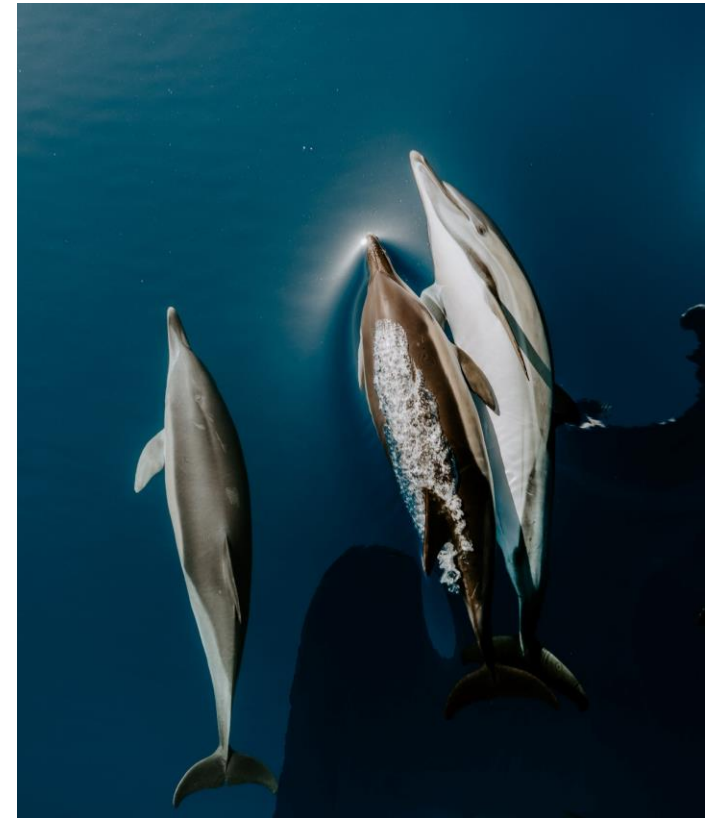




The Convention on the Conservation of Migratory Species of Wild Animals

27 June 2022, Intersessional Working Group
on Linear Infrastructure, Vilm Island



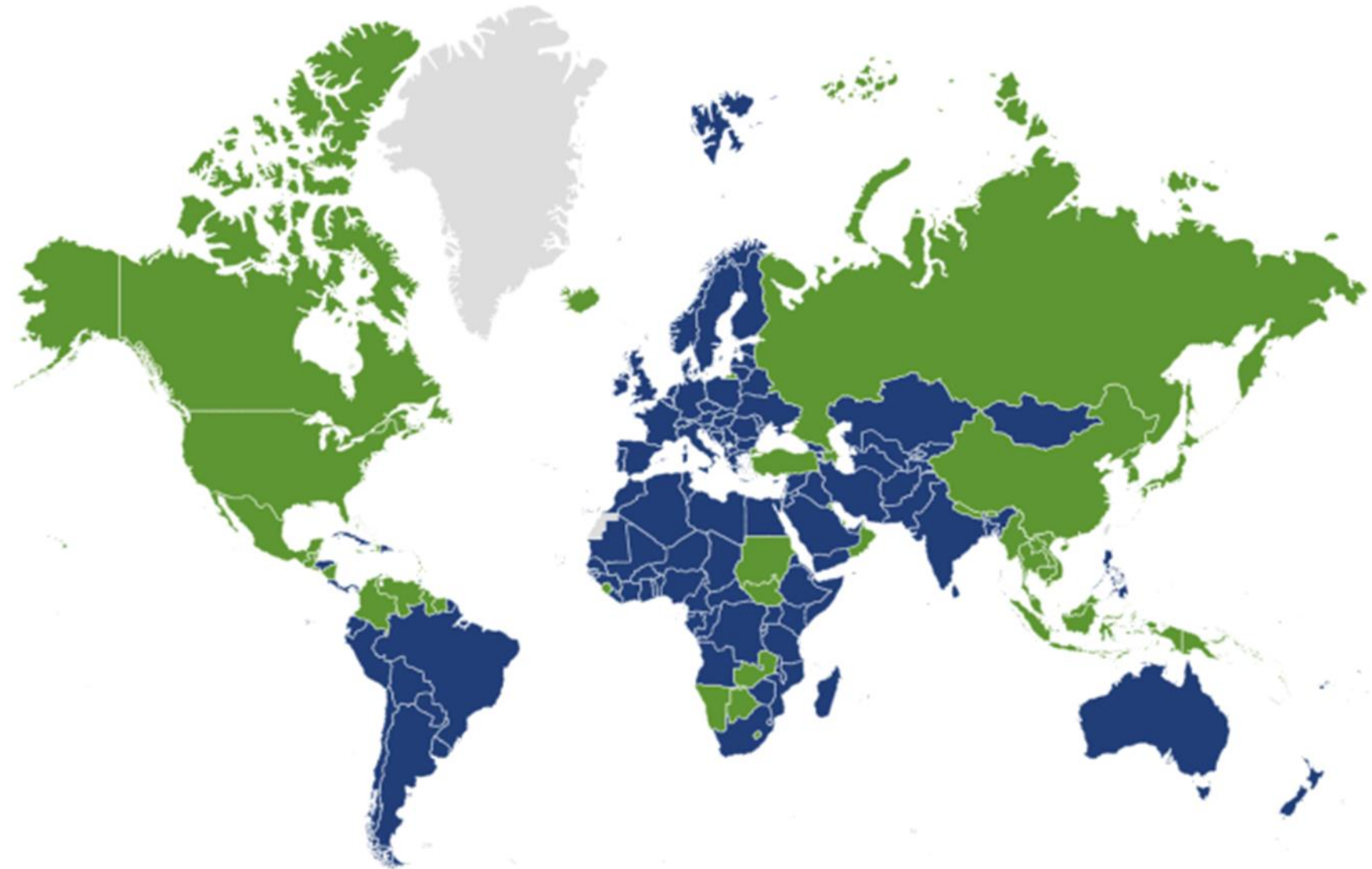
Title and Content Layout with Chart

CMS – the Convention on the Conservation of Migratory Species of Wild Animals

- Migratory species travel across borders, thus they are shared species and international cooperation is needed to conserve them: CMS provides a 'passport' to migratory species.
- CMS protects avian, marine and terrestrial species and their habitats.
- Entry into force in 1983



CMS currently has 133 Parties worldwide



Party

Non-Party

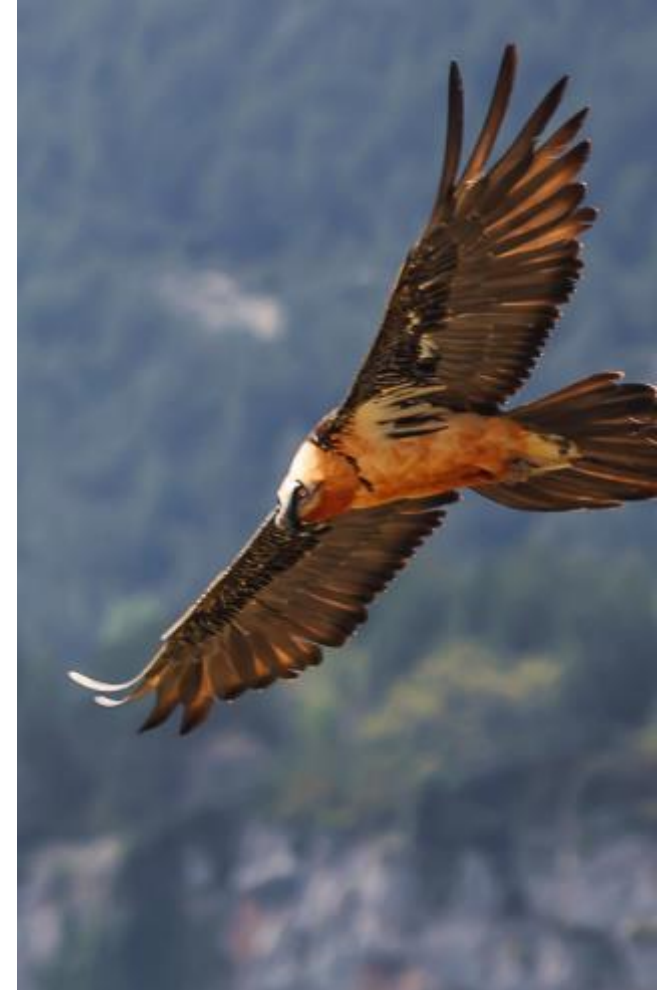
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

The final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

