the reporting deadline.

Relevant data considerations, caveats and knowledge gaps:

- Although Indicator 5.2.1 tracks how many Parties have submitted National Reports towards the end of each triennium, the indicator does not take into account the completeness of those reports (i.e. variation between Parties in how many questions were answered) and it does not assess how the results are used to inform priorities.

Target 5.3. Parties use best available science, as the basis for evidence-based advice and decision-making to address the conservation of migratory species, their habitats and threats under CMS.

Background information on indicators and baselines:

- Indicator 5.3.1 assesses the degree to which Scientific Council recommendations are adopted at each Conference of the Parties. The indicator focuses on the adoption of recommendations at the COP because this is the main arena where input from the Scientific Council (the body established to provide advice on scientific matters to other CMS bodies and CMS Parties) is considered and translated into Resolutions and Decisions to be implemented by Parties. The indicator could be compiled by the CMS Secretariat, following advice provided by the CMS Scientific Council.

Relevant data considerations, caveats and knowledge gaps:

- Indicator 5.3.1 focuses on a Convention-level measure of whether Parties are collectively using the best available scientific advice, as provided by the Scientific Council, in their decision-making. It does not address whether individual Parties are utilizing scientific evidence to inform their decision-making at the national level.

Target 5.4. By 2032, CMS provisions are included in relevant national planning processes and policies for the benefit of migratory species and the ecosystem services they provide.

Background information on indicators and baselines:

- Indicator 5.4.1 reflects whether or not Parties have integrated the provisions of CMS and/or migratory species into the development of their latest NBSAPs (National Biodiversity Strategies and Action Plans) or other relevant national planning processes and policies to some degree, using information reported by Parties in their National Reports to CMS. Q.XVI.1 of the CMS National Reports could provide an approximate baseline for the level of progress made towards reaching the target, but the wording of the question (which asks Parties whether they have 'explicitly' addressed obligations under CMS, and other priorities for migratory species conservation, in their NBSAP) may need to be modified to better match the indicator (potentially by capturing 'implicit' references to CMS and/or migratory species). The follow-up evidence that is requested as part of Q.XVI.1 may also need to be adjusted (this may provide valuable context for a more in-depth analysis of responses).

Relevant data considerations, caveats and knowledge gaps:

- Indicator 5.4.1 does not measure the *extent* to which Parties have integrated CMS priorities and/or wider considerations relevant to migratory species into their NBSAPs, the mechanisms by which they have done so, or the degree of progress towards implementation. While this represents an important gap, it should be noted that the range of CMS provisions that Parties can choose to include in their NBSAPs is potentially very broad and will vary depending on their own national context and priorities. This variability makes it

challenging to develop quantitative indicators that can address the *degree* of integration. Planned in-depth analyses of the contents of submitted NBSAPs by the wider scientific community may provide further insights on the progress towards achieving Target 5.4.

Target 5.5. By 2029, Parties work collaboratively with other governments on actions and initiatives to implement CMS, its Resolutions and Decisions and associated guidance.

Background information on indicators and baselines:

- Indicator 5.5.1 tracks the proportion of Parties that have engaged with other governments to develop joint initiatives under CMS. The information needed to calculate this indicator could be drawn from QXII.3 (on participation in the implementation of Concerted Actions) and/or Q.XII.1 (on participation in the development of any proposals for new CMS Agreements or Memoranda of Understanding) of the CMS National Reports. These questions could potentially be broadened to encompass new CMS listing proposals, to further address Target 5.5.

Goal 6. The profile of CMS and synergies with other relevant international frameworks are enhanced.

Target 6.1. By 2032, awareness of the importance of migratory species and their role in providing benefits for people has increased globally.

Background information on indicators and baselines:

- Indicator 6.1.1 tracks awareness-raising activities Parties have carried out, directed towards a range of different target audiences. The data needed to calculate this indicator could be obtained from changes to the current question V.1 in the CMS National Reports. QV.I. lists options for the types of awareness-raising activities Parties may have undertaken. These options could be reviewed to ensure they cover the relevant recommended actions directed to Parties under Goal 6. For each option, Parties could also be requested to indicate the audience they were targeted at, including a) general audiences, b) lecturers, teachers or students, c) local communities (including hunters, fishers and farmers), and d) journalists and media professional (unless this is obvious from the activity type, e.g., press briefings), and to provide data on the number of such activities carried out in the past triennium by audience group. The number of responding Parties and the geographic coverage they represent, could be reported alongside Indicator 6.1.1. Q.V.3., which asks Parties 'how successful these awareness actions have been in achieving their objectives', providing further useful contextual information. The guidance linked to Q.V.3 suggests that project evaluation studies or follow-up attitude surveys should be used as the basis for determining positive impacts. The guidance also notes that it may not always be possible to perform such assessment studies, in which case respondents may base their answers on their informed judgement. Indicator 6.1.1 could be supplemented by website and social media searches to obtain broader insights on the number of awareness-raising activities being carried out globally.
- A threshold for success (i.e. the number of awareness-raising activities by audience type representing an acceptable level of progress towards Target 6.1) would need to be defined, with input from the CMS Secretariat.

