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CONSERVATION AND MANAGEMENT SITUATION ANALYSIS OF THE CENTRAL ASIAN FLYWAY (CAF)

Summary:

This document presents, in its annex, a draft situation analysis on the conservation and management of migratory bird species in the Central Asian Flyway, prepared by BirdLife International. The participants of the meeting of the Range States of the Central Asian Flyway are recommended to take note of this draft situation analysis, as a basis for discussion, and invited to provide comments, as appropriate.

CONSERVATION AND MANAGEMENT SITUATION ANALYSIS OF THE CENTRAL ASIAN FLYWAY (CAF)

Background

1. In early 2022, the CMS Secretariat and BirdLife International discussed options for preparing a situation analysis report on the conservation and management of migratory birds in the Central Asian Flyway (CAF). The analysis report has been envisaged to provide a basis for discussion of the CAF Range States and relevant stakeholders, to support determining priority actions and institutional arrangements needed, and sound decision-making, towards effective and efficient conservation and management of migratory bird species and their habitats in the CAF.

2. BirdLife International kindly offered to conduct the situation analysis and prepare the related report. The project was led by an international consultant working closely with a project team hired by BirdLife International, staff from the BirdLife Middle East regional office and national partner organisations. The project was undertaken from May 2022 to February 2023. Further information on the manner and methodology of information gathering can be found in the situation analysis report itself, chapter 2. *Methodology of study*.

3. A first draft report was made available to the CMS Secretariat and other relevant stakeholders in early February 2023, for feedback. The CMS Secretariat provided initial comments. Based on the feedback, a revised draft was prepared by BirdLife International and submitted to the CMS Secretariat, to be presented to the meeting of the CAF Range States to be held in May 2023, for review and further consultations, as appropriate.

Recommended actions

4. The meeting is recommended to

   a) review the draft situation analysis report prepared by BirdLife International, contained in the annex of this document;

   b) provide comments on the draft report, as appropriate;

   c) consider the findings in determining priorities and actions in the CAF for migratory bird conservation and management, and the necessary steps towards their implementation.

Central Asian Flyway Situation Analysis - Consultation Draft, 23 February 2023

CENTRAL ASIAN FLYWAY SITUATION ANALYSIS

BirdLife International

2023

Central Asian Flyway Situation Analysis - Consultation Draft, 23 February 2023

Consultation Draft of 23 February 2023

In late Feb, the draft report will be shared by the CMS Secretariat with CAF Range States and international partners for feedback. It is proposed that the report be presented to a meeting(s) of the CAF range states planned in early 2023. It is expected that the final report will be compiled by Q3 2023 for use by CAF range states at the CMS COP14 in Samarkand, Uzbekistan in October 2023.

For feedback, kindly contact taej.mundkur@gmail.com

Disclaimers
Boundaries
The designations employed and the presentation do not imply the expression of any opinion whatsoever on the part of BirdLife International, UNEP/CMS or contributory organisations concerning the legal status of any country, territory, city or area in its authority, or concerning the delimitation of its frontiers or boundaries.

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Executive Summary

The Central Asian Flyway (CAF) straddles the central part of the Eurasian continent and overlaps with the flyways of the African Eurasian region and the East Asian – Australasian Flyway. It spans 30 countries and is home to 606 species of migratory bird of 84 families which include populations that are migratory, including the following groups: waterbirds, raptors and other landbirds, and seabirds. At least 48 species are categorised as globally threatened in the IUCN Red List of Threatened Species (2022) and the populations of 40% species are declining.

These birds use a wide variety of habitats during their annual cycle, from the arctic coast and frozen tundra to the temperate taiga, forest-steppe, steppe grasslands, hot and cold deserts, scrub forests, inland and coastal wetlands, wet and dry agriculture croplands, rivers and floodplains marshes, and a variety of human made tanks, salt pans, sewage and waste treatment farms. The region supports over a sixth of the world's human population, the fastest growing economies but also faces many socio-economic challenges. Across the region different migratory birds have a range of cultural and spiritual values to local people.

Most countries of the region are signatories to multilateral environmental agreements including, but not only, the Convention on Biological Diversity, Ramsar Convention on Wetlands, CITES, UNFCCC, UNCCD, with fewer countries party to the Convention on Migratory Species. At present there is no overarching instrument to promote the conservation of all migratory species in the CAF. However the CAF lies within the range of four major CMS instruments, the African Eurasian Waterbird Agreement (about half the countries), the CAF Action Plan for migratory waterbirds, the African Eurasian MOU for migratory birds of prey (Raptors MOU) and the Action Plan for Migratory Landbirds in the African-Eurasian Region (AEMLAP). The Flyways resolution of CMS COP13 in 2020 has amongst others, prioritised the development of an institutional instrument under CMS to support the implementation of increased conservation action for migratory birds and their habitats in the CAF, as well as to support this initiative with resources, in coordination with the existing CMS avian-related instruments.

There is a long history of research, collaboration and cooperation within the CAF region, through bilateral and international cooperation on migratory species research and conservation. Nevertheless, there remains large information gaps about a majority of the migratory species - their migration strategies, population sizes and trends, threats, ecological and conservation needs. There are great opportunities for learning and cooperation with other flyways.

The conservation of migratory birds is intimately linked to the major development challenges faced by countries in the region, particularly the challenges posed by climate change. The transition to renewable energy will place additional pressure on migratory birds and wise siting and risk management will be essential to avoid or minimise impacts on birds and other biodiversity and delays in planning and delivery. Worsening climatic conditions will increase pressure on drylands, wetlands and other habitats with impacts for migratory birds and people. Nature safe energy development and nature-based solutions can be a win-win opportunity to deliver co-benefits for migratory birds and people. The link provided by migratory birds represents an opportunity for countries on the flyway to work on some of these issues together.

On the basis of a literature review and consultation with national and international experts through use of an online questionnaire and in-country consultation, the conservation status of migratory birds of the CAF has been summarized, the most important existing and emerging threats and opportunities affecting them have been identified and their impacts reviewed. The main direct threats to birds include legal and illegal capture of migratory birds, their young and eggs, collisions and electrocution with man-made structures, human disturbance (to breeding, feeding and roosting

areas), disruption to migratory birds or their habitats, artificial light pollution, avian diseases, alien invasive species, poisoning, plastics, changes/declines in food availability. In addition, birds are affected by a variety of indirect threats including habitat loss and degradation (including, habitat loss from deforestation, use of agrochemicals, loss of wetlands, unsustainable land/resource use, mineral exploration/extraction, sand mining from rivers, urbanization, road/highway construction, marine/coastal debris (including plastics), solid and liquid pollution, too much/too little water and fire damage to habitat). In addition, there are increasing impacts of climate change on the habitats of the birds across their ranges. A first working list of international important sites for all migratory birds has been generated from the IBA database and national feedback identifies a minimum of 1,703 sites; and will require further review.

Emphasis has been given to the development context within which these priorities will need to be addressed, particularly the pressing need for urgent action to mitigate and adapt to climate change.

This first Situation Analysis provides an important benchmark to raise the profile of the migratory birds of the CAF and of their conservation challenges and opportunities. The report covers the following aspects:

- Ecology and importance of Central Asian Flyway, including a comprehensive review of conservation status of migratory species, key habitats and sites, and knowledge gaps
- Critical Site Networks across the flyway for landbirds, raptors and waterbirds
- Information on main direct and indirect threats to migratory birds and their drivers
- Capacity of national stakeholders for research and conservation of migratory birds and their habitats
- Measures in place to protect and conserve migratory birds, key sites and habitats.

The Situation Analysis provides crucial information to governments and other key stakeholders at national and international level to more efficiently consider priorities for international and national actions at flyway and national level and to ensure maximal alignment for conservation of its migratory birds and their habitats and strengthening flyway-scale collaboration.

The report provides recommendations for the CAF in relation to :

A. Development of a joint collaborative initiative to improve coordination and build synergies among international frameworks, both formal and informal and key stakeholders (including governments, international NGOs, scientists and others with an interest in saving migratory birds).

B. Species management – implementation of existing single species or multispecies action plans for globally threatened species and development of others; and listing of eight globally threatened and one near-threatened CAF species under the CMS Appendices.

C. Land-use management – identification and management of sites of national or international importance to migratory bird species, establishment of a critical site network; tackling land-use changes in intensive agriculture and traditional agriculture including pastoralism and small-scale cropping systems; timber and non-timber forest products; water management at important wetlands; energy production and renewable energy; re-vegetation (including reforestation), and, reducing desertification and carbon emissions from deforestation and degradation; tackling disturbance from human activities, human-wildlife conflict; poisoning, collisions, diseases and taking and trade of migratory birds - regulation of legal taking; tackling illegal taking.

F. Research and monitoring - understanding migration patterns and connectivity along flyways, monitoring of population trends, understanding causes of population change in migratory species, habitat use and management, building capacity and improving the exchange of information, collaboration and coordination between researchers studying migratory species

G. Education and information - Improving public awareness and understanding about migratory bird species

H. Integrating action for climate and migratory species and mobilizing adequate resourcing of the work.

Implementation of the recommendations will help reverse the decline of migratory bird species of the CAF, by strengthening legislation and policy for migratory birds and their habitats and their implementation, conservation of migratory birds, management and restoration of important habitats for migratory birds, strengthen awareness raising, enhance national and local capacity, and strengthen national and international cooperation and integration of multilateral environment agreement national implementation through involvement of multiple stakeholders. It should also provide the basis to better integrate policy and action for climate and migratory species.

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Central Asian Flyway Situation Analysis - Consultation Draft, 23 February 2023

Foreword

The Central Asian Flyway, one of the world's nine great flyways used by migratory birds to travel between their breeding and non-breeding grounds, is still the most neglected in terms of knowledge and conservation action.

Migratory birds are important sentinels of the health of our environment. As they travel they rely on sites and landscapes, often thousands of kilometres apart, to rest and refuel for the next leg of their extraordinary journeys. Declines in migratory bird populations signal environmental degradation of the same sites and landscapes that are so important for millions of people for food, clean water and other environmental services, and particularly for climate change mitigation and adaptation.

Migratory birds connect countries and continents. Efforts made to conserve birds in one country can be undermined by damaging developments in others, such as deterioration of habitats or direct threats such as overexploitation and poorly-sited energy infrastructure. Therefore, conservation of migratory birds requires a collaborative effort of all countries along their flyways.

For this reason, BirdLife greatly welcomes the initiative of the Government of India and the Convention on Migratory Species (CMS), to set up a process to catalyse concerted, cooperative, coordinated action for the migratory birds of the Central Asian Flyway and their habitats.

BirdLife has produced this situation analysis to provide a factual baseline for this process. This document is intended to inform the prioritisation of conservation action, including highlighting important information gaps that need to be filled. It represents a compilation of information collected through consultation with experts from governments, academia and civil society from 25 countries of the Central Asian Flyway.

The BirdLife Partnership stands ready to support CMS and the Central Asian Flyway Range State governments to develop and implement a robust plan of action for the flyway. The results of the situation analysis indicates that such action is urgently needed.

Migratory birds are an inspiration to people along the Central Asian Flyway. Securing their future will help ensure a healthy, sustainably managed environment, rich in ecosystem services, for future generations.

Patricia Zurita

CEO

BirdLife International

Central Asian Flyway Situation Analysis - Consultation Draft, 23 February 2023

1 Introduction

The annual migrations of birds across international borders are among the most spectacular marvels of the natural world. Many birds follow regular routes, known as flyways[1], to travel between their breeding grounds and their non-breeding grounds. The Central Asian Flyway (CAF) is one of the nine global flyways.

The CAF is in many ways the least known of all global flyways. Many aspects of bird migration in the CAF are still poorly understood, and conservation of migratory birds is generally low on the agendas of governments as well as most NGOs. The CAF includes China and India, two countries of the world with the largest and in parts most dense human populations. Overexploitation of natural resources and related development pressures are increasingly putting the survival of migratory birds at risk, with habitat loss, degradation and pollution, illegal hunting and trade, poisoning, electrocution and collisions with energy infrastructure. Global assessments highlight the loss of habitats and growing impacts of climate change on the economies and biodiversity of the region.

The CAF covers a large continental area of Eurasia between the Arctic and Indian Oceans and the associated island chains. The Flyway comprises several important migration routes of birds, most of which extend from the northernmost breeding grounds in the Russian Federation (Siberia) to the southernmost non-breeding (wintering) grounds in West and South Asia, the Maldives and the British Indian Ocean Territory (BIOT). The birds on their annual migration cross the borders of several countries[2].

Geographically the CAF region covers 30 countries of North, Central and South Asia and Trans-Caucasus[3] (Fig 1); see Annex 1 for a full list. This boundary has been defined for the CMS CAF Waterbird Action Plan (2005) and has been applied for the purposes of this report, with the taxonomic scope of the flyway broadened to cover all taxa of migratory birds (waterbirds, raptors and other landbirds and seabirds). This flyway is regularly used by over 606 species of migratory birds of 84 families (see Section 3 for details).

While most of the countries of the CAF region are signatories to global multilateral environmental agreements, as well as international agreements and cooperative frameworks that include the conservation of migratory species and their habitats, approximately 8% of all migratory bird species in the CAF are assessed as Globally Threatened and an 6% as Near Threatened under the IUCN Red List of Threatened Species (BirdLife International 2022). Nearly four times the number of species are assessed as being decreasing than the number that are increasing; with an equal number of species for which there is no reliable or recent trend information. There is an urgency to collate information on the current situation of migratory birds, identify major direct and indirect threats to the species and their habitats and find solutions to reverse the trends.

The region is also home to a wide range of unique cooperative initiatives for the conservation of single species and groups of species, involvement of researchers, non-government organisations,

[1] A “flyway” is the total area used by (groups of) populations or species of birds, throughout their annual cycle, including the breeding areas, migration stop-over and non-breeding (wintering) sites. Many of these sites tend to be highly productive and are thus also of importance to non-migratory birds and other biodiversity. In the staging and non-breeding areas of the flyway, the high productivity also enable local people to benefit food, shelter and water (Boere & Stroud 2006).

[2] The term “Migratory bird” species means the entire population or any geographically separate part of the population of any bird species, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries (definition as per CMS).

[3] The term “range state” is used to denote where a country is within the geographic coverage of a convention or agreement.

conservationists and local communities in research, monitoring and conservation action for species and habitats.

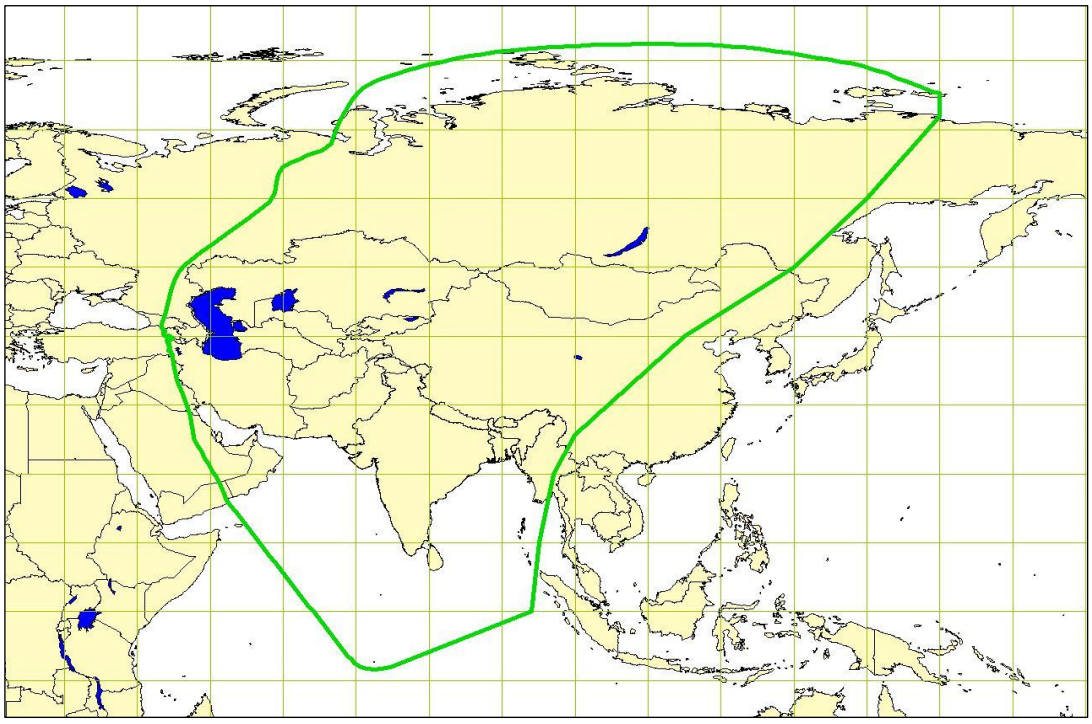

Fig 1. The CAF boundary adopted for the CAF Situation Analysis, as depicted in the CMS CAF Waterbird Action Plan. The political boundaries on the map do not imply official endorsement or acceptance by BirdLife International or CMS

While under the mandate given to the Convention on Migratory Species (CMS) a global *Review of Migratory Bird Flyways and Priorities for Management* (2014) of the state of knowledge about the different migratory birds and their needs has been undertaken, a flyway scale review of all CAF's bird taxa is overdue to improve conservation action for these species and their habitats.

BirdLife International has undertaken to produce a Situation Analysis review for the CAF in support of efforts by CMS Parties to conserve its migratory birds. The review is developed in consultation with the CMS Secretariat and will inform the development of "an institutional instrument under CMS to support the implementation of increased conservation action for migratory birds and their habitats in the CAF, as well as to support this initiative with resources, in coordination with the existing CMS avian-related instruments" as called for by the Flyways resolution adopted at the CMS COP13 in 2020[4].

This first CAF Situation Analysis summarizes key information relevant for the conservation of migratory birds in the CAF at the flyway level especially in the context of existing international and national commitments of countries, especially under the CMS, Ramsar Convention on Wetlands, and Convention on Biological Diversity (CBD) including the newly agreed Global Biodiversity Framework in December 2022[5].

[4] https://www.cms.int/en/document/flyways-4
[5] https://www.cbd.int/article/cop15-final-text-kunming-montreal-gbf-221222

In addition, it includes commitments to major agreements/frameworks (and linked species conservation plans) and action by local stakeholders for migratory birds that cover the region and provide a basis for international cooperation and conservation action.

The Situation Analysis provides an important benchmark to raise the profile of the migratory birds of the CAF and of their conservation challenges and opportunities. It will also provide crucial information to governments and other key stakeholders at national and international level to more efficiently consider priorities for international and national actions at flyway and national level within the flyway to ensure maximal alignment for conservation of its migratory birds and their habitats and strengthening flyway-scale collaboration.

2 Methodology of study

The Situation Analysis report has been produced by BirdLife International in consultation with the CMS Secretariat (see Annex 2 for the Project Plan). The project was led by an international consultant working closely with a project team hired by BirdLife International, staff from the BirdLife Middle East regional office and national partner organisations.

The project was undertaken from May 2022 to February 2023 to prepare a draft report for consultation. Information was collected and collated from four main sources:

a. Consultation using a **standard online national questionnaire,** translated into Arabic, Chinese, Mongolian and Russian to facilitate local feedback. The questionnaire sought information on three main areas:

1. Management of Migratory Birds and their Habitats	● Overview of migratory bird species and conservation planning ● Legislation and policies for protection of migratory species ● Cultural values of migratory birds ● Financial resources for the protection of migratory species ● Current and future threats and pressures affecting migratory birds and their habitats ● Climate change and migratory birds ● Current knowledge on migratory birds ● Migratory bird research and monitoring activities ● Migratory bird and habitat data management, analysis and use ● Capacity for research and conservation action ● Management of Important Sites/Habitats for Migratory Birds ● Integration across Sectors
2. Awareness Raising and Communication	● Awareness levels ● Awareness-raising programmes and their impact ● Priority actions for Awareness Raising
3. International Cooperation for Migratory Bird and Habitat Conservation	● Cooperation based on international frameworks ● Priorities for international cooperation

The national consultation was undertaken with MEA focal points through initial contact by the CMS Secretariat and followed up by the project team. Direct contact was made with research institutions, universities and NGO stakeholders mainly between July and November 2022.

Responses to the questionnaire were received from the majority (25/30) of countries (exceptions being Azerbaijan, Iran, Kyrgyzstan, Qatar and Tajikistan). While access to information from official sources in Afghanistan and the Russian Federation was difficult, we were able to retrieve information from Yemen, a country currently going through war.

Information was provided from government focal points, institutions, university, NGOs and independent experts. Questions that proved to be confusing (for which we initially received variable response rates) were followed up and many were clarified, with some remaining unresolved.

b. **Use of international databases** including the BirdLife International Datazone (species and Important Bird Areas), IUCN Red List and International Waterbird Census Portal, Critical Site Network Portal and Waterbird Populations Portal managed by Wetlands International to extract core information on species, habitat use, threats and internationally important sites.

c. Identification of relevant **resolutions, strategic plans, action plans, work programmes**, **and species conservation action plans** from international conventions, agreements and frameworks.

d. **Rapid literature survey** to collect essential information on research and conservation action for migratory birds and their habitats.

Structure of the report

A synthesis of the CAF and summary tables are provided in line within the text wherever they are mentioned. The report has the following structure:

1. Introduction
2. Acknowledgements
3. Methodology
4. Migratory birds and their habitats - describes the birds, the state of knowledge about their migration, important habitats, current and future threats and pressures –including climate change – resources for migratory species and habitat action, and capacity for research, monitoring and awareness raising to support conservation.
5. Conservation action - national legislation, international cooperation frameworks, and the role of government and other stakeholders.
6. Recommendations - flyway-scale recommendations aimed at conserving migratory species and preventing their extinction.
7. Glossary of key terms and acronyms used in the report.
8. References, first for the synthesis, followed by country specific references received through the consultation.
9. Annexes including -

   - First working list of migratory CAF species (scientific names of all species mentioned in the report are provided here).
   - Working list of sites of internationally importance for conservation in the CAF

- A collation of the country feedback from the national consultation process.
- A key to ISO two character codes used for countries in the tables is included in Annex 1

10. Links to webpages mentioned in the text are provided as footnotes at their first mention.

3 Migratory Birds and their Habitats

a. Knowledge about CAF's migratory birds

As defined by CMS, a CAF bird species or lower taxon (subspecies or population) is considered migratory, if a significant proportion of their members cyclically and predictably cross one or more national jurisdictional boundaries of the CAF states. This also includes altitudinal migrants (species that seasonally move up and down mountains) if they cross one or more jurisdictional boundaries. Under this definition, the term "migratory" does not recognise populations of a species which may undertake seasonal/annual movements within national boundaries – the management of these species are the sole responsibility of the country.

The CAF connects the breeding grounds as far north as the Siberian Arctic, including the countries of Central Asia, to non-breeding grounds in the tropics in the Indian Subcontinent, the Maldives, British Indian Ocean Territories (BIOT) and Arabian Peninsula. This flyway is regularly used by 606 species of migratory bird of 84 families[6] based on a first working list prepared for this review (Annex 3 for a list of families and Annex 4 for a full list of migratory species). Seven families are represented by 25 or more migratory species each (Table 1).

Table 1. Number of species in each family with 25 or more species in the CAF

Group	Family	No of species
Landbirds	Muscicapidae (Old World Flycatchers and Chats)	61
	Phylloscopidae (Leaf-warblers)	27
	Turdidae (Thrushes)	25
Raptors	Accipitridae (Hawks, Eagles)	47
Waterbirds	Anatidae (Ducks, Geese, Swans)	38
	Scolopacidae (Sandpipers, Snipes, Phalaropes)	36
	Laridae (Gulls, Terns, Skimmers)	29

Many migratory species have a distribution beyond the CAF, either in the East Asian – Australasian Flyway or African Eurasian Flyways. Where there is limited information on distribution and movement, we have taken a precautionary approach and included the species, unless it appears to be a vagrant (and so does not regularly occur) in the CAF country.

[6] For the Situation Analysis Report, a migratory species of the CAF is defined as "a species or lower taxon of migratory bird (subspecies or population), a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries of the CAF states" following the CMS definition.

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If the species breeds within one or more country within the CAF region, and may pass through but the majority of the population migrates outside the CAF countries during the non-breeding period, so the terminus of migration is either westwards into Europe or Africa (the Amur Falcon (Meyburg et al 2017), Common Swift (Zhao et al 2022) and Cuckoo[7] migrate from eastern China to Africa) or south eastwards into South East Asia or Australasia, it was not included in the working list as a migratory species of the CAF.

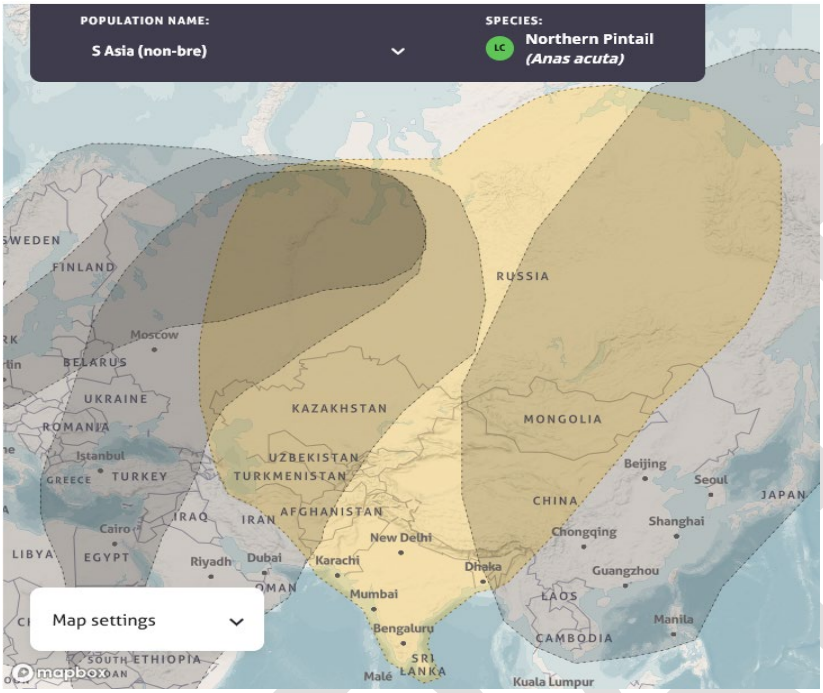

Fig 2. Distribution of the Northern Pintail a northern arctic breeding migrant duck.
The population in yellow indicates the biogeographic population in the CAF (while other populations breeding in northern Eurasia migrate into Africa and S E Asia). *Source:* https://wpp.wetlands.org/explore/457/2269

Most long-distance migratory species of shorebirds, ducks and geese breeding in the Arctic and temperate regions of Russia and Kazakhstan migrate to the terrestrial and coastal areas of southern Asia during the boreal /northern winter (Figs 2, 3a and 3b). Landbirds breeding in temperate regions may migrate short distances to Central Asia, while others migrate long distances to West and South Asia.

[7] https://qz.com/859330/researchers-use-google-maps-to-track-the-epic-migration-of-three-cuckoos-from-beijing-to-east-africa

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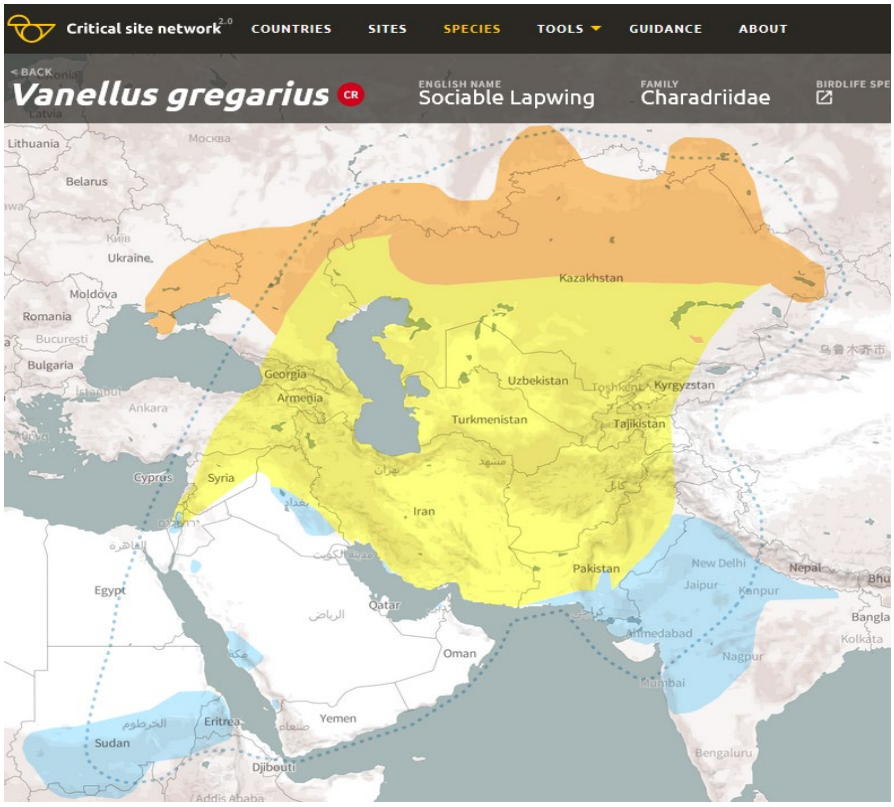

Fig 3a. Sociable Lapwing, a temperate breeding migrant to South Asia and north east Africa. The species range map: breeding (orange), non-breeding (light blue) and passage (yellow). The dotted line indicates the population boundary and encompasses areas where the species normally occurs *Source: http://critical-sites.wetlands.org/en/species/22694053?zoom=4&lat=36.27970720524017&lng=72.46582031250001&view=map*

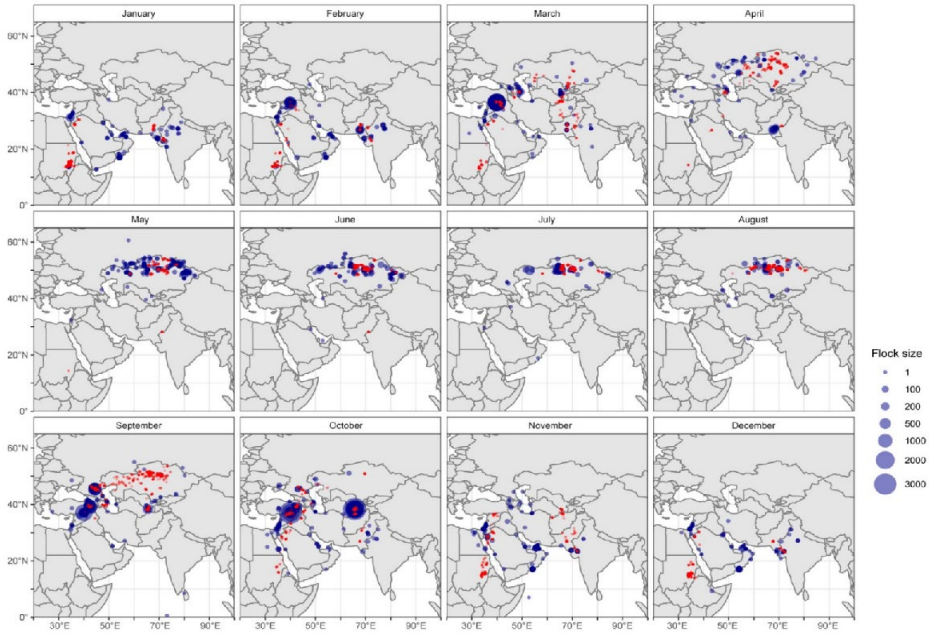

Fig. 3b. Summary of monthly distribution of satellite-tagged Sociable Lapwing (red dots) and sight records of the species since 1970 (blue circles, scaled proportional to the number of birds recorded). Source: Donald et al. (2020).