CMS Definition of 'Migratory Species'

Article I:

"**Migratory species**" means the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members **cyclically and predictably cross one or more national jurisdictional boundaries.**



CMS Appendices

Appendix I:

- migratory species threatened with extinction
- CMS Parties shall prohibit the taking of these animals (four exceptions – specific and limited in time), and endeavour to conserve or restore their habitats, mitigate obstacles to migration and control other factors that might endanger them

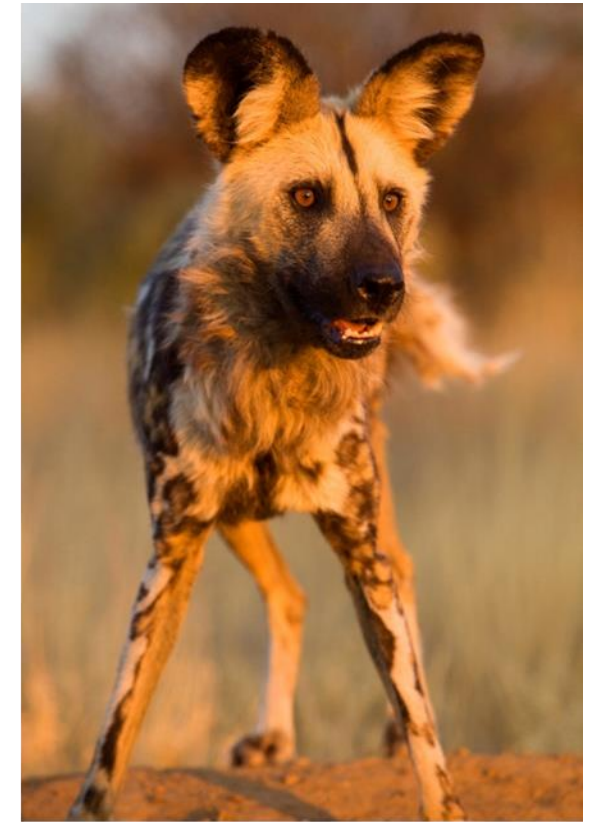


CMS Appendices

Appendix II:

- Migratory species with an unfavourable conservation status that need or would significantly benefit from international co-operation.
- Range States shall endeavour to conclude cooperative agreements.

