



CMS Expert Workshop on devising the CMS Atlas of Animal Migration

(Palazzo d'Avalos, Vasto, Region of Abruzzo, Italy, 9 - 11 October 2026)

UNEP/CMS/AAMWS2026/Doc.1.1

DRAFT AGENDA AND MEETING SCHEDULE

(as of 08th October 2026)

AGENDA

Opening Session

Strategic Vision, Lessons Learned, and Policy Relevance

Session 1: Needs Assessment and User Analysis

Session 2: Lessons from Existing Atlas Initiatives

Data Integration, Tools, and Partnerships

Session 3: Linking Data and Policy

Session 4: Expanding and Updating the Atlas – Looking Ahead

Session 5: Data Harmonization and Standards

Session 6: Visualization and User-Oriented Tools

Session 7: Monitoring Infrastructure Impacts

CMS data infrastructure and way forward

Session 8: Partnerships and Institutional Alignment

Session 9: Identifying Key Habitats, Corridors, Networks and Drivers

Session 10: Knowledge Infrastructure

Session 11: Consolidation of Recommendations and Roadmap

Closing Session

Objectives of the Meeting:

- Identify key uses and users of the Atlas and their data needs.
- Identify transferable lessons and review technical approaches for data management and analysis.
- Define priorities for future Atlas development.
- Improve consistency across datasets.
- Enhance accessibility and usability of Atlas outputs.
- Identify monitoring approaches.
- Strengthen collaboration frameworks.
- Use the Atlas to contribute information to identify key protected areas.
- Strengthen institutional and analytical capacity.
- Agree on outcomes and next steps.

Day 1 – Friday, 09 October 2026

Strategic Vision, Lessons Learned, and Policy Relevance

Chair: Des Thompson, CMS COP-appointed Councillor for Climate Change

Time	Agenda item	Details	Presenters
09:00 – 10:30	Opening Session	Welcoming remarks CMS Secretariat: Dagmar Zíková Host - the Mayor of Vasco: Francesco Menna Donor - Cantina Orsogna: Director Camillo Zulli Adoption of the Agenda Document UNEP/CMS/AAMWS2026/Doc.1.1 Introduction of Participants through Tour de Table	- Dagmar Zíková, Anouska Kinahan (CMS Secretariat) <i>Introduction to the CMS Atlas on Animal Migration</i> - Fernando Spina (CMS COP-appointed Councillor for Connectivity and Networks) <i>Introduction to the workshop</i>
10:30 – 11:00	Coffee break		
11:00 – 12:30	Needs Assessment and User Analysis Session 1 Relevant Decisions: 15.21a)ii., 15.21b), 15.211b) ¹	Objective: <i>Identify key uses and users of the Atlas and their data needs.</i> Focus areas: - Identification of core uses of the Atlas and the main users (e.g. policymakers, MDBs, conservation planners, researchers, public) - Consideration of environmental changes/pressures driving need for agility in accessing data/information (e.g. climate change, habitat loss, development pressures, wildlife health concerns etc.) - Data needs (geographical scope, level of detail, planning and timing)	- James Williams (JNCC) <i>Why an atlas is useful for policy</i> - Nicola Crockford (BirdLife International) <i>Using information on ecological connectivity to drive conservation action</i> - Francesca Cagnacci (GIUM) <i>Before they're gone: building a community to identify, visualise and communicate about land migrations. The GIUM approach</i> - Francesco Ricciardi (ADB) <i>From tracks to thresholds: What MDBs teed from a Migration Atlas for Critical Habitat Determination</i>

¹Decisions adopted at the 15th meeting of the CMS Conference of Parties (COP15) are available [here](#). The text of the Decisions referred to in this draft Agenda is contained in Annex 2.