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A few species migrate in the reverse direction. The Pallas's Fish Eagle, for example, breeds in Bangladesh and India during the northern winter and migrates north to Mongolia and Central Asia during the northern summer (Fig 4).

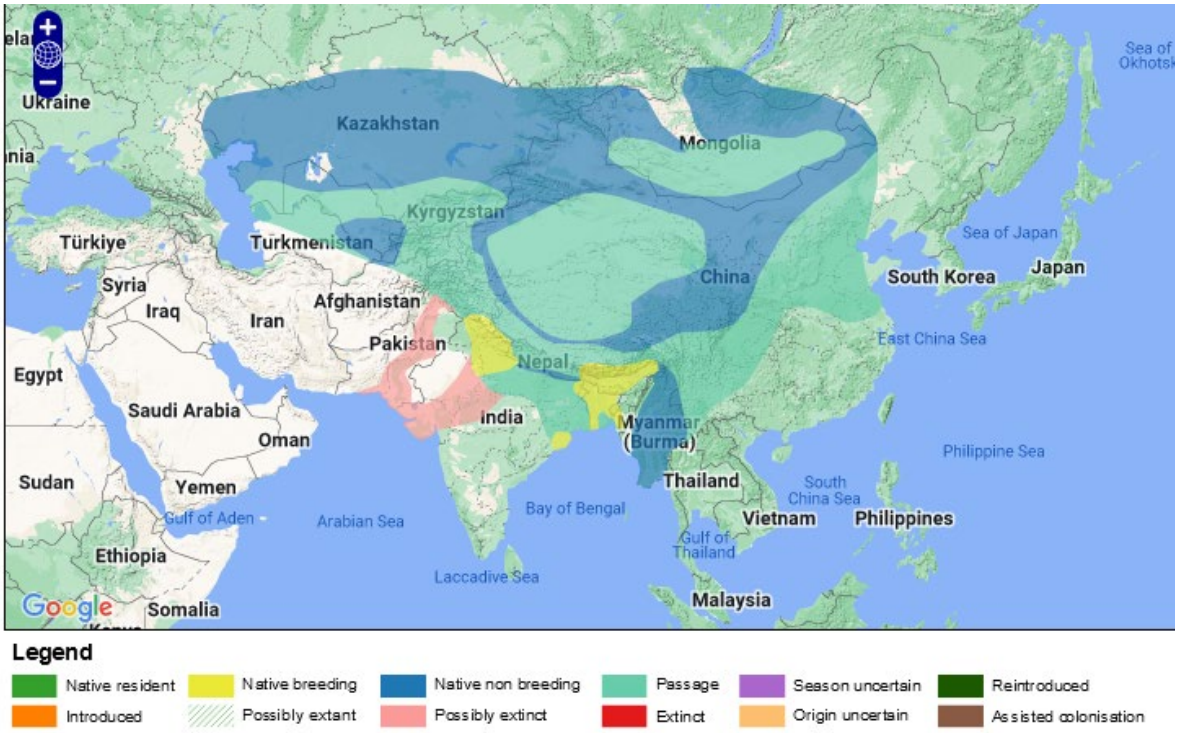

Fig 4. A "reverse" migration pattern of the Endangered Pallas's Fish-eagle breeding in south Asia and migrating north to Central Asia
Source: http://datazone.birdlife.org/species/factsheet/pallass-fish-eagle-haliaeetus-leucoryphus

Although the shortest flyway, the Central Asian Flyway includes the highest mountain range in the world, the Himalayas. Several species of birds are known to migrate directly over the Himalayas flying at altitudes in excess of 6,000m (e.g. Bar-headed Goose - Hawkes *et al*. 2015, Ruddy Shelduck - Parr *et al*. 2017, and Demoiselle Crane – Higuchi *et al*. 2017 and Black Kites - Kumar *et al.* 2020).

In addition to the migratory species described above, all of which use the terrestrial and coastal habitats, three species (Pomarine Jaeger, Arctic Skua and the Red-necked Phalarope) breed in the Arctic and migrate across the continent to spend the non-breeding period in the Arabian Sea. There is a group of eight seabird species (Wilson's Storm-petrel, Wedge-tailed Shearwater, Flesh-footed Shearwater, Tropical Shearwater, Persian Shearwater, Bulwer's Petrel, Jouanin's Petrel and Swinhoe's Storm-petrel) that breed in the Indian Ocean, within and beyond the southern boundaries of the CAF, and migrate into the Arabian Sea and Bay of Bengal. Two of these breed up to the Pacific ocean and migrate into the Arabian Sea and Bay of Bengal.

Of the three groups of migrants (Fig. 5), raptors include the highest percentage of globally threatened species (19%), followed by waterbirds (and seabirds) at 11% and landbirds (4%).

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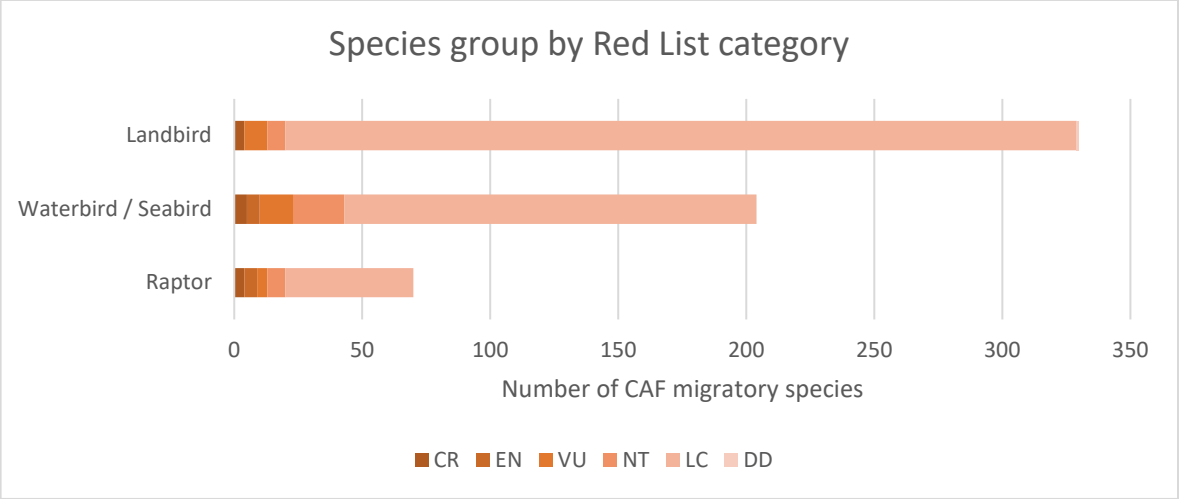

Fig 5. Overview of CAF migratory species groups as per the IUCN Red List of Threatened Species (2022) See Table 2 for details of threatened categories.

At present, approximately 8% of all migratory bird species in the CAF are categorised as Globally Threatened, and 6% as Near Threatened (summarized in Table 2, details in Annex 4), with many more species showing a decline in their populations.

Table 2. Number of species in the CAF based on red list status

Red List status	**Number**	**Percentage**
Critically Endangered CR	13	2.1
Endangered EN	10	1.7
Vulnerable VU	25	4.1
Near threatened NT	36	5.9
Least Concern LC	521	86.0
Data Deficient DD	1	0.2
Total	**606**	

The families of Otididae (Bustards) and Hydrobatidae (Storm-petrels) show the highest proportion of threatened species (Table 3).

Table 3. Families with the highest numbers of threatened species in the CAF

Family	**CR**	**VU**	**EN**	**LC**	**NT**	**Total**	**No of RL species**	**Percentage of threatened species per family**
Otididae (Bustards)	3	2			1	6	5	83.3
Hydrobatidae (Storm-petrels)		1			1	2	1	50.0
Gruidae (Cranes)	1	1		2	1	5	2	40.0
Ciconiidae (Storks)		1	1	3	1	6	2	33.3
Phalacrocoracidae (Cormorants)		1		2		3	1	33.3

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Family	CR	VU	EN	LC	NT	Total	No of RL species	Percentage of threatened species per family
Apodidae (Swifts)		1		3		4	1	25.0
Accipitridae (Hawks, Eagles)	4	3	4	30	6	47	11	23.4
Podicipedidae (Grebes)		1		4		5	1	20.0
Anatidae (Ducks, Geese, Swans)	1	5	1	28	3	38	7	18.4
Scolopacidae (Sandpipers, Snipes, Phalaropes)	2	1	2	24	7	36	5	13.9

An assessment of the population trends indicates that 11% of species show increasing populations, 38% are stable, and 39% are decreasing (Table 4). For the remaining 11% of species we do not have sufficient information to assess their population trends. If we consider only the subset of species for which there is adequate information, the percentage of species assessed with decreasing populations is 45%.

Table 4. Number of species in the CAF with population trends

Trend	No of species	%	% of known
Increasing	67	11.1	12.5
Decreasing	239	39.4	44.5
Stable	231	38.1	43.0
Unknown	69	11.4	

Of the three groups of migrants (Fig. 6), waterbirds (and seabirds) and landbirds have over 100 species each with a decreasing trend; although 54% of raptors and 51% of waterbirds (and seabirds) are decreasing as compared to 30% of landbirds.

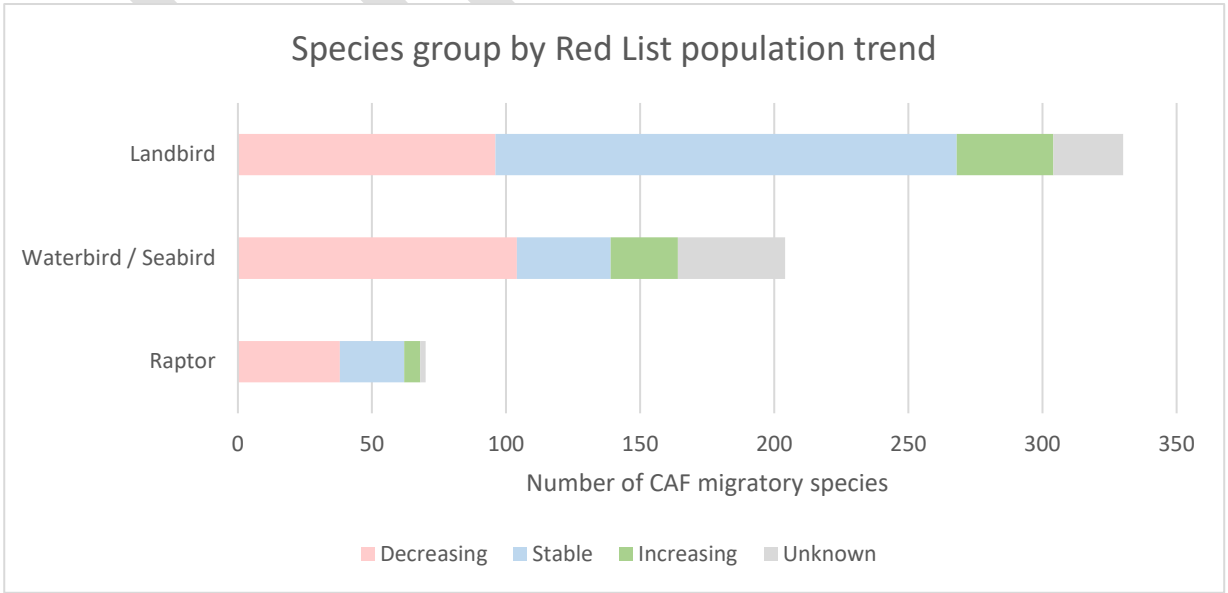

Fig 6. Overview of population trend of CAF migratory species groups as per the IUCN Red List of Threatened Species (2022)

b. Cultural values of migratory birds

Migratory birds are of great cultural and religious significance for the people residing in the countries of the CAF region. A few highlights include: (more details can be found in the country synthesis).

- **Religion and culture**: The White Stork is considered a sacred bird that brings peace and tranquility in Uzbekistan and the Black-necked Crane is revered for longevity in Bhutan and is considered a symbol of the Buddha in India. In Sri Lanka and other countries where Buddhism is the main religion, most people have compassion towards all living beings and respect for all wildlife, including migratory birds. The arrival of Demoiselle Cranes is culturally welcomed in western India[8], while arrival of the Pallas's Fish Eagle to breed in the wetlands is celebrated as "Raio Uutshav" in Bangladesh by Hindu and Muslim communities alike (Sourav et al. 2011). The Greater Flamingo has a religious value for Shiite Muslims in Afghanistan.
- **Arts**: Many species of swans, cranes, and ducks including Ruddy Shelduck have inspired art and folk culture, including paintings, carving, songs and dances.
- **Traditional agriculture**: The arrival of Demoiselle Cranes on northward migration has been used to time sowing of crops in Nepal.
- **Traditional hunting**: Some species, particularly the Saker and Peregrine Falcons and the Golden Eagle, have long been valued (and highly priced) for falconry, from the Arabian Peninsula to Mongolia, as has been their prime quarry species, the migratory Houbara Bustard.
- **Traditional fishing**: Birds are of cultural value to fishermen in the Maldives, who rely on them to locate tuna schools.

c. Habitats used by migratory birds

Migratory birds in the CAF use a wide variety of habitats during their annual cycle: from the remote Arctic to the tropical Indian Ocean coasts and islands, through the heights of the Himalayas and the dryness of the Arabian Desert, the birds explore both natural and human made habitats.

Migratory birds by their nature require a variety of different sites and/or landscapes during their annual migration cycle that they use for breeding, staging, moulting (for some species, such as ducks, geese and swans) and the non-breeding period.

Forests, wetlands, grasslands, scrub land and shallow marine areas are the habitats of major importance that are used by more than 40 species (Fig. 7).

[8] https://www.thehindu.com/sci-tech/energy-and-environment/how-the-demoiselle-crane-has-turned-a-rajasthani-village-into-a-tourist-hub/article26088763.ece

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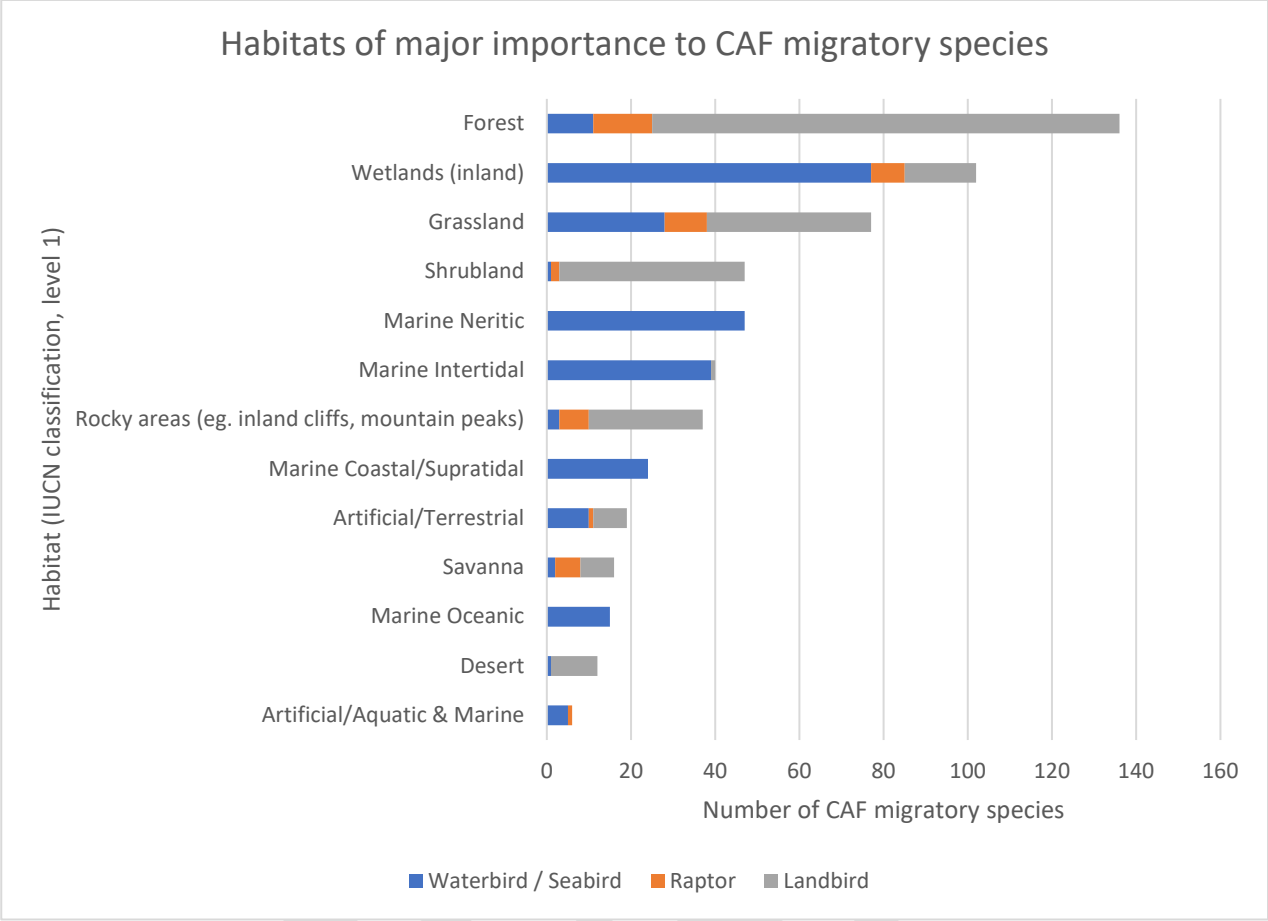

Fig 7. Overview of major habitats of importance for CAF migratory species groups

Additional information on the habitat types is provided in Table 5 (there are exceptions for each group).

Table 5. Summary of main habitat types used by migratory birds during their annual cycle in the CAF

Main habitat types[9]	Landbirds	Raptors	Waterbirds	Seabirds
Desert (Hot deserts and oases, Temperate desert, Cold desert and Semi-desert)	x	x		
Forest (Boreal, Subarctic forest, Temperate forest; Subtropical/tropical dry forest, lowland moist, mangrove, swamp and montane moist forest)	x	x		
Grassland (Tundra; Subarctic, Subantarctic, Temperate, Subtropical/tropical (lowland) dry, seasonally wet/flooded and high altitude grassland)	x	x	x	
Rocky areas (e.g. inland cliffs, mountain peaks)	x	x		x
Savanna (Dry and Moist savanna)	x	x	x	
Shrubland (Subarctic, Subantarctic, Boreal, Temperate; Subtropical/tropical (lowland) dry, moist and high altitude shrubland; Mediterranean-type shrubland)	x	x		

[9] BirdLife Datazone http://datazone.birdlife.org/species/spchabalt

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Main habitat types[9]	Landbirds	Raptors	Waterbirds	Seabirds
Wetlands (inland) Rivers, streams, creeks – permanent and seasonal/intermittent/irregular; Shrub dominated wetlands; Bogs, marshes, swamps, fens, peatlands; Freshwater lakes (>8 ha) – permanent and seasonal/intermittent; Freshwater marshes/pools		x	x	
Marine Coastal/Supratidal (Rocky shores; 10.6 Coastal brackish/saline lagoons; 10.7 Coastal freshwater lagoons)	x	x	x	
Marine Intertidal (Sand, shingle, pebble shores; Estuarine waters; Intertidal mud, sand/salt flats; Intertidal marshes; Subtidal aquatic beds, Coral reefs)			x	x
Marine Neritic (Shallow sea)				x
Marine Oceanic (Open sea)				x
Artificial/Aquatic & Marine (Irrigated land; Seasonally flooded agricultural lands; Canals, drainage ditches, Ponds (<8ha); Water storage areas (>8ha); Excavations (open); Aquaculture ponds; Salt exploitation sites; Wastewater treatment areas)		x	x	
Artificial landscapes (Terrestrial) Arable land; Pastureland; Plantations; Rural gardens; Urban areas; Subtropical/tropical heavily degraded former forest.	x	x		

A first working list of important sites for all migratory birds has been generated from the IBA database identifies a minimum of 1,703 sites of international importance, including 110 potential sites that have been added through the national questionnaires for five countries (Armenia, Bangladesh. Georgia, Uzbekistan and Yemen). A summary is provided in Annex 5 and with a detailed list in Annex 6. It has not been possible to evaluate the current international importance of these sites as part of this review. There is a need to review and update this list in consultation with national experts and international organisations.

At the CAF level, at least five sources of information are available on sites/areas of international importance for migratory birds:

(a) the Important Bird Areas (IBA) Portal[10] held by BirdLife International,

(b) the Protected Planet[11] by UNEP-WCMC, which provides access to the World Database on Protected Areas (WDPA), World Database on OECMs, and Global Database on Protected Area Management Effectiveness (GD-PAME),

(c) the Critical Site Network Portal[12] provides information for species and populations of waterbirds in the CAF range states covered by AEWA, which has been developed by Wetlands International and BirdLife International, and

(d) Ramsar Database of wetlands of international importance[13], including those designated for waterbirds maintained by UNEP-WCMC.

(e) Information on internationally important sites for waterbirds generated through the annual International Waterbird Census available in periodic publications (e.g. Li *et al*. 2019).

[10] https://datazone.birdlife.org/sites/search
[11] https://www.protectedplanet.net/en
[12] https://critical-sites.wetlands.org/en
[13] https://rsis.ramsar.org/

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Based on the national questionnaire responses, some information on important sites for migratory birds exists in most CAF countries (including sites listed as IBAs), and some of these sites are protected (Annex 7) and will also need to be reviewed in consultation with national experts to support their further use.

In addition to listing of sites of importance for waterbirds (which is used to inform the designation of Ramsar sites and Flyway Network sites), collation of such information is underway for different groups across the flyway. The Raptors MOU is in the process of updating a list of important raptor congregation sites in consultation with signatories[14] and the Working Group of AEMLAP is to identify priority principal habitats for migratory landbirds[15].

The CAF region includes two flyway networks that aim to conserve migratory birds by providing ecological connectivity needed across their annual migration cycles, including:

(a) the Western/Central Asian Site Network for Siberian Cranes and Other Waterbirds (WCASN) that was formally launched in May 2007 in Kazakhstan, with 12 sites of international importance for migratory waterbirds designated (and an additional 24 proposed) by countries in the flyway[16]; and

(b) the East Asian – Australasian Flyway Site Network[17] under the EAAFP launched in 2006, covering the breeding and staging range of CAF birds in Russia, Mongolia, NW to NE China and Myanmar, with 30 designated sites in the CAF region.

The CAF Waterbird Action Plan (2006) has called for the establishment of a flyway site network that would broaden the range and coverage of the WCASN; although this has not been operationalised to date and remains a high priority to promote conservation of an ecological network for migratory waterbirds and other migratory species in the flyway (Mundkur 2021).

The concept of Effective Area-based Conservation Measures (OECMs)[18] is a fairly recent development under the CBD (2018) and appears not widely known, recognised and applied within CAF countries. While none appear to have a national list or database of OECMs of critical importance for migratory birds, IBAs have been listed as potential OECMs. It is premature to draw conclusions about the effectiveness of management actions (as outlined above for protected areas) being undertaken in OECMs to ensure safe feeding, resting/roosting and nesting areas for migratory birds.

d. Knowledge on migratory birds

Having adequate knowledge about the biology, migratory strategies, numbers and trends of different migratory birds and evidence of effectiveness of conservation interventions is critical for an evidence-based approach to their conservation. The *Review of Migratory Bird Flyways and Priorities for Management* (2014) provides a global overview of the state of knowledge about the different migratory birds and their needs. Such a CAF scale review of all bird taxa is overdue as

[14] https://www.cms.int/raptors/sites/default/files/document/cms_raptors-tag3_doc4.1b_rev1_annex2_amendments-site-list.pdf
[15] https://www.cms.int/sites/default/files/document/AEML%20WG%20POW%202021-2026%20Final%20version.pdf
[16] https://www.cms.int/siberian-crane/en/page/site-network launched at the Sixth Meeting of the Signatories (MOS6) to the CMS Memorandum of Understanding on Conservation Measures for the Siberian Crane
[17] https://www.eaaflyway.net/the-flyway/flyway-site-network/
[18] An OECM is officially defined by the Convention on Biological Diversity as “a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long term outcomes for the in situ conservation of biodiversity with associated ecosystem functions and services and where applicable, cultural, spiritual, socio economic, and other locally relevant values”.

there has been a long history of research and studies on a limited number of species, but for the bulk of migratory species very little information is available on their migration strategies, threats, and ecological and conservation needs. At least information on migratory raptors in the CAF region is summarised in the Raptors MOU and Action Plan, and the paucity of research on migration and conservation of migratory species in India is recently highlighted in Mahananda *et al.* (2022).

i. Migratory movements and strategies

The use of metal rings to individually mark birds in the flyway started in the 1930s (Ali and Ripley 1983), with millions of birds being marked over the decades. This has mainly been limited to long running national ringing schemes operating in Russia and ex-Soviet states, India, Iran and the United Arab Emirates . In recent years, a few other countries have also started ringing programs, including Bangladesh, Nepal, Oman, Pakistan and Sri Lanka. In addition, the Migratory Animal Pathological Survey (MAPS), which spanned from 1963 to 1973, added considerable knowledge on the basic migration routes and survival of many species through its extensive ringing operations which banded over 1.2 million birds across India, East and South-East Asia (McClure 1974).

Together, this has yielded basic movement pattern information of a relatively small proportion of CAF species, including ducks and geese, Greater Flamingo and shorebirds (e.g. Balachandran et al. 2018). The overall recovery rate of metal rings has been very low compared to other flyways and overall information generated by these projects has been limited to date due to the limited number of national ringing schemes and research groups, restrictions on hunting in many countries and deficient communication.

Through the use of individual colour markers (e.g. neck collars, leg rings) that rely on reports of resighting of birds by observers across their range, our knowledge of some species has increased in the last few decades, particularly of the Bar-headed Goose, Siberian Crane and Demoiselle Crane. The use of individually-marked colour flags has recently increased in countries such as Bangladesh, Kuwait, India, Oman, Sri Lanka and the UAE and contributed to increased our knowledge of migratory birds in the region, particularly of shorebirds.