Species can be listed on both Appendices



Agreements and MOUs

Parties have flexibility to design cooperation

Species-specific	Sharks MOU
Geography-based	Central Asian Mammals Initiative
Combined species and geographic approach	IOSEA Marine Turtle MOU Joint CITES-CMS African Carnivores Initiative

Legally Binding



Wadden Sea Seals



ACAP



EUROBATS



ACCOBAMS



ASCOBANS



Gorilla



AEWA

Non-Legally Binding



Aquatic Warbler



Bukhara Deer



Dugong



Great Bustard



Pacific Cetaceans



Raptors



Ruddy Headed Goose



Saiga Antelope



Sharks



Siberian Crane



Slender-billed Curlew



West African Aquatic Mammals



High Andean Flamingo



Marine Turtles Africa



IOSEA



Mediterranean Monk Seal



West African Elephants



Grassland Birds of South America



Huemul



Overview of existing CMS guidelines and resources

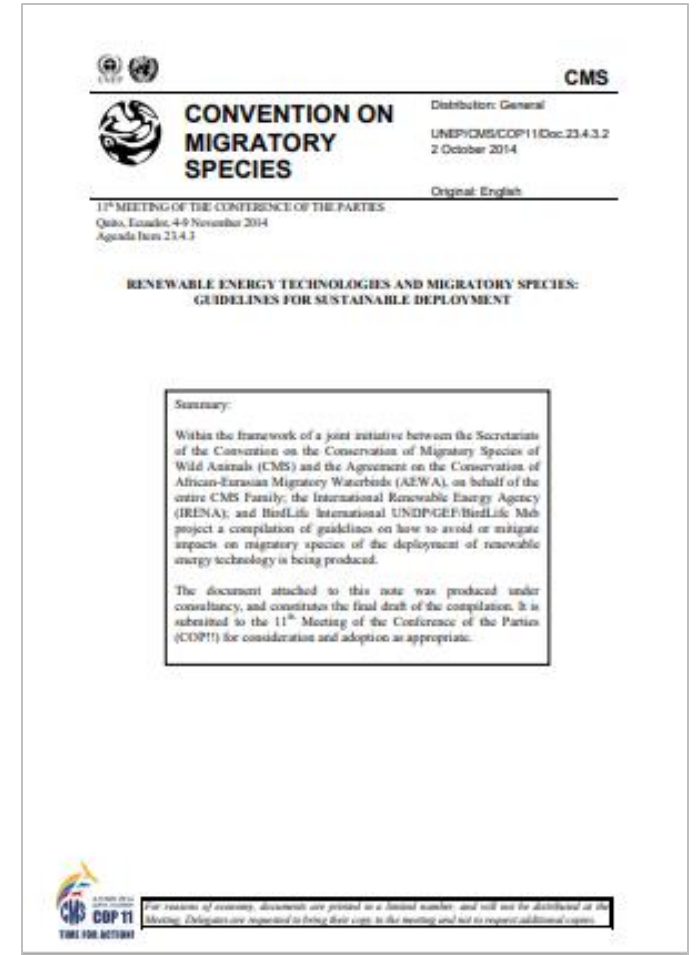


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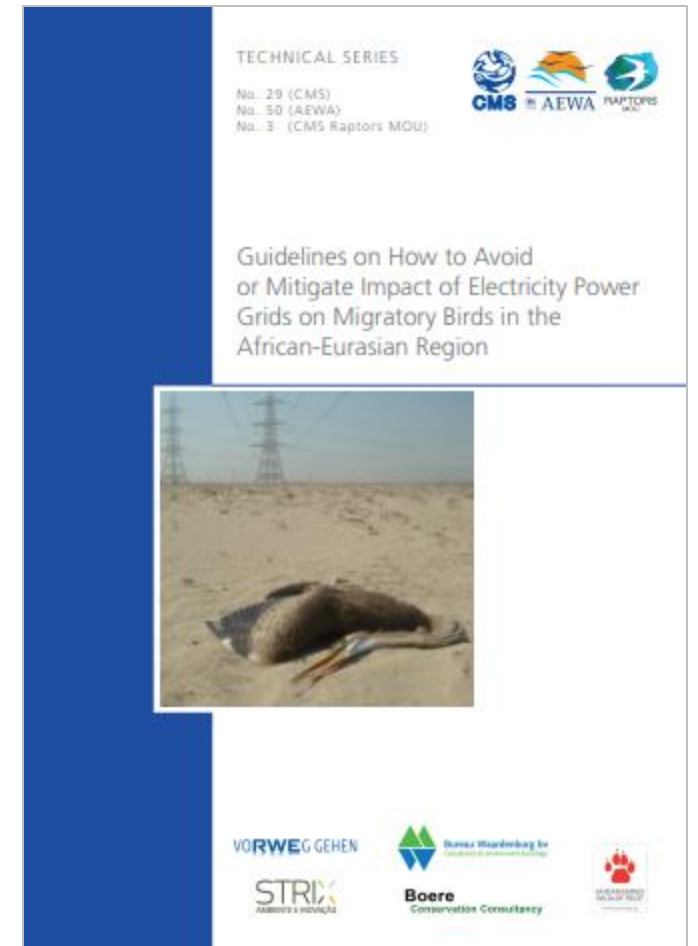
Renewable Energy Technologies and Migratory Species: Guidelines For Sustainable Deployment

- Published: 28 August 2014
- Target Sectors: Energy, Transport, Infrastructure
- Recommendations:
 - Migratory species in strategic planning
 - Development of sensitivity mapping tools
 - Strengthen national and international SEA and EIA legislation regulations
 - Definition of impact criteria
 - Project level environmental impact assessment
 - Implement measure to avoid and/or mitigate impacts
 - Adopt an adaptive management strategy in RET developments
 - Taskforce
 - Further research