Time	Agenda item	Details	Presenters
		- Constraints faced by users (accessibility, format, interpretation) - Options to enhance policy usability and mechanisms to translate data into conservation action	Daniel Hornett (WWF-US) <i>Open access biodiversity data for sound infrastructure decision making: Barriers and solutions</i>
12:30 – 14:00	Lunch		
14:00 – 15:30	Lessons from existing Atlas initiatives Session 2 Relevant Decisions: 15.21a)i., 15.21a)ii., 15.197a)	Objective: <i>Identify transferable lessons and review technical approaches for data management and analysis.</i> Focus areas: - Data quality and availability - Best practice in data governance and data hosting - Analytical methods and tools and their transferability for future Atlas modules - Strengthening analytical capacity on CMS-relevant data	- Steffen Mumme (GIUM) <i>An analytical workflow and communication pathway to link data and policy</i> - Ana Martins Sequeira (MegaMove) <i>Marine Megafauna Movement – the journey so far, and looking ahead</i> - Franz Bairlein (Institute of Avian Research, Wilhelmshaven, Germany) <i>Eurasian-African Bird Migration Atlas</i> - Tom Auer (Cornell Lab of Ornithology) <i>From Participatory Science to Flyway Atlas: Building Global Analytical Capacity with eBird Status and Trends and Bird Concentration Areas</i> - Nandintsetseg Dejid (CMS COP-appointed Councillor for terrestrial mammals) <i>Central Asian Mammals Migration and Linear Infrastructure Atlas.</i>
15:30 – 16:00	Coffee Break		
16:00 – 17:30	Linking data and policy Session 3	Brainstorming sessions: <i>Policy needs of Atlas data:</i> Chair – Nicola Crockford <i>How to make data readily available and transferable to increase their uptake in policy and practice:</i> Chair – Christian Rutz	
17:30 – 18:00	Day 1 Wrap-up		

Day 2 – Saturday, 10 October 2026

Data Integration, Tools, and Partnerships

Chair: Fernando Spina, CMS COP-appointed Councillor for connectivity and networks

Time	Agenda item	Details	Presenters
09:00 – 10:30 Session 4	Expanding and Updating the Atlas – looking ahead Relevant Decisions: 15.22a), 15.108i)	Objective: Define priorities for future Atlas development. Focus areas: - Identified gaps across current Atlas modules - Priority species for new modules (including freshwater fishes) - Recommendations for updating existing modules - Resource considerations	- Daniel Dunn (University of Queensland) <i>Delivering Important Marine Turtle Areas</i> - Samantha Franks (BTO) <i>Spreading our wings: Next steps for a global bird migration atlas</i> - Zeb Hogan (CMS COP-appointed Councillor for Fish) <i>Freshwater Fish in the CMS Atlas of Animal Migration: Mapping Transboundary Swimways, Migration Evidence, and Data Gaps</i> - Nandintsetseg Dejid (CMS COP-appointed councillor for terrestrial mammals) <i>Terrestrial Mammals in the CMS Atlas of Animal Migration: From Species Lists to Migration System Typology</i> - Christian Voigt (Leibniz Institute for Zoo and Wildlife Research) <i>Recent advances in the understanding of bat migration</i> - Andrada Opris, Sarah Scott-Marshall and James Williams (UK) <i>And don't forget the invertebrates</i>
10:30 – 11:00	Coffee Break		

11:00 – 13:00 Session 5	Data Harmonization and Standards Relevant Decisions: 15.211d)	Objective: <i>Improve consistency across datasets.</i> Focus areas: - Improving interoperability - Potential for harmonized data standards - Recommendations for partnerships and collaboration among database holders - Identification of technical barriers and solutions	- Fernando Spina (CMS COP-appointed Councillor for Connectivity and Networks) <i>Context</i> - Christian Rutz (University of St Andrews) <i>Improving data discoverability, standardisation, integration, and mobilisation – some recent innovations</i> - Francesca Cagnacci (Data Standardisation and pipelines Working group- IBLS, MoveBON and GBIF) <i>Are we talking the same migration? Migration data standardisation, interoperability and traceability</i> - Autumn-Lynn Harrison (Smithsonian Institution) <i>Every data choice is a conservation choice: lessons across taxa and projects</i> - Stephen Garnett (CMS COP-appointed Councillor for birds) <i>Accessing range state data of CMS-listed species</i> - Martin Wikelski (Movebank) <i>Animals as novel earth observation system</i>
13:00 – 14:00	Lunch		
14:00 – 15:30 Session 6	Visualization and User-Oriented Tools Relevant Decisions: 15.211c), 15.211d), 15.211m)ii.	Objective: <i>Enhance accessibility and usability of Atlas outputs.</i> Focus areas: - Recommendations on visualization of species distribution and infrastructure - Identified target audiences, user needs and priority functionalities - Improved approaches to interactive tools - Challenges and opportunities in using AI	- Roberto Ambrosini (University of Milan) <i>Making migratory connectivity visible: linking movements, places and conservation action</i> - Lauren Oldham (Cornell Lab of Ornithology) <i>Improving Atlas for the Americas Flyway: Opportunities and obstacles in creating engaging interactive data visualization tools for mapping migratory species</i> - Saloni Basrur (UNEP-WCMC) <i>Co-managing UN Biodiversity Lab (UNBL) - geospatial dataset insights</i>