Relevant knowledge gaps and caveats:

- Indicator 6.1.1 a)-d) assesses whether or not Parties have undertaken outreach activities focused on migratory species, aimed at different audiences. Insights on whether or not these are judged to be having some form of positive impact could be informed by Q.V.3. However, different types of outreach activity are treated similarly, regardless of their scale and impact. Quantifying actual levels of public awareness would require standardized surveys, as has been used in the development of the '[Societal Awareness of Biodiversity](#)' indicator developed by WWF Germany and the Sinus Institute.

Target 6.2. By 2032, awareness of the role, purpose and achievements of CMS has increased globally.

- Indicator 6.2.1 measures the level of engagement with CMS educational and multimedia materials – such as videos, podcasts and online resources, based on number of views or listens. It provides insight into the reach and effectiveness of CMS outreach and awareness-raising efforts. Data would be collected and reported by the CMS Secretariat.
- Indicator 6.2.2 tracks the number of media mentions of CMS across various platforms, including news articles, reports, television, radio and internet shows. It provides insights on the visibility and public awareness of CMS at the global level, taking into account variability between years in the level of coverage (media attention is expected to peak in years when the COP is held). Indicator 6.2.2 uses data captured by the Meltwater media monitoring software, which is already used by the CMS Secretariat to monitor outreach efforts and includes news media articles published online covering a range of countries in multiple languages.
- Indicator 6.2.3 tracks the number of scientific articles that reference CMS and/or the *State of the World's Migratory Species* report. It provides basic insights into the level of engagement with CMS in the scientific community and the extent to which CMS-related topics are informing or appearing in academic literature. Data would be compiled by the CMS Secretariat through periodic literature reviews or citation tracking.

Relevant data considerations, caveats and knowledge gaps:

- *Media coverage as a proxy for public awareness:* while new media-based metrics can provide a relatively up-to-date measure of recent press interest, these metrics do not consider whether coverage is positive, negative or neutral. Coverage of CMS in general news articles does not necessarily reflect awareness of the role, purpose and achievements of CMS among specific target audiences that may be of relevance to the Convention (e.g. the academic community, the private sector, the wider environmental movement, etc.).

Target 6.3. By 2032, the total number of Parties to the Convention has increased from 133 to 160, surpassing 80 per cent of the countries recognized by the UN.

Background information on indicators and baselines:

- Indicator 6.3.1 provides a direct measure of progress made towards achieving the numerical target specified in Target 6.3.

Target 6.4. By 2032, provisions that support CMS are included and strengthened in other relevant international instruments, policies and initiatives, and in the strategic priorities of relevant stakeholders for the benefit of migratory species.

Background information on indicators and baselines:

- Indicator 6.4.1 addresses Target 6.4 by tracking mentions of CMS provisions in decisions, resolutions and/or policies of other multilateral environmental agreements. Assessment of this target would involve review of official texts from other conventions, such as the Convention on Biological Diversity, United Nations Framework Convention on Climate Change and the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Relevant data considerations, caveats and knowledge gaps:

- While CMS could be referenced in documents, this does not necessarily translate into concrete actions or policy implementation.

Annex Table 2: Additional **supporting indicators** and **data sources** that are being used or collected by instruments in the wider CMS Family that could inform the assessment of progress towards the Samarkand Strategic Plan for Migratory Species (e.g. by enabling specific elements of a target to be measured that would otherwise not be fully assessed, or by providing a more detailed understanding of progress).