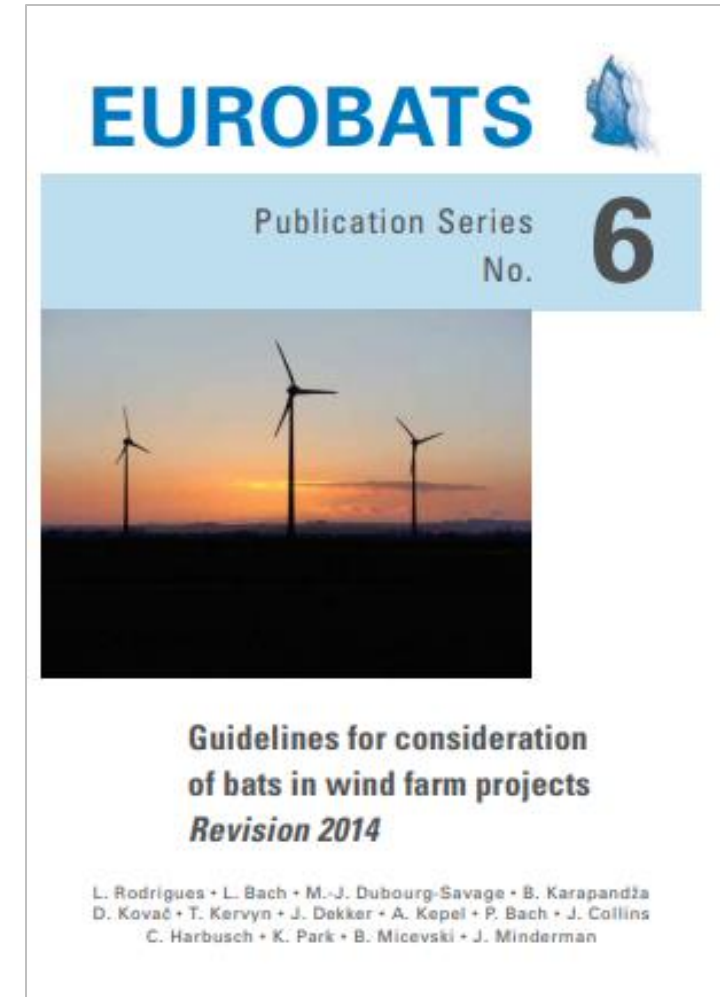
Guidelines on How to Avoid or Mitigate Impact of Electricity Power Grids on Migratory Birds in the African-Eurasian Region

- Published: May 2012
- Target Sectors: Electricity
- Output: Step chart to minimize the effects of power lines on birds
- Guidelines:
 - Strategic Planning, Legislation and Organisational Approaches
 - Routing of New Powerlines
 - Decision-making When and Where to Mitigate
 - Mitigating Electrocutation and Collision Impact on Birds
 - Impact Monitoring and Evaluation of Mitigation Effectiveness
 - Recommended Sources of Information and Guidance



Guidelines for consideration of bats in wind farm project – Revision 2014

- Published: 2014
- Target Sectors: Wind Energy
- Guidelines:
 - General aspects of the planning process
 - Carrying out impact assessments
 - Content of national guidelines



The Eurasian African Bird Migration Atlas

- Published: 2022
- Target Sectors: Conservation, Impact Assessment, Infrastructure and Development Planning

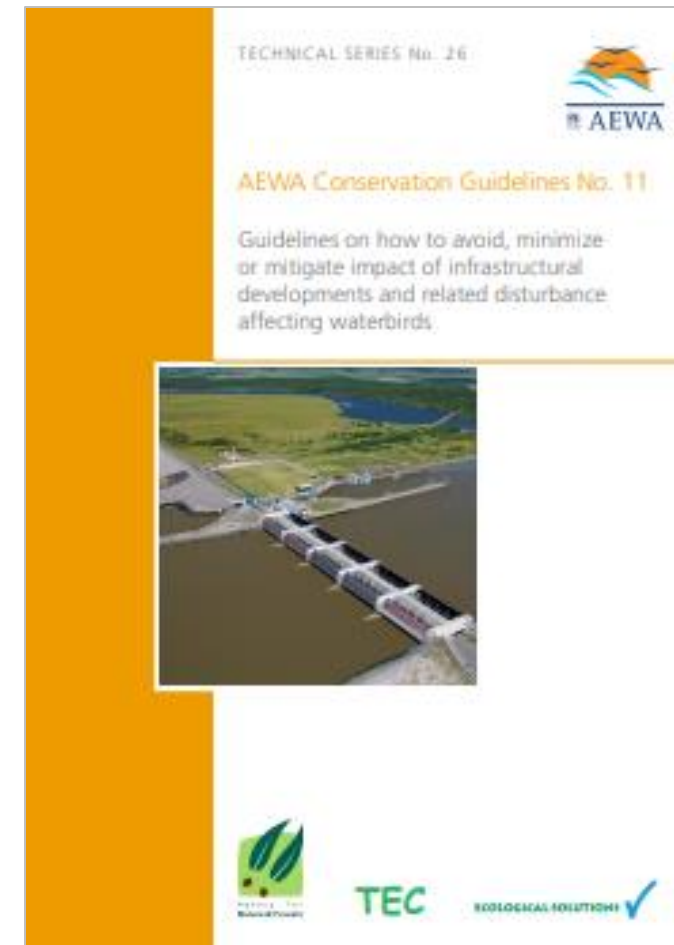
- Introduction:

This online Migration Atlas covers the huge geographical area represented by two continents, encompassing the flyways between Eurasia and Africa. Movements in time and space of 300 bird species are mapped and analysed drawing on data gathered by European Ringing Schemes over more than a century and collated by the EURING databank.