In parallel, application of satellite transmitters have provided precise descriptions of local and long-distance migratory movements across multiple years and do not require birds being recaptured/reported by people. They have provided valuable information on the movement of the Demoiselle Cranes (Galtbalt *et al*. 2022), the Greater Flamingo (Javed et al. 2007), the Bar-headed Goose (Javed *et al.* 2000, Takekawa et al. 2009); raptors such as the Black Kite (Kumar *et al*. 2020, Literak *et al*. 2021), the Peregrine Falcon (Gu et al. 2021) and floricans (Jha *et al.* 2018) and a few smaller species, including the threatened Sociable Plover (Donald *et al.* 2020). However, the high cost of transmitters has limited the number of species studied to date

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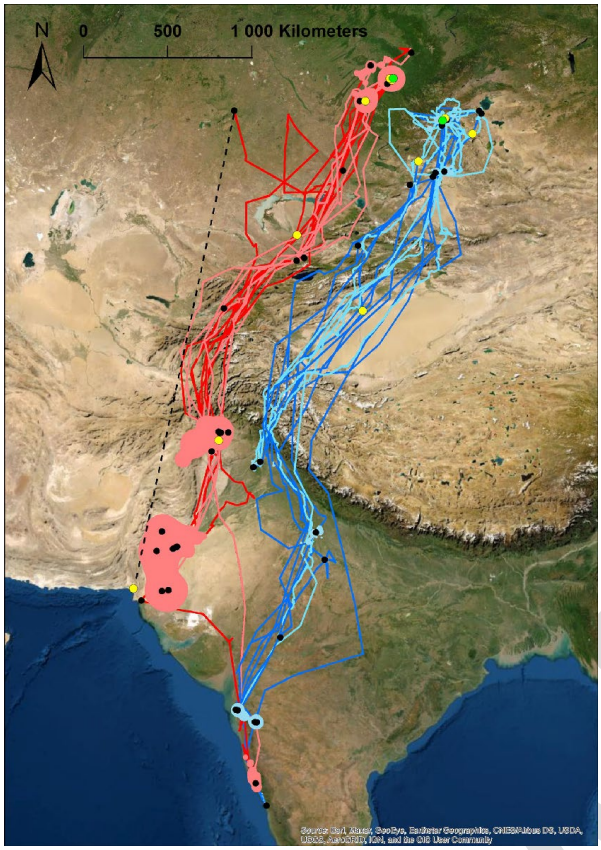

Fig 8. Differences in migration routes and pre-breeding and post-breeding home ranges of Black Kites tagged with satellite transmitters in two nearby sites in the Russian Federation; Biysk (southward migration - dark red lines, northward migration - light red lines, light red polygon - home range) and Kosh-Agach (southward migration - dark blue lines), northward migration - light blue lines, light blue polygon - home range). Source: Literak *et al.* (2021).

Precise information on long-distance movements of smaller-sized birds has been limited to a few species, such as Little Ringed Plover (Hedenström et al. 2013), Red-necked Phalarope (van Bemmelen et al. 2019), Common Rosefinch (Stach et al. 206) and Common Swallow (Turbek et al. 2018), see Fig 6. This has only been possible in the last decade with the development of lightweight (1-2 gm) geolocators that require recapture of the bird to download data. Most published studies are limited to species with breeding grounds in Europe, a few of which also migrate to southern Asia. There appears to be very few studies on the migratory movements of small migratory birds marked within the CAF region (Yellow-breasted Bunting, Heim *et al*. 2020).

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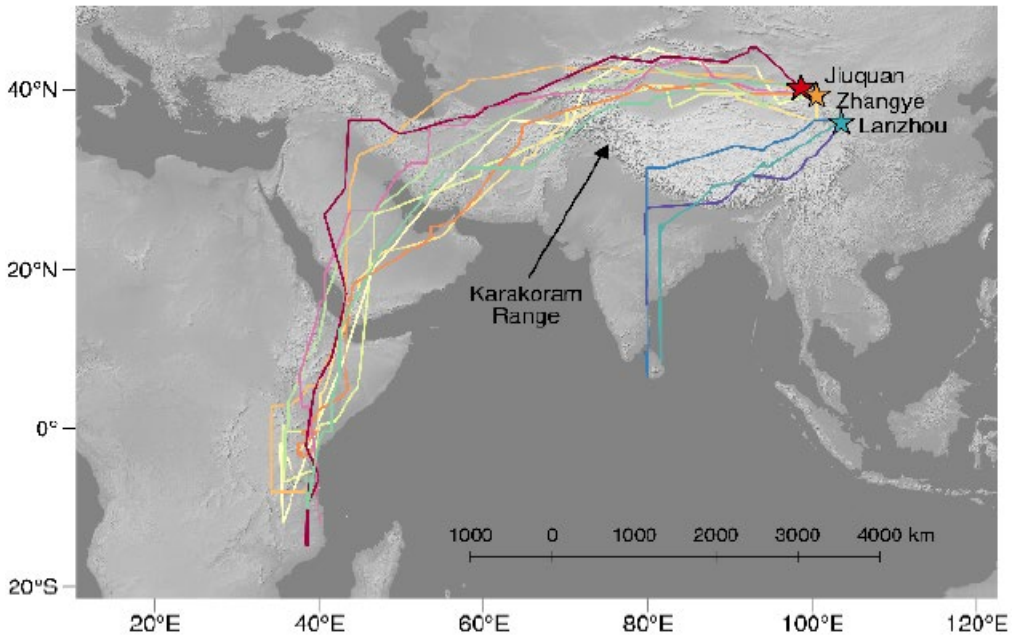

Fig 9. Migration of Common Swallow breeding in China to south Asia across the Himalaya and Africa as revealed by geolocators. Source: Turbek et al. (2018).

As the technology develops and becomes more accessible and countries simplify their processes of bird marking, we expect that more information on the migratory habits of smaller species will be brought to light.

ii. Migratory bird research and monitoring activities

At the flyway level, information on migratory birds and their habitats is available through online databases, including those held by BirdLife International on birds and Important Bird Areas, IUCN (Red List), community (citizen) science platforms, such as annual waterbird and wetland monitoring through the International Waterbird Census by Wetlands International, eBird by Cornell University and iNaturalist. An increasing amount of satellite tracking data are stored by Movebank and the BirdLife International Seabird Tracking Database with a Global Wader Tracking Database been established under the International Wader Study Group. These data sources are being used for flyway, regional and national assessments. Where information is being uploaded on to flyway/global platforms, these data tend to be more accessible.

In addition, there is a lot of printed literature in a number of languages that summarise knowledge different aspects about migratory birds, including breeding information, such the atlas of breeding waders in the Russian Arctic (Lappo et al. 2012) and the breeding bird atlas of Saudi Arabia (Jennings, 2010) and the Indian Bird Migration Atlas (Balachandran et al. 2018).

The national questionnaires have sought information available/collected to inform conservation action for the main bird groups including: (a) Population monitoring (during breeding, migration, non-breeding periods), (b) Migration movements (based on ringing, colour marking or satellite tracking), (c) Habitat requirements, (d) Food and feeding requirements, (e) Knowledge of most important sites, and (f) Conservation needs/ threats.

Based on the information gathered (Table 6), the level of knowledge varies between moderate to absent, with none of the countries reporting high levels of knowledge for all groups of birds. Most countries report absent to low levels for most categories, although without providing a lot of information to substantiate the feedback.

Table 6. Knowledge levels about information on CAF migratory birds based on feedback from the national questionnaires

Information on migratory birds	Level of knowledge	Examples of feedback provided by countries on information missing to identify and implement conservation action
Population monitoring (during breeding, migration, non-breeding periods)	Moderate-absent	Most countries report lack of monitoring of raptors, landbirds and seabirds during any period. Most report low to moderate levels of monitoring of waterbirds, linked to the International Waterbird Census. There is a need to conduct systematic monitoring of breeding birds nationwide (BH). Not all sites can be covered regularly and there is a need to assess threats. Recent information is based on personal efforts of individual birders with uploads of rough counts on eBird database.
Migration movements (based on ringing, colour marking or satellite tracking)	High-absent	As presented in the previous section, there is information for a few species. Most countries report lack of migratory studies of raptors, landbirds and seabirds.
Habitat requirements	High-absent	There is poor understanding of wildlife requirements (OM).
Food and feeding requirements	High-absent	Important data on populations at most important sites are only available for waterbirds. Limited by funding and limited to people interested in specific taxonomic groups. Studies on food & feeding of migratory birds are almost non-existent in BD; except studies on food of Indian Skimmer & Black-tailed Godwit Das et al. (in press). Studies needed to understand diet & food reserve for managing refuelling of migratory birds.
Knowledge of most important sites	High-absent	There are no data specific to migratory birds (YM).

iii. Migratory bird and habitat data management, analysis and use

Data is the essence of evidence-based policy. Good data management and analysis is crucial for assessing migratory bird populations and their habitats and build sound policy recommendations.

The national questionnaires revealed that data on migratory birds, habitats and sites have been collected and curated by a diverse range of players, including national government agencies, research institutions, universities, NGOs and individual researchers, with varying degrees of quality and accessibility. Bureaucracy and language differences can play an important part in hindering collaborations across the flyway. There can also be significant differences among countries in budget allocation and geographical biases in data collection (e.g. most information relates to lowland birds, with significant gaps in mountainous regions). As a result, much of the data are incomplete, disaggregated, and poorly studied.

Across the flyway, migratory bird data is being collected for a variety of different purposes (see Table 7). Over 60% of countries use this information for the development of species conservation plans, preparation of National Reports for conventions, agreements and regional initiatives and in the identification of important areas for designation and protection.

Information is also reported being used in management (restoration) of areas of importance (incl. Protected Areas, Ramsar Sites, World Heritage Sites, Flyway Networks (incl. West/Central Asian Flyway Site Network and East Asian - Australasian Flyway Site Network), Important Bird Areas and privately managed areas). For example, in Bangladesh, information collected jointly by the Bangladesh Bird Club and Forest Department has been used by the government to designate many protected areas for bird conservation. On the other hand, in Afghanistan and Yemen there appears to be a lack of adequate systems for information collection and use. Details provided by countries are available in the country summaries.

In the few countries where legalised hunting systems exist (e.g. Kazakhstan, Uzbekistan and Kuwait), some report using the data to inform decisions concerning the hunting and management of migratory bird populations. Even in countries like Bahrain where hunting of all species is prohibited, such decisions to ban hunting are reported to be data-driven.

Table 7. **CAF countries utilising specific information to guide bird management policies**

Purposes of use of information	**Percentage of responding countries using info**
Identification of important areas for designation and protection	66.7
Management (restoration) of protected areas for migratory birds	57.1
Management (restoration) of Ramsar Sites for migratory birds	54.5
Management (restoration) of World Heritage sites for migratory birds	35.0
Management (restoration) of Flyway Network sites (incl. West/Central Asian Flyway Site Network and East Asian - Australasian Flyway Site Network)	30.0
Management (restoration) of Important Bird Areas	50.0
Management (restoration) of Privately managed areas	30.0
Development of Species Conservation Plans	72.7
National Reports for Conventions, Agreements, regional initiatives	59.1
National Biodiversity Strategies & Action Plans	54.5
Decisions concerning utilisation of migratory bird populations through a legalised hunting system	38.1

Further details per country in Annex 8

e. Threats and pressures affecting migratory birds and habitats

This part of the review focusses on threats and pressures that have or are likely to have a population level impact. Information is drawn from literature and from the questionnaires.

A range of threats currently pressure the migratory bird populations in the CAF region, including agriculture & aquaculture, biological resource use, modifications of national systems, pollution, human intrusions & disturbance, and invasive species (as summarised in Fig 10).

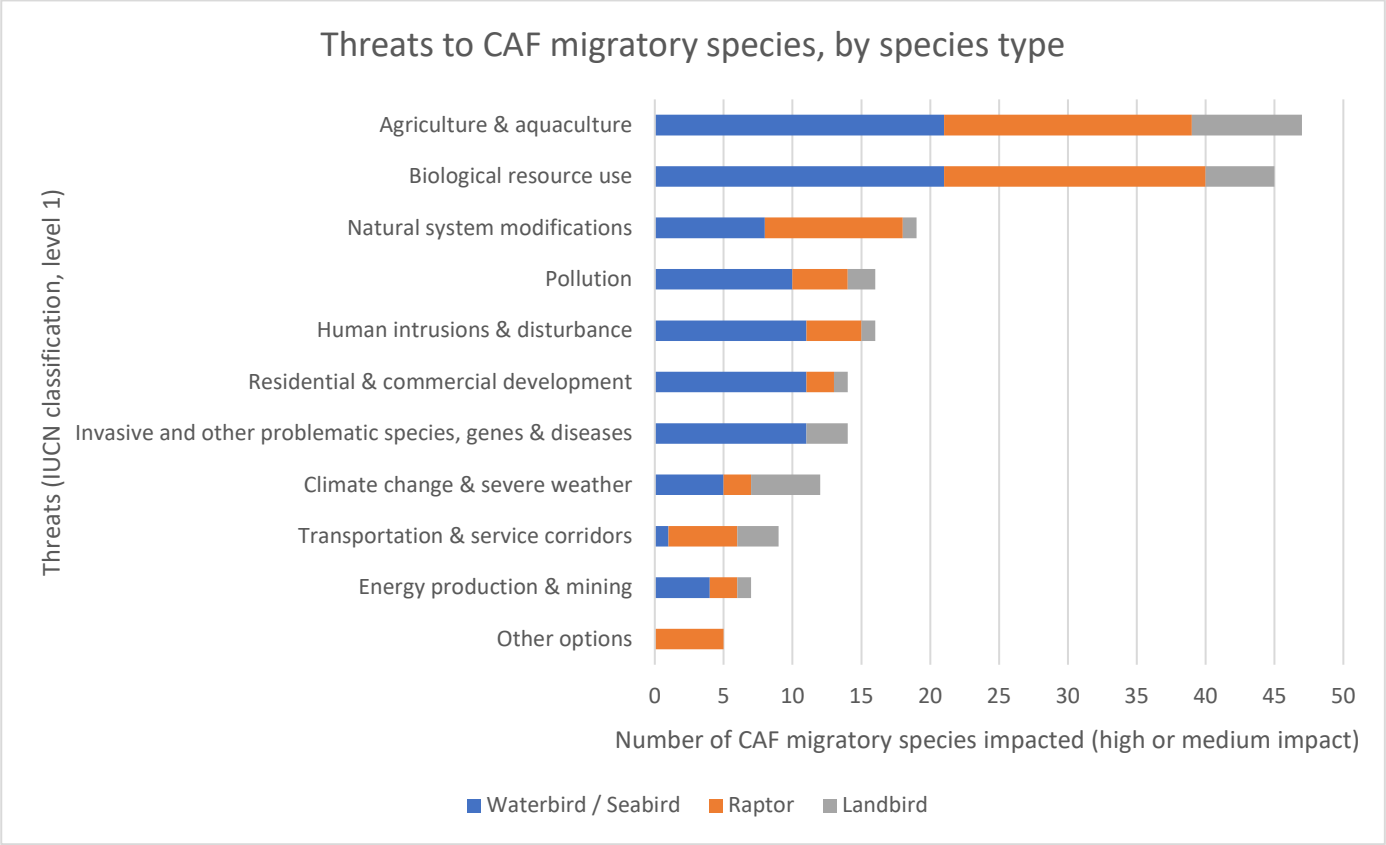

Fig 10. High or medium impact threats to CAF migratory species, based on IUCN classification (level 1). Source: BirdLife International Datazone (2023).

The following are a list of pressures affecting birds regrouped into two main categories based on the national questionnaire responses (not in order of intensity):

a. **Habitat loss and degradation**

b. **Direct threats to birds**

a. Habitat loss and degradation

High-quality natural habitats are important to sustain migratory populations. Many parts of the CAF region, however, have dense and growing human populations that have altered the landscape significantly. As an example, an assessment of the anthropogenic pressures affecting coastal regions has revealed that the entire Indian Ocean coastline of South and West Asia (apart from a small part of the coastline in Oman) had less than 20% of intact habitat, reflecting the high levels of human impact on habitat change (Williams *et al*. 2021). These are important non-breeding grounds for migratory shorebirds, other waterbirds and seabirds. As a comparison, the Arctic coast of Russia, which serves as the breeding ground for many CAF species, retains more than 80% of its coastline intact. Inland wetlands, which are important habitats for migratory waterbirds, raptors

and many landbirds, are also under serious threat (Convention of Wetlands 2021). The expansion of deserts in Central Asia[19] is also expected to have a negative impact on migratory birds.

With rapid human development in many of the countries, the pressure on all natural habitats (incl. coasts, grasslands and forests) is increasing, with large-scale changes evident particularly in the last decades. Feedback from the national questionnaires have reported a wide range of threats affecting migratory birds (Table 8). The degradation and destruction of habitats of importance for migratory birds are reported to be moderate to severe in most countries.

Table 8. Summary of main threats to habitats used by migratory birds during their annual cycle in the CAF based on the national questionnaires

Threat and pressure	Overall relative severity of impact	Species/groups affected
Habitat loss/destruction	Severe-moderate	All migratory species in all habitats
Habitat degradation (loss of quality)	Moderate-severe	All migratory species in all habitats
Urbanization	Moderate	All migratory species in all habitats
Road/highway construction	Moderate	Farmland birds, forest birds, waterbirds, and cliff-nesting raptors.
Unsustainable land/resource use e.g. overharvesting of plants	Moderate	All migratory species in all habitats
Mineral exploration/extraction	Low-moderate	All migratory species, esp. bustards, ground nesting passerines
Sand mining from rivers	Moderate	Ground-nesting waterbirds (Indian Skimmer, Black-bellied Tern, River Tern) and landbirds (larks, bee-eaters)
Marine/coastal debris (including plastics)	Moderate	Coastal waterbirds (gulls, terns, herons and waders), seabirds
Other forms of solid or liquid pollution	Moderate	Farmland birds, waterbirds, and raptors.
Too much/too little water	Severe-moderate	All migratory species
Fire damage to habitat	Moderate	Forest-dependent and grassland birds. fires to remove agricultural stubble affects forest and farmland dependent breeding species.

Further details per country in Annex 9

In most countries, agricultural lands are used by a range of migratory species, landbirds, raptors and waterbirds. Intensification of agriculture with increased use of agrochemicals and pesticides has impacts of a range of migratory birds using these habitats (also see direct threats below).

[19] Guglielmi, G (2022). Climate change is turning more of Central Asia into desert. Nature. https://www.nature.com/articles/d41586-022-01667-2#:~:text=More%20than%2060%25%20of%20Central,heighten%20the%20risk%20of%20drought.

On the other hand, abandonment of agriculture in Russia and Kazakhstan is also having negative impacts on breeding habitats of species like the Critically Endangered Sociable Lapwing (Kamp *et al.* 2011, Sheldon *et al.* 2012) that largely depends on open agricultural lands through its annual cycle; while these new habitats will favour other species.

Information on changes to waterbird populations, with many in decline at the decadal level, is available from the citizen-science led Asian Waterbird Census reports (Li et al. 2019). Similar data for most raptors and landbirds, including forest species within the CAF, is not available.

b. Direct threats to birds

i. The capture of migratory birds, their young and eggs[20]

The illegal capture and local trade of wild birds for food by local people across the region has been a traditional source of protein for some communities (e.g. Bahadur et al. 2023, Hussain and Khan 2023, Yong et al. 2021). In Iraq, Al kerwi *et al.* (2022) reported that the emergence of some non-traditional methods of hunting by bird hunters, such as the establishment of artificial waterbodies to attract waterfowl, has led to large numbers of deaths. The lack of legal oversight, lack of accountability, and the tendency of bird hunters to hunt in uncontrolled areas increased the great damage to wild birds. From one assessment of the Arabian peninsula, Irak and IQ (Brochet et al. 2019) an estimated 879 000–3 100 000 Passerines, 607,000–1,100,000 Waterbirds/Seabirds, 168,000–421,000 Gamebirds, 3,300–11,700 Raptors and 6,800–30,100 other birds were illegally killed/captured per year. These included a wide variety of species, including some that are globally threatened (5,000–15,000 individuals of the Near Threatened Marbled Teal and up to 325 the Critically Endangered Sociable Lapwing annually).

From feedback in the national questionnaires (Table 9), the illegal capture of different species of birds (and their young) takes place in nearly all CAF countries (reflecting challenges in implementation of legislation). Illegal poaching or capturing of birds by shooting, trapping and poisoning is reported for (a) recreation/sport, (b) food, (c) pet trade, (d) merit release as part of religious customs, (e) traditional medicine, as well as (f) persecution due to conflict with aquaculture and agriculture.

Table 9. CAF species that face specific threats and pressures due to different methods of hunting/take
Based per the national questionnaires

Threat and pressure	Main methods	Species or species groups affected
Killing or taking birds or eggs for recreation/ sport	Shooting, trapping (nets), poisoning	cranes, ducks, geese, passerines, flamingo, waders, Houbara Bustard, raptors (vultures, eagles and falcons)
Killing, taking, trading birds or eggs for food	Shooting, trapping (nets), poisoning	cranes, ducks, geese, passerines, flamingo, waders, Houbara Bustard, raptors (vultures, eagles and falcons)
Persecution	Shooting, poisoning	Raptors killed by pigeon fanciers.

[20] Legal hunting is defined here as hunting that complies with provisions of applicable laws at local, national or international level, whereas killing is considered illegal in this context if it is undertaken in ways that breach any provision of applicable laws at local, national or international level. “Taking” means taking, hunting, capturing, harassing, deliberate killing, or attempting to engage in such conduct.

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Threat and pressure	Main methods	Species or species groups affected
Persecution (Superstition)	Shooting, trapping (nets), poisoning	Great Cormorant, eagles, Eurasian Eagle owl, Cinereous Vulture, vultures, owls, Dalmatian Pelican
Cagebird trade	trapping (nets)	Passerines, falcons, and cranes.
Belief-based use (e.g. merit release, traditional medicine)	trapping (nets), shooting	Passerines (sparrows), pelicans
Persecution (Human/ wild bird conflict in agriculture)	Shooting, trapping, poisoning and crop protection measures (nets in crop fields)	Grain and fruit eating passerines (Yellow-breasted Bunting, bunting, doves, cuckoos, starlings, warblers, Common Raven), owls, waterbirds (ducks, ibises, storks, herons, egrets and shorebirds)
Persecution (Human/ wild bird conflict in aquaculture)	Shooting, trapping, poisoning and crop protection measures (nets in fish and shrimp farms)	Waterbirds (Great Cormorant, egrets, ibises, storks, ducks, shorebirds), Raptors (Osprey), small migratory passerines, and owls.
Bycatch in inland wetlands	Nets	Waterbirds (Oriental Darter, grebes, goose, ruddy shelduck, ducks, coots, swamphen, gulls).
Bycatch in coastal and marine waters	Nets	Waterbirds (Socotra Cormorant, other cormorants, ducks, egrets, whimbrel and curlews and other waders)

Estimates of the scale of illegal hunting and capturing are limited in different countries, with perceptions of overall relative severity of impacts ranging from low to severe (see details in individual country reports).

Elsewhere other threatened species taken illegally include the Critically Endangered Yellow-breasted Bunting and Dalmatian Pelican (west Mongolian breeding population) and Vulnerable Houbara Bustard. Legal and illegal capture of falcons for falconry is reported in some countries. Illegal killing of falcons by pigeon fanciers is also reported as a threat in some countries.

In Central and west Asia, the biggest threat to Egyptian Vultures is poisoning. In most cases, the vultures are not the targeted species, but rather victims of the intentional poisoning of predators or other animals causing economic damage (Nikolov *et al.* 2018). In addition, shepherds are reported to shoot or destroy vulture nests because they consider them predators of lambs (Kashkarov *et al*. 2011).

Use of raptor feathers and body parts has been reported in shamanistic practices. Some organs of eagles, vultures, crows and owls are reportedly used for adorning ornate shaman dresses and religious tools in Mongolia.

Information provided on persecution of migratory birds due to their potential conflict with agriculture or aquaculture is difficult to separate from bycatch, defined here as “birds that are caught accidentally in fish nets or fishing lines or nets used to protect fruit, vegetable or other crops or aquaculture”. The threat is considered severe in some fish capture areas, such as in Hakaluki Haor Ramsar Site and the wider inland floodplain region in Bangladesh.

As species identification and differentiation of migratory and resident species can be difficult, both types are listed in the responses to the national questionnaire (see Table 9 for examples of migratory species) and further validation of species is required. A more systematic national tracking system that includes rigorous identification of species, methods of capture and scale would be required to support a more robust flyway assessment.

ii. Collisions and electrocution with man-made structures

Accidental deaths of migratory birds through collision (and electrocution) with power lines, wind turbines, gas flares, and buildings/built up structures is being reported in nearly all countries for a wide variety of large and small sized species, including threated species (see Table 10).

Table 10. Species and species groups in the CAF that face threats and pressures from energy infrastructure

Threat and pressure	Species/species groups affected
Collision with power lines	Raptors (Pallas's Fish Eagle, vultures), Waterbirds (flamingos, swans, Black-necked Crane and other cranes, ducks, egrets, crakes, gulls), Landbirds (Pallas's Sandgrouse, larks, kingfishers, Great Indian Bustard).
Electrocution by power lines	Raptors (Pallas's Fish Eagle, vultures), Waterbirds (flamingos, swans, Black-necked Crane and other cranes, ducks, egrets, crakes, gulls)
Collision with wind turbines	Raptors, Waterbirds, landbirds
Collision with buildings/built up structures	Landbirds (Green pigeons, bulbuls, doves, crows, woodpeckers, barbets, pittas, spider hunters and orioles, quails, nightjars), waterbirds (waders, bitterns), raptors (Levant Sparrowhawk)
Collision with other structures	Raptors (Pallas's Fish Eagle, vultures), waterbirds (egrets).

Estimates of the scale of annual deaths are limited in different countries with perceptions of overall relative severity of impacts ranging from low to severe (see details in individual country reports). However, as the scale of linear infrastructure development (power lines) has accelerated in the flyway, the risk to migratory birds has increased, for example, on the Critically Endangered Great Indian Bustard (India) and Pallas's Fish Eagle (Bangladesh), with mass mortalities being reported of some species (e.g. Pallas' Sandgrouse (Nyambayar et al 2016) and raptors (Dixon et al. 2013) in Mongolia). On the other hand, collision and electrocution is not considered an issue in the Maldives where there are few overhead power cables.

iii. Human disturbance and disruption to migratory birds or their habitats

Human disturbance - Across the CAF migratory birds share their breeding, staging and non-breeding habitats with local people, often in high densities. As many species of migratory birds tend to flock in large numbers and in mixed groups, they can be very sensitive to unintentional or intentional disturbance from the mere presence of people and their activities. Disturbance could include any human intrusion or activity that risks disrupting the feeding, breeding, roosting or other behaviour of migratory animals, or significantly increasing their stress levels, which may affect their nutrition levels, reproduction rate or life expectancy.

In locations where the birds perceive no harm from people they can become habituated, experiencing little disturbance and in close proximity to people with whom they share the same habitats.

While there are no detailed studies published on the impact of disturbance on migratory birds within the CAF, feedback from the national questionnaires has identified fishing, recreation, religious and other types of tourism, and agriculture as activities that may affect birds. Disturbance may be a major issue particularly when species are breeding, as the presence of humans may scare away adults and allow predators to take eggs and young. For some species particularly sensitive to disturbance, such as raptors, even recreational activities as hiking, climbing, and paragliding are known to have a significant negative impact. In addition, disturbance can have severe consequences for migratory waders that forage and roost in the coastal mudflats (Das et al. 2022 a & b, Jackson et al. 2020). Additionally, domestic dogs are reported as an increasing source of disturbance and predation to migratory waterbirds (Mundkur & Langendoen 2019) and other species.

Non-recreational operations (mining, logging, construction, etc.) can also have indirect negative effects on breeding populations as they increase the flow of people and activities in the area. Military activity is also a commonly recorded factor that can increase disturbance of breeding pairs, and negatively affecting productivity (summarised in Nikolov *et al.* 2016).

Table 11. Summary of information on species affected by each threat and examples from different countries based on the national questionnaires

Threat and pressure	**Species/species groups affected**	**Anecdotal information on disturbance**
Disturbance to breeding areas	Raptors (vultures and Pallas's Fish Eagle), Waterbirds (White-bellied Heron, Flamingo, Sarus Crane, jacanas, watercock, pygmy goose, Comb Duck, Spot-billed Duck, Ruddy Shelduck and ducks, coots, herons, egrets, waders, storks, bitterns), Passerines (Pitta, cuckoos, flycatchers), Seabirds.	Fishing industry, agriculture, and tourism cause disturbance. Pilgrimage by people visiting high altitude lakes in BT during the breeding season. Nesting areas of birds are affected by people, livestock, or feral dogs (BT, IN). Rat-infestation of islands are a huge threat to seabird colonies (IO)
Disturbance to feeding areas	Raptors (vultures and Pallas's Fish Eagle), Waterbirds (Ruddy Shelduck White-bellied Heron, cranes, waders, ducks, storks, Indian Skimmer, geese, waders, jacanas, watercock), Passerines (buntings, flycatchers, and cuckoos).	Severe for migratory waders in the coastal mudflats in BD (Das et al. 2022 a & b). Fishing industry, agriculture, and tourism cause disturbance. Sometimes recreational activities cause some disturbances in major lakes, especially during summer holiday season. Infrastructure

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Threat and pressure	Species/species groups affected	Anecdotal information on disturbance
		development, illegal fishing activity, and recreational activities. People passing by and dogs, extraction of sand and boulders from banks of riverbeds.
Disturbance to roosting areas	Raptors (vultures), Waterbirds (shorebirds, storks, Indian Skimmer, Black-necked Crane). Waders in the coastal mudflats (BD).	
Light pollution	Raptors (Pallas's Fish Eagle), Waterbirds (Ruddy Shelduck, Eurasian Curlew, Great Cormorant, Common Pochard and Black-necked Crane).	Recreational activities and urban area development.
Alien invasive species (incl. plants, animals)	Disturbance of Black-necked Crane non-breeding habitat due to bamboo plantation in wetlands (BT).	

Light pollution **-** increasing electrification of urban and rural areas as well as highways has increased the ambient artificial light across large stretches of landscape in many central and southern parts of the flyway. Artificial lighting is well documented to negatively affect birds' navigation during flight at night and to cause them to fly into lighthouses, illuminated buildings, towers and other manmade structures. The impacts of light pollution on migratory birds is not adequately recognised or being addressed properly in the CAF.