Target	Element of the target being addressed	Relevant supporting indicators and data sources
Goal 1: The conservation status of migratory species is improved.		
Target 1.2. By 2029, the conservation status of all migratory species is reviewed regularly, informing priorities for conservation and management action.	Completion of regular conservation reviews	<ul style="list-style-type: none"> • Raptors MOU: Existing indicator – number of raptor status and trends assessments completed per MOS monitoring period (Table 2 Activity 6.1; Main data source: Raptors MOU National Reports).
Goal 2: The habitats and ranges of migratory species are maintained and restored, supporting their connectivity.		
Target 2.1. By 2029, all important habitats for migratory species listed in CMS Appendices are identified, assessed and monitored to ensure their functionality and ability to support migratory species throughout their life cycles.	Identification of important habitats for migratory species	<ul style="list-style-type: none"> • AEWA: Existing indicator – number/percentage of Parties that have reviewed and confirmed the known internationally and nationally important sites for migratory species in their territory (AEWA Strategic Plan Target 3.1; Main data sources: AEWA National Reports, Site Network Review, Technical Committee Outputs). • EUROBATS: Data source – information on the number of Parties that have submitted lists of important underground sites for bats, overground roosts and important overground sites for bats in accordance with Resolution 7.6, Resolution 5.7 and Resolution 8.5, is available via the EUROBATS National Implementation Reports. • IOSEA Marine Turtles MOU: Data source – information on the number of Signatories that have an IOSEA Network site is available through Signatories' National Reports (see Q.0.2.d)).
Target 2.2. By 2032, all important habitats for migratory species listed in CMS Appendices are protected, effectively conserved, managed and restored through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures.	Effective conservation of important habitats for migratory species	<ul style="list-style-type: none"> • AEWA: Existing indicators – Number/percentage of flyway network sites for which actively implemented management plans are in place (AEWA Strategic Plan Target 3.3; Main data sources: AEWA National Reports, AEWA Site Network Report); Number of flyway network sites in the territory of each Party that are threatened with adverse impacts from development (AEWA Strategic Plan Target 3.5; Main data source: AEWA National Reports). • Raptors MOU: Existing indicator – Number and proportion of nationally and internationally important sites for birds of prey covered by actively implemented management plans (Table 2 Activity 3.2; Main data source: periodic self-assessment exercise). • Southern South American Grassland Birds MOU: Existing indicator - Number of [protected area] management plans or other planning instruments, including grassland bird conservation (MOU Action Plan, Action 1.5; see UNEP/CMS/GRB-MOS3/Doc.5.1)
Target 2.3. By 2032, the loss, degradation and fragmentation of	Eliminating and/or reducing the negative	<ul style="list-style-type: none"> • AEWA: Existing indicator – Number of Parties reporting significant measures to improve quality and extent of waterbird habitats in the wider environment (AEWA Strategic Plan Target 4.3; Main data sources: AEWA National Reports).

Target	Element of the target being addressed	Relevant supporting indicators and data sources
important habitats for migratory species listed in CMS Appendices is reduced, and habitats are restored to ensure that such habitats support their viability.	impacts on migratory species from the loss and degradation of important habitats (<i>wider environment</i>)	
Goal 3: Threats affecting migratory species are eliminated or significantly reduced.		
Target 3.1. By 2032, any take, use and trade of migratory species listed in CMS Appendices is sustainable, safe and legal, overexploitation is prevented, risk of pathogen spillover is reduced and negative impacts on non-target species and their ecosystems are minimized.	Preventing illegal and unsustainable taking.	<ul style="list-style-type: none"> • AEWA: Existing indicators – Percentage of Parties that have transposed all the legal measures required in Paragraph 4.1 of the AEWA Action Plan into domestic legislation (AEWA Strategic Plan Target 2.2; Data source: AEWA National Reports); Degree of enforcement of legislation [required by Paragraph 4.1 of the AEWA Action Plan] as assessed by each Party (AEWA Strategic Plan Target 2.2; Data source: AEWA National Reports); Number/percentage of priority species/populations for which flyway-level adaptive harvest management plans have been agreed <i>and</i> are being implemented (AEWA Strategic Plan Target 2.4; Data source: Collation and analysis of reports from each Species Action or Management Plan coordination mechanism timed to coincide with MOP cycle). • MIKT: Data sources – Scoreboards to assess the progress in combating illegal killing, taking and trade of wild birds (IKB): Indicators on comprehensiveness of national legislation – Questions B5-B13 (Data source: Analyses of National Scoreboard Reporting, e.g. UNEP/CMS/MIKT6/Doc.8.1); Indicators on enforcement response: preparedness of law enforcement bodies and coordination of national institutions – Questions C14-C19; Indicators on prevention (other instruments used to prevent IKB) – Questions E24-E28 (Data source: Analyses of National Scoreboard Reporting, e.g. UNEP/CMS/MIKT6/Doc.8.1). <i>Baseline data on the illegal killing of priority bird species in the East Asian-Australasian Flyway is currently being collated as part of ITTEA Programme of Work (see UNEP/CMS/ITTEA1/Doc.6b) and could also be integrated, once available.</i> • Raptors MOU: Existing indicator – Proportion of MOU-listed species fully protected throughout the MOU area [in relation to unsustainable killing, taking trade or other forms of exploitation] (Raptors MOU Table 2, Activity 1.2; Data sources: Raptors MOU National Reports, legislation reviews, national species lists). • Sharks MOU: Data source – information on the Annex 1-listed species that are caught by Signatories' vessels <i>within</i> or <i>outside</i> of national jurisdiction boundaries is available through National Reports, in addition to information on protection measures or managed fisheries for Annex 1-listed species (Sharks MOU National Reports to MOS4).
Target 3.2. By 2032, the direct mortality of migratory species caused by human-made infrastructure is significantly	Minimizing negative impacts on non-target species. Levels of direct mortality of migratory species caused by human-made infrastructure.	<ul style="list-style-type: none"> • ACAP: Existing indicator – P1 Pressure indicators for bycatch: i) bycatch rates of seabirds across each of the fisheries of ACAP Parties; ii) total number of birds killed per year of ACAP species (Reference document: SBWG10 Doc 05); noting that seabird bycatch indicators remain under development (see MOP7 Doc16 Rev 2). • ASCOBANS: Data source – information on the perceived level of pressure from ocean energy and ship strikes is available through the ASCOBANS National Reports (National Reports to MOP10).