Guidelines on how to avoid, minimize or mitigate impact of infrastructural developments and related disturbance affecting waterbirds

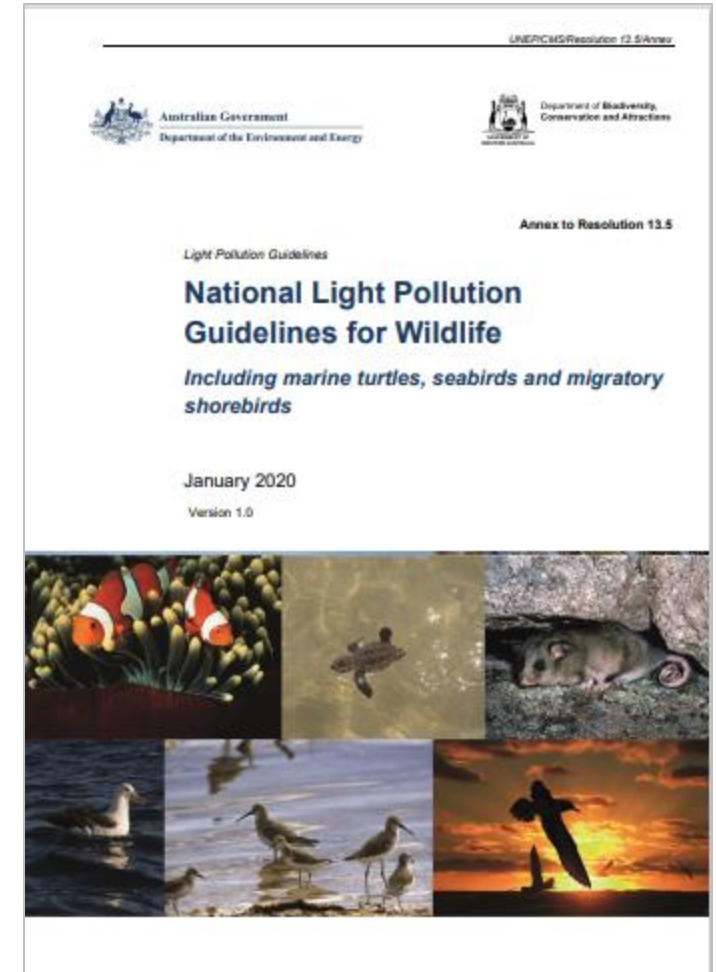
- Published: September 2008
- Target Sectors: Infrastructure
- Guidelines:
 - Step chart for Strategic Environmental Assessment
 - Step chart for Environmental Impact Assessment



National Light Pollution Guidelines for Wildlife

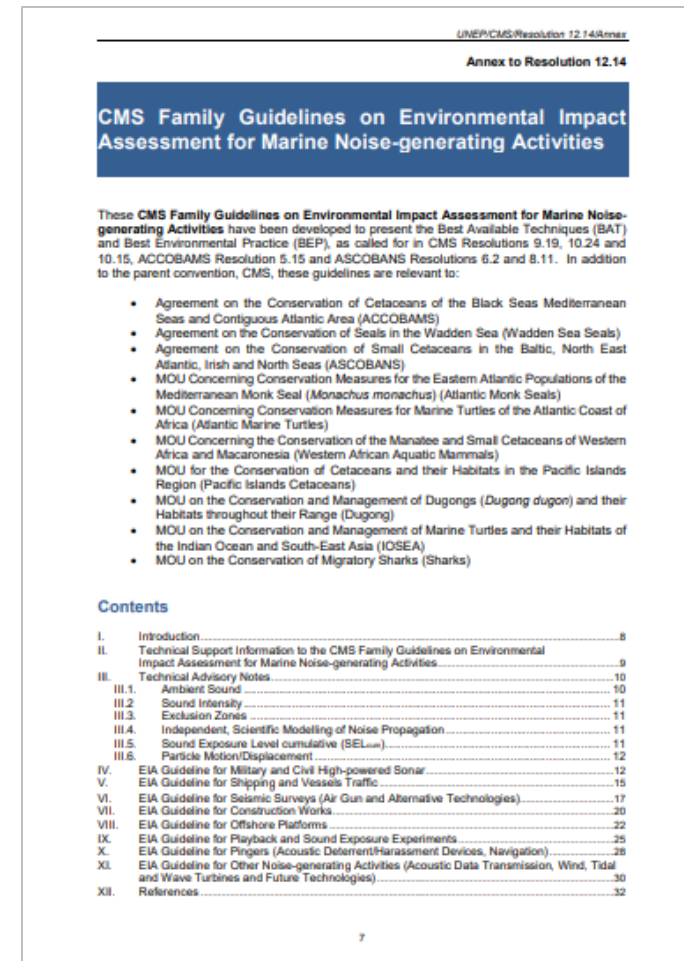
- Annex to CMS Resolution 13.4
- Adopted: February 2020
- Target Sector: Universal
- Introduction:

These Guidelines provide users with the theoretical, technical and practical information required to assess if artificial lighting is likely to affect wildlife and the management tools to minimise and mitigate that affect. These techniques can be applied regardless of scale, from small, domestic projects to large-scale industrial developments.