Alien invasive species – while there is growing awareness of the spread of alien invasive species, including of plants and animals worldwide, and a growing number of species are being reported within the CAF region, e.g. Water Hyacinth choking freshwater lakes and rivers thereby reducing feeding and roosting habitat for ducks and other open-water waterbird species, there are few studies assessing their impacts on migratory birds.

iv.Other causes of mortality

Poisoning - for reasons other than predator control where poisons are being used to intentionally kill wild birds, in addition to direct causes of mortality to migratory birds described above, there are other potential health risks, including mortality from accidental/indirect poisoning from toxic substances, for example (a) in agriculture (pesticides, fungicides, algicides), (b) veterinary pharmaceutical treatments (impact of use of Non-Steroidal Anti-inflammatory drugs (e.g. diclofenac) to treat cattle, which then die and are eaten by vultures, to which these drugs are poisonous), (c) from use of lead for hunting and fishing, (d) unintentional secondary poisoning resulting from the legal intensive use of rodenticides is also reported to have a negative impact on

vultures (Nikolov *et al.* 2018) and (e) biomagnification of heavy metals and other chemicals known to affect waterbirds and others.

Species reported through the national questionnaires as being affected include raptors (White-tailed Sea Eagle), waterbirds (Great Cormorant, cranes, herons, storks, coots, ducks, geese, egrets, gulls and waders), grain and fruit eating passerines (doves, bulbuls, cuckoos, mynas and starlings, sparrows, wagtails and pipits) and other small migratory passerines, as well as breeding seabirds. Estimates of the scale of annual deaths are limited with perceptions of overall relative severity of impacts ranging from unknown and were known from low to severe (see details in individual country reports).

Plastics – some groups of migratory birds are reported to be susceptible to interactions with plastics due to their specific behaviours (Horton & Blissett 2021), including intentional handling of plastics as building materials, unintentional contact and entanglement, and microplastic ingestion by adults and juveniles.

Avian diseases - a range of zoonotic viral, bacterial and other diseases are reported to occur in migratory birds, including Highly Pathogenic Avian Influenza (HPAI) and avian botulism in waterbirds (Ruddy Shelduck and other ducks, Bar-headed Goose). HPAI in migratory birds has been the focus of much research in the past two decades given its association with loss of domestic poultry and human deaths (for e.g. Bridge *et al*. 2014, Gilbert *et al.* 2010, Iverson *et al.* 2011).

Changes/declines in food availability – impacts of changes reduction of food availability for migratory birds has not been widely reported in the CAF region, although decline of herbivores (wildlife and livestock), resulting in a reduction of animal carcasses in the wild, is considered to have a negative impact on the breeding success of the Cinereous Vulture (Andevski, et al 2017). Likewise, the decline of bees and other insects in agricultural and forestry areas due to pesticide use is well documented and may result in lower availability of food for insectivorous birds in the CAF.

f. Climate change

The CAF region is extremely vulnerable to climate change. Significant variation on the impacts felt by the member countries are projected to exist due to the many combinations of geographical features, socio-economic factors and adaptive capacity by local populations present in the region (IPCC 2022a). The region experiences increased threat from extreme weather events, such as heatwaves, droughts, forest fires, flooding, storms, coastal swells, and erosion in the monsoon regions in South, Southeast and East Asia. Increased rainfall and higher temperatures have also caused 30% glacial melting over the past 50-60 years, increasing flood risk and landslides in the Himalayan region (IPCC 2022a; ADB 2022). In contrast since the 1980s, desert landscapes have increased by up to 100km in parts of Uzbekistan, Kyrgyzstan, and China (Guglielmi 2022; Hu & Han 2022), with significant drying of wetlands, as experienced in the Teniz-Korgalzhyn and Alakol-Sasykkol lake systems and the delta of the Ural River, Kazakhstan[21]. There is also particular risk of additional irreversible loss from sea level rise of marine, coastal and intertidal habitat in the region, such as tidal marshes, especially at the scenario of 2°C increase into the future (IPCC 2022b). These impacts are altering marine, terrestrial and freshwater ecosystems all around the world with changes to local species populations, increases in disease and mass mortality events, including across the CAF (IPCC 2022c).

[21] NDP (2021). Protection of migratory birds and their habitats for people and the planet. https://www.undp.org/kazakhstan/stories/protection-migratory-birds-and-their-habitats-people-and-planet

Climate change poses a significant threat for migratory birds in the CAF and globally. The most immediate threat will be the loss of vital habitat from increased desertification and flooding from glacial, sea ice and tundra permafrost melts, as well as the collapse of food webs in the oceans linked to changing zooplankton abundance (McNamara 2010). Temperature increases can also change the timing of migration patterns and potentially result in a phenological mismatch between peak in food sources and demand and alter species distribution, with particular species avoiding certain areas outside of their temperature and humidity comfort ranges (Seri & Rahman 2021). However, there is a limit to how far distributions can shift, and changes in migratory and breeding cycles lead to disrupted relationships between predators, prey, and competitors, often resulting in reduced survival rates (BirdLife International 2022).

Changes in precipitation will also have significant impact on migratory species, as they may cause reduction in key habitats, such as wetlands and wet grasslands, and food distribution and abundance (McNamara 2020). Losses of these valuable habitats will have significant impact on the feeding and breeding areas of migratory species using the CAF. The changes in ocean circulations will also make migration routes difficult for species which depend on specific currents for feed or to aid in migration (McNamara 2010). Climate change is also impacting species physiology, with reduction in size, differences in sex rations, and increase in metabolic costs (Scheffers et al., 2016; Seri & Rahman 2021).

Key species currently at threat include the Asian Houbara and Sociable Plover, due to changes in ecosystem structures on the migratory routes (McNamara 2010; Frenette-Dussault, et al 2013; BirdLife International 2023).

g. Awareness Raising and Communication

Awareness of the need and benefits of the conservation of migratory birds and their habitats is essential for long term conservation of these species. Greater awareness amongst different stakeholders also provides the basis for encouraging support for conservation action and the effective implementation of legislation.

From the feedback received, at a national level, general awareness amongst different stakeholders in the CAF countries vary from low to moderate (Table 12). A range of awareness-raising programmes from the last three years on the value and conservation of migratory birds and their habitats have been reported as having a positive impact.

Table 12. Awareness levels about migratory birds and their habitats by different stakeholder groups along the CAF based on the national questionnaires

Stakeholder	**Overall level of awareness**
National authorities responsible for habitat and migratory bird management	Moderate
Local authorities responsible for habitat and migratory bird management	Moderate
General urban adult population	Low
General rural adult population	Low
School and college children	Low

Further details per country in Annex 10

Activities range from public awareness raising campaigns targeted at different audiences; annual celebration of the World Migratory Birds Day; World Wetlands Day; and bird festivals, including for cranes, eagles, shorebirds, swans and other species; and other national and local events, ranging from teaching in schools to improved information provided to the public at nature visitor centres, reserves and other sites. The overall increased public access to press, media –social media – in recent times has also helped to increase awareness.

Therefore, it appears that success of these awareness-raising activities has ranged from moderate to slightly positive. Nevertheless, there is a persistent need of resources to increase awareness across the flyway, as is highlighted in some countries (e.g. Yemen).

Table 13. Success levels of awareness raising activities in CAF countries in the past three years based on the national questionnaires

Awareness raising activities implemented in the last three years	**Success of awareness actions in achieving impact**
Public awareness-raising campaigns	moderately positive
Teaching programmes in schools or colleges	moderately positive
Community-based celebrations, exhibitions and other events	moderately positive
Press and media publicity, including social media	moderately positive
Interpretation at nature visitor centres, reserves and other sites	moderately positive
Dissemination of special publications, information resources	Slightly positive

Further details per country in Annex 11

h. Capacity for research and conservation action

Recognising the limited research and information available in the flyway region, it does not come as a surprise that the result from the national questionnaire on the overall capacity for migratory bird research, monitoring and implementation of conservation action was moderate to low across the different stakeholders.

Table 14. Overall capacity for stakeholder groups along the CAF to conduct specific activities to conserve migratory birds as per the national questionnaires

Stakeholder group	**Overall capacity for migratory bird research**	**Overall capacity for bird monitoring**	**Overall capacity to implement conservation action**	**Additional Comments**
National authorities responsible for habitat and migratory bird management	Low	Moderate-Low	Moderate	

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Stakeholder group	Overall capacity for migratory bird research	Overall capacity for bird monitoring	Overall capacity to implement conservation action	Additional Comments
Local authorities responsible for habitat and migratory bird management	Low	Low	Low	
Research Institutions	Moderate	Moderate	Moderate	Increasing quality in last decade, but need improving (MN)
Universities	Moderate	Moderate	Low	Decreasing quality (MN)
Schools	Low	Low	Low	
NGOs	Moderate	Moderate	Moderate	Resources limited (NP)
Volunteers / birding community	Low	Moderate	Low	No active birding community (MV)
Local communities	Low	Low	Low	

Further details per country in Annexes 12, 13 and 14

As per the Landbird Action Plan, presently in parts of Central Asia and the Middle East, there is a need to build capacity among the national agencies to collate data, and to develop or revive their own national databases, focusing on online resources to make that data accessible to a wider community. The Action Plan has outlined actions needed to build capacity and improve the exchange of information, collaboration and coordination between researchers studying migratory landbird species.

4 Taking conservation action

a. International Cooperation

International cooperation for the conservation of migratory birds along the CAF takes many forms. This includes formal government-level participation in international MEAs, such as CBD, Ramsar, UNCCD and, particularly relevant, CMS. It also includes cooperation among NGOs, both national and international, along the flyway, as well as multiple partnership among scientists, researchers, universities and independent experts, often focused around specific species or groups of species or tracking species flyways.

The challenge for effective international cooperation is to agree on a framework and process for bringing together these different groups and the structures and mechanisms involved. Whether they are formal and informal, these help develop ownership of an inclusive and participatory initiative in the region to conserve the migratory birds and their habitats. This will require an incremental approach, building on successes and best practices, and also on opportunities for engagement.

a. MEA frameworks

i. Conventions. All 30 CAF countries are Contracting Parties to global/regional multilateral environmental agreements, particularly the Convention on Biological Diversity (CBD) and United Nations Framework Convention on Climate Change (UNFCCC); while a majority (86%) are Party to the Ramsar Convention on Wetlands, and about 73% Party to the Convention on Migratory Species (CMS) (see Table 15). Most countries (83%) are also Party to the United Nations Convention to Combat Desertification (UNCCD) – an important convention for the management of habitats of importance to migratory birds – and Convention on the International Trade in Endangered Species (CITES) (96%).

Table 15. Summary of CAF range states formally involved in regional/global conservation frameworks (as at 15 February 2023)

Conservation framework	No. of Contracting Parties/ Partners/ Signatories	Total of Range States covered	Percentage
African-Eurasian Raptors MOU	10	28	35.7
African Eurasian Waterbird Agreement	5	17	29.4
East Asian – Australasian Flyway Partnership	5	5	100.0
Ramsar Convention on Wetlands	26	30	86.7
Convention on Migratory Species	21	30	70
Convention on the International Trade in Endangered Species	29	30	96.7
Convention on Biological Diversity	30	30	100.0
United Nations Framework Convention on Climate Change	30	30	100.0
United Nations Convention to Combat Desertification	30	30	100
Arctic Migratory Bird Initiative	1	30	

In addition, CMS's global "Programme of Work on Migratory Birds and Flyways" (POW) for the period 2014-2023[22] has prioritised the need for international collaboration and conservation of migratory birds and their habitats in the CAF with four major objectives:

1. Strengthen the formal framework for conservation of migratory waterbirds through increased synergies with AEWA.
2. Strengthen the implementation of Western/Central Asian Site Network for the Siberian Crane and Other Migratory Waterbirds.
3. Establishment of the Action Plan and formal implementation framework for conservation of landbirds (as part of African Eurasian Landbird Action Plan).
4. Strengthen the implementation of Raptor MoU in Central Asian flyway region.

The POW also identifies the need to improve monitoring waterbird populations (status and trends) in the CAF, including capacity building.

Several CMS resolutions prioritise the need to address direct and indirect threats to migratory birds and their habitats (Annex 15). Recognising the importance of habitat management for migratory birds, CMS Resolution 12.07 (Rev.COP13) *The Role of Ecological Networks in the Conservation of Migratory Species* calls on Parties to consider the network approach in the implementation of CMS instruments and initiatives. It invites Parties, Range States and other relevant organizations to identify, designate and maintain comprehensive and coherent ecological networks of protected sites and other adequately managed sites of international and national importance for migratory birds.

Most MEAs, including the CMS[23] and the Ramsar Convention, have called for synergies and partnerships with other MEAs, international, national and local stakeholders to work together in meeting the conservation targets, which would include actions for conservation of CAF migrants and their habitats.

The Flyways Resolution of CMS COP13 in 2020[24], has welcomed the continuation of a process to develop an institutional instrument under CMS "to support the implementation of increased conservation action for migratory birds and their habitats in the CAF, as well as to support this initiative with resources, in coordination with the existing CMS avian-related instruments".

b. Migratory bird frameworks In addition to MEAs, the CAF falls within the range of four major migratory bird conservation frameworks under the CMS family (Table 16). Currently, only 29% range states have signed up to the AEWA, which covers the northern, central and western part of the CAF, and 33% to the African Eurasian Raptors MOU. In 2006, all 30 range states of the Central Asian Waterbird Action Plan, to which CMS Parties, have signed up to the Action Plan. In addition, the East Asian-Australasian Flyway Partnership provides an informal multistakeholder approach to conservation of migratory birds and their habitats. Details of the current status of countries participating in the most important treaties and initiatives for the CAF are listed in Annex 2.

[22] Res. 12.11 (Rev.COP13) *Flyways*
[23] CMS Res 11.10 (Rev.COP13) *Synergies and Partnerships* https://www.cms.int/en/document/synergies-and-partnerships-9
[24] CMS Res 12.11 (Rev.COP13) *Flyways* https://www.cms.int/en/document/flyways-4

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Table 16. Summary of major international frameworks covering migratory birds of the CAF (as at 15 February 2023)

Conservation framework entered into force	No of migratory species covered	Geographic scope
CMS (1983)	Appx I 36, Appx II 385	Global, including all 30 CAF countries
Raptors MoU (2008)	76	Including Africa, Europe east to Russia, Mongolia and south Asia
AEMLAP (2014)	246	Including Africa, Europe east to Russia, Mongolia and south Asia
AEWA (1995)	255	118 countries, including Russia, Central and south west Asia
CAF Waterbird Action Plan (2006)	279 biogeographic populations of 182 species	30 CAF countries, see Fig 1, section 1.
EAAFP (2006)	276 biogeographic populations, including at least 12 that overlap with CAF	Covers Asian Russia to Alaska through East & SE Asia to Australasia. Overlaps with northern and eastern side of the CAF (breeding and staging areas) - involves Bangladesh China, Mongolia, Myanmar and Russia[25].

Each of these frameworks have produced a list of prioritized actions. These actions are based on the specific needs for the species groups and the threats to them and their habitats, and are expected to be implemented within varying time frames; see Annex 16 for details. The sustainable management of migratory bird species must be developed alongside the national laws and administrative mechanisms that will oversee their implementation and, while they are being developed in other overlapping flyways– including for geese populations under the AEWA – they are currently lacking in the CAF region.

The Arctic Migratory Bird Initiative, under the Arctic Council, provides a cooperative framework for conservation of birds breeding in the Arctic that migrate to the CAF region. While Russia is the only CAF signatory, there are flyway plans and projects on migratory species being developed with observer countries, including India. Additionally, Armenia and Georgia, two CAF countries, participate in the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention).

At least two regional and subregional agreements/frameworks for cooperation on the environment and related issues also cover migratory birds within their mandate: the Gulf Cooperation Council (GCC) and South Asian Cooperative Environmental Programme (SACEP). These could be encouraged to also provide a basis for conservation action for the CAF.

Countries of the CAF also participate in various bilateral agreements to promote conservation of species and habitats. The Russia and India agreement was, for example, signed in 1984 (during the Soviet Union, which, at the time, included all the Central Asian Republics), under which both countries have undertaken various collaborative actions in the past. This review has not attempted to document all existing bilateral agreements.

There is also the potential for more international cooperation in finding and implementing solutions to shared problems within the CAF. There are few active task forces covering this region. Their value has been shown in other flyways, such as the work being done to tackle illegal killing by the CMS Intergovernmental Task Force on Illegal Killing, Taking and Trade of

[25] India (particularly eastern part and Andaman & Nicobar islands) falls within staging & non-breeding ranges of many migratory waterbird populations of the EAAF, particularly along western EAAFP boundary, but has yet to consider formal involvement in the Partnership.

Migratory Birds in the Mediterranean[26]. There is great potential for sharing of experience and best practice both within and between flyways, as has been recognised through the establishment of the Global Interflyways Network[27].

The main challenges lie in translating these international commitments into national and local actions within a timely manner.

c. Conservation action plans for migratory species provide a structure for collaborating for the conservation of birds and their habitats and a number of such plans have been developed under the frameworks of the CMS, AEWA, EAAFP and others. These are available for single threatened and near threatened species and species groups, with additional plans underway (see Annex 17). These flyway-scale plans enable range states and multiple national and international stakeholders to work together across the range of the species against a common agreed set of priorities to improve the status of the species through implementation of specific actions and to accumulate a new knowledge about its current status, key threats and lessons learnt.

As outlined above, there are multiple frameworks covering differing geographic regions, with different priorities, governance mechanisms and timeframes for action. There are also many collaborative informal and semi-formal research and other citizen-science led initiatives underway that support conservation efforts of migratory birds and their habitats in the CAF. **An international multistakeholder flyway-wide framework for the conservation of migratory birds and their habitats is urgently needed to streamline action, strengthen cooperation and solidify resources.**

b. National legislation and policies for migratory species and their habitats

This review covers a wide range of migratory species across many countries, including many species that are traditionally hunted or captured and used for falconry. Based on the national questionnaires (details in Annex 18):

- most countries (24 of 26, with exception of Yemen and Pakistan) have reported having national legislation that covers protection/management of birds, including migratory species. Feedback from Azerbaijan, Kyrgyzstan and Tajikistan is not available.
- From the feedback received, it is not clear whether separate legislation exists for migratory species in all countries.
- Pakistan has only provincial legislation defining what species and numbers of birds can be hunted; the development of a national legislation is currently underway.
- In Nepal, while all species are protected, a few species, including the Bengal Florican, Lesser Florican, Sarus Crane, White Stork and Black Stork are especially listed as priority species for conservation action.
- About half the countries reported to have adequate national and local legislation to protect migratory birds. Considering that illegal killing is reported in nearly all countries, see section 3, it seems that these might not be effectively enforced.

[26] https://www.cms.int/en/taskforce/mikt
[27] https://www.cms.int/en/news/publication-global-interflyway-network-launched-ramsar-cop

- Legislation that details what species of migratory birds can be hunted is reported for at least 5 countries.
- In Myanmar, while lacking a specific list for migratory species, hunting is permitted with exception of protected areas and certain protected species
- In Mongolia, while geese and ducks are designated as game birds by law, there is no specific list of huntable migratory species. However, with little bird hunting tradition, few birds appear to be effectively hunted.
- While national legislation exists in Afghanistan, proper enforcement of the legal framework is reported as a challenge.
- In addition to hunting, the legal collection of eggs of migratory species for food or other purposes is permitted in 7 countries. In Kazakhstan, where a legal provision for egg collection exists, it is practiced for breeding of species in captivity with special permits, whereas in Nepal it is permitted only for scientific purposes.
- Recent changes to legislation around hunting is reported in Turkmenistan where there has been a ban since the COVID-19 pandemic and all weapons were withdrawn from the population.

Additional information on threats to migratory birds from legal and illegal take is provided in section 3.5.b.i. Based on this first analysis, it is evident that a comprehensive review of legislation covering protection and the legal and illegal capture of migratory species and their eggs in the CAF would provide valuable insights.

Table 17. The percentage of countries in the CAF with specific legislation that protects migratory bird species

Legislation for protection and management of migratory species	**Status**
No. of countries where protection and management of migratory bird species is covered under national legislation and/or policies	96%
No. of countries with national and local legislation measures regarded by respondents to national questionnaires as adequate to protect migratory birds	54%
No. of countries with a specific list of huntable migratory species	22%
No. of countries where hunting quotas are set at levels intended to be sustainable for the migratory population/species	26%
No. of countries permitting legal collection of eggs of migratory species for food or other purposes.	29%
No. of countries with adequate local enforcement of hunting legislation.	33%
No. of countries with an adequate system for hunters to report their catch/ hunting bag.	14%

Further details per country in Annex 19

c. Implementing conservation action

Taking short and long term action for conservation of migratory birds and their habitats requires commitment and involvement of multiple stakeholders, capacity and adequate resources.

Across the region, different stakeholders are involved in a variety of activities to support conservation of migratory birds and their habitats at national to local level as summarised in Table 18. Their roles and responsibilities vary among countries, with influence of ethe existing political systems and structures.

Table 18. Activities that support migratory bird and habitat conservation in which stakeholders in the CAF are involved

Stakeholders	Policy & legislation	Research	Monitoring	Conservation	Awareness raising	Capacity strengthening
National government agencies	x		x		x	x
Subnational government agencies	x		x	x	x	x
Research Institutions	x	x	x	x		x
Universities		x	x			
NGOs	x	x	x		x	x
Birding community/ groups		x	x	x	x	
Foundations		x	x	x	x	x
Corporates		x	x	x	x	x
International agencies/ organisations		x	x	x	x	x

Based on the national questionnaire, involvement of other stakeholders, including NGOs, research institutions and universities is varied. Several countries identified stakeholders in all three categories (e.g. with up to four NGOs listed in Mongolia), while others did not provide information on this topic.

The responses to the national questionnaire make it clear that many conservation efforts are ongoing from different stakeholders, from the policy level to community-based actions.

Table 19 below **provides a few examples of the wide range of actions** being undertaken by stakeholders for conservation of birds and their habitats in the last five years as provided in the national questionnaires. More details are available in the national reports.

Table 19. Examples of actions for migratory birds and their habitats that specific stakeholders have conducted in the past five years, as provided through the national questionnaires

Stakeholders	Examples of actions for migratory birds and their habitats in the last five years
National government agencies	● National Action Plan for Conservation of Migratory birds along with Central Asian Flyway 2018-2023 (IN) ● Creation and management of the National PAs (KZ, TM) ● Protection of Houbara Bustard habitats by the Wildlife and Forestry Committee of the Ministry of Nature Resources (KZ)

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Stakeholders	Examples of actions for migratory birds and their habitats in the last five years
	● National legislation for construction of overhead power lines developed, approved and implemented nationwide (MN) Identification of priority sites for nature conservation and protected area network expansion, with successful designation of some into protected areas (MN) ● IBAs identified for protection (UAE) ● Preparation of nominations of internationally important wetlands for the Ramsar Convention by the State Committee for Ecology (UZ)
Subnational government agencies	● Declaration of 28 as Ramsar sites in 2022, bringing the total to 75 wetlands, highest in Asia (IN) ● Establishment of Bird rescue centre (NP) ● Declaration of wetlands or important sites as sanctuaries (e.g. Jagdishpur Reservoir bird sanctuary by Sudurpaschim Province authorities, and Pokhara Metropolitan and Annapurna/Rupa Rural Municipality in managing a lake cluster of Pokhara Valley) (NP).
Research Institutions	● Research on birds by the Museum of Natural History (PK)
Universities	● Annual monitoring and satellite tagging of geese (North Kazakhstan State University) ● Support to creation of new wetland protected areas through support in the description and selection of territories, compilation of a list of rare species by the Institute of Zoology, Academy of Sciences of the Republic of Karakalpakstan (UZ)
NGOs	● Restoring degraded habitat and protection of foraging sites of Black-necked Crane by RSPN (BT). ● Capacity building of state governments and implementation of National Action Plan for Conservation of Migratory Species under CAF by the BNHS (IN) ● Taldykol lake protection campaign in Astana (KZ) ● Work with national agencies to develop and implement national legislation for construction of overhead power lines (MN) ● Work with national and subnational government agencies for identification of priority sites for nature conservation and protected area network expansion (MN) ● Waterbird research and conservation and Yellow-breasted Bunting research by Wildlife Science and Conservation Center, the Mongolian Bird Conservation Center, the Mongolian Ornithological Society, and Mongolian Bird Watching Club (MN) ● Recovery program for Houbara Bustard through release of birds, collaring, transmitters by Emirates Birds Breeding Center (UZ) ● Creation of new desert protected areas for birds of prey (and preparation of justification and preparation of the UNESCO nomination) (UZ)
Birding community/ groups	● Protection to bird colonies by local community groups (BD) ● Awareness, seizure and confiscation of catapults and traps. Rescue and treatment of injured birds (NP) ● White-headed Duck lake in Almaty region protection campaign (KZ)

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Stakeholders	Examples of actions for migratory birds and their habitats in the last five years
Foundations	● Habitat conservation action by Isabella Foundation (BD) ● Various research and conservation activities carried out support of major international foundations, incl. International Crane Foundation, Peregrine Fund, Succow Foundation (MN, TM).
Community groups	● Establishment of community-managed vulture feeding sites at multiple locations (NP) ● Involvement of Community Forest User's Groups and Mother's groups in species conservation (NP). ● Action by local communities and Community Controlled Hunting Areas (PK)
Business sector	● Monitoring of waterbirds with oil companies (KZ)

In addition to these in-country actions, there is a lot of ongoing international cooperative research that is done more informally, among researchers, NGOs and universities across the CAF region and beyond. For example, BirdLife Partners and associated non-governmental nature conservation organisations from throughout the Central Asian Flyway work together through the BirdLife Central Asian Flyway Initiative (CAFI), an inclusive collaborative effort led by BirdLife International Partners to conserve migratory species and natural habitats along the Central Asian Flyway (see case study). Key strategic objectives of CAFI include Scientific research & monitoring, Habitat conservation and restoration, Transboundary cooperation, National and international policy advocacy, and Capacity building.

CASE STUDY

The **BirdLife Central Asian Flyway Initiative (CAFI)** is dedicated to finding solutions for improving the conservation status of migratory birds in the CAF. The role of Birdlife Partners in Central Asian Flyway conservation has been vital in recent years. For instance the support and efforts by BNHS
(the BirdLife Partner of India), have supported the Government of India not only to launch its National Action Plan for the conservation of Migratory birds but also to take a leadership role in promoting and developing conservation partnerships for the CAF. Through our local-to-global approach, based on scientific insight, we are uniquely placed to support year-round conservation action for migratory birds along the CAF. The CAFI aims to:

- Improve the understanding of bird migration, including migratory pathways, patterns of migration, important sites and habitat, a review of present and emerging threats and opportunities for migratory birds and the identification of appropriate conservation actions to address them;
- Develop and support international and national action plans for protecting migratory birds along the flyway and advocate for their effective implementation;
- Build on existing initiatives, national and international to understand and conserve migratory birds in the Flyway;
- Strengthen organisations and institutions and promote international cooperation along the flyway to deliver conservation actions.

We also surveyed participants on effective management practices applied specifically to benefit migratory birds, particularly at protected areas. As may be expected in such a diverse group of respondents and contexts, the response is that partly implemented for most traditional practices (Table 20). The impact of the use of drones and of feral dogs and cats on wild birds is widely not recognized as a threat, and therefore not yet managed in most countries.

Table 20. Feedback on management practices being implemented nationally to respond to direct threats to migratory birds and their habitats as provided through the national questionnaires

Management practices	Response
Regulation of water levels to provide appropriate habitat conditions for the birds	Partly
Eradication or control of invasive species of plants and animals	Partly
Regulation of use of certain fish nets / tackle that can lead to bycatch of birds	Partly
Tourism activities (control on numbers, access to areas at certain times of year)	Partly
Control on selected sports within sensitive areas that are known to harm birds or disturb their daily activities (e.g. motor boats, jet skis, off road vehicles, wind surfing, parasailing, kite flying)	Partly
Control of use of drones for filming at feeding, roosting or nesting areas	No
Seasonal restrictions on cattle grazing within sensitive areas that are known to harm nesting birds or disturb other activities	Partly
Control on feral dogs or domestic cats	No

Further details per country in Annex 20

d. Resourcing conservation action

International finance – as covered in Section 4.1 and 4.2, there are adequate frameworks to promote implementation of conservation action. Implementing these at international, national and local levels requires predictable, adequate and ongoing resources and from different sources. In the last five years, funding has become made available in many countries through multilateral financial lending institutions (e.g. Global Environment Facility, UNDP, UNEP, Asian Development Bank).

Questionnaire respondents have listed the following international sources of funding for research, monitoring, conservation and raising awareness on migratory birds and their habitats (Table 21). These examples should provide an understanding of the wide range of funding sources available to stakeholder in CAF countries.