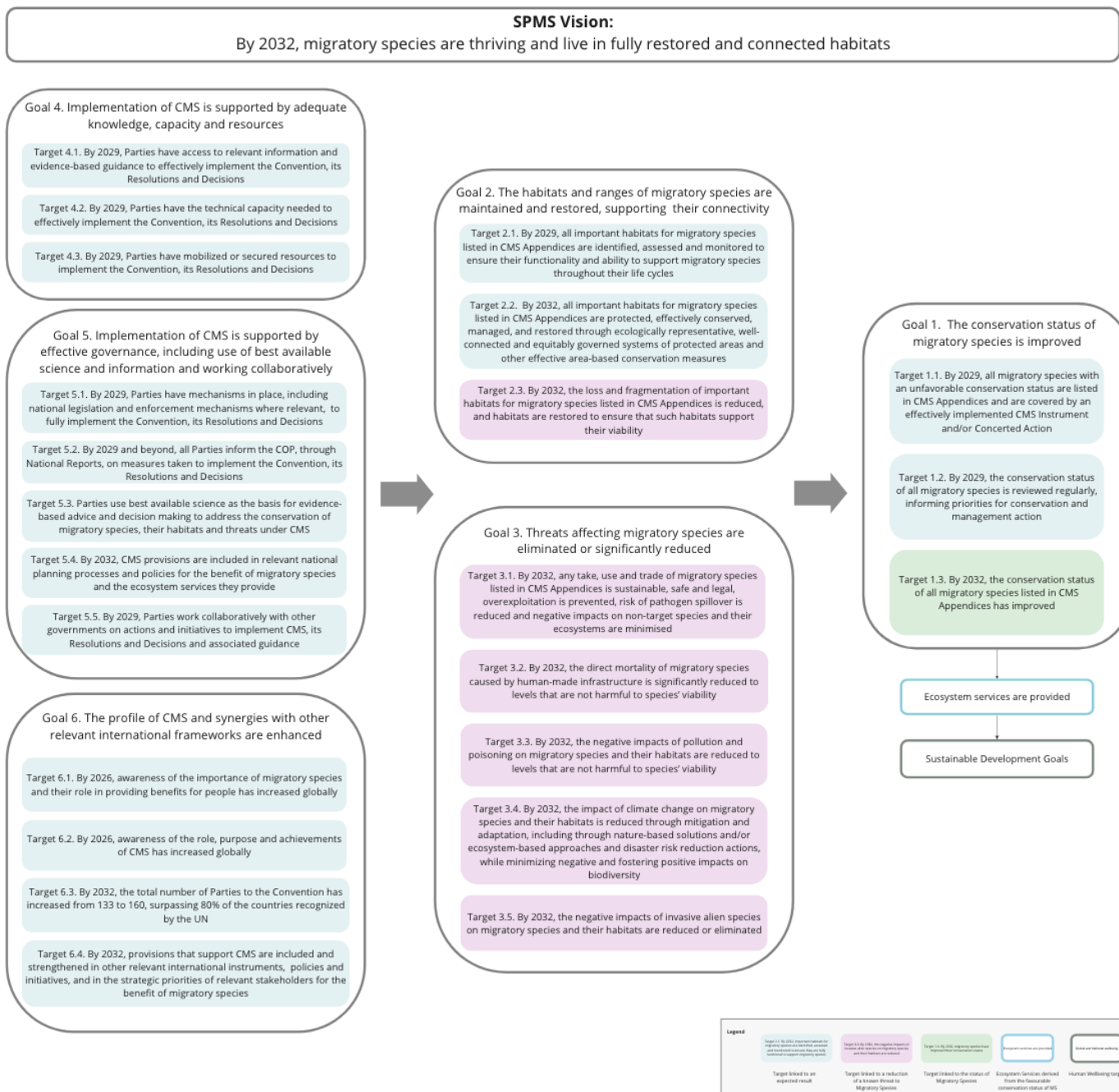
Target	Element of the target being addressed	Relevant supporting indicators and data sources
reduced to levels that are not harmful to species' viability.	Actions to sustainably design and operate infrastructure, and to monitor impacts while in operation.	<ul style="list-style-type: none"> • AEWA: Existing indicator – Number of Parties that have adopted legal or administrative measures to avoid, mitigate and compensate for adverse impact of development and other pressures on flyway network sites in general (AEWA Strategic Plan Target 3.5; Main data source: AEWA National Reports). • EUROBATS: Data source – information on the number of Parties that have conducted activities to implement Resolution 7.9 (Impact of Roads and Other Traffic Infrastructures on Bats) (e.g. consideration of bats during the planning, construction and operation of road infrastructure projects) and Resolution 8.4 (Wind Turbines and Bat Populations) (e.g. the development of national guidelines following EUROBATS Publication Series, No. 6) are available via the EUROBATS National Implementation Reports. • IOSEA Marine Turtles MOU: Data source – information on the number of Signatories with legislation requiring Environmental Impact Assessments (EIAs) addressing marine turtles and their habitats to be undertaken for marine and coastal development projects is available through Signatories' National Reports (Objective V; Q.5.4.5). • Raptors MOU: Existing indicator – Number/proportion of Signatories with legislation providing for robust and comprehensive EIA and SEA (Table 2, Activity 4.2; Main data source: Raptors MOU National Reports).
Target 3.3. By 2032, the negative impacts of pollution including transboundary effects, and poisoning on migratory species and their habitats are reduced to levels that are not harmful to species' viability.	<p>Levels of pollution affecting migratory species.</p> <p>Actions to quantify, monitor and reduce or eliminate the negative impacts of pollution.</p>	<ul style="list-style-type: none"> • ASCOBANS: Data source – species-specific information on the perceived level of pressure from underwater noise, marine debris (ingestion and entanglement) and pollution and hazardous substances (including microplastics) is available through the ASCOBANS National Reports (National Reports to MOP10).
Target 3.4. By 2032, the impact of climate change on migratory species and their habitats is reduced through mitigation and adaptation, including through nature-based solutions and/or ecosystem-based approaches and disaster risk reduction actions, while minimizing negative and fostering positive impacts on biodiversity.	Impact of climate change on migratory species and their habitats.	<ul style="list-style-type: none"> • Raptors MOU: Existing indicator – Number/ proportion of Signatories with legislation containing prohibitions relevant to the use of exposed poison baits, rodenticides and other toxic chemical methods of predator or pest control where these have been shown to cause significant avian mortalities (Table 2, Activity 1.3; Main data sources: Raptors MOU National Reports, legislation reviews). • ASCOBANS: Data source – information on the perceived level of pressure from climate change is available through the ASCOBANS National Reports (National Reports to MOP10).
Target 3.5. By 2032, the negative impacts of invasive alien species on migratory species and their	Negative impacts of invasive alien species	<ul style="list-style-type: none"> • ACAP: Existing indicators – Breeding sites S1: Number/percentage of islands with introduced alien vertebrate species present; Breeding Sites R3: Number/percentage of sites with Biosecurity Protocol