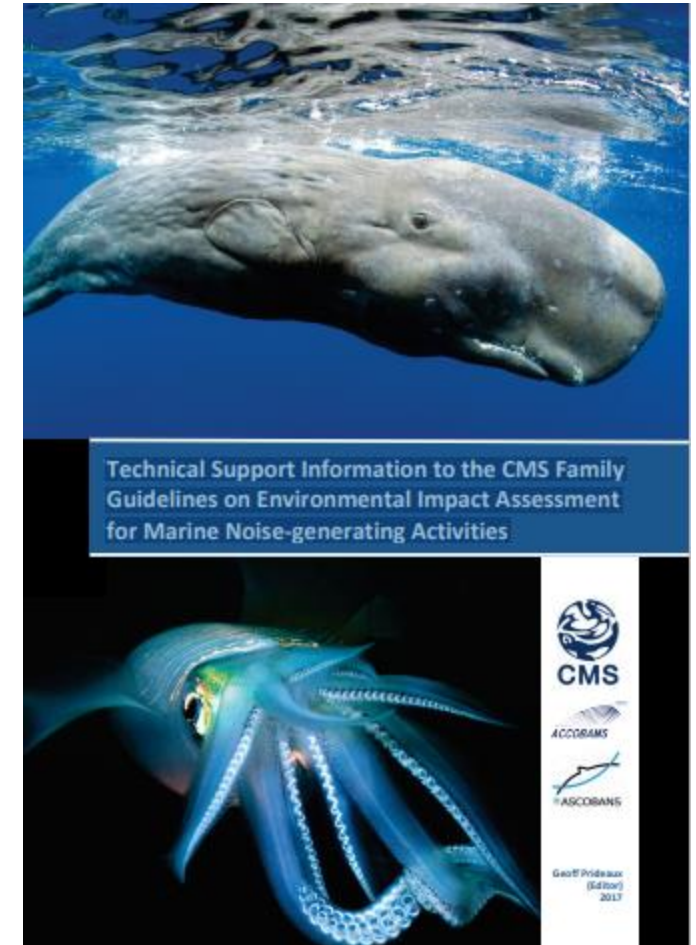
CMS Family Guidelines on Environmental Impact Assessment for Marine Noise-generating Activities

- Annex to CMS Resolution 12.14
- Adopted: October 2017
- EIA Guidelines for:
 - Military and Civil High-powered Sonar
 - Shipping and Vessel Traffic
 - Seismic Surveys (Air Gun and Alternative Technologies)
 - Construction Works
 - Offshore Platforms
 - Playback and Sound Exposure Experiments
 - Pingers (Acoustic Deterrent/Harassment Devices, Navigation)
 - Other Noise-generating Activities (Acoustic Data Transmission, Wind, Tidal and Wave Turbines and Future Technologies)



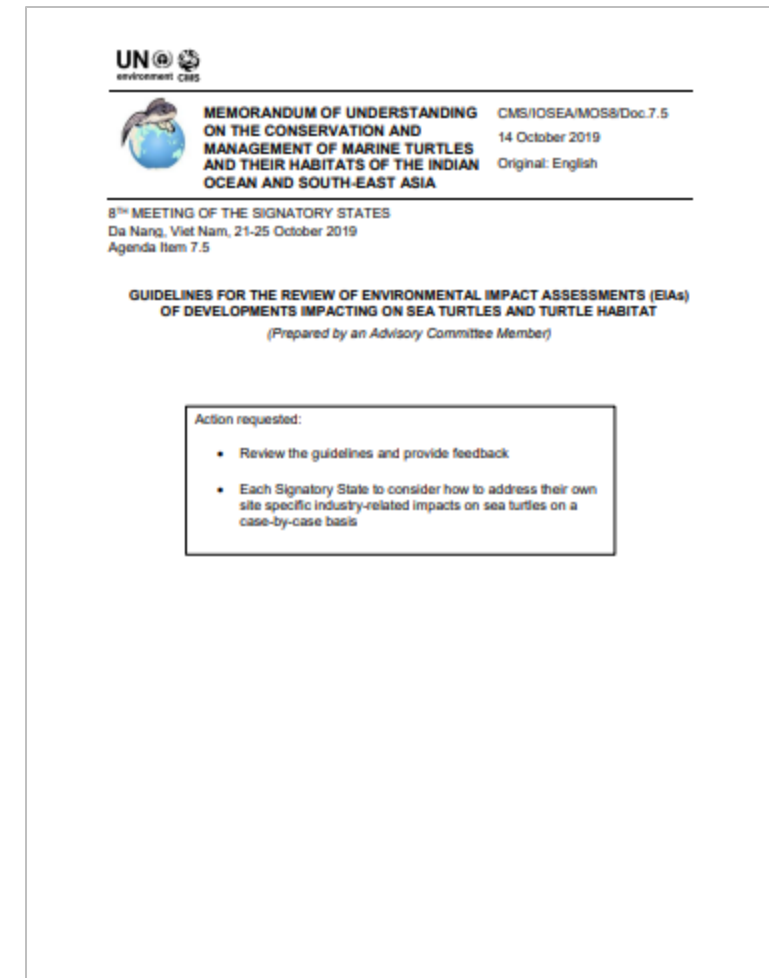
Technical Support Information to the CMS Family Guidelines on Environmental Impact Assessment for Marine Noise-generating Activities

- Published: 2017
- Contents:
 - Sound in Water is Complex
 - Basis Concepts and Necessity of Modelling
 - Expert Advice on Specific Species Groups
 - Decompression Stress
 - Exposure Levels
 - Marine Noise-generating Activities
 - Related Decisions of Intergovernmental Bodies of Regional Economic Organisations
 - Principles of EIAs
 - CMS-Listed Species Potentially Impacted by Anthropogenic Marine Noise



Guidelines for the review EIAs of developments impacting on sea turtles and turtle habitat

- Published: 14 October 2019
- Introduction:
 - The guidelines will assist in identifying potential impacts (i.e. severity, spatial extent and duration) of industry related pressures on sea turtles and their habitat, and where possible, identify potential mitigation measures to maximise environmental, social and economic benefits.
 - Governments should ensure that the EIA process for projects located in coastal and marine areas specifically evaluates the industry related impacts on these threatened species and their habitats. These Guidelines do not promote any point of view, development sector, policy or legislation, and should be adapted to the regulations and frameworks of each country.