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Table 21. Overview of funding bodies supporting work in the CAF region as provided through the national questionnaires

Category	Examples of funders supporting work in the CAF region
Bilateral funding from national governments	US Department of Agriculture (USDA), Swedish International Development Cooperation Agency (SIDA), Japan Fund of Global Environment, CADI – the Central Asian Desert Initiative and other programmes supported by International Climate Initiative (IKI) of the German government.
Trust funds	Critical Ecosystem Partnership Fund (CEPF) a joint initiative of l'Agence Française de Développement, Conservation International, the European Union, the Global Environment Facility, the Government of Japan and the World Bank.
International development agencies	European Commission, World Bank, Global Environment Facility (GEF), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Asian Development Bank, IUCN
Conventions, agreements	AEWA, Ramsar Convention, East Asian – Australasian Flyway Partnership (EAAFP)
International NGOs	BirdLife International, Friends of the Environment Center (Qatar), International Crane Foundation (ICF) Wildlife Conservation Society (WCS), WWF, Wetlands International, Royal Society for the Protection of Birds (RSPB), Swiss Society for the Study and Conservation of Birds
Research institutions	Max Planck Institute for Animal Behaviour (Germany)
Universities	Linnaeus University (Sweden)
Foundations/trusts	Rain Forest Trust, Succow Foundation
Corporates	Swarovski Optik, Tengizchevroil (KZ), Dhilma Conservation (SL), Tokyo Cement Group

National sources - in nearly all countries, national and local budgets are reported to be allocated towards management of important habitats, particularly protected areas, national parks, sanctuaries, and Ramsar and World Heritage sites. Resourcing the management of protected areas across the region has been a challenge, the degree of under-resourcing remaining largely unknown due to a lack of collated, comparable data (Coad et al. 2019).

The national questionnaires sought to collect information on funding being allocated towards migratory species and habitat related-work through three questions, as outlined in Table 22 below. Responses rates varied from 27 to 54%, and the information received was often inconsistent and incomplete, hindering meaningfully interpretation of results.

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Table 22. Provision and adequacy of budgets for migratory bird conservation from national sources as provided through the national questionnaires

Availability/use of budgets from national government and other sources for migratory birds	**Response rate (n = 26 respondents)**
a) What are the estimated annual government budgets allocated to the conservation of migratory birds and their habitats in your country (inc. sites) for last three years,	9 (34.6%)
b) What are the estimated annual budgets allocated from sources other than government to the conservation of migratory birds and their habitats in your country (inc. sites) for last three years, and	7 (26.9%)
c) How would you rate the adequacy of the combined annual budget to effectively conserve migratory birds and their habitats in your country?	14 (53.8%)

Government agencies seem to be the source of funding of a wide range of conservation efforts among the surveyed countries, with the exceptions of Afghanistan and Yemen, where ongoing political circumstances have prioritized resources elsewhere.

No country reports to have a budget allocated directly to migratory bird conservation. Resource allocations for the protection and restoration of habitats, and waterbodies, protected areas are the indirect contributions expected to help conserve of migratory bird species. See the case study for Nepal below.

CASE STUDY - In Nepal, the Lumbini Provincial Government allocated a budget for the management of Jagdishpur Lake Ramsar Site, including preparation and execution of a management plan; while the Sudurpaschim Provincial Government and Ghodaghodi municipality supported similar actions for Ghodaghodi lake conservation. Both are also important IBAs for migratory birds.

Similarly, apart from northern winter bird survey activities, patrolling to curb migratory birds poaching, and removal of nets/traps, very few activities are directly focused on migratory birds.

The work being done nationally and locally by multiple stakeholders has been supported by the national government, national and local NGOs, corporations (including the tourism companies Tiger Tops and Tiger Mountain in Nepal), foundations and private individuals. Additional resources for this work have been sourced from international organizations (as covered in the next section).

The private sector, foundations and individuals have also contributed resources to support migratory species and habitat conservation through awareness raising, research and monitoring, capacity building and related site and species conservation activities.

Generating estimates of annual government budgets being allocated specifically to the conservation of migratory birds and management of habitats only important for migratory species require a more detailed analysis.

Without such information from across the region, it is also premature to attempt to evaluate the adequacy of the combined annual budget available to effectively conserve migratory birds and their habitats in any country.

e. *Taking Action for climate change*

Integrated climate and biodiversity policy and planning

The climate and biodiversity crises are interlinked. Whilst there is recognition of their interconnectedness, they are typically addressed in their own domains. This "siloing" creates the risk of generating actions that may prevent solutions to one or the other crises (Portner et al. 2021). The IPBES (2019) Global Assessment report states that around 25% of assessed species are threatened and facing extinction This number is likely to increase unless the direct drivers of change in land/sea use, exploitation, climate change, pollution, and invasive alien species are addressed. The recently agreed Convention on Biological Diversity (CBD) Kunming-Montreal Global Biodiversity Framework (GBF) (CBD/COP/DEC/15/4) responds to this species threat. It promotes integration and cooperation between and across Conventions and multilateral environment agreements, such as the United Nations Framework Convention on Climate Change (UNFCCC), recognising the need to address climate and biodiversity jointly, using tools such as the Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and National Biodiversity Strategic Action Plans (NBSAPs). The CBD GBF (Target 8[28]), Ramsar Convention on Wetlands and the CMS have also recognised the need for multilateral decisions on climate change and have made several decisions that prioritise actions to reduce climate change impacts on migratory species (e.g., CMS Resolution 12.21).

The national questionnaire results have presented a significant variation in the knowledge and understanding of respondents of the impact of climate change on migratory species and their habitats across the flyway. The survey respondents from Kazakhstan, Iraq, China, BIOT, Kuwait, Myanmar, Turkmenistan, and Qatar recorded that they don't have any climate change policies and plans available. However, this is not an accurate reflection of the policy frameworks in place in these countries. A review of the international climate and biodiversity framework indicate that all States surveyed – apart from BIOT– have such policies in place (refer Annex 21). This disconnect of the survey responses with published national policies highlights the common separation of the biodiversity conservation and climate change agendas, with the consequent lack of synergistic action in many countries, as outlined by Portner et al. (2021).

The national questionnaire results have also indicated that the Maldives, Bangladesh, Bhutan, Mongolia, Pakistan, Sri Lanka, Nepal have outlined the most comprehensive set of climate and biodiversity national and regional climate/biodiversity policies. However, Bangladesh reported that their climate action focusses on human migration, not wildlife, with a need for people to be at the centre. The recognition for a human-centric approach is likely due to the significant losses and damages and high vulnerability to climate impacts experienced locally. However, the Bangladesh NDC includes significant reference to ecosystem restoration. Mongolia and Bhutan were the only countries which indicated having protected species plans, including the impacts of climate change, in the survey results.

A review of the UNFCCC NDC Registry for CAF countries indicated the following CAF countries have referenced nature in their NDCs:

- **Bangladesh** - afforestation, reforestation, forest conservation and restoration, improved land management, climate smart agriculture, and marsh restoration.

[28] CBD/COP/DEC/15/4 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.

- **Bhutan** - forest conservation, biodiversity conservation and protection, climate smart restoration, agro-forestry, wetland conservation.
- **Kuwait** – cultivation of mangroves, sustainable land management and green belt programmes.
- **Maldives –** restoration of mangroves, coral reef restoration, protection of forests and critical watershed hydrological services
- **Mongolia –** ecosystem-based adaptation/nature-based solutions (NbS) including wetlands, sustainable land management, and forests
- **Myanmar –** NbS, agroforestry, afforestation, restoration of mangroves and coral ecosystems.
- **Nepal** – afforestation, ecosystem protection, sustainable management of wetlands
- **Russia** – forest management and protection
- **Sri Lanka** – NbS, targets for wetland restoration, prevention of coastal degradation through mangroves, water retention, and introduction of city parks. Identified threats to biodiversity from climate have not been studied adequately but expecting significant impacts to species relying on coastal habitats, such as coral, seagrass meadows and lagoons.
- **UAE** – restoration, protection and planting of mangroves, seagrass meadows, and coral reefs. A focus on blue carbon.
- **Qatar** – nature-based adaptation, restoration of marine habitats, mangroves, and tree planting.

As demonstrated from the analysis of these NDCs, protection and restoration of migratory bird habitats, such as coastal wetlands, can sequester significant amounts of carbon and should be included in accounting of greenhouse gas emission under NDCs and incorporated as key mitigation actions. NbS relating to ecosystem conservation, protection and restoration can also have adaptation outcomes through natural-flood management, coastal protection, and increased ecosystem resilience and should ensure inclusion in NAPs, providing multiple benefits for migratory species and people. We know that increasing the resilience of the biodiversity and ecosystem services includes the need to invest in nature-based solutions (NbS) using a rights-based approach, such as ecosystem protection and restoration, to minimise the impact of climate change on migratory species.

Table 23. Documents/strategies/policies/planning relating to climate change and biodiversity based on national questionnaires

Existing policy and legislative frameworks	**Number of survey responses providing evidence (n = 24 respondents)**
Legislation	38% (9)
Nationally determined contribution (NDC)	58% (14) Only one country stated their NDC specifically outlined biodiversity measures.
National adaptation plans (NAPs), National Adaptation Programme of Action (NAPA), and related significant national adaptation projects completed or underdevelopment	38% (9)
National biodiversity strategies and action plans (NBSAPs)	63% (15)
Regional, sub-national, or local policies	42% (10)

Existing policy and legislative frameworks	Number of survey responses providing evidence (n = 24 respondents)
	Examples provided include Ramsar Strategy and Action Plans, sub-national, or local climate related policies. No broader supranational regional policies were identified.
Site species management plans	33% (8) Examples provided include protected area plans, forests, and for freshwater lakes.
Species management plans	8% (2) Examples provided include Black-necked Crane and protected species plans.
Other (please specify)	Examples provided include river water quality reports (Bangladesh) and National Communications to the UNFCCC

The national questionnaire asked respondents to provide the main sources of evidence relating to climate impacts on ecosystems and migratory birds within their national context (Table 24). There was a range of the quality of evidence, with few States having completed a full impact, risk, or vulnerability assessment to identify key vulnerable locations and corresponding actions. However, Nepal and Yemen identified the specific at-risk sites of Koshi and Ghodaghodi (Nepal) and the Socotra archipelago (Yemen) as important areas for migratory species.

Table 24. Evidence sources available for climate impacts on ecosystems, sites, and migratory birds based on national questionnaire results

Identified evidence	Number of survey responses providing evidence (n = 24 respondents)
climate impact, risk, and vulnerability assessments	16% (4)
national/regional adaptation action plans	13% (3)
forest fire impact reports	4% (1)
observed climate change changes in localised habitats/bird community structure	8% (2)
Academic papers/reports	25% (6)
CBD reports, e.g., NBSAPs	13% (3)
Communication to the UNFCCC	4% (1)
Important Bird Area (IBA) report	4% (1)

f. Integration across Sectors

Integrated action for climate and migratory species

The IPCC (2022c) and BirdLife International (2022) have recognised the role of ecosystem protection and restoration as a NbS to build resilience of ecosystems and to generate opportunities

to restore ecosystem services with substantial co-benefits for species, climate, and people. In 2022, at CBD COP15, the world's governments agreed to Target 3[29] under the GBF.

National questionnaire responses identified some synergistic action demonstrated throughout the CAF by the States. Various ecosystem restoration programs are underway in BIOT (mangroves), Myanmar (rivers and wetlands), and Nepal (water holes, forests, grasslands, and wetlands), providing resilient habitats and increased ecological connectivity for the migrating species. These are listed as actions in NDCs, NAPs and NBSAPs, as outlined in the section above and in Annex 21. However, it must be noted that ecosystem restoration was focused on site restoration with only indirect benefits for migratory species, such as the return of the Lesser Adjutant Stork and Bristled Grassbirds at key sites in Nepal.

Given the socio-economic conditions of most CAF countries and competing pressures for development, integrating the needs of migratory birds, including the management of habitats and sites important for their conservation, within the legislations and policies of other sectors (such as agriculture, forestry, energy, transport, waste, tourism, climate) has not the highest priority and reported to be partly achieved on average. In many countries, there appears to be little recognition of the need for this integration.

From the information provided, it seems some countries have been integrating the needs of migratory birds within the frameworks of Environmental Impact Assessments (EIA) and Strategic Environmental Assessments (SEA). These are mainly expressed in new development projects, particularly when implemented in important habitats near protected areas; when often mitigations measures are required. However, the effectiveness of EIAs and SEAs policies in the conservation of migratory birds, including threated species, requires further investigation.

[29] Ensure and enable that by 2030 at least 30 per cent of terrestrial and 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.

5 Recommendations

Conservation of 604 migratory species in the CAF by preventing or reversing population declines will require a wide range of species-focus conservation measures as well as habitat management and restoration actions at the flyway level and national and local levels across the region.

The review recognises all the past work and the wide range of ongoing conservation action being undertaken by a wide range of local, national and international stakeholders. It also recognises that there remain large gaps in knowledge, legislation, capacity, awareness and especially adequate resources to achieve species conservation and to restore and manage the habitats on which these birds depend.

Given the socio-economic conditions of the most CAF countries and competing pressures of development, the integration of the needs of migratory birds and management of habitats/sites important for their conservation within the legislations and policies of other sectors such as agriculture, forestry, energy, transport, waste, tourism, climate and others needs to be integration into other policies is needed.
There is thus an opportunity and urgency to align these with development agendas in the region, particularly climate change mitigation and adaption measures.

A set of wide-ranging flyway-scale recommendations are provided within the following main action areas:

A. *CAF collaborative framework development*

B. *Species management*

C. *Land-use management*

D. *Taking and trade of migratory birds*

E. *Research and monitoring*

F. *Education and information*

G. *Integrating action for climate and migratory species*

The recommendations are presented adapting the format used by the current version of the AEMLAP. These are based on strategic plans, action plans and priorities of international frameworks (in Section 4.1) and perceived gaps identified in this review. The recommendations are also informed by national questionnaire feedback on priorities for migratory bird and habitat conservation (see Annex 22 on legislation and policy, Annex 23 on priority actions for conservation of birds, Annex 24 to manage/restore habitats, Annex 25 awareness raising, Annex 26 capacity building and Annex 27 enhancing international cooperation).

The priorities and time lines for implementation of action as included in the AEMLAP that are relevant for landbirds are listed for information in a column in the list below. As mentioned in the first recommendation below, a mapping of all relevant plans and priorities for raptors, waterbirds and seabirds would be valuable in developing a more comprehensive framework for collaborative action.

Recommendations	**AEM LAP[1]**
A. CAF COLLABORATIVE FRAMEWORK DEVELOPMENT	
Develop a collaborative and cooperative multistakeholder CAF flyway-wide framework for the conservation of migratory birds and their habitats. This Situation Analysis provides a strong basis for a more comprehensive analysis of obligations and opportunities. This would need to include (a) mapping of relevant resolutions, strategic plans, action plans and programmes of work and species conservation action plans of the international	

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Recommendations	AEM LAP[1]
conventions, agreements and related frameworks, (b) international NGOs and (c) a large number of international formal and informal collaborations amongst researchers, NGOs, and others. Following such an analysis, different institutional and cooperative framework options could be developed, building on the strengths, comparative advantages and roles and responsibilities of key stakeholder groups. The CAF would benefit from being developed as a joint collaborative initiative to improve coordination and build synergies among international frameworks, both formal and informal and key stakeholders (including governments, international NGOs, scientists and others with an interest in saving migratory birds). Some key principles and attributes of a framework could be laid out, so that for example it could be innovative, least bureaucratic, dynamic and inclusive.	
B. SPECIES MANAGEMENT	
Implement existing conservation single species or multispecies action plans for globally threatened species and others for which plans exist. Plans developed by CMS, AEWA, AEMLAP, Raptors MOU and EAAFP are outlined in sections 4.1 and 4.2. Also informal cooperation around many key species, often undertaken by national and local NGOs, community groups and researchers. A review of all these could be undertaken.	
Develop and implement single species conservation plans (or as part of multispecies action plans) for selected globally threatened high priority species, ideally building on existing work and promoting international communication and collaboration (see list in Table 25).	
Recommend to the CMS Scientific Council to consider eight globally threatened and one near-threatened CAF species identified for listing of under CMS Appendix I or II (as appropriate) to highlight the need to improve their conservation through international cooperative action. A list of 9 species for listing is included in Table 26.	
Refine the Working List of CAF Migratory Birds prepared for this review in consultation with national experts and information on current status of species in countries and migration information.	
C. LAND-USE MANAGEMENT	
i. Sites of national or international importance to migratory bird species	
Undertake and publish national inventories of the sites of importance to migratory species, in liaison, where appropriate, with competent international conservation organisations. Build on existing databases include the IBA database by BirdLife International, Critically Important Cites for waterbirds by Wetlands International and BirdLife International, and for raptors and landbirds being developed by the Raptors MOU and AEMLAP respectively and Marine IBAs by the BirdLife International Seabird Programme.	S/1
Facilitate and promote designation of sites important to migratory bird species under appropriate national and international conservation categories. (e.g. nationally as nature reserves, national parks, wildlife reserves, sanctuaries, non-hunting areas, and other relevant systems of protection, and internationally as Ramsar, World Heritage Sites and Flyway Network Sites), or other approaches that can lead to adequate management practices.	S/1
Implement action through enhancing management (incl. restoration) to address important migratory bird habitat (including of OECMs) degradation/ destruction, through encroachment and development activities, particularly those that are not currently listed in lists above.	

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Recommendations	AEM LAP[1]
Refine the Working List of Internationally Important Sites for CAF Migratory Birds prepared for this review in consultation with national experts and information on current status of sites in countries.	
Establish a CAF Critical Site Network taking into account the relationship between sites and landscapes which may be ecologically linked to each other, in physical terms, for example as connecting habitat corridors, or in other ecological terms, for example as breeding areas related to non-breeding areas, stopover sites, feeding and/or resting places to ensure ecological connectivity for all migratory birds. Research into and information about migratory species tracked during migratory movement will enable the accurate identification of these site networks. Recognising that different species groups require different habitat types.	S/1
Review and where necessary, establish and implement appropriate and effective conservation site management plans that incorporate appropriate prescriptions for migrant species. At least national protected areas, Ramsar Sites, WHS and Flyway Network Sites require management planning to meet national and international requirements/obligations to conserve migratory species and their specific needs.	M/1
Encourage local implementation of land-use management policies, potentially through appropriate incentive programmes. Provide national support for cross-cutting themes such as the CBD Ecosystem Approach, which is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in a fair and equitable way.	M/1
ii. Land-use changes	
Intensive agriculture	
Develop and implement new policies or review existing policies that maintain and manage natural and semi-natural habitats of value for migratory bird species within otherwise wide-scale and/or intensively managed, or cropped, agricultural landscapes including the promotion of agri-environment schemes and, where these exist, the removal of perverse incentives and subsidies.	M/1
Promote types of biodiversity-friendly farming systems that are favourable to migratory bird species.	S/1
Undertake Strategic Environmental Assessments, as far as possible, to determine overall policies and plans for agriculture, industry, energy, infrastructure, urban and other development that fully consider migratory birds, their habitats and other biodiversity.	M/2
Develop landscape design principles and guidance to mitigate the negative consequences of large-scale and/or intensive forms of agriculture on migratory species and their habitats, and share relevant experiences and good practices through collaboration between Range States.	S/2
Develop land-use planning strategies, using an ecosystem approach, for the conservation of the habitats of importance to migratory species, and ensure the integration of environmental considerations within national agricultural policies.	M/1
Traditional agriculture including pastoralism and small-scale cropping systems	
Promote agricultural policies that support participatory, sustainable natural resource management practices, e.g. small-scale agriculture and traditional farming methods (including pastoralism), *that benefit populations of migratory species and other biodiversity,* including the promotion of appropriate measures within agro-environment schemes and the removal of perverse incentives and subsidies, where these exist.	M/1
Work with and empower local communities to advocate, develop and implement participatory approaches and incentives aimed at integrated, sustainable management of natural resources. This should encourage sustainable small-scale agriculture and forest management, zonation of	M/1

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Recommendations	AEM LAP[1]
grazing, alternative income generation including habitat restoration where appropriate, improving both human livelihoods and the quality of habitat for migratory bird species.	
Timber and non-timber forest products	
Include the habitat requirements of migratory birds in the development and implementation of national integrated forest and scrub forest management plans. Where appropriate, woodlots or plantations of timber trees and/or sustainably managed community forest initiatives should be promoted to reduce pressures on natural forest habitats. Contribute to the implementation of the Work Programme on Forests of the CBD.	M/1
iii. Water management	
Implement, and promote widely, the Ramsar Convention's guidance on wetlands and river basin management (Ramsar Res X.19), especially, but not restricted to, the need to maintain natural river flows that maintain the ecological character of associated wetlands.	S/1
Mitigate effects of existing hydro-dams by allowing well-managed, artificial discharge/flooding downstream, which can be an effective way of restoring floodplain habitats (including flood forests, where necessary aided by replanting/regeneration) and local livelihoods such as rice and arable cultures.	L/2
Regulate anthropogenic threats liable to cause degradation and/or loss of wetlands important for migratory bird species and initiate rehabilitation or restoration programmes, where feasible and appropriate. This will involve the introduction or the enforcement of appropriate regulations or standards and control measures at important wetland sites, as well as at sites that have already suffered degradation as a result of the impacts of factors such as unsustainable use, agriculture, uncontrolled fires, spread of aquatic invasive non-native species, hydrological change, climate change, natural succession, eutrophication and pollution.	L/1
Enhance efforts to conserve and promote the sustainable use of intertidal wetlands and other coastal habitats of importance for migratory bird species (CMS Res.12.25).	
Identify priority issues for conservation of seabird species in the Arabian Gulf, Arabian Sea and Bay of Bengal, including information of current and future threats related to bycatch, illegal killing and oil pollution.	
iv. Energy	
Ensure that a strategic approach is adopted with respect to the location of alternative renewable energy developments. This should include mapping renewable energy potential and overlaying this information with maps of key sites and habitats for migratory bird species and other relevant biodiversity, as well as migration corridors. Opportunity of innovative planning tools (such as Bird Sensitivity mapping https://avistep.birdlife.org/)	M/1
Institute sustainable land-use and energy management policies that consider biodiversity, including migratory bird species, their habitats and other biodiversity.	L/1
Ensure that new energy developments likely to have a significant impact on migratory bird species adopt early-stage and high-level strategic planning processes involving Strategic Environmental Impact Assessments (SEA) and stakeholder consultation and where possible and appropriate, advocate for alternative renewable energy sources.	S/1
Ensure that planned new hydro-electric reservoirs and other schemes modifying natural hydrology are subject to rigorous Environmental Impact Assessments to ensure that their design mitigates	S/1

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Recommendations	AEM LAP[1]
any harm to, and maximises the potential for environmental benefits for, migratory bird species and their habitats.	
Seek to reduce the dependence on wood fuel, as appropriate, through policies and by supporting initiatives that promote, and make available, alternative renewable sources of energy for heating, lighting and cooking.	S/1
v. Re-vegetation (including reforestation), and reducing desertification and carbon emissions from deforestation and degradation	
Encourage the use of indigenous trees or other plants that are of high value to migratory bird species in appropriate afforestation or re-afforestation initiatives. This action will require detailed monitoring and research into resource use by migratory species to inform the most appropriate implementation.	L/1
Incorporate into measures being taken to implement the UN Convention to Combat Desertification (UNCCD) considerations of migratory bird species conservation, and particularly the recommendations and actions contained within this review.	S/1
D. TAKING AND TRADE OF MIGRATORY BIRDS	
Undertake a comprehensive review of legislation covering protection and legal take of migratory species and their eggs in the CAF would be valuable to get a more detailed understanding of the current situation.	
Identify migratory bird species that are the subject of taking and trade, as well as determining the extent to which this exploitation is legal and regulated and, in consultation with other Range States, whether it is sustainable at a population level across the CAF area.	M/2
Explore option for development of a systematic national tracking system by all Range States to enable rigorous identification of species, methods of capture and scale of legal and illegal taking to support a flyway assessment and inform actions.	
i. Regulation of legal taking	
Ensure legal protection of migratory species of greatest conservation concern. Follow existing prioritisation of AEMLAP (listing in Annex 1), Raptor MOU, AEWA and CAF Action Plan.	S/1
Give conservation priority to migratory species with declining global population trends. The adoption of appropriate monitoring systems and the production of adaptive management plans are suggested for species, especially legal quarry species, for which taking may be a significant contributory factor to population declines. i.e. species listed in Category B of Annex 3 of the AEMLAP and priority lists of the Raptor MOU, AEWA and CAF Action Plan.	S/1
Establish limits on the number and means of taking of migratory species and provide adequate controls to ensure that these limits are observed. This can take the form of a national management plan for the harvest and exploitation of migratory species and will need to involve the prohibition of all indiscriminate means of taking.	S/1
Regulate all taking and trade of migratory species with increasing, stable or unknown global population trends, as well as institute their monitoring. i.e. species listed in Category C of Annex 3 of the AEMLAP and priority lists of the Raptor MOU, AEWA and CAF Action Plan.	S/1

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Recommendations	AEM LAP[1]
Compile national lists of quarry migratory bird species, hunting seasons and trade across Range States, to ensure sustainability of taking at the flyway scale and an accurate determination of hunting pressure.	S/1
Develop/refine the concept of sustainable management of migratory species in the CAF in line with national laws and mechanisms. This would benefit from models and lessons learnt in other flyways.	
Implement alternative livelihood programmes or captive breeding programmes for migratory bird species utilised as food sources where evidence suggests that subsistence hunting of migrant species is unsustainable.	M/1
ii. Illegal taking	
Promote international cooperation between enforcement authorities and other stakeholders in the regulation, implementation and enforcement of the taking and trade of migratory species, and implement measures outlined in CMS Resolution 11.16 on Illegal Killing, Taking and Trade of Migratory Birds.	S/1
Take action through existing legal instruments regulating domestic and/or international trade (e.g. CITES) where there is evidence that trade (legal or illegal) is driving unsustainable taking of birds. Active participation with CITES by all Range States is encouraged. Where domestic instruments do not presently exist, explore processes for their introduction, implementation and enforcement.	M/2
Take action at national and local level to reduce or eliminate bycatch (accidental killing in fish or other nets or fishing lines) of migratory birds in inland waters, coastal and marine waters.	
iii. Disturbance from human activities	
Encourage the development and implementation of effective management plans at sensitive sites, including appropriate regulation of hunting and recreational activities to eliminate potentially damaging disturbance at critical periods during the annual cycle of migratory bird species.	S/2
iv. Human-wildlife conflict	
Conduct a national review to identify those species of migratory birds and other species for which human-wildlife conflict is a potential problem. This information should form the basis for all deliberations about the implementation of control or culling programmes nationally. Exceptions to, or derogations from, protective legislation to allow control and/or culling of migratory bird species should only be given under strict conditions and be subject to careful monitoring and reporting of outcomes.	S/1
Ensure adequate statutory controls are in place, relating to the use of control procedures, and where practicable provide guidance for liaison with agriculture departments regarding appropriate control of pest bird species	M/2
Promote alternative, non-lethal means of avoiding conflict with migratory birds in liaison with agriculture departments and other relevant regulatory bodies.	S/1
v. Poisoning	
Substitute, restrict or ban substances of high risk to migratory bird species, including insecticides, second generation anticoagulant rodenticides (SGARs) and veterinary pharmaceuticals for domestic ungulates causing lethal and sub-lethal effects to migratory bird species, and implement measures outlined in CMS Resolution 11.15 on Guidelines to Prevent Poisoning of Migratory Birds.	M/1
Encourage national legislative mechanisms to monitor agricultural use of pesticide substances, and adoption of an integrated pest management (IPM) that incorporates a certification scheme for farmers.	M/2

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Recommendations	AEM LAP[1]
IPM is a sustainable approach to crop production and protection that combines different management strategies and practices to grow healthy crops and minimise the use of pesticides, thereby limiting the risk of poisoning of non-target species, including birds. Incentives are needed to encourage current users of substances of risk to birds, particularly in agricultural crops (food and non-food crops), to move to an IPM approach.	
Discourage long-term or permanent baiting, applying pesticides only when infestations are present, and followed by bait removal, reducing risk to non-target species.	S/1
Take actions to reduce impacts of plastic pollution, including poisoning by microplastics on migratory birds and their terrestrial and inland & coastal/marine habitats. Plastic pollution is affecting a wide range of migratory species and little is known of the short and long-term impacts. There is a need to encourage research by academia, research organizations and other relevant stakeholders on the impact of plastic pollution, including microplastics on migratory birds.	
vi. Collisions	
Ensure appropriate legislation is in place and enforced to restrict construction of structures posing potential collision risks at known migration staging sites and along migration routes. Additionally measures may be required at congregatory sites in non-breeding or moulting areas for some species.	S/1
Introduce appropriate mitigation measures for the various collision risks e.g. adapting types of light source to reduce light pollution where these result in incidences of window strikes by migratory bird species, as well as introducing measures to reduce the collision risk posed by wind farms. Implement measures outlined in CMS Resolution 10.11 on *Power Lines and Migratory Birds* that provides a framework for implementing one element of collision risk across CMS-signatory Range States.	S/1
vii. Diseases	
In the event of a disease outbreak or mass mortality episode that may impact populations of migratory bird species, conduct epidemiological and other research to inform mitigation, and response actions. Based on this information, integrate prevention of disease transmission into the management planning of protected areas following a One Health approach. Guidance can be drawn from the Ramsar Wetland Disease Manual. This will also require strengthening of local capacity of veterinarians, wildlife staff and public health workers to be able to work together.	M/2
Develop and implement emergency measures when exceptionally unfavourable or endangering conditions (e.g. pesticides, wildlife disease, harsh weather) occur, ensuring close co-operation across the CAF area and with other stakeholders whenever possible and relevant.	M/2
E. RESEARCH AND MONITORING	
i. Understanding migration patterns and connectivity along flyways	
Further develop existing and establish new international and local collaborative projects that potentially refine existing international standardised field protocols and data sets and contribute to an improved flyway-scale understanding of migratory patterns, habitat use and carry-over effects.	S/1
ii. Monitoring of population trends	
Develop and implement standardised national monitoring schemes for migratory bird species and their habitats. For landbirds, consider following the successful model that exists in Europe and some countries in Africa, based on participatory schemes using volunteer observers, local conservation groups and Site Support Groups, co-ordinated as far as possible with international efforts, with harmonisation of monitoring protocols.	M/1

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Recommendations	**AEM LAP[1]**
For raptors, use models and schemes proposed by the Raptors MOU and Action Plans. For waterbirds, use the International Waterbird Census and other schemes.	
Encourage, support and promote standardised bird monitoring programmes at sites, *ecological research to understand the ecological importance of these areas*, *and the publication of data and information so obtained*. Produce regular national and/or regional reports detailing research at sites of importance for migratory species.	S/3
Encourage the active use of existing regional and sub-regional online databases by Range States, as well as establish modalities for information sharing and linkage between existing databases.	L/2
iii. Understanding causes of population change in migratory species	
Understand the connections between ecological factors limiting migratory bird populations and socio-economic issues and policies, and changes therein, especially those relating to land use and energy.	M/1
Diagnose the causes of population change and undertake targeted ecological studies of selected 'indicator species' and relevant associated habitats, including comparative approaches with populations that are not declining.	M/2
iv. Habitat use and management	
Promote studies to evaluate the effect of human disturbance at key sites and use the results in management planning contexts to minimise negative effects.	L/3
v. Build capacity and improve the exchange of information, collaboration and coordination between researchers studying migratory species	
Facilitate comprehensive gap analyses to identify and prioritise research needs, including an inventory of past and ongoing research within sub-regions of the CAF area through encouraging engagement of national experts on migratory species.	S/1
Encourage the development of the Migrant Landbird species Study Group (MLSG), an international network of specialists and organisations involved in research, monitoring and conservation of migratory landbird species, and encourage participation by national experts in the MLSG. The MLSG will be run on a voluntary basis by researchers and should consider having or contributing to a clearing house function (collect, consolidate and distribute migratory landbird conservation-related research and monitoring information in the CAF area).	M/1
Encourage researchers and funders to focus on the most important and urgent issues for migratory species conservation including through disseminating priority research needs, analysing existing data sets, establishing research consortia to address key conservation issues and identifying and supporting the development and geographical expansion of sub-regional research institutes.	M/2
Support the provision of targeted research and monitoring training to develop national skills, expertise and capacity to undertake research and monitoring to benefit the conservation of migratory bird species.	S/1
F. EDUCATION AND INFORMATION	
i. Improve public awareness and understanding about migratory bird species	
Promote public experience of the wonder of migration and migratory bird species by raising awareness and providing information, and where appropriate regulate access to congregatory sites or bottlenecks.	