			Samantha Franks (BTO) <i>From beautiful visualisations to storytelling: harnessing the incredible power of bird migration</i>
15:30 – 16:00	Coffee Break		
16:00 – 17:00 Session 7	Monitoring Infrastructure Impacts Relevant Decisions: 15.210c)	Objective: <i>Identify monitoring approaches.</i> Focus areas: - List of best-practice monitoring methods - Cost-effective monitoring methods - Recommendations for integration into Atlas	- Clara Nobbe (CMS Secretariat) <i>Context</i> - Giacomo Assandri <i>et al</i> (University of Piemonte Orientale) <i>Leveraging cross-continental movement data to assess exposure of a migratory raptor to wind power infrastructure</i> - Steffen Zuther (Frankfurt Zoological Society) <i>Using terrestrial migration data for mitigation of infrastructure impacts</i>
17:00 – 18:30 Session 8	Partnerships and Institutional Alignment Relevant Decisions: 15.211b)	Objective: <i>Strengthen collaboration frameworks.</i> Brainstorming sessions: <i>Data-sharing and alignment mechanisms</i> (Chair - Stephen Garnett) <i>Enhancing collaboration between partners</i> (Chair - Zeb Hogan)	- Lacey Hughey (Smithsonian Institution) <i>Building Cross-Realm and Cross-Institution Collaboration through Move BON</i> - Giuseppe Notarbartolo di Sciara (Tethys Research Institute) <i>Mapping important areas and migratory corridors for marine mammals</i>

Day 3 – Sunday, 11 October 2026

CMS data infrastructure and way forward

Chair: Fernando Spina, CMS COP-appointed Councillor for connectivity and networks

Time	Agenda item	Details	Presenters
09:00 – 10:30 Session 9	Identifying Key Habitats, Corridors, Networks and Drivers Relevant Decisions: 15.21a)iii.	Objective: <i>How the Atlas could help identify protected sites</i> Focus areas: • Possible contribution of the Atlas to identification of KBA, IMMA, ISRA and related frameworks • Connecting Networks • Prioritising drivers and impacts	• Vicky Jones (Birdlife International) <i>Conserving moving targets: from ecological networks to conservation commitments</i> • Christian Rutz (University of St Andrews) <i>National Geographic Society's Living Pathways program: Turning wildlife movement into coexistence solutions</i> • Ivan Ramirez (CMS) <i>CMS and AEWA priorities for avian mapping</i> • Luca Guitink (Wetlands International Europe) <i>From movement data to flyway decisions: making migration information usable for conservation policy</i> • Melanie Virtue CMS) <i>CMS priorities for freshwater and marine mapping</i> • Clara Nobbe CMS) <i>CMS priorities for terrestrial mapping</i>
10:30 – 11:00	Coffee break		
11:00 – 12:00 Session 10	Knowledge Infrastructure Relevant Decisions: 15.197a)	Objective: <i>Strengthen institutional and analytical capacity.</i> Focus areas: • Recommendations for CMS data/knowledge infrastructure • Identified analytical capacity needs • Proposed follow-up actions	• Kelly Malsch (UNEP-WCMC) <i>Pathways for strengthening the impact of the CMS Atlas on Animal Migration: lessons learned from online biodiversity knowledge systems</i> • Francesca Cagnacci (Data Standardization and pipelines Working group and GIUM) <i>Keep the maps in the world: consolidating</i>