Target	Element of the target being addressed	Relevant supporting indicators and data sources
habitats are reduced or eliminated.	on migratory species and their habitats.	(Biosecurity Plan or Quarantine) (Reference document: MoP7 Doc 16 Rev 2 ; Data source: ACAP database).
Goal 4: Implementation of CMS is supported by adequate knowledge, capacity and resources.		
Target 4.1. By 2029, Parties have access to relevant information and evidence-based guidance to effectively implement the Convention, its Resolutions and Decisions.	Availability of relevant information needed to effectively implement the Convention, its Resolutions and Decisions.	<p>Information on population trends for migratory species:</p> <ul style="list-style-type: none"> • ACAP: Existing indicators – Populations: S1 b) Sites counted within the last ten years; Populations: S3 Sites with ongoing annual monitoring (Reference document: MoP7 Doc 16 Rev 2; Data source: ACAP Database). • AEWA: Existing indicator – percentage of waterbird populations for which good quality size and trend data is available and regularly updated (AEWA Strategic Plan Target 1.4; Main data source: Conservation status review). • ASCOBANS: Data source – information on the number of Parties that have national monitoring programmes that enable the assessment of the conservation status of small cetaceans is available through the ASCOBANS National Reports (National Reports to MOP10). • EUROBATS: Data source – information on the number of Parties that have implemented Resolution 2.2 (Consistent Monitoring Methodologies); Resolution 5.4 (Monitoring Bats across Europe) (e.g. involvement in long-term pan-European monitoring surveillance to provide trend data) is available via EUROBATS National Implementation Reports. • IOSEA Marine Turtles MOU: Data source – information on the number of Signatories that have monitored index nesting beaches or that have planned or enacted monitoring programmes is available through Signatories' National Reports (see Q.0.2.b) and Objective III, Q.3.1.1). • Raptors MOU: Existing indicator - number of relevant national/transboundary/internationally coordinated monitoring programmes in place (Table 2 Activity 6.2; Data source: Raptors MOU National Reports). <p>Information on the most important pressures faced by migratory species:</p> <ul style="list-style-type: none"> • Raptors MOU: Existing indicator – number of raptor threat assessments completed (Table 2 Activity 4.1; Data source: Raptors MOU National Reports). <p>Information on the distribution and movements of migratory species:</p> <ul style="list-style-type: none"> • ACAP: Existing indicators – Tracking: S1 Island Groups with at least 15 tracks each from incubation, brood guard, post-guard chick rearing, non-breeding adults (from any island); Tracking: S2 Island Groups with at least 15 tracks from juveniles/immatures (from any island) (Reference document: MoP7 Doc 16 Rev 2; Data source: BirdLife International Seabird Tracking Database). • EUROBATS: Data source – information on the number of Parties that have conducted activities to implement Resolution 8.3 (Monitoring of Daily and Seasonal Movements of Bats) is available via EUROBATS National Implementation Reports.