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Recommendations	AEM LAP[1]
Build/strengthen capacity to implement awareness raising programmes. Stakeholders include national (provincial and local) authorities responsible for habitat and migratory bird management, university, research institutions, NGOs, volunteers / birding community and local communities. Access to information materials to support development of awareness-raising tools and resources (resources in local languages).	
Support and encourage public participation in migratory bird conservation awareness programmes. These include World Migratory Bird Days for all migratory birds, World Wetlands Day and World Environment Day. *'Friends of the Landbirds Action Plan' (FLAP)*, an initiative that will use online social media to provide a forum for all interested in and who care about migratory landbird species to follow, support and contribute to the work of the AEML-WG.	
Encourage local, national and international engagement with private organisations and public agencies, especially in the development sector, particularly agriculture, energy and manufacturing. This is aimed at information sharing and the formulation of development strategies that are economic and ecologically sustainable.	
G. INTEGRATING ACTION FOR CLIMATE AND MIGRATORY SPECIES	
Review the most vulnerable locations due to climate impacts in all CAF range states and assess the potential to apply landscape scale restoration action. This may include mangrove restoration (that also recognises the importance of maintaining open intertidal habitats important for migratory birds); afforestation; increased number of reserves and protected areas; ecosystem restoration; construction of water holes; grassland management; forest fire controls; forest and landscape restoration. Any identified action needs to be delivered using a rights-based approach and using the right species, in the right place.[30]	
CAF range states should mainstream NbS within their national policies, planning and legislation to address the climate and biodiversity crises and contribute to wider delivery against the Sustainable Development Goals NbS have the potential to provide benefits for migratory species through ecosystem protection, restoration, and conservation, for example. It is critical for the role of NbS to be recognised in migratory species conservation[31].	
CAF range states to review the Global Environment Facility (GEF) and Green Climate Fund (GCF) for opportunities to deliver landscape-scale NbS, with benefits for migratory species through increased ecosystem connectivity and integrity[32].	
CAF range states to increase research assessing the impacts on, and resilience of migratory species in the CAF. An improved evidence-base of current and expected changes to migratory species behaviours, distribution and their habitats would be beneficial to improve collaboration on multi-benefit action	

[30] The multilateral environment agreements (MEAs) of UNFCCC, CBD, UNCCD, and Ramsar have recognised the value and multiple benefits of NbS for nature, climate, and people.

[31] Parties to the UNFCCC and CBD have committed to mobilising billions for climate and biodiversity action. By reviewing the potential benefits for migratory species conservation through multi-benefit activities such as NbS it may be possible to access additional funding through sources such as the GEF or GCF (NbS framed through climate adaptation/mitigation lens). Although the GEF is not the financial mechanism for CMS, and will not directly support countries' CMS implementation activities, the GEF-8 program can indirectly contribute to the maintenance of ecological connectivity, and wildlife health (Global Environment Facility 2022).

[32] The limited recognition by the questionnaire respondents of their country's existing climate change policies demonstrated a disconnect between climate and biodiversity conservation management across the region. Increased integration between climate and migratory species conservation is needed if the climate impacts on migratory species are to be better understood, including identification of what action is needed.

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Recommendations	AEM LAP[1]
and enable targeted landscape-scale action in key vulnerable locations identified in each state, and to provide maximum benefits for migratory species, climate, and people. Inclusion of such actions (e.g., NbS) in country NDCs and NAPs is recommended to drive integration and access climate/biodiversity related funding.[33]	
Identify innovative and sustainable financing from local, national and international sources from all stakeholders, including from the private sector to ensure support and sustain the wide range of long-term actions needed for species and habitat related research, habitat management and restoration, development of legislation and policies and their implementation, strengthening of local and national capacity, raise awareness of all stakeholders and initiate and support new collaborative actions that benefit migratory birds, their habitats, people and climate. There is a need to develop national overviews of budget allocations from government and non-government sources for management action of migratory birds and their habitats in all Range States to inform prioritization.	

[1]AEMLAP Classification key for actions

Anticipating immediate or early commencement of all actions, each is classified according to when results are expected (reporting timeline) and the priority for the action as determined by likely influence on the achievement of the overall goal of this Action Plan.

Timeline:

S = results expected in short-term and actions that are already ongoing, (within one CMS COP intersessional period (i.e. three years));

M = results expected in medium term, (within two COP intersessional periods (i.e. six years));

L = results expected in long term, (within three COP intersessional periods or more (i.e. nine years or more)).

Priority:

1 = high (an activity needed to prevent the extinction of a migratory landbird species within the Action Plan area),

2 = medium (an activity needed to prevent or reverse population declines in any globally threatened or near threatened migratory landbird species, or the majority of other migratory landbird species with a declining population trend within the Action Plan area),

3 = low (an activity needed to restore populations of a globally threatened or near threatened migratory landbird species, or to prevent population declines in any migratory landbird species).

Table 25: Recommended CAF flyway level priority species for conservation action (as listed under the CMS Appendix 1).

H – threatened species for which no action plans exist, M species for which single species action plans exist

Common Name	Red List status (2022)	Pop Trend	CMS App x I	Raptors MoU	AEM LAP	AEWA	CAF	Priority
Raptors								
Red-headed Vulture	CR	Dec	Y	Y				M
White-rumped Vulture	CR	Dec	Y	Y				M
Indian Vulture	CR	Dec	Y	Y				M
Slender-billed Vulture	CR	Dec	Y	Y				M
Egyptian Vulture	EN	Dec	Y	Y				M
Lappet-faced Vulture	EN	Dec	Y	Y				M
Steppe Eagle	EN	Dec	Y	Y				M
Pallas's Fish-eagle	EN	Dec	Y	Y				M

[33] The questionnaire results and review of State NDCs provided limited evidence that significant landscape-scale ecosystem restoration is occurring across the CAF to deliver the much-needed multiple benefits for migratory species, climate, and people.

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Common Name	Red List status (2022)	Pop Trend	CMS App x I	Raptors MoU	AEM LAP	AEWA	CAF	Priority
Raptors								
Saker Falcon	EN	Dec	Y	Y				M
Greater Spotted Eagle	VU	Dec	Y	Y				M
Eastern Imperial Eagle	VU	Dec	Y	Y				M
White-tailed Sea-eagle	LC	Incr	Y	Y				M
Lesser Kestrel	LC	Sta	Y	Y				M
Waterbirds								
Baer's Pochard	CR	Dec	Y				Y	H
Sociable Lapwing	CR	Dec	Y			Y	Y	M
Siberian Crane	CR	Dec	Y			Y	Y	H
Slender-billed Curlew	CR	Dec	Y			Y	Y	M
Spoon-billed Sandpiper	CR	Dec	Y				Y	H
White-headed Duck	EN	Dec	Y			Y	Y	H
Great Knot	EN	Dec	Y			Y	Y	H
Spotted Greenshank	EN	Dec	Y				Y	H
Great White Pelican	LC	Unk	Y			Y	Y	H
Red-breasted Goose	VU	Dec	Y			Y	Y	M
Lesser White-fronted Goose	VU	Dec	Y			Y	Y	M
Relict Gull	VU	Dec	Y				Y	M
Marbled Teal	NT	Dec	Y			Y	Y	M
Ferruginous Duck	NT	Dec	Y			Y	Y	M
Black-necked Crane	NT	Sta	Y				Y	H
Dalmatian Pelican	NT	Dec	Y			Y	Y	H
Red Knot	NT	Dec	Y			Y	Y	M
Landbirds								
Yellow-breasted Bunting	CR	Dec	Y		Y			H
Great Indian Bustard	CR	Dec	Y					H
Bengal Florican	CR	Dec	Y		Y			H
Great Bustard	VU	Dec	Y					H
Little Bustard	NT	Dec	Y		Y			H

Table 26. Priority species recommended to the CMS for listing under CMS Appendix I or II, as appropriate

Common Name	*Species Name*	Red List Category (2022)	Trend
1. Dark-rumped Swift	*Apus acuticauda*	VU	Stable
2. Greater Adjutant	*Leptoptilos dubius*	EN	Decreasing
3. Lesser Adjutant	*Leptoptilos javanicus*	VU	Decreasing
4. Yellow-eyed Pigeon	*Columba eversmanni*	VU	Decreasing

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	Common Name	*Species Name*	Red List Category (2022)	Trend
5.	Indian Skimmer[34]	*Rynchops albicollis*	EN	Decreasing
6.	Lesser Florican	*Sypheotides indicus*	CR	Decreasing
7.	Snowy Owl	*Bubo scandiacus*	VU	Decreasing
8.	Matsudaira's Storm-petrel	*Hydrobates matsudairae*	VU	Unknown
9.	Black-headed Ibis	*Threskiornis melanocephalus*	NT	Decreasing

[34] Prioritised for listing and development of a single species action plan as per UNEP/CMS/Resolution 12.12 (Rev.COP13).

6 Glossary of Definitions and Acronyms

Definitions

Explanatory notes:

1. The Situation Analysis uses specific terms related to migratory species and habitat conservation for which definitions and explanatory notes are considered useful.
2. The definitions are drawn from existing documentation from within the CMS family having been developed for one or more migratory bird groups. In the absence of a comprehensive and standardised set of CMS definitions, some of these definitions and guidance have been adapted from other international processes.
3. It is noted that a number of these terms have also been defined at a national level. As these may vary within and between national jurisdictions, their application at the global/international level needs to be agreed.
4. There remains a need for these terms to be defined and standardised for the CMS purposes.
5. The following definitions and explanatory notes are provided to explain various terms related to migratory species and habitat conservation used here are not aimed at being definitive.

Biodiversity Offsets - measurable conservation outcomes of actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken (definition as per Business and Biodiversity Offsets Programme[35]).

Critical habitat - Any area of the planet with high biodiversity conservation significance based on the existence of habitat of significant importance to critically endangered or endangered species, restricted range or endemic species, globally significant concentrations of migratory and/or congregatory species, highly threatened and/or unique ecosystems and key evolutionary processes (definition as per International Finance Corporation[36]).

Critical site - Criteria have been developed for the AEWA region from the relevant Ramsar and IBA criteria in order to address the identification of networks of Critical Sites for waterbirds populations during those stages of their annual cycles when the site-based conservation approach is effective. A site has been identified as 'critical' if it fulfils at least one of the two CSN criteria: CSN criterion 1: The site is known or thought regularly or predictably to hold significant numbers of a population of a globally threatened waterbird species. CSN criterion 2: The site is known or thought regularly or predictably to hold >1% of a flyway or other distinct population of a waterbird species (definition as per AEWA Wings over Wetlands project).

Note: the critical site definition developed for migratory waterbirds will need to be expanded to cover other migratory birds.

Flyway - A flyway is taken to be a geographical region within which a single migratory species, a group of migratory species, or a distinct population of a given migratory species, completes all components of its annual cycle (breeding, moulting, staging, non-breeding "wintering" etc.) (Boere & Stroud 2006).

Each individual species and population migrates in a different way and uses a different suite of breeding, migration staging and non-breeding (wintering) sites. Hence a single flyway is composed of many overlapping migration systems of individual bird populations and species, each of which has different habitat preferences and migration strategies. From knowledge of these various migration systems it is possible to group the migration routes used by birds into broad flyways, each of which is used by many species, often in a similar way, during their annual migrations. Recent research into the migrations of many wader or shorebird species, for example, indicates that the migrations of waders can broadly be grouped into eight flyways: The East Atlantic Flyway, the Mediterranean/Black Sea Flyway, the West

[35] http://bbop.forest-trends.org/

[36] International Finance Corporation (2012) Performance Standard 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources: http://www.ifc.org/wps/wcm/connect/bff0a28049a790d6b835faa8c6a8312a/PS6_English_2012.pdf?MOD=AJPERES

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Asia/Africa Flyway, the Central Asian Flyway, the East Asia/Australasia Flyway, and three flyways in the Americas and the Neotropics.

There are no clear separations between flyways, and the use of the term is not intended to imply major biological significance; rather it is a valuable concept for permitting the biology and conservation of birds, as well as other migratory species, to be considered in broad geographical units into which the migrations of species and populations can be more or less readily grouped (definition adapted from Ramsar Resolution XI.8. Annex 2).

Habitat - means any area in the range of a migratory species which contains suitable living conditions for that species (definition as per CMS).

Internationally important site – A site should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird or if it regularly supports 20,000 or more waterbirds (definition as per the Ramsar Convention). This Criterion identifies those wetlands which are of numerical importance for waterbirds through their support of internationally important numbers, either of one or more species, and often the total numbers of the waterbird species assemblage. Note: the definition has been developed for waterbirds and there is a need for it to be expanded to cover and quantified to cover other migratory birds.

Landscape - An area of land that contains a mosaic of ecosystems, including human-dominated ecosystems (Hassan *et al.* 2005).

Migratory species - Migratory bird species means the entire population or any geographically separate part of the population of any bird species, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries (definition as per CMS).

Net Positive Impact (NPI) - a target for project outcomes in which the impacts on biodiversity caused by the project are outweighed by the actions taken, in accordance with the Mitigation Hierarchy, to achieve net gains for biodiversity (Definition as per NPI Alliance).

A net gain to biodiversity features measured in quality hectares (for habitats), number or percentage of individuals (for species), or other metrics appropriate to the feature[37].

Priority species – migratory bird species included under CMS Appendix I.

Protected area - is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN definition 2008).

Site – A geographical area on land or in water with defined ecological, physical, administrative, or management boundaries that it is actually or potentially manageable as a single unit (e.g. a protected area or other managed conservation unit).
For this reason, large-scale conservation priority regions such as Ecoregions, Endemic Bird Areas, and Biodiversity Hotspots, which often span multiple countries, are not considered to be sites. In the context of Key Biodiversity Areas (KBA), “site” and “area” are used interchangeably.

Site Network/Ecological Network – A collection of individual sustainably managed sites operating cooperatively and synergistically, both ecologically and administratively, to achieve ecological and governance benefits for migratory birds that single protected sites cannot achieve in isolation (Modified from the CMS IOSEA guidance document; see also CMS/ScC18/Doc.10.3.1 for further information).

[37] http://www.biodiversitya-z.org/content/net-positive-impact-npi

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Acronyms and Abbreviations

To be completed

AEMLAP	African-Eurasian Migratory Landbirds Action Plan
AEWA	African Eurasian Migratory Waterbird Agreement
AMBI	Arctic Migratory Bird Initiative
BLI	BirdLife International
CAF	Central Asian Flyway
CAFF	Conservation of Arctic Flora and Fauna
CBD	Convention on Biological Diversity
CHM	Clearing House Mechanism
CIC	International Council for Game & Wildlife Conservation
EAAFP	East Asian - Australasian Flyway Partnership
FAO	Food and Agriculture Organisation
FWG	CMS Flyways Working Group
GEF	Global Environment Facility
GFN	Global Flyways Network
ICF	International Crane Foundation
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IRENA	International Renewable Energy Agency
IUCN SSC	World Conservation Union Species Survival Commission
MEA	Multilateral Environmental Agreement
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-Government Organization
POW	Programme of Work on Migratory Birds and Flyways
POWPA	Programme of Work on Protected Areas of the Convention on Biological Diversity
RFMO	Regional Fisheries Management Organization
SSAP	Single Species Action Plan
SPMS	Strategic Plan for Migratory Species 2015-2023
TNC	The Nature Conservancy
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
UNFCC	United Nations Framework Convention on Climate Change
UNWTO	United Nations World Tourism Organisation
WCASN	West/Central Asian Site Network for Siberian Crane and other waterbirds
WCS	Wildlife Conservation Society
WHC	World Heritage Convention
WHS	World Heritage Site
WI	Wetlands International
WMBD	World Migratory Bird Day
WWF	World Wide Fund for Nature

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To be completed

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8 Annexes

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Annex 1. Overview of international cooperation frameworks within the CAF

Country[38]	Country code	Raptors MOU	AEWA	Water bird AP	Land bird AP	EAAFP	Ramsar	CMS	CITES	UNCCD
Afghanistan	AF	R		R	R			C	C	C
Armenia	AM	C	C	R	R		C	C	C	
Azerbaijan	AZ	R		R	R		C		C	
Bahrain	BH	R	R	R	R		C	C	C	C
Bangladesh	BD	R		R		C	C	C	C	C
Bhutan	BT	R		R			C		C	C
BIOT	IO			R	R		C	C	C	
China, People's Republic	CN	R		R		C	C		C	C
Georgia	GE	R	C	R	R		C	C	C	
India	IN	C		R	R		C	C	C	C
Iran, Islamic Republic	IR	C	R	R	R		C	C	C	C
Iraq	IQ	R	R	R	R		C	C	C	C
Kazakhstan	KZ	R	R	R	R		C	C	C	C
Kuwait	KW	R	R	R	R		C		C	C
Kyrgyzstan	KG	R		R	R		C	C	C	C
Maldives	MV			R	R			C	C	C
Mongolia	MN	C		R		C	C	C	C	C
Myanmar	MM			R		C	C		C	C
Nepal	NP	C		R	R		C		C	C
Oman	OM	R	R	R	R		C	C	C	C
Pakistan	PK	C		R	R		C	C	C	C
Qatar	QA	R	R	R	R				C	C
Russian Federation	RU	R		R	R	C	C		C	
Saudi Arabia	SA	C	R	R	R			C	C	C
Sri Lanka	LK	R		R	R		C	C	C	C
Tajikistan	TJ	R		R	R		C	C	C	C
Turkmenistan	TM	R	C	R	R		C	C	C	C
United Arab Emirates	AE	C	R	R	R		C	C	C	C
Uzbekistan	UZ	R	C	R	R		C	C	C	C
Yemen	YE	C	R	R	R		C	C	C	C
No. of Contracting Parties/ Partners/ Signatories		**9**	**4**	**0**	**0**	**5**	**26**	**22**	**29**	**25**
Total no. of Range States		**27**	**14**	**30**	**25**	**5**	**30**	**30**	**30**	**30**
%		33.3	28.6			100.0	86.7	73.3	96.7	83.3

[38] https://www.un.org/en/about-us/member-states

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All 30 countries are party to the United Nations Framework Convention on Climate Change (UNFCCC) and United Nations Convention to Combat Desertification (UNCCD) and these are not included in the table above.

Sources:

Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MOU) - https://www.cms.int/raptors/en/signatories-range-states; accessed on 22-01-2023

African Eurasian Waterbird Agreement (AEWA) - https://www.unep-aewa.org/en/parties-range-states; accessed on 22-01-2022

CAF Waterbird Action Plan - https://www.cms.int/en/document/report-meeting-conclude-and-endorse-proposed-central-asian-flyway-action-plan-conserve; accessed on 22-01-2023

East Asian – Australasian Flyway Partnership (EAAFP) - https://www.eaaflyway.net/partnership-documents/; accessed on 22-01-2023

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Annex 2. BirdLife International's CAF Situation Analysis Project plan 2022-2023

Objective

To advance conservation of migratory birds in the Central Asian Flyway, BirdLife International, under the current project and in line with CMS objectives, aims:

- To produce a concise situation analysis that serves as a generally accepted baseline for priority setting of migratory bird conservation actions in the (CMS-defined) geography of the Central Asian Flyway and places these priorities in the context of the wider development agenda for the region.
- The situation analysis will support the planning and work of the CMS CAF Secretariat and will be one of 5 outputs that will presented to the CMS Conference of Parties at CMS COP 14 in May 2023.
- On the basis of a literature review and consultation with national and international experts, the conservation status of migratory birds of the CAF will be summarized, the most important existing and emerging threats and opportunities affecting them will be identified and their impacts reviewed.

Particular emphasis will be given to the development context within which these priorities will need to be addressed, particularly the pressing need for urgent action to mitigate and adapt to climate change. Governments and other key stakeholders are invited to join in information collection and review to ensure maximal alignment with ongoing policy, planning and conservation initiatives at national and international levels, and especially with the development of a programme of work for the CMS CAF secretariat and institutional framework.

Apart from providing crucial information for conservation planning, the development of the situation analysis is also an instrumental step in strengthening flyway-scale collaboration.

Content of the report

The report will summarize key information relevant for the conservation of migratory birds in the Central Asian Flyway, covering all taxonomic groups: waterbirds, seabirds, raptors and other land birds. The information gathered will be reviewed and aligned in the context of existing international commitments of countries, especially under the Convention on Migratory Species (CMS).

The report will cover the following aspects:

- Ecology and importance of Central Asian Flyway, including a comprehensive review of conservation status of migratory species, key habitats and sites, and knowledge gaps
- Critical Site Networks across the flyway for waterbirds, raptors and land birds
- Ranked list of threats to migratory birds and their drivers
- Measures in place to protect and conserve migratory birds, key sites and habitats, and identification of effectiveness and gaps
- Priorities for conservation action
- Opportunities to build on for successful conservation of migratory species and their habitats
- Opportunities to align these priorities with development agendas in the region particularly climate change mitigation and adaption measures

As much as possible the information will be presented at the level of the whole Flyway and per country.

Project components

1. Project definition: Project initiation to develop a comprehensive review of migratory birds of Central Asian Flyway as defined by CMS. Recruitment of consultants and creation of project team. Identification of sources of information (e.g. literature, datasets, organisations and

experts). Strategies for data collection and analysis defined. Government and other key stakeholders will be informed through CMS and AEWA Secretariats about the scope, methodology and consultation/adoption/dissemination plans, and requested to participate.

2. Data collection: Data requests to BirdLife International, Wetlands International and other identified dataholders. Review of scientific literature (including in English and Russian). Review of national reports to relevant treaties. Submitting questionnaires (with guidance notes) to national and international experts. Online consultation with stakeholders and experts.

3. A. Context assessment - Climate Change: Review of climate change scenarios for the flyway (IPCC report). Estimation implications for species, sites and habitats. Review planned national response to climate change as set out in the Nationally Determined Contributions (NDCs) to combat climate change in the context of the UN Framework Convention on Combating Climate Change (UNFCCC). Identification of alignment opportunities for flyway conservation and Climate Change mitigation and adaption measures in the region (win-win opportunities).

   B. Context Assessment - Institutional Resources: Review of institutional resources of key government agencies/institutions for the conservation of migratory bird species and their habitats. Review planned national response to biodiversity conservation, such as set out in National Biodiversity Strategies and Action Plans. Preliminary identification of alignment opportunities for flyway and biodiversity conservation measures in the region from major multilateral public and private sources.
4. Analysis: Data compilation and synthesis. Drafting of report for consultation.

5. Review: Consultation with key stakeholders, including government agencies, relevant MEAs, and international experts. Comments from the various consultations will be incorporated into the drafts as appropriate and where consensus cannot be reached, all key varying opinions (especially of governments) will be recorded in the report.

6. Communication: Final draft report and development, production, translation and dissemination of a summary leaflet.

7. Endorsement: As appropriate by first intergovernmental meeting of CAF institutional framework established under CMS, following consultation also with the CMS Scientific Council, sharing for information with CMS COP14 and relevant other parties.

Timelines
The project will start as soon as all necessary resources have been secured. The draft report for consultation will be ready by November 2022. Review process will be led by CMS Secretariat and will take place between November 2022 and May 2023.

A detailed planning will be developed in the first phase of the project.

Relevant project partners
While this project proposal is initiated and led by BirdLife International via its Central Asian Flyway Initiative (CAFI), it is intended to support the work of the CMS CAF Secretariat and be embraced also by the relevant intergovernmental processes and all key stakeholders involved in the conservation of the CAF, and to provide a common baseline for all conservation action to address threats along the flyway.

BirdLife Partners and associated non-governmental nature conservation organisations from throughout the Central Asian Flyway work together through the BirdLife Central Asian Flyway Initiative (CAFI), an inclusive collaborative effort led by BirdLife International Partners to conserve migratory species and natural habitats along the Central Asian Flyway. Key strategic objectives of CAFI include Scientific research & monitoring, Habitat conservation and restoration, Transboundary cooperation, National and international policy advocacy, and Capacity building.

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Other organisations that will be consulted (and their expertise sought) in the project include:
• Government agencies dealing with migratory bird conservation in India and other CAF range states
• Convention on the Conservation of Migratory Species of Wild Animals (CMS), including Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU), and African-Eurasian Migratory Landbirds Action Plan (AEMLAP)
• Wildlife Institute of India.
• Arctic Migratory Bird Initiative (AMBI) of the Council of the Arctic Flora and Fauna (CAFF), essentially with a bilateral Russia-India focus
• The East Asian - Australasian Flyway Partnership (EAAFP)
• International Union for Conservation of Nature (IUCN)
• BirdLife Partner Organizations operating in Central Asian Flyway range states.
• Wetlands International
• International Crane Foundation (ICF)

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Countries included in the CAF Situation Analysis include:
Central/North Asia Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, Uzbekistan, Russia, China
West Asia/Middle East Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, Yemen
South Asia Afghanistan, Bangladesh, Bhutan, British Indian Ocean Territory, India, Maldives, Myanmar, Nepal, Pakistan, Sri Lanka
For some countries, such as China, Iraq, Georgia, Russia and Saudi Arabia, part of the country may be included, as defined by the migratory movements of the bird populations into the CAF.