Central Asian Mammals Initiative: Infrastructure Guidelines

27 June 2022, Intersessional Working Group on Linear
Infrastructure, Vilm Island



Central Asia: home to world's largest unbroken grasslands

- Inter-connected deserts, grassland and mountain ecosystems
- Central Asian mammals need to keep moving: large distances to follow seasonal and spatial shifts in food and water availability
- Low human population density
- Resource rich area



Central Asian Mammal Initiative (CAMI)

- CMS Regional initiative
- Covers 15 species (mostly ungulates) in 14 countries.
- The overall goal is to improve the conservation status of large migratory mammals and their habitats in the region.



CAMI Programme of Work

- Adopted by CMS COP11 in 2014 as Resolution 11.24, current Programme of Work 2021-2026 adopted by CMS COP13 Resolution 11.24 (Rev. COP13).
- Infrastructure is one of the key issues addressed by the initiative.

<https://www.cms.int/cami/en/page/programme-work>



Negative impacts of linear Infrastructure

© L. Badamjav



© M. Pestov



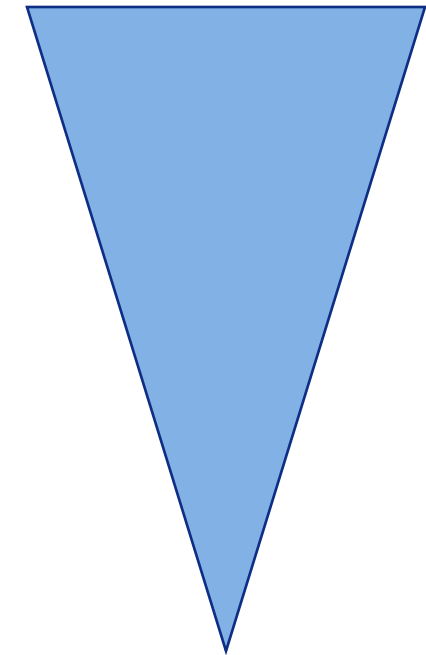
© T.Rosen



Infrastructure type by impact level

- 1. Fences** - Fences are clearly the number one threat and a major concern for all CAMI species. For several species fences constitute absolute barriers, which cannot even be mitigated by a change in design. Fences prevent animals from essential movements in search for food and water or to avoid harsh weather. Additional impacts include entanglement, injuries possibly leading to infection and death, and use by poachers and predators as a tool to entrap.
- 2. Railroads** - Challenges presented by railroads are the elevated rail bed often resulting in a steep embankment and the tracks themselves. The barrier effect of a railroad per se is further enhanced if fenced, resulting in the added risk of wildlife getting trapped in the railway corridor.
- 3. Roads** - Paved and unpaved roads are among the most common of infrastructure types; they offer a challenge to wildlife because sporadic traffic presents a high threat of mortality to crossing wildlife, high traffic volumes eventually make it impossible for wildlife to cross. Roads also allow easy access for poachers to formerly difficult-to-reach areas of wildlife habitat. The barrier effect of busy roads per se is further enhanced if fenced, resulting in the added risk of wildlife getting trapped in the road corridor.
- 4. Canals** - A network of irrigation canals exists in many Central Asian countries. The impact of canals on movements of ungulates is not well understood, but they do not seem to have a significant impact or act as a major movement barrier; however, this is mainly due to the fact that there is little overlap with species distribution.
- 5. Pipelines** - Many sections of pipeline are buried throughout the CAMI range and so are mainly disruptive to CAMI species during construction or in specific places where they remain above ground.