Target	Element of the target being addressed	Relevant supporting indicators and data sources
Goal 5: Implementation of CMS is supported by effective governance, including use of best available science and information, and collaborative working.		
Target 5.3. Parties use best available science, as the basis for evidence-based advice and decision-making to address the conservation of migratory species, their habitats and threats under CMS.	Use of the best available science as the basis for evidence-based advice and decision-making.	<ul style="list-style-type: none"> • AEWA: Existing indicators – number/percentage of Parties confirming their use of IWC (International Waterbirds Census) and/or other relevant monitoring data to inform national-level implementation; number/percentage of AEWA populations with flyway-level conservation measures in place that are regularly reviewed on the basis of updated IWC (International Waterbirds Census) and other relevant monitoring data (AEWA Strategic Plan Target 1.5; Data sources: AEWA Conservation Status Review, AEWA Technical Committee outputs, AEWA National Reports). • IOSEA Marine Turtles: Data source – information on the number of Signatories that have applied research results to improve management practices is available through Signatories' National Reports (Objective III; Q.3.3.1).

THEORY OF CHANGE

Theory of Change for CMS SPMS 2024-2032 (9 years)



THEORY OF CHANGE

Description of the theory of change and how the SPMS goals and targets work together to deliver the SPMS vision

The SPMS 2024-2032 is built around a theory of change describing how the Convention aims to realize the vision that *by 2032, migratory species are thriving and live in fully restored and connected habitats*.

The work of the Convention to achieve this vision is organized around six main goals. Goal 1 focuses on improving the conservation status of migratory species, Goal 2 is aimed at maintaining and restoring habitats and ranges for migratory species, and Goal 3 is aimed at the significant reduction or elimination of threats affecting migratory species. Goals 4, 5 and 6 support the achievement of the first three goals through the work of the Convention. More specifically:

Goal 1 focuses on improving the conservation status of migratory species listed in CMS Appendices (Target 1.3). To achieve this, all migratory species with an 'unfavourable' conservation status need to be listed within CMS Appendices and covered by an effectively implemented CMS Instrument and/or Concerted Action (Target 1.1). Furthermore, the status of migratory species needs to be reviewed regularly to inform priorities for conservation and management action (Target 1.2).

Supporting Goal 1, Goal 2 is aimed at maintaining and restoring habitats and ranges of migratory species supporting their connectivity. More specifically, the loss and fragmentation of important habitats for migratory species listed in the CMS Appendices need to be reduced and habitats restored to ensure that they support the viability of these species (Target 2.3). To achieve this, all important habitats for migratory species listed in CMS Appendices need to be protected, effectively conserved, managed and restored through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures (Target 2.2). To facilitate the protection, management and restoration of important habitats for migratory species listed in CMS Appendices, these habitats need to be identified, assessed and monitored to ensure they are fully functional and able to support migratory species through their life cycles (Target 2.1).

In parallel with Goal 2, Goal 3 focuses on reducing threats to migratory species: illegal and unsustainable take and overexploitation (Target 3.1), direct mortality caused from human-made infrastructure (Target 3.2), pollution and poisoning affecting migratory species and their habitats (Target 3.3), impacts of climate change on migratory species and their habitats (Target 3.4), and the negative impacts of invasive alien species (Target 3.5).

Goals 4, along with Goal 5 and 6, creates the enabling conditions for Goals 1 to 3. Goal 4 focuses on supporting the implementation of CMS with adequate knowledge, capacity and resources. Parties need to have access to relevant information and evidence-based guidance to effectively implement the Convention, its Resolutions and Decisions (Target 4.1), Parties also need to have the technical capacity (Target 4.2) and ability to mobilize or secure resources (Target 4.3) to effectively implement the Convention, its Resolutions and Decisions.

Goal 5 focuses on supporting the implementation of CMS through effective governance, including use of the best available science and information in decision-making, and collaborative working. Where relevant, national legislation and enforcement mechanisms that fully implement the Convention, its Resolutions and Decisions need to be in place (Target 5.1). In parallel, Parties need to inform the COP through National Reports of measures taken to implement the Convention, its Resolutions and Decisions (Target 5.2) and Parties need to use best available science as the basis for evidence-based advice and decision-making to address the threats to and support the conservation of migratory species and their habitats under CMS (Target 5.3). Furthermore, CMS provisions need to be included in national planning processes and policies relevant to migratory species (Target 5.4) and Parties need to work collaboratively with other governments on actions and initiatives to implement CMS, its Resolutions and Decisions and associated guidance (Target 5.5).