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Annex 3. Overview of Migratory Birds of the CAF Region included in the Situation Analysis

Family	No of species
Accipitridae (Hawks, Eagles)	47
Acrocephalidae (Reed-warblers)	12
Aegithalidae (Long-tailed Tits)	2
Alaudidae (Larks)	12
Alcedinidae (Kingfishers)	3
Anatidae (Ducks, Geese, Swans)	38
Apodidae (Swifts)	4
Ardeidae (Herons)	17
Bombycillidae (Waxwings)	1
Burhinidae (Thick-knees)	1
Calcariidae (Longspurs)	2
Campephagidae (Cuckooshrikes)	5
Caprimulgidae (Nightjars)	3
Charadriidae (Plovers)	15
Ciconiidae (Storks)	4
Cinclidae (Dippers)	1
Cisticolidae (Cisticolas and allies)	1
Columbidae (Pigeons, Doves)	11
Coraciidae (Rollers)	1
Corvidae (Crows and jays)	5
Cuculidae (Cuckoos)	12
Dicruridae (Drongos)	3
Dromadidae (Crab-plover)	1
Emberizidae (Old World Buntings)	11
Falconidae (Falcons, Caracaras)	11
Fregatidae (Frigate birds)	1
Fringillidae (Finches)	17
Gaviidae (Loons/Divers)	1
Glareolidae (Coursers, Pratincoles)	5
Gruidae (Cranes)	5
Haematopodidae (Oystercatchers)	1
Hirundinidae (Swallows and martins)	9
Hydrobatidae (Storm-petrels)	2
Hypocoliidae (Hypocolius)	1
Ibidorhynchidae (Ibisbill)	1
Jacanidae (Jacanas)	1
Laniidae (Shrikes)	8
Laridae (Gulls, Terns, Skimmers)	29
Locustellidae (Grasshopper-warblers and grassbirds)	9
Meropidae (Bee-eaters)	4
Monarchidae (Monarch-flycatchers)	2

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Family	No of species
Motacillidae (Pipits and Wagtails)	16
Muscicapidae (Old World Flycatchers and Chats)	61
Oceanitidae (Southern Storm-petrels)	3
Oriolidae (Old World Orioles)	5
Otididae (Bustards)	6
Pandionidae (Osprey)	1
Panuridae (Bearded Reedling)	1
Paridae (Tits and chickadees)	1
Passeridae (Old World Sparrows)	1
Pelecanidae (Pelicans)	3
Phaethontidae (Tropicbirds)	1
Phalacrocoracidae (Cormorants)	3
Phasianidae (Pheasants, Partridges, Turkeys, Grouse)	1
Phoenicopteridae (Flamingos)	2
Phylloscopidae (Leaf-warblers)	27
Picidae (Woodpeckers)	5
Pittidae (Pittas)	1
Podicipedidae (Grebes)	5
Procellariidae (Petrels, Shearwaters)	6
Prunellidae (Accentors)	2
Psittacidae (Parrots)	2
Pteroclidae (Sandgrouse)	4
Pycnonotidae (Bulbuls)	2
Rallidae (Rails, Gallinules, Coots)	13
Recurvirostridae (Avocets, Stilts)	2
Regulidae (Kinglets and firecrests)	1
Remizidae (Penduline-tits)	1
Rhipiduridae (Fantails)	1
Scolopacidae (Sandpipers, Snipes, Phalaropes)	36
Scotocercidae (Bush-warblers)	13
Sittidae (Nuthatches)	1
Stenostiridae (Fairy Flycatcher and allies)	2
Stercorariidae (Skuas)	2
Strigidae (Typical Owls)	11
Sturnidae (Starlings)	3
Sulidae (Gannets, Boobies)	2
Sylviidae (Old World Warblers)	5
Threskiornithidae (Ibises, Spoonbills)	2
Troglodytidae (Wrens)	1
Turdidae (Thrushes)	25
Turnicidae (Buttonquails)	1
Upupidae (Hoopoes)	1
Zosteropidae (White eyes)	1
Total number of species	**606**

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Annex 4. Working List Migratory Birds of the CAF Region included in the Situation Analysis

Family	Scientific Name	Common Name	Red List Category (2022)	Pop Trend	CMS Appx I	CMS Appx II	Raptors MoU	AEMLAP	AEWA
Accipitridae	*Accipiter badius*	Shikra	LC	Sta		Y	Y		
Accipitridae	*Accipiter gentilis*	Northern Goshawk	LC	Unk		Y	Y		
Accipitridae	*Accipiter nisus*	Eurasian Sparrowhawk	LC	Sta		Y	Y		
Accipitridae	*Accipiter virgatus*	Besra	LC	Dec		Y	Y		
Accipitridae	*Aegypius monachus*	Cinereous Vulture	NT	Dec		Y	Y		
Accipitridae	*Aquila chrysaetos*	Golden Eagle	LC	Sta		Y	Y		
Accipitridae	*Aquila fasciata*	Bonelli's Eagle	LC	Dec		Y			
Accipitridae	*Aquila heliaca*	Eastern Imperial Eagle	VU	Dec	Y	Y	Y		
Accipitridae	*Aquila nipalensis*	Steppe Eagle	EN	Dec	Y	Y	Y		
Accipitridae	*Aquila rapax*	Tawny Eagle	VU	Dec		Y	Y		
Accipitridae	*Aviceda jerdoni*	Jerdon's Baza	LC	Dec		Y	Y		
Accipitridae	*Aviceda leuphotes*	Black Baza	LC	Dec		Y	Y		
Accipitridae	*Butastur teesa*	White-eyed Buzzard	LC	Sta		Y			
Accipitridae	*Buteo buteo*	Eurasian Buzzard	LC	Inc		Y	Y		
Accipitridae	*Buteo hemilasius*	Upland Buzzard	LC	Sta		Y	Y		
Accipitridae	*Buteo japonicus*	Japanese Buzzard	LC	Unk		Y	Y		
Accipitridae	*Buteo lagopus*	Rough-legged Buzzard	LC	Sta		Y	Y		
Accipitridae	*Buteo rufinus*	Long-legged Buzzard	LC	Sta		Y	Y		
Accipitridae	*Circaetus gallicus*	Short-toed Snake-eagle	LC	Sta		Y	Y		
Accipitridae	*Circus aeruginosus*	Western Marsh-harrier	LC	Sta		Y	Y		
Accipitridae	*Circus cyaneus*	Hen Harrier	LC	Dec		Y	Y		
Accipitridae	*Circus macrourus*	Pallid Harrier	NT	Dec		Y	Y		
Accipitridae	*Circus melanoleucos*	Pied Harrier	LC	Dec		Y	Y		
Accipitridae	*Circus pygargus*	Montagu's Harrier	LC	Dec		Y	Y		

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Accipitridae	*Circus spilonotus*	Eastern Marsh-harrier	LC	Sta		Y	Y		
Accipitridae	*Clanga clanga*	Greater Spotted Eagle	VU	Dec	Y	Y	Y		
Accipitridae	*Clanga pomarina*	Lesser Spotted Eagle	LC	Sta		Y	Y		
Accipitridae	*Gypaetus barbatus*	Bearded Vulture	NT	Dec		Y	Y		
Accipitridae	*Gyps bengalensis*	White-rumped Vulture	CR	Dec	Y	Y	Y		
Accipitridae	*Gyps fulvus*	Griffon Vulture	LC	Inc		Y	Y		
Accipitridae	*Gyps himalayensis*	Himalayan Griffon	NT	Dec		Y	Y		
Accipitridae	*Gyps indicus*	Indian Vulture	CR	Dec	Y	Y	Y		
Accipitridae	*Gyps tenuirostris*	Slender-billed Vulture	CR	Dec	Y	Y	Y		
Accipitridae	*Haliaeetus albicilla*	White-tailed Sea-eagle	LC	Inc	Y	Y	Y		
Accipitridae	*Haliaeetus leucoryphus*	Pallas's Fish-eagle	EN	Dec	Y	Y	Y		
Accipitridae	*Haliastur indus*	Brahminy Kite	LC	Dec		Y			
Accipitridae	*Hieraaetus pennatus*	Booted Eagle	LC	Sta		Y	Y		
Accipitridae	*Icthyophaga humilis*	Lesser Fish-eagle	NT	Dec		Y			
Accipitridae	*Ictinaetus malaiensis*	Black Eagle	LC	Dec		Y			
Accipitridae	*Milvus migrans*	Black Kite	LC	Sta		Y	Y		
Accipitridae	*Neophron percnopterus*	Egyptian Vulture	EN	Dec	Y	Y	Y		
Accipitridae	*Nisaetus nipalensis*	Mountain Hawk-eagle	NT	Dec		Y	Y		
Accipitridae	*Pernis apivorus*	European Honey-buzzard	LC	Sta		Y	Y		
Accipitridae	*Pernis ptilorhynchus*	Oriental Honey-buzzard	LC	Dec		Y	Y		
Accipitridae	*Sarcogyps calvus*	Red-headed Vulture	CR	Dec	Y	Y	Y		
Accipitridae	*Spilornis cheela*	Crested Serpent-eagle	LC	Sta		Y			
Accipitridae	*Torgos tracheliotos*	Lappet-faced Vulture	EN	Dec	Y	Y	Y		
Acrocephalidae	*Acrocephalus agricola*	Paddyfield Warbler	LC	Dec		Y		Y	
Acrocephalidae	*Acrocephalus bistrigiceps*	Black-browed Reed-warbler	LC	Sta		Y		Y	
Acrocephalidae	*Acrocephalus concinens*	Blunt-winged Warbler	LC	Sta		Y		Y	

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Acrocephalidae	*Acrocephalus dumetorum*	Blyth's Reed-warbler	LC	Inc		Y		Y	
Acrocephalidae	*Acrocephalus melanopogon*	Moustached Warbler	LC	Sta		Y		Y	
Acrocephalidae	*Acrocephalus orientalis*	Oriental Reed-warbler	LC	Dec		Y		Y	
Acrocephalidae	*Acrocephalus orinus*	Large-billed Reed-warbler	DD	Unk		Y		Y	
Acrocephalidae	*Acrocephalus scirpaceus*	Common Reed-warbler	LC	Sta		Y		Y	
Acrocephalidae	*Acrocephalus stentoreus*	Clamorous Reed-warbler	LC	Sta		Y		Y	
Acrocephalidae	*Arundinax aedon*	Thick-billed Warbler	LC	Dec		Y		Y	
Acrocephalidae	*Iduna caligata*	Booted Warbler	LC	Inc		Y		Y	
Acrocephalidae	*Iduna rama*	Sykes's Warbler	LC	Sta		Y		Y	
Aegithalidae	*Aegithalos caudatus*	Long-tailed Tit	LC	Sta		Y		Y	
Aegithalidae	*Leptopoecile sophiae*	White-browed Tit-warbler	LC	Sta		Y			
Alaudidae	*Alauda arvensis*	Eurasian Skylark	LC	Dec				Y	
Alaudidae	*Alauda gulgula*	Oriental Skylark	LC	Dec				Y	
Alaudidae	*Alauda leucoptera*	White-winged Lark	LC	Dec				Y	
Alaudidae	*Alaudala rufescens*	Lesser Short-toed Lark	LC	Dec				Y	
Alaudidae	*Calandrella acutirostris*	Hume's Lark	LC	Sta				Y	
Alaudidae	*Calandrella brachydactyla*	Greater Short-toed Lark	LC	Unk				Y	
Alaudidae	*Calandrella dukhunensis*	Eastern Short-toed Lark	LC	Unk					
Alaudidae	*Eremophila alpestris*	Horned Lark	LC	Dec				Y	
Alaudidae	*Galerida cristata*	Crested Lark	LC	Dec				Y	
Alaudidae	*Melanocorypha bimaculata*	Bimaculated Lark	LC	Sta				Y	
Alaudidae	*Melanocorypha mongolica*	Mongolian Lark	LC	Sta				Y	
Alaudidae	*Mirafra javanica*	Horsfield's Bushlark	LC	Sta				Y	
Alcedinidae	*Alcedo atthis*	Common Kingfisher	LC	Unk				Y	
Alcedinidae	*Ceyx erithaca*	Oriental Dwarf-kingfisher	LC	Dec				Y	
Alcedinidae	*Halcyon pileata*	Black-capped Kingfisher	LC	Dec				Y	

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Anatidae	*Anas acuta*	Northern Pintail	LC	Dec		Y			Y
Anatidae	*Anas crecca*	Common Teal	LC	Unk		Y			Y
Anatidae	*Anas platyrhynchos*	Mallard	LC	Inc		Y			Y
Anatidae	*Anas poecilorhyncha*	Indian Spot-billed Duck	LC	Dec		Y			
Anatidae	*Anser albifrons*	Greater White-fronted Goose	LC	Unk		Y			Y
Anatidae	*Anser anser*	Greylag Goose	LC	Inc		Y			Y
Anatidae	*Anser erythropus*	Lesser White-fronted Goose	VU	Dec	Y	Y			Y
Anatidae	*Anser fabalis*	Bean Goose	LC	Dec		Y			Y
Anatidae	*Anser indicus*	Bar-headed Goose	LC	Dec		Y			
Anatidae	*Aythya baeri*	Baer's Pochard	CR	Dec	Y	Y			
Anatidae	*Aythya ferina*	Common Pochard	VU	Dec		Y			Y
Anatidae	*Aythya fuligula*	Tufted Duck	LC	Sta		Y			Y
Anatidae	*Aythya marila*	Greater Scaup	LC	Dec		Y			Y
Anatidae	*Aythya nyroca*	Ferruginous Duck	NT	Dec	Y	Y			Y
Anatidae	*Branta ruficollis*	Red-breasted Goose	VU	Dec	Y	Y			Y
Anatidae	*Bucephala clangula*	Common Goldeneye	LC	Sta		Y			Y
Anatidae	*Clangula hyemalis*	Long-tailed Duck	VU	Dec		Y			Y
Anatidae	*Cygnus columbianus*	Tundra Swan	LC	Unk		Y			Y
Anatidae	*Cygnus cygnus*	Whooper Swan	LC	Unk		Y			Y
Anatidae	*Cygnus olor*	Mute Swan	LC	Inc		Y			Y
Anatidae	*Dendrocygna bicolor*	Fulvous Whistling-duck	LC	Dec		Y			Y
Anatidae	*Dendrocygna javanica*	Lesser Whistling-duck	LC	Dec		Y			
Anatidae	*Mareca falcata*	Falcated Duck	NT	Dec		Y			
Anatidae	*Mareca penelope*	Eurasian Wigeon	LC	Dec		Y			Y
Anatidae	*Mareca strepera*	Gadwall	LC	Inc		Y			Y
Anatidae	*Marmaronetta angustirostris*	Marbled Teal	NT	Dec	Y	Y			Y

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Anatidae	*Melanitta fusca*	Velvet Scoter	VU	Dec		Y			Y
Anatidae	*Mergellus albellus*	Smew	LC	Dec		Y			Y
Anatidae	*Mergus merganser*	Goosander	LC	Unk		Y			Y
Anatidae	*Mergus serrator*	Red-breasted Merganser	LC	Sta		Y			Y
Anatidae	*Netta rufina*	Red-crested Pochard	LC	Unk		Y			Y
Anatidae	*Nettapus coromandelianus*	Cotton Pygmy-goose	LC	Sta		Y			
Anatidae	*Oxyura leucocephala*	White-headed Duck	EN	Dec	Y	Y			Y
Anatidae	*Sarkidiornis melanotos*	African Comb Duck	LC	Dec		Y			Y
Anatidae	*Spatula clypeata*	Northern Shoveler	LC	Dec		Y			Y
Anatidae	*Spatula querquedula*	Garganey	LC	Dec		Y			Y
Anatidae	*Tadorna ferruginea*	Ruddy Shelduck	LC	Unk		Y			Y
Anatidae	*Tadorna tadorna*	Common Shelduck	LC	Inc		Y			Y
Apodidae	*Apus acuticauda*	Dark-rumped Swift	VU	Sta				Y	
Apodidae	*Apus affinis*	Little Swift	LC	Inc				Y	
Apodidae	*Apus pacificus*	Pacific Swift	LC	Sta				Y	
Apodidae	*Tachymarptis melba*	Alpine Swift	LC	Sta				Y	
Ardeidae	*Ardea alba*	Great White Egret	LC	Unk		Y			Y
Ardeidae	*Ardea cinerea*	Grey Heron	LC	Unk					Y
Ardeidae	*Ardea goliath*	Goliath Heron	LC	Sta					
Ardeidae	*Ardea intermedia*	Intermediate Egret	LC	Dec					
Ardeidae	*Ardea purpurea*	Purple Heron	LC	Dec		Y			Y
Ardeidae	*Ardeola ralloides*	Squacco Heron	LC	Unk					Y
Ardeidae	*Botaurus stellaris*	Eurasian Bittern	LC	Dec		Y			Y
Ardeidae	*Bubulcus ibis*	Cattle Egret	LC	Inc					Y
Ardeidae	*Butorides striata*	Green-backed Heron	LC	Dec					
Ardeidae	*Egretta garzetta*	Little Egret	LC	Inc					Y

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Ardeidae	*Egretta gularis*	Western Reef-egret	LC	Sta					Y
Ardeidae	*Gorsachius melanolophus*	Malay Night-heron	LC	Unk					
Ardeidae	*Ixobrychus cinnamomeus*	Cinnamon Bittern	LC	Sta					
Ardeidae	*Ixobrychus flavicollis*	Black Bittern	LC	Dec					
Ardeidae	*Ixobrychus minutus*	Common Little Bittern	LC	Dec		Y			Y
Ardeidae	*Ixobrychus sinensis*	Yellow Bittern	LC	Unk					
Ardeidae	*Nycticorax nycticorax*	Black-crowned Night-heron	LC	Dec					Y
Bombycillidae	*Bombycilla garrulus*	Bohemian Waxwing	LC	Inc				Y	
Burhinidae	*Burhinus oedicnemus*	Eurasian Thick-knee	LC	Dec		Y		Y	
Calcariidae	*Calcarius lapponicus*	Lapland Longspur	LC	Inc				Y	
Calcariidae	*Plectrophenax nivalis*	Snow Bunting	LC	Dec				Y	
Campephagidae	*Lalage melanoptera*	Black-headed Cuckooshrike	LC	Sta				Y	
Campephagidae	*Lalage melaschistos*	Black-winged Cuckooshrike	LC	Dec				Y	
Campephagidae	*Pericrocotus divaricatus*	Ashy Minivet	LC	Dec				Y	
Campephagidae	*Pericrocotus ethologus*	Long-tailed Minivet	LC	Dec				Y	
Campephagidae	*Pericrocotus roseus*	Rosy Minivet	LC	Dec				Y	
Caprimulgidae	*Caprimulgus indicus*	Jungle Nightjar	LC	Sta				Y	
Caprimulgidae	*Caprimulgus jotaka*	Grey Nightjar	LC	Sta					
Caprimulgidae	*Caprimulgus mahrattensis*	Sykes's Nightjar	LC	Sta				Y	
Charadriidae	*Charadrius alexandrinus*	Kentish Plover	LC	Dec		Y			Y
Charadriidae	*Charadrius asiaticus*	Caspian Plover	LC	Dec		Y			Y
Charadriidae	*Charadrius dubius*	Little Ringed Plover	LC	Sta		Y			Y
Charadriidae	*Charadrius hiaticula*	Common Ringed Plover	LC	Dec		Y			Y
Charadriidae	*Charadrius leschenaultii*	Greater Sandplover	LC	Dec		Y			Y
Charadriidae	*Charadrius mongolus*	Lesser Sandplover	LC	Unk		Y			Y
Charadriidae	*Charadrius placidus*	Long-billed Plover	LC	Dec		Y			

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Charadriidae	*Eudromias morinellus*	Eurasian Dotterel	LC	Dec		Y			Y
Charadriidae	*Pluvialis apricaria*	Eurasian Golden Plover	LC	Inc		Y			Y
Charadriidae	*Pluvialis fulva*	Pacific Golden Plover	LC	Dec		Y			Y
Charadriidae	*Pluvialis squatarola*	Grey Plover	LC	Dec		Y			Y
Charadriidae	*Vanellus cinereus*	Grey-headed Lapwing	LC	Dec		Y			
Charadriidae	*Vanellus gregarius*	Sociable Lapwing	CR	Dec	Y	Y			Y
Charadriidae	*Vanellus leucurus*	White-tailed Lapwing	LC	Unk		Y			Y
Charadriidae	*Vanellus vanellus*	Northern Lapwing	NT	Dec		Y			Y
Ciconiidae	*Ciconia ciconia*	White Stork	LC	Inc		Y			Y
Ciconiidae	*Ciconia nigra*	Black Stork	LC	Unk		Y			Y
Ciconiidae	*Leptoptilos dubius*	Greater Adjutant	EN	Dec					
Ciconiidae	*Leptoptilos javanicus*	Lesser Adjutant	VU	Dec					
Ciconiidae	*Anastomus oscitans*	Asian Openbill	LC	Unk					
Ciconiidae	*Mycteria leucocephala*	Painted Stork	NT	Dec					
Cinclidae	*Cinclus cinclus*	White-throated Dipper	LC	Dec				Y	
Cisticolidae	*Cisticola juncidis*	Zitting Cisticola	LC	Inc				Y	
Columbidae	*Columba eversmanni*	Yellow-eyed Pigeon	VU	Dec				Y	
Columbidae	*Columba hodgsonii*	Speckled Woodpigeon	LC	Sta				Y	
Columbidae	*Columba leuconota*	Snow Pigeon	LC	Sta				Y	
Columbidae	*Columba oenas*	Stock Dove	LC	Inc				Y	
Columbidae	*Columba palumbus*	Common Woodpigeon	LC	Inc				Y	
Columbidae	*Spilopelia senegalensis*	Laughing Dove	LC	Sta				Y	
Columbidae	*Spilopelia suratensis*	Western Spotted Dove	LC	Inc					
Columbidae	*Streptopelia decaocto*	Eurasian Collared-dove	LC	Inc				Y	
Columbidae	*Streptopelia orientalis*	Oriental Turtle-dove	LC	Sta				Y	
Columbidae	*Streptopelia tranquebarica*	Red Turtle-dove	LC	Dec				Y	

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Columbidae	*Treron apicauda*	Pin-tailed Green-pigeon	LC	Dec				Y	
Coraciidae	*Coracias benghalensis*	Indian Roller	LC	Inc	Y	Y		Y	
Corvidae	*Corvus corax*	Common Raven	LC	Inc				Y	
Corvidae	*Corvus corone*	Carrion Crow	LC	Inc				Y	
Corvidae	*Corvus frugilegus*	Rook	LC	Dec				Y	
Corvidae	*Corvus monedula*	Eurasian Jackdaw	LC	Sta				Y	
Corvidae	*Pica pica*	Eurasian Magpie	LC	Sta				Y	
Cuculidae	*Cacomantis merulinus*	Plaintive Cuckoo	LC	Sta					
Cuculidae	*Cacomantis passerinus*	Grey-bellied Cuckoo	LC	Sta				Y	
Cuculidae	*Cacomantis sonneratii*	Banded Bay Cuckoo	LC	Sta				Y	
Cuculidae	*Chrysococcyx maculatus*	Asian Emerald Cuckoo	LC	Dec				Y	
Cuculidae	*Clamator coromandus*	Chestnut-winged Cuckoo	LC	Sta				Y	
Cuculidae	*Clamator jacobinus*	Jacobin Cuckoo	LC	Sta				Y	
Cuculidae	*Cuculus micropterus*	Indian Cuckoo	LC	Dec				Y	
Cuculidae	*Cuculus poliocephalus*	Lesser Cuckoo	LC	Sta				Y	
Cuculidae	*Eudynamys scolopaceus*	Western Koel	LC	Sta				Y	
Cuculidae	*Hierococcyx sparverioides*	Large Hawk-cuckoo	LC	Sta				Y	
Cuculidae	*Hierococcyx varius*	Common Hawk-cuckoo	LC	Sta				Y	
Cuculidae	*Surniculus dicruroides*	Fork-tailed Drongo-cuckoo	LC	Dec					
Dicruridae	*Dicrurus hottentottus*	Hair-crested Drongo	LC	Unk				Y	
Dicruridae	*Dicrurus leucophaeus*	Ashy Drongo	LC	Unk				Y	
Dicruridae	*Dicrurus macrocercus*	Black Drongo	LC	Unk				Y	
Dromadidae	*Dromas ardeola*	Crab-plover	LC	Sta		Y			Y
Emberizidae	*Emberiza aureola*	Yellow-breasted Bunting	CR	Dec	Y			Y	
Emberizidae	*Emberiza bruniceps*	Red-headed Bunting	LC	Sta				Y	
Emberizidae	*Emberiza buchanani*	Grey-necked Bunting	LC	Sta				Y	
Emberizidae	*Emberiza calandra*	Corn Bunting	LC	Dec				Y	

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Emberizidae	*Emberiza cia*	Rock Bunting	LC	Inc				Y	
Emberizidae	*Emberiza citrinella*	Yellowhammer	LC	Dec				Y	
Emberizidae	*Emberiza fucata*	Chestnut-eared Bunting	LC	Sta				Y	
Emberizidae	*Emberiza leucocephalos*	Pine Bunting	LC	Sta				Y	
Emberizidae	*Emberiza melanocephala*	Black-headed Bunting	LC	Unk				Y	
Emberizidae	*Emberiza schoeniclus*	Reed Bunting	LC	Dec				Y	
Emberizidae	*Emberiza stewarti*	White-capped Bunting	LC	Sta				Y	
Falconidae	*Falco biarmicus*	Lanner Falcon	LC	Dec		Y	Y		
Falconidae	*Falco cherrug*	Saker Falcon	EN	Dec	Y	Y	Y		
Falconidae	*Falco chicquera*	Red-headed Falcon	NT	Dec		Y			
Falconidae	*Falco columbarius*	Merlin	LC	Sta		Y	Y		
Falconidae	*Falco naumanni*	Lesser Kestrel	LC	Sta	Y	Y	Y		
Falconidae	*Falco peregrinus*	Peregrine Falcon	LC	Inc		Y	Y		
Falconidae	*Falco rusticolus*	Gyrfalcon	LC	Sta		Y	Y		
Falconidae	*Falco severus*	Oriental Hobby	LC	Dec		Y	Y		
Falconidae	*Falco subbuteo*	Eurasian Hobby	LC	Dec		Y	Y		
Falconidae	*Falco tinnunculus*	Common Kestrel	LC	Dec		Y	Y		
Fregatidae	*Fregata ariel*	Lesser Frigatebird	LC	Dec					Y
Fringillidae	*Acanthis flammea*	Redpoll	LC	Dec				Y	
Fringillidae	*Carduelis caniceps*	Eastern Goldfinch	LC	Sta					
Fringillidae	*Carduelis carduelis*	European Goldfinch	LC	Dec				Y	
Fringillidae	*Carpodacus erythrinus*	Common Rosefinch	LC	Dec				Y	
Fringillidae	*Carpodacus roseus*	Pallas's Rosefinch	LC	Sta				Y	
Fringillidae	*Carpodacus sibiricus*	Long-tailed Rosefinch	LC	Sta				Y	
Fringillidae	*Chloris chloris*	European Greenfinch	LC	Sta				Y	
Fringillidae	*Chloris spinoides*	Yellow-breasted Greenfinch	LC	Sta				Y	

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Fringillidae	*Coccothraustes coccothraustes*	Hawfinch	LC	Inc				Y	
Fringillidae	*Fringilla coelebs*	Common Chaffinch	LC	Inc				Y	
Fringillidae	*Fringilla montifringilla*	Brambling	LC	Dec				Y	
Fringillidae	*Leucosticte brandti*	Brandt's Mountain-finch	LC	Sta				Y	
Fringillidae	*Leucosticte nemoricola*	Plain Mountain-finch	LC	Sta				Y	
Fringillidae	*Linaria flavirostris*	Twite	LC	Dec				Y	
Fringillidae	*Pinicola enucleator*	Pine Grosbeak	LC	Dec				Y	
Fringillidae	*Pyrrhula pyrrhula*	Eurasian Bullfinch	LC	Dec				Y	
Fringillidae	*Rhodopechys sanguineus*	Eurasian Crimson-winged Finch	LC	Sta				Y	
Gaviidae	*Gavia stellata*	Red-throated Loon	LC	Dec		Y			Y
Glareolidae	*Cursorius cursor*	Cream-coloured Courser	LC	Dec				Y	
Glareolidae	*Glareola lactea*	Little Pratincole	LC	Unk					
Glareolidae	*Glareola maldivarum*	Oriental Pratincole	LC	Dec					
Glareolidae	*Glareola nordmanni*	Black-winged Pratincole	NT	Dec		Y			Y
Glareolidae	*Glareola pratincola*	Collared Pratincole	LC	Dec		Y			Y
Gruidae	*Anthropoides virgo*	Demoiselle Crane	LC	Inc		Y			Y
Gruidae	*Grus antigone*	Sarus Crane	VU	Dec		Y			
Gruidae	*Grus grus*	Common Crane	LC	Inc		Y			Y
Gruidae	*Grus nigricollis*	Black-necked Crane	NT	Sta	Y	Y			
Gruidae	*Leucogeranus leucogeranus*	Siberian Crane	CR	Dec	Y	Y			Y
Haematopodidae	*Haematopus ostralegus*	Eurasian Oystercatcher	NT	Dec		Y			Y
Hirundinidae	*Cecropis daurica*	Red-rumped Swallow	LC	Sta				Y	
Hirundinidae	*Delichon dasypus*	Asian House Martin	LC	Inc				Y	
Hirundinidae	*Hirundo rustica*	Barn Swallow	LC	Dec				Y	
Hirundinidae	*Hirundo smithii*	Wire-tailed Swallow	LC	Inc				Y	
Hirundinidae	*Petrochelidon fluvicola*	Streak-throated Swallow	LC	Inc				Y	

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Hirundinidae	*Ptyonoprogne rupestris*	Eurasian Crag Martin	LC	Sta				Y	
Hirundinidae	*Riparia chinensis*	Asian Plain Martin	LC	Dec					
Hirundinidae	*Riparia diluta*	Pale Sand Martin	LC	Unk					
Hirundinidae	*Riparia riparia*	Collared Sand Martin	LC	Dec				Y	
Hydrobatidae	*Hydrobates matsudairae*	Matsudaira's Storm-petrel	VU	Unk					
Hydrobatidae	*Hydrobates monorhis*	Swinhoe's Storm-petrel	NT	Sta					
Hypocoliidae	*Hypocolius ampelinus*	Hypocolius	LC	Unk				Y	
Ibidorhynchidae	*Ibidorhyncha struthersii*	Ibisbill	LC	Unk		Y			
Jacanidae	*Hydrophasianus chirurgus*	Pheasant-tailed Jacana	LC	Dec					
Laniidae	*Lanius borealis*	Northern Grey Shrike	LC	Sta					
Laniidae	*Lanius cristatus*	Brown Shrike	LC	Dec				Y	
Laniidae	*Lanius excubitor*	Great Grey Shrike	LC	Dec		Y		Y	
Laniidae	*Lanius isabellinus*	Isabelline Shrike	LC	Sta				Y	
Laniidae	*Lanius phoenicuroides*	Red-tailed Shrike	LC	Sta					
Laniidae	*Lanius schach*	Long-tailed Shrike	LC	Unk				Y	
Laniidae	*Lanius tephronotus*	Grey-backed Shrike	LC	Sta				Y	
Laniidae	*Lanius vittatus*	Bay-backed Shrike	LC	Sta				Y	
Laridae	*Anous stolidus*	Brown Noddy	LC	Sta					Y
Laridae	*Anous tenuirostris*	Lesser Noddy	LC	Sta					Y
Laridae	*Chlidonias hybrida*	Whiskered Tern	LC	Sta					Y
Laridae	*Chlidonias leucopterus*	White-winged Tern	LC	Sta		Y			Y
Laridae	*Gelochelidon nilotica*	Common Gull-billed Tern	LC	Dec		Y			Y
Laridae	*Hydrocoloeus minutus*	Little Gull	LC	Inc					Y
Laridae	*Hydroprogne caspia*	Caspian Tern	LC	Inc		Y			Y
Laridae	*Larus armenicus*	Armenian Gull	LC	Inc		Y			Y
Laridae	*Larus brunnicephalus*	Brown-headed Gull	LC	Sta					
Laridae	*Larus cachinnans*	Caspian Gull	LC	Inc					Y