highest



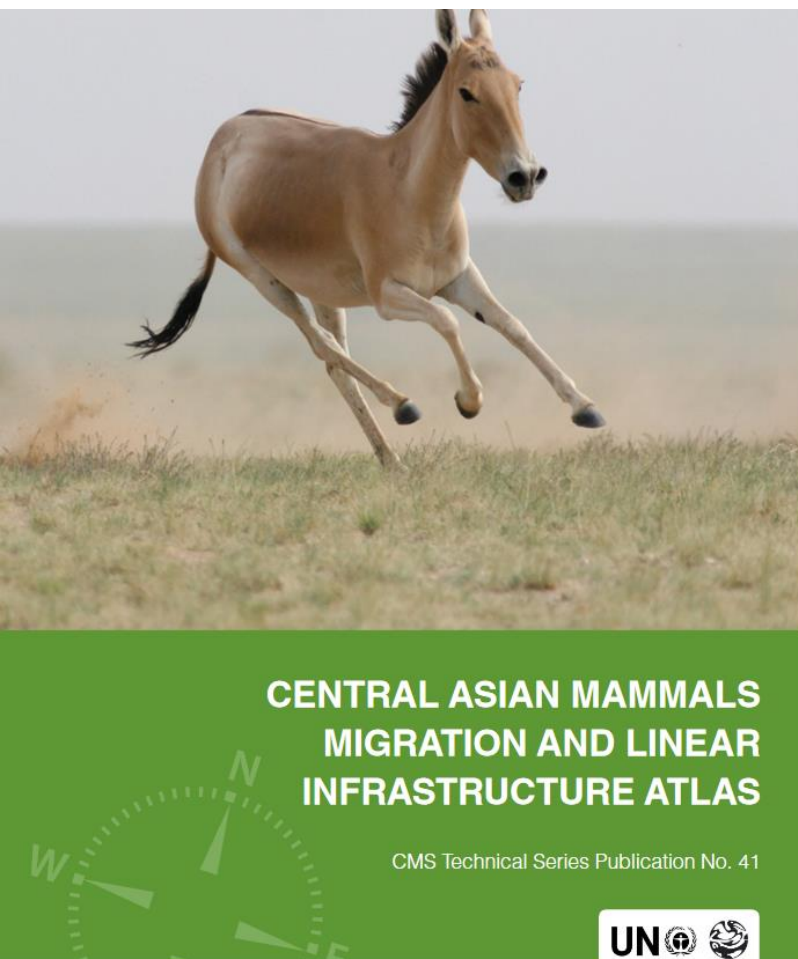
lowest

CAMI Activities on infrastructure

- The workshop “Implementing Wildlife-Friendly Measures in Infrastructure Planning and Design in Mongolia”, August 2015
- Removal/ redesign of the fence to allow Mongolian Gazelles and other animals to cross the trans-Mongolian railway, 2018-2019
- Guidelines for Addressing the Impact of Linear Infrastructure on Large Migratory Mammals in Central Asia
- Saiga Crossing Options CMS report and fence modification by Kazakhstan
- Central Asian Mammals Migration and Linear Infrastructure Atlas



CAMI migration and linear infrastructure atlas

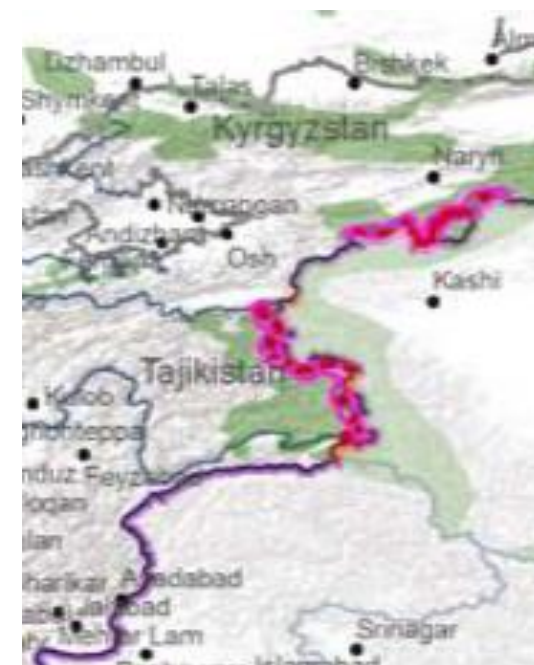


- https://www.cms.int/sites/default/files/document/cms_cami2_inf.4_cami-migration-and-infrastructure-atlas_e.pdf

Argali vs Roads



Argali vs. Fences



GIS Data available upon request!

Guidelines for Addressing the Impact of Linear Infrastructure on Large Migratory Mammals in Central Asia

- Guidance for creating legislation to reduce impacts of linear infrastructure
- **Introductory materials** on types of animal movement
- Lender rules and requirements
- Types of linear infrastructure and their impacts
- Analyses international requirements and related legislation in 8 countries: China, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, Uzbekistan and Russia.



Examples of gaps in the SEA and EIA

- SEA requirement not required for all types of projects (missing completely in Russia)
- None of the countries included the requirements to analyse the impact of fences!
- Fences = terrestrial gill nets!

More information at:

Component Type		Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan	Mongolia	China	Russia
1	Includes transboundary Impacts	referenced	referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced
2	Mentions roads (referencing any type such as motorways, highways, transportation corridors etc.)	referenced	referenced	not referenced	not referenced	referenced	not referenced	not referenced	not referenced
3	Mentions rail lines (using terms such as railways, railroads, rail corridors, transportation corridors etc.)	referenced	referenced	not referenced	not referenced	referenced	not referenced	not referenced	not referenced
4	Mentions pipelines (in reference to oil, gas and water pipelines)	referenced	referenced	not referenced	not referenced	referenced	not referenced	not referenced	referenced
5	Mentions fences (whether border, livestock or used in connection with transportation corridors)	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced
6	Mentions wildlife (using terms such as wildlife, animal(s) or animal resources, fauna, etc.)	referenced	referenced	not referenced	not referenced	referenced	referenced	referenced	referenced
7	Mentions migratory species	referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced
8	Expressly requires consideration of migratory species during the construction of linear infrastructure.	referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced	not referenced

Legend: referenced - ■ not referenced - ■ unclear - ■

Guidelines for Addressing the Impact of Linear Infrastructure on Large Migratory Mammals in Central Asia

- Mitigation principles (hierarchy, species and place specific, durability)
- Planning and design principles (inter-agency coordination, landscape-level view, identification of species of interest and movement patterns)
- Assessment principles (multi-stakeholder, screening and scoping, cumulative effects, indirect impacts and climate change)
- Mitigation measures
- Monitoring and evaluation






CMS

Thank you!