Finally, Goal 6 focuses on enhancing the profile of CMS and synergies with other relevant international frameworks. Firstly, the awareness of the importance of migratory species and their role in providing benefits for people needs to be increased globally (Target 6.1). Secondly, there needs to be greater global awareness of the role, purpose and achievements of CMS (Target 6.2). The total number of Parties to the Convention also needs to increase (Target 6.3), and the provisions of CMS need to be included in and strengthened by other international instruments, policies and initiatives, and strategic priorities of relevant stakeholders (Target 6.4).

RELATIONSHIP WITH THE GLOBAL BIODIVERSITY FRAMEWORK

SPMS 2024-2032 targets are aligned and contribute to GBF targets, with a particular focus on migratory species. The links are shown in the table below:

SPMS Target	GBF Target
Target 1.1. By 2029, all migratory species with an unfavourable conservation status are listed in CMS Appendices and are covered by an effectively implemented CMS Instrument and/or Concerted Action.	Target 4: Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.
Target 1.2. By 2029, the conservation status of all migratory species is reviewed regularly, informing priorities for conservation and management action.	Target 4: Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence. Target 9: Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.
Target 1.3. By 2032, the conservation status of all migratory species listed in CMS Appendices has improved.	Target 4: Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.
Target 2.1. By 2029, all important habitats for migratory species listed in CMS Appendices are identified, assessed and monitored to ensure their	Target 1: Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity,

<p>functionality and ability to support migratory species throughout their life cycles.</p>	<p>close to zero by 2030, while respecting the rights of indigenous peoples and local communities.</p>
<p>Target 2.2. By 2032, all important habitats for migratory species listed in CMS Appendices are protected, effectively conserved, managed and restored through ecologically representative, well- connected and equitably governed systems of protected areas and other effective area-based conservation measures.</p>	<p>Target 1: Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.</p> <p>Target 2. Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.</p> <p>Target 3. Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.</p>
<p>Target 2.3. By 2032, the loss and fragmentation of important habitats for migratory species listed in CMS Appendices is reduced, and habitats are restored to ensure that such habitats support their viability.</p>	<p>Target 10: Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.</p>
<p>Target 3.1. By 2032, any take, use and trade of migratory species listed in CMS Appendices is sustainable, safe and legal, overexploitation is prevented, risk of pathogen spillover is reduced, and negative impacts on non-target species and their ecosystems are minimized</p>	<p>Target 5. Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spill-over, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.</p>

<p>Target 3.2. By 2032, the direct mortality of migratory species caused by human-made infrastructure is significantly reduced to levels that are not harmful to species' viability.</p>	<p>Target 1: Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.</p>
<p>Target 3.3. By 2032, the negative impacts of pollution and poisoning on migratory species and their habitats are reduced to levels that are not harmful to species' viability.</p>	<p>Target 7. Reduce pollution risks and the negative impact of pollution from all sources, by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: reducing excess nutrients lost to the environment by at least half including through more efficient nutrient cycling and use; reducing the overall risk from pesticides and highly hazardous chemicals by at least half including through integrated pest management, based on science, taking into account food security and livelihoods; and also preventing, reducing, and working towards eliminating plastic pollution.</p>
<p>Target 3.4. By 2032, the impact of climate change on migratory species and their habitats is reduced through mitigation and adaptation, including through nature-based solutions and/or ecosystem-based approaches and disaster risk reduction actions, while minimizing negative and fostering positive impacts on biodiversity.</p>	<p>Target 8. Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solution and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.</p>
<p>Target 3.5. By 2032, the negative impacts of invasive alien species on migratory species and their habitats are reduced or eliminated.</p>	<p>Target 6. Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent, by 2030, eradicating or controlling invasive alien species especially in priority sites, such as islands.</p>
<p>Target 4.1. By 2029, Parties have access to relevant information and evidence-based guidance to effectively implement the Convention, its Resolutions and Decisions.</p>	<p>Target 21: Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.</p>

<p>Target 4.2. By 2029, Parties have the technical capacity needed to effectively implement the Convention, its Resolutions and Decisions.</p>	<p>Target 20: Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.</p>
<p>Target 4.3. By 2029, Parties have mobilized or secured resources to implement the Convention, its Resolutions and Decisions.</p>	<p>Target 19: Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by:</p> <ul style="list-style-type: none"> (a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030; (b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances; (c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments; (d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards; (e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises; (f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions and non-market- based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity; (g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.