Time	Agenda item	Details	Presenters
			<i>knowledge, preserving data, enhancing participation</i>
12:00 – 12:50 Session 11	Consolidation of Recommendations and Roadmap Relevant Decisions: All Decisions (15.21, 15.22, 15.108, 15.197, 15.210, 15.211)	Objective: <i>Agree on outcomes and next steps.</i> Structured synthesis: • Draft roadmap for Atlas development ○ Strategic and technical recommendations for further development of the Atlas ○ Enhancing policy uptake and usability of data ○ Outreach and communication • Framework for collaboration with partners • Priority actions and indicative timelines	• Led by Ferna Spina, Des Thompson and Dagmar Zíková
12:50 – 13:00	Closing Session	• Next Steps • Closing Remarks	
13:00 – 14:00	Lunch		
14:30 – 18:00	A Special Session with the Public <i>Migratory animals connect the Planet: the wonder of their journeys, and threats for their future</i>	Fernando Spina: <i>Introduction and sequential translation in Italian</i> Dagmar Zíková: <i>Connecting the planet</i> Franz Bairlein: <i>The fascination of bird migration</i> Ana Sequeira: <i>Great Ocean migrations: tracking marine giants to protect our oceans</i> Francesca Cagnacci: <i>Footsteps, hooves, roads, and trails: ungulate migration in changing landscapes</i> Martin Wikelski: <i>The Internet of animals: a new Earth observation system</i>	

		Des Thompson: <i>Coping with a warming world: challenges for migratory animals</i> Maurizio Odicino: <i>BIO Cantina di Orsogna for the conservation of biodiversity: birds as indicators of a sustainable agriculture</i> Giacomo Assandri: <i>BIO Cantina di Orsogna for the conservation of biodiversity: dragonfly wings and irrigation of water quality</i>	
18.30 - 19.30	CMS World Migratory Bird Day 2026 <i>'Every bird counts'</i>	Coro dell'Accademia di Pescara Maestro Pasquale Veleno <i>Celebration Concert of the Choir</i>	

CMS COP15 [DECISIONS](#) RELEVANT TO ATLAS ON ANIMAL MIGRATION:

Atlas on Animal Migration	
15.21a)-b)	The Scientific Council is requested, subject to the availability of resources, to: a) through its Working Group on Ecological Connectivity, make recommendations on the future development of the Atlas, including on: i. sharing experience from the Atlas of Bird Migration in the EurasianAfrican Region and other existing Atlas modules with experts on other taxonomic groups regarding data hosting, methodology, analytical tools and the use of the best available data for the Atlas; ii. options for a more comprehensive and effective approach to ensure the Atlas fulfils its purpose, including for enhancing the interoperability of the various data sets, and for improving its usability for conservation policies and translating movement data into policy/conservation action; iii. how the existing and future modules of the CMS Atlas on Animal Migration can contribute to identification of key habitats, areas, corridors and networked sites that are of greatest global importance for the conservation of migratory species, taking into account the progress made in identifying Key Biodiversity Areas (KBAs), and other important habitats, such as Important Marine Mammal Areas (IMMAs), Important Shark and Ray Areas (ISRAs) and the List of internationally important sites for migratory birds of prey in Africa and Eurasia; b) promote the knowledge and the use of existing modules of the Atlas;
15.22a)	The Secretariat shall, subject to the availability of resources: a) further develop additional modules of the Atlas, and update existing modules, as appropriate;
Migratory Freshwater Fish	
15.108i)	The Scientific Council is requested to, subject to the availability of resources: i) work closely with the Secretariat on the possibility of developing a dedicated freshwater fishes module for the Atlas of Animal Migration;

Ecological Connectivity	
15.197a)	The Secretariat shall, subject to the availability of resources: a) convene, in cooperation with the Scientific Council and its Working Group on Infrastructure and Migratory Species, an expert workshop to consider options and develop proposals for creating relevant data- and knowledge-holding capacity and for enhancing analysis capabilities under the auspices of the CMS, building, inter alia, on the outcomes of the Survey on Ecological Connectivity and Infrastructure and the recommendations from the Scientific Council's Working Group on Infrastructure;
Infrastructure Development and Migratory Species	
15.210c)	The Scientific Council is requested to extend the Working Group as established until the Sessional Committee decides its work is complete or an alternative arrangement is made, focusing its work on the following tasks: c) identify best-practice, cost-effective monitoring methods for infrastructure impacts on migratory species;
15.211b)-d), m)ii.	The Secretariat shall, subject to the availability of resources: b) liaise with multilateral development banks (MDBs) and the International Association for Impact Assessment (IAIA) on updating their guidance, and with relevant bodies maintaining the Global Biodiversity Information Facility (GBIF) and the GEO Portal to ensure alignment and data sharing; c) update, regularly, the Online Library of Existing Databases on Movements, Habitats, and Presence and Absence of Migratory Species accessible to Parties and practitioners; d) convene, in cooperation with the Scientific Council Working Group on Ecological Connectivity, holders of databases on migratory species distribution and movements, including those used by MDBs, to explore the potential for harmonizing data standards and optimizing visualization for targeted data users; m) include in its communication programme: ii. visualization of species distribution, and existing and planned infrastructure extracted from interactive online tools (including the CAMI Atlas and Bird Migration Atlas).

BACKGROUND: CONCEPT NOTE

Expert Workshop on devising the CMS Atlas of Animal Migration

1. Background

The **CMS Atlas of Animal Migration** is a key initiative supporting the conservation of migratory species by compiling and visualizing movement data across taxa and regions. Building on existing modules of complementary global datasets, the Atlas aims to inform conservation planning, policy development, and infrastructure decision-making. This offers tremendous opportunities for supporting the conservation of migratory animals.

Challenges include ensuring data interoperability, improving analytical capacity, enhancing usability for policy processes, and expanding taxonomic and geographic coverage. Importantly, significant opportunities founded on emerging global frameworks (e.g., Key Biodiversity Areas, Important Marine Mammal Areas, Important Bird and Biodiversity Areas, and others) provide a transformational means of strengthening the role of the Atlas in identifying critical habitats and ecological connectivity.

This workshop brings together experts to advance the strategic, technical, and institutional development of the Atlas of Animal Migration as a tool accessible through a CMS Gateway. This would offer an overview of migration patterns and strategies and related conservation threats across the different taxa groups of relevance to CMS, through easy and practical access to contents of the range of modules.

2. Objectives

The workshop aims to:

1. Review lessons learned from existing Atlas modules and related initiatives.
2. Strengthen technical foundations, including data standards, interoperability, and analytical tools.
3. Enhance policy relevance, including translation of movement data into conservation action.
4. Advance identification of key habitats, corridors, and networks for migratory species in the face of key drivers including climate change, habitat loss, animal health, and species exploitation.
5. Explore options for expanding and updating Atlas modules, including new taxonomic areas at international/intercontinental scale.
6. Promote partnerships and data-sharing among key institutions and stakeholders.
7. Develop recommendations and a forward-looking roadmap for the Atlas.

3. Anticipated Outputs

- Technical and strategic recommendations for further development of the Atlas.
- Identified priority actions for improving interoperability and data harmonization.
- Agreed approaches for enhancing policy uptake and usability.
- A framework for collaboration with partners (e.g., MDBs, GBIF, GEO, IAIA).
- A proposed roadmap for module development and capacity-building.

4. Participants

Technical experts, data holders, conservation practitioners, and representatives of organizations engaged in migratory species research, data infrastructure, and policy implementation.

5. Methodology

The workshop will combine:

- Plenary presentations
- Technical sessions
- Breakout discussions
- Interactive mapping/visualization demonstrations
- Structured synthesis sessions