<p>Target 5.1. By 2029, Parties have mechanisms in place, including national legislation and enforcement mechanisms where relevant, to fully implement the Convention, its Resolutions and Decisions.</p>	<p>Target 5: Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.</p> <p>Target 14: Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.</p> <p>Target 16: Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.</p>
<p>Target 5.2. By 2029 and beyond, all Parties inform the COP, through National Reports, of measures taken to implement the Convention, its Resolutions and Decisions.</p>	<p>Target 21: Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.</p>
<p>Target 5.3. Parties use best available science as the basis for evidence-based advice and decision-making to address the conservation of migratory species, their habitats and threats under CMS.</p>	<p>Target 21: Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.</p>

<p>Target 5.4. By 2032, CMS provisions are included in relevant national planning processes and policies for the benefit of migratory species and the ecosystem services they provide.</p>	<p>Target 1: Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.</p> <p>Target 12: Significantly increase the area and quality and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature and contributing to inclusive and sustainable urbanization and the provision of ecosystem functions and services.</p> <p>Target 14: Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.</p>
<p>Target 5.5. By 2029, Parties work collaboratively with other governments on actions and initiatives to implement CMS, its Resolutions and Decisions and associated guidance.</p>	<p>Target 14: Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.</p>
<p>Target 6.1. By 2026, awareness of the importance of migratory species and their role in providing benefits for people has increased globally.</p>	<p>Target 21: Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.</p>

<p>Target 6.2. By 2026, awareness of the role, purpose and achievements of CMS has increased globally.</p>	<p>Target 21: Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.</p>
<p>Target 6.3. By 2032, the total number of Parties to the Convention has increased from 133 to 160, surpassing 80% of the countries recognized by the UN.</p>	
<p>Target 6.4. By 2032, provisions that support CMS are included and strengthened in other relevant international instruments, policies and initiatives, and in the strategic priorities of relevant stakeholders for the benefit of migratory species.</p>	<p>Target 14: Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.</p>

GLOSSARY

Glossary of terms used in the SPMS as described in the [Convention text](#) and details for other terms used in this proposal for a new SPMS.

CMS instruments and initiatives – Instruments consist of agreements concluded among Parties (globally or regionally) when species listed in Appendix II would benefit from further cooperation. These agreements may range from legally binding treaties (called Agreements), to less formal instruments such as Memorandums of Understanding, and can be adapted to the requirements of particular regions. Initiatives include Special Species Initiatives like concerted actions, single species action plans, and geographical or multi- species initiatives.

Conservation status [from the Convention text] – will be taken as ‘favourable’ when:

- (1) population dynamics data indicate that the migratory species is maintaining itself on a long-term basis as a viable component of its ecosystems;
- (2) the range of the migratory species is neither currently being reduced, nor is likely to be reduced, on a long-term basis;
- (3) there is, and will be in the foreseeable future, sufficient habitat to maintain the population of the migratory species on a long-term basis; and
- (4) 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.
- (5) Conservation status will be taken as ‘unfavourable’ if any of the four conditions (above) are not met.

Habitat [from the Convention text] – means any area in the range of a migratory species which contains suitable living conditions for that species.

Range [from the Convention text] – all the areas of land or water that a migratory species inhabits, stays in temporarily, crosses or overflies at any time on its normal migration route.

Range State [from the Convention text] – in relation to a particular migratory species means any State (...) that exercises jurisdiction over any part of the range of that migratory species, or a State, flag vessels of which are engaged outside national jurisdictional limits in taking that migratory species.

Taking [from the Convention text] – means taking, hunting, fishing, capturing, harassing, deliberate killing or attempting to engage in any such conduct.

DRAFT DECISIONS

SAMARKAND STRATEGIC PLAN FOR MIGRATORY SPECIES 2024-2032

Directed to Parties

15.AA Parties are encouraged to:

- a) implement the Samarkand Strategic Plan for Migratory Species (SPMS) 2024–2032 and, where possible, make linkages with their National Biodiversity Strategies and Action Plans (NBSAPs) and United Nations Sustainable Development Cooperation Frameworks;
- b) contribute to compilation of SPMS baselines needed to monitor its implementation;
- c) report on the implementation of the SPMS through their National Reports, as appropriate.

Directed to the Standing Committee

15.BB The Standing Committee is requested to:

- a) provide advice on the implementation of the SPMS;
- b) adopt a new template for National Reports for COP16, aligned to the SPMS;
- c) provide advice on the implications of the implementation of the SPMS for the CMS Programme of Work, to better align it with the SPMS and its priorities;

Directed to the Scientific Council, Working Groups & Task Forces

15.CC The Scientific Council is requested to provide scientific advice to the Standing Committee on any potential changes to the Goals, Targets or Indicators of the SPMS and its implications for the National Reports.

Directed to the Secretariat

15.DD The Secretariat is requested, subject to the availability of resources, to:

- a) raise awareness of the implementation of the SPMS with other multilateral environmental agreements and relevant entities;
- b) identify data gaps that could be hindering progress in relation to indicators of the SPMS, and support the filling of those gaps;
- c) provide advice to the Standing Committee on the implications of the implementation of the SPMS for the CMS Programme of Work, to better align it with the SPMS and its priorities;
- d) undertake an assessment of the implementation of the SPMS.