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Laridae	*Larus canus*	Mew Gull	LC	Unk					Y
Laridae	*Larus fuscus*	Lesser Black-backed Gull	LC	Inc					Y
Laridae	*Larus genei*	Slender-billed Gull	LC	Unk		Y			Y
Laridae	*Larus hemprichii*	Sooty Gull	LC	Dec		Y			Y
Laridae	*Larus ichthyaetus*	Pallas's Gull	LC	Inc		Y			Y
Laridae	*Larus michahellis*	Yellow-legged Gull	LC	Inc					Y
Laridae	*Larus relictus*	Relict Gull	VU	Dec	Y				
Laridae	*Larus ridibundus*	Black-headed Gull	LC	Unk					Y
Laridae	*Onychoprion anaethetus*	Bridled Tern	LC	Unk					Y
Laridae	*Onychoprion fuscatus*	Sooty Tern	LC	Unk					Y
Laridae	*Rynchops albicollis*	Indian Skimmer	EN	Dec					
Laridae	*Sterna dougallii*	Roseate Tern	LC	Unk		Y			Y
Laridae	*Sterna hirundo*	Common Tern	LC	Unk		Y			Y
Laridae	*Sterna repressa*	White-cheeked Tern	LC	Dec		Y			Y
Laridae	*Sternula albifrons*	Little Tern	LC	Dec		Y			Y
Laridae	*Sternula saundersi*	Saunders's Tern	LC	Dec		Y			Y
Laridae	*Thalasseus bengalensis*	Lesser Crested Tern	LC	Sta		Y			Y
Laridae	*Thalasseus bergii*	Greater Crested Tern	LC	Sta		Y			Y
Laridae	*Thalasseus sandvicensis*	Sandwich Tern	LC	Sta		Y			Y
Locustellidae	*Chaetornis striata*	Bristled Grassbird	VU	Dec		Y		Y	
Locustellidae	*Locustella certhiola*	Pallas's Grasshopper-warbler	LC	Dec		Y		Y	
Locustellidae	*Locustella davidi*	Baikal Grasshopper-warbler	LC	Sta		Y		Y	
Locustellidae	*Locustella kashmirensis*	Himalayan Grasshopper-warbler	LC	Sta					
Locustellidae	*Locustella lanceolata*	Lanceolated Warbler	LC	Sta		Y		Y	
Locustellidae	*Locustella major*	Long-billed Grasshopper-warbler	NT	Dec		Y			

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Locustellidae	*Locustella naevia*	Common Grasshopper-warbler	LC	Sta		Y		Y	
Locustellidae	*Locustella tacsanowskia*	Chinese Grasshopper-warbler	LC	Sta		Y		Y	
Locustellidae	*Locustella thoracica*	Spotted Grasshopper-warbler	LC	Sta		Y		Y	
Meropidae	*Merops apiaster*	European Bee-eater	LC	Sta		Y		Y	
Meropidae	*Merops leschenaulti*	Chestnut-headed Bee-eater	LC	Inc				Y	
Meropidae	*Merops orientalis*	Asian Green Bee-eater	LC	Inc				Y	
Meropidae	*Merops philippinus*	Blue-tailed Bee-eater	LC	Sta				Y	
Monarchidae	*Hypothymis azurea*	Black-naped Monarch	LC	Sta				Y	
Monarchidae	*Terpsiphone paradisi*	Indian Paradise-flycatcher	LC	Sta		Y		Y	
Motacillidae	*Anthus campestris*	Tawny Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus cervinus*	Red-throated Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus godlewskii*	Blyth's Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus hodgsoni*	Olive-backed Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus pratensis*	Meadow Pipit	LC	Dec		Y		Y	
Motacillidae	*Anthus richardi*	Richard's Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus roseatus*	Rosy Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus rubescens*	Buff-bellied Pipit	LC	Dec		Y		Y	
Motacillidae	*Anthus spinoletta*	Water Pipit	LC	Sta		Y		Y	
Motacillidae	*Anthus trivialis*	Tree Pipit	LC	Dec		Y		Y	
Motacillidae	*Dendronanthus indicus*	Forest Wagtail	LC	Sta		Y		Y	
Motacillidae	*Motacilla alba*	White Wagtail	LC	Sta		Y		Y	
Motacillidae	*Motacilla cinerea*	Grey Wagtail	LC	Sta		Y		Y	
Motacillidae	*Motacilla citreola*	Citrine Wagtail	LC	Inc		Y		Y	
Motacillidae	*Motacilla flava*	Western Yellow Wagtail	LC	Dec		Y		Y	
Motacillidae	*Motacilla maderaspatensis*	White-browed Wagtail	LC	Sta		Y			

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Muscicapidae	*Brachypteryx hyperythra*	Rusty-bellied Shortwing	NT	Dec		Y			
Muscicapidae	*Calliope calliope*	Siberian Rubythroat	LC	Sta		Y		Y	
Muscicapidae	*Calliope pectardens*	Firethroat	NT	Dec		Y		Y	
Muscicapidae	*Calliope pectoralis*	Himalayan Rubythroat	LC	Sta		Y		Y	
Muscicapidae	*Calliope tschebaiewi*	Chinese Rubythroat	LC	Sta		Y			
Muscicapidae	*Cinclidium frontale*	Blue-fronted Robin	LC	Dec		Y			
Muscicapidae	*Cyanecula svecica*	Bluethroat	LC	Sta		Y		Y	
Muscicapidae	*Cyornis rubeculoides*	Blue-throated Blue-flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Cyornis tickelliae*	Tickell's Blue-flycatcher	LC	Sta		Y			
Muscicapidae	*Cyornis unicolor*	Pale Blue-flycatcher	LC	Dec		Y			
Muscicapidae	*Enicurus scouleri*	Little Forktail	LC	Sta		Y			
Muscicapidae	*Erithacus rubecula*	European Robin	LC	Inc		Y		Y	
Muscicapidae	*Eumyias thalassinus*	Verditer Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Ficedula albicilla*	Red-throated Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Ficedula erithacus*	Slaty-backed Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Ficedula hyperythra*	Snowy-browed Flycatcher	LC	Dec		Y			
Muscicapidae	*Ficedula hypoleuca*	European Pied Flycatcher	LC	Dec		Y		Y	
Muscicapidae	*Ficedula parva*	Red-breasted Flycatcher	LC	Inc		Y		Y	
Muscicapidae	*Ficedula ruficauda*	Rusty-tailed Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Ficedula sapphira*	Sapphire Flycatcher	LC	Sta		Y			
Muscicapidae	*Ficedula strophiata*	Rufous-gorgeted Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Ficedula subrubra*	Kashmir Flycatcher	VU	Dec		Y		Y	
Muscicapidae	*Ficedula superciliaris*	Ultramarine Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Ficedula tricolor*	Slaty-blue Flycatcher	LC	Sta		Y			
Muscicapidae	*Ficedula westermanni*	Little Pied Flycatcher	LC	Dec		Y			
Muscicapidae	*Hodgsonius phaenicuroides*	White-bellied Redstart	LC	Sta		Y			

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Muscicapidae	*Larvivora brunnea*	Indian Blue Robin	LC	Dec		Y		Y	
Muscicapidae	*Monticola cinclorhyncha*	Blue-capped Rock-thrush	LC	Sta		Y			
Muscicapidae	*Monticola rufiventris*	Chestnut-bellied Rock-thrush	LC	Sta		Y		Y	
Muscicapidae	*Monticola solitarius*	Blue Rock-thrush	LC	Sta		Y		Y	
Muscicapidae	*Muscicapa dauurica*	Asian Brown Flycatcher	LC	Sta		Y		Y	
Muscicapidae	*Muscicapa muttui*	Brown-breasted Flycatcher	LC	Dec		Y		Y	
Muscicapidae	*Myophonus caeruleus*	Blue Whistling-thrush	LC	Unk		Y			
Muscicapidae	*Niltava grandis*	Large Niltava	LC	Sta		Y			
Muscicapidae	*Niltava macgrigoriae*	Small Niltava	LC	Sta		Y			
Muscicapidae	*Niltava oatesi*	Large Vivid Niltava	LC	Dec		Y			
Muscicapidae	*Niltava sundara*	Rufous-bellied Niltava	LC	Sta		Y			
Muscicapidae	*Oenanthe albonigra*	Hume's Wheatear	LC	Sta		Y			
Muscicapidae	*Oenanthe chrysopygia*	Red-tailed Wheatear	LC	Sta		Y		Y	
Muscicapidae	*Oenanthe deserti*	Desert Wheatear	LC	Sta		Y		Y	
Muscicapidae	*Oenanthe finschii*	Finsch's Wheatear	LC	Sta		Y		Y	
Muscicapidae	*Oenanthe isabellina*	Isabelline Wheatear	LC	Sta		Y		Y	
Muscicapidae	*Oenanthe picata*	Variable Wheatear	LC	Sta		Y		Y	
Muscicapidae	*Oenanthe pleschanka*	Pied Wheatear	LC	Sta		Y		Y	
Muscicapidae	*Phoenicurus auroreus*	Daurian Redstart	LC	Sta		Y		Y	
Muscicapidae	*Phoenicurus coeruleocephala*	Blue-capped Redstart	LC	Sta		Y			
Muscicapidae	*Phoenicurus erythrogastrus*	White-winged Redstart	LC	Sta		Y		Y	
Muscicapidae	*Phoenicurus erythronotus*	Eversmann's Redstart	LC	Sta		Y			
Muscicapidae	*Phoenicurus frontalis*	Blue-fronted Redstart	LC	Sta		Y			
Muscicapidae	*Phoenicurus fuliginosus*	Plumbeous Water-redstart	LC	Sta		Y			
Muscicapidae	*Phoenicurus hodgsoni*	Hodgson's Redstart	LC	Sta		Y		Y	

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Muscicapidae	*Phoenicurus leucocephalus*	White-capped Water-redstart	LC	Sta		Y			
Muscicapidae	*Phoenicurus ochruros*	Black Redstart	LC	Inc		Y		Y	
Muscicapidae	*Phoenicurus phoenicurus*	Common Redstart	LC	Inc		Y		Y	
Muscicapidae	*Saxicola caprata*	Pied Bushchat	LC	Sta		Y		Y	
Muscicapidae	*Saxicola ferreus*	Grey Bushchat	LC	Sta		Y			
Muscicapidae	*Saxicola insignis*	White-throated Bushchat	VU	Dec		Y		Y	
Muscicapidae	*Saxicola macrorhynchus*	White-browed Bushchat	VU	Dec		Y			
Muscicapidae	*Saxicola torquatus*	Common Stonechat	LC	Sta		Y		Y	
Muscicapidae	*Tarsiger chrysaeus*	Golden Bush-robin	LC	Sta		Y		Y	
Muscicapidae	*Tarsiger rufilatus*	Himalayan Bush-robin	LC	Sta		Y			
Oceanitidae	*Fregetta tropica*	Black-bellied Storm-petrel	LC	Dec					
Oceanitidae	*Oceanites oceanicus*	Wilson's Storm-petrel	LC	Sta					
Oceanitidae	*Pelagodroma marina*	White-faced Storm-petrel	LC	Dec					
Oriolidae	*Oriolus chinensis*	Black-naped Oriole	LC	Dec		Y		Y	
Oriolidae	*Oriolus kundoo*	Indian Golden Oriole	LC	Unk		Y			
Oriolidae	*Oriolus tenuirostris*	Slender-billed Oriole	LC	Dec		Y		Y	
Oriolidae	*Oriolus traillii*	Maroon Oriole	LC	Sta				Y	
Oriolidae	*Oriolus xanthornus*	Black-hooded Oriole	LC	Sta		Y			
Otididae	*Ardeotis nigriceps*	Great Indian Bustard	CR	Dec	Y				
Otididae	*Chlamydotis macqueenii*	Asian Houbara	VU	Dec		Y			
Otididae	*Houbaropsis bengalensis*	Bengal Florican	CR	Dec	Y			Y	
Otididae	*Otis tarda*	Great Bustard	VU	Dec	Y	Y			
Otididae	*Sypheotides indicus*	Lesser Florican	CR	Dec				Y	
Otididae	*Tetrax tetrax*	Little Bustard	NT	Dec	Y	Y		Y	
Pandionidae	*Pandion haliaetus*	Osprey	LC	Inc		Y	Y		
Panuridae	*Panurus biarmicus*	Bearded Reedling	LC	Unk		Y		Y	

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Paridae	*Cephalopyrus flammiceps*	Fire-capped Tit	LC	Unk				Y	
Passeridae	*Passer hispaniolensis*	Spanish Sparrow	LC	Dec				Y	
Pelecanidae	*Pelecanus crispus*	Dalmatian Pelican	NT	Dec	Y	Y			Y
Pelecanidae	*Pelecanus onocrotalus*	Great White Pelican	LC	Unk	Y	Y			Y
Pelecanidae	*Pelecanus philippensis*	Spot-billed Pelican	NT	Dec					
Phaethontidae	*Phaethon aethereus*	Red-billed Tropicbird	LC	Dec					Y
Phalacrocoracidae	*Microcarbo pygmaeus*	Pygmy Cormorant	LC	Inc		Y			Y
Phalacrocoracidae	*Phalacrocorax carbo*	Great Cormorant	LC	Inc					Y
Phalacrocoracidae	*Phalacrocorax nigrogularis*	Socotra Cormorant	VU	Dec		Y			Y
Phasianidae	*Coturnix coturnix*	Common Quail	LC	Dec		Y		Y	
Phoenicopteridae	*Phoeniconaias minor*	Lesser Flamingo	NT	Dec		Y			Y
Phoenicopteridae	*Phoenicopterus roseus*	Greater Flamingo	LC	Inc		Y			Y
Phylloscopidae	*Phylloscopus affinis*	Tickell's Leaf-warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus burkii*	Green-crowned Warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus cantator*	Yellow-vented Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus castaniceps*	Chestnut-crowned Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus chloronotus*	Lemon-rumped Leaf-warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus claudiae*	Claudia's Leaf-warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus collybita*	Common Chiffchaff	LC	Inc		Y		Y	
Phylloscopidae	*Phylloscopus fuligiventer*	Smoky Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus fuscatus*	Dusky Warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus griseolus*	Sulphur-bellied Warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus humei*	Hume's Leaf-warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus inornatus*	Yellow-browed Warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus intermedius*	White-spectacled Warbler	LC	Sta		Y			

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Phylloscopidae	*Phylloscopus maculipennis*	Ashy-throated Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus magnirostris*	Large-billed Leaf-warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus neglectus*	Plain Leaf-warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus nitidus*	Green Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus occipitalis*	Western Crowned Leaf-warbler	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus poliogenys*	Grey-cheeked Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus pulcher*	Buff-barred Warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus reguloides*	Blyth's Leaf-warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus sindianus*	Mountain Chiffchaff	LC	Sta		Y		Y	
Phylloscopidae	*Phylloscopus subviridis*	Brooks's Leaf-warbler	LC	Sta		Y			
Phylloscopidae	*Phylloscopus tristis*	Siberian Chiffchaff	LC	Unk		Y			
Phylloscopidae	*Phylloscopus trochiloides*	Greenish Warbler	LC	Inc		Y		Y	
Phylloscopidae	*Phylloscopus tytleri*	Tytler's Leaf-warbler	NT	Dec		Y		Y	
Phylloscopidae	*Phylloscopus xanthoschistos*	Grey-hooded Warbler	LC	Sta		Y			
Picidae	*Dendrocopos hyperythrus*	Rufous-bellied Woodpecker	LC	Dec				Y	
Picidae	*Dryobates minor*	Lesser Spotted Woodpecker	LC	Dec				Y	
Picidae	*Dryocopus martius*	Black Woodpecker	LC	Inc				Y	
Picidae	*Jynx torquilla*	Eurasian Wryneck	LC	Dec				Y	
Picidae	*Picoides tridactylus*	Three-toed Woodpecker	LC	Sta				Y	
Pittidae	*Pitta brachyura*	Indian Pitta	LC	Dec				Y	
Podicipedidae	*Podiceps auritus*	Horned Grebe	VU	Dec		Y			Y
Podicipedidae	*Podiceps cristatus*	Great Crested Grebe	LC	Unk					Y
Podicipedidae	*Podiceps grisegena*	Red-necked Grebe	LC	Dec		Y			Y
Podicipedidae	*Podiceps nigricollis*	Black-necked Grebe	LC	Unk					Y
Podicipedidae	*Tachybaptus ruficollis*	Little Grebe	LC	Dec					Y

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Procellariidae	*Ardenna carneipes*	Flesh-footed Shearwater	NT	Dec					
Procellariidae	*Ardenna pacifica*	Wedge-tailed Shearwater	LC	Dec					
Procellariidae	*Bulweria bulwerii*	Bulwer's Petrel	LC	Sta					
Procellariidae	*Bulweria fallax*	Jouanin's Petrel	NT	Unk					
Procellariidae	*Puffinus bailloni*	Tropical Shearwater	LC	Sta					
Procellariidae	*Puffinus persicus*	Persian Shearwater	LC	Dec					
Prunellidae	*Prunella atrogularis*	Black-throated Accentor	LC	Sta				Y	
Prunellidae	*Prunella collaris*	Alpine Accentor	LC	Sta				Y	
Psittacidae	*Loriculus vernalis*	Vernal Hanging-parrot	LC	Sta				Y	
Psittacidae	*Psittacula derbiana*	Lord Derby's Parakeet	NT	Dec				Y	
Pteroclidae	*Pterocles alchata*	Pin-tailed Sandgrouse	LC	Sta				Y	
Pteroclidae	*Pterocles orientalis*	Black-bellied Sandgrouse	LC	Dec				Y	
Pteroclidae	*Pterocles senegallus*	Spotted Sandgrouse	LC	Sta				Y	
Pteroclidae	*Syrrhaptes paradoxus*	Pallas's Sandgrouse	LC	Sta				Y	
Pycnonotidae	*Hypsipetes leucocephalus*	Black Bulbul	LC	Sta				Y	
Pycnonotidae	*Pycnonotus leucogenys*	Himalayan Bulbul	LC	Inc				Y	
Rallidae	*Amaurornis phoenicurus*	White-breasted Waterhen	LC	Unk					
Rallidae	*Crex crex*	Corncrake	LC	Sta		Y			Y
Rallidae	*Fulica atra*	Common Coot	LC	Inc		Y			Y
Rallidae	*Gallicrex cinerea*	Watercock	LC	Dec					
Rallidae	*Gallinula chloropus*	Common Moorhen	LC	Sta					Y
Rallidae	*Porzana porzana*	Spotted Crake	LC	Sta		Y			Y
Rallidae	*Rallina eurizonoides*	Slaty-legged Crake	LC	Dec					
Rallidae	*Rallus aquaticus*	Western Water Rail	LC	Dec					Y
Rallidae	*Rallus indicus*	Eastern Water Rail	LC	Dec					
Rallidae	*Zapornia akool*	Brown Crake	LC	Unk					
Rallidae	*Zapornia fusca*	Ruddy-breasted Crake	LC	Dec					

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Rallidae	*Zapornia parva*	Little Crake	LC	Sta		Y			Y
Rallidae	*Zapornia pusilla*	Baillon's Crake	LC	Unk		Y			Y
Recurvirostridae	*Himantopus himantopus*	Black-winged Stilt	LC	Inc		Y			Y
Recurvirostridae	*Recurvirostra avosetta*	Pied Avocet	LC	Unk		Y			Y
Regulidae	*Regulus regulus*	Goldcrest	LC	Dec		Y		Y	
Remizidae	*Remiz coronatus*	White-crowned Penduline-tit	LC	Dec				Y	
Rhipiduridae	*Rhipidura albicollis*	White-throated Fantail	LC	Sta		Y			
Scolopacidae	*Actitis hypoleucos*	Common Sandpiper	LC	Dec		Y			Y
Scolopacidae	*Arenaria interpres*	Ruddy Turnstone	LC	Dec		Y			Y
Scolopacidae	*Calidris alba*	Sanderling	LC	Unk		Y			Y
Scolopacidae	*Calidris alpina*	Dunlin	LC	Dec		Y			Y
Scolopacidae	*Calidris canutus*	Red Knot	NT	Dec	Y	Y			Y
Scolopacidae	*Calidris falcinellus*	Broad-billed Sandpiper	LC	Dec		Y			Y
Scolopacidae	*Calidris ferruginea*	Curlew Sandpiper	NT	Dec		Y			Y
Scolopacidae	*Calidris minuta*	Little Stint	LC	Inc		Y			Y
Scolopacidae	*Calidris pugnax*	Ruff	LC	Dec		Y			Y
Scolopacidae	*Calidris pygmaea*	Spoon-billed Sandpiper	CR	Dec	Y	Y			
Scolopacidae	*Calidris ruficollis*	Red-necked Stint	NT	Dec		Y			
Scolopacidae	*Calidris subminuta*	Long-toed Stint	LC	Unk		Y			
Scolopacidae	*Calidris temminckii*	Temminck's Stint	LC	Unk		Y			Y
Scolopacidae	*Calidris tenuirostris*	Great Knot	EN	Dec	Y	Y			Y
Scolopacidae	*Gallinago gallinago*	Common Snipe	LC	Dec		Y			Y
Scolopacidae	*Gallinago megala*	Swinhoe's Snipe	LC	Unk		Y			
Scolopacidae	*Gallinago nemoricola*	Wood Snipe	VU	Dec		Y			
Scolopacidae	*Gallinago solitaria*	Solitary Snipe	LC	Sta		Y			
Scolopacidae	*Gallinago stenura*	Pintail Snipe	LC	Unk		Y			Y

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Family	Scientific Name	Common Name	Red List Category (2022)	Pop Trend	CMS Appx I	CMS Appx II	Raptors MoU	AEMLAP	AEWA
Scolopacidae	*Limnodromus semipalmatus*	Asian Dowitcher	NT	Dec		Y			
Scolopacidae	*Limosa lapponica*	Bar-tailed Godwit	NT	Dec		Y			Y
Scolopacidae	*Limosa limosa*	Black-tailed Godwit	NT	Dec		Y			Y
Scolopacidae	*Lymnocryptes minimus*	Jack Snipe	LC	Sta		Y			Y
Scolopacidae	*Numenius arquata*	Eurasian Curlew	NT	Dec		Y			Y
Scolopacidae	*Numenius phaeopus*	Whimbrel	LC	Dec		Y			Y
Scolopacidae	*Numenius tenuirostris*	Slender-billed Curlew	CR	Dec	Y	Y			Y
Scolopacidae	*Phalaropus lobatus*	Red-necked Phalarope	LC	Dec		Y			Y
Scolopacidae	*Scolopax rusticola*	Eurasian Woodcock	LC	Sta		Y			Y
Scolopacidae	*Tringa erythropus*	Spotted Redshank	LC	Sta		Y			Y
Scolopacidae	*Tringa glareola*	Wood Sandpiper	LC	Sta		Y			Y
Scolopacidae	*Tringa guttifer*	Spotted Greenshank	EN	Dec	Y	Y			
Scolopacidae	*Tringa nebularia*	Common Greenshank	LC	Sta		Y			Y
Scolopacidae	*Tringa ochropus*	Green Sandpiper	LC	Inc		Y			Y
Scolopacidae	*Tringa stagnatilis*	Marsh Sandpiper	LC	Dec		Y			Y
Scolopacidae	*Tringa totanus*	Common Redshank	LC	Unk		Y			Y
Scolopacidae	*Xenus cinereus*	Terek Sandpiper	LC	Dec		Y			Y
Scotocercidae	*Abroscopus schisticeps*	Black-faced Warbler	LC	Sta		Y			
Scotocercidae	*Abroscopus superciliaris*	Yellow-bellied Warbler	LC	Sta		Y			
Scotocercidae	*Cettia brunnifrons*	Grey-sided Bush-warbler	LC	Sta		Y			
Scotocercidae	*Cettia castaneocoronata*	Chestnut-headed Tesia	LC	Sta		Y			
Scotocercidae	*Cettia cetti*	Cetti's Warbler	LC	Inc		Y		Y	
Scotocercidae	*Cettia major*	Chestnut-crowned Bush-warbler	LC	Dec		Y			
Scotocercidae	*Hemitesia pallidipes*	Pale-footed Bush-warbler	LC	Sta		Y			
Scotocercidae	*Horornis brunnescens*	Hume's Bush-warbler	LC	Dec		Y			
Scotocercidae	*Horornis flavolivaceus*	Aberrant Bush-warbler	LC	Sta		Y			

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Family	Scientific Name	Common Name	Red List Category (2022)	Pop Trend	CMS Appx I	CMS Appx II	Raptors MoU	AEMLAP	AEWA
Scotocercidae	*Horornis fortipes*	Brownish-flanked Bush-warbler	LC	Dec		Y			
Scotocercidae	*Scotocerca inquieta*	Streaked Scrub-warbler	LC	Dec		Y			
Scotocercidae	*Tesia cyaniventer*	Grey-bellied Tesia	LC	Sta		Y			
Scotocercidae	*Tesia olivea*	Slaty-bellied Tesia	LC	Sta		Y			
Sittidae	*Tichodroma muraria*	Wallcreeper	LC	Sta				Y	
Stenostiridae	*Chelidorhynx hypoxanthus*	Yellow-bellied Fairy-fantail	LC	Sta		Y			
Stenostiridae	*Culicicapa ceylonensis*	Grey-headed Canary-flycatcher	LC	Sta		Y			
Stercorariidae (Skuas)	Stercorarius parasiticus	Arctic Jaeger	LC	Sta					
Stercorariidae (Skuas)	*Stercorarius pomarinus*	Pomarine Jaeger	LC	Sta					
Strigidae	*Aegolius funereus*	Boreal Owl	LC	Sta			Y		
Strigidae	*Asio flammeus*	Short-eared Owl	LC	Dec			Y		
Strigidae	*Asio otus*	Northern Long-eared Owl	LC	Dec			Y		
Strigidae	*Bubo scandiacus*	Snowy Owl	VU	Dec			Y		
Strigidae	*Ninox scutulata*	Brown Boobook	LC	Dec			Y		
Strigidae	*Otus brucei*	Pallid Scops-owl	LC	Sta			Y		
Strigidae	*Otus scops*	Eurasian Scops-owl	LC	Dec			Y		
Strigidae	*Otus sunia*	Oriental Scops-owl	LC	Sta			Y		
Strigidae	*Strix nebulosa*	Great Grey Owl	LC	Inc			Y		
Strigidae	*Strix uralensis*	Ural Owl	LC	Sta			Y		
Strigidae	*Surnia ulula*	Northern Hawk-owl	LC	Sta			Y		
Sturnidae	*Pastor roseus*	Rosy Starling	LC	Unk				Y	
Sturnidae	*Sturnia pagodarum*	Brahminy Starling	LC	Unk				Y	
Sturnidae	*Sturnus vulgaris*	Common Starling	LC	Dec				Y	
Sulidae	Sula dactylatra	Masked Booby	LC	Dec					
Sulidae	*Sula sula*	Red-footed Booby	LC	Dec					

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Family	Scientific Name	Common Name	Red List Category (2022)	Pop Trend	CMS Appx I	CMS Appx II	Raptors MoU	AEMLAP	AEWA
Sylviidae	*Sylvia communis*	Common Whitethroat	LC	Inc		Y		Y	
Sylviidae	*Sylvia crassirostris*	Eastern Orphean Warbler	LC	Inc		Y			
Sylviidae	*Sylvia curruca*	Lesser Whitethroat	LC	Sta		Y		Y	
Sylviidae	*Sylvia mystacea*	Menetries's Warbler	LC	Sta		Y		Y	
Sylviidae	*Sylvia nana*	Asian Desert Warbler	LC	Sta		Y		Y	
Threskiornithidae	*Platalea leucorodia*	Eurasian Spoonbill	LC	Unk		Y			Y
Threskiornithidae	*Plegadis falcinellus*	Glossy Ibis	LC	Dec		Y			Y
Threskiornithidae	*Threskiornis aethiopicus*	African Sacred Ibis	LC	Sta		Y			Y
Threskiornithidae	*Threskiornis melanocephalus*	Black-headed Ibis	NT	Dec					
Troglodytidae	*Troglodytes troglodytes*	Northern Wren	LC	Inc				Y	
Turdidae	*Cochoa purpurea*	Purple Cochoa	LC	Dec		Y			
Turdidae	*Geokichla citrina*	Orange-headed Thrush	LC	Dec		Y		Y	
Turdidae	*Geokichla wardii*	Pied Thrush	LC	Dec		Y		Y	
Turdidae	*Grandala coelicolor*	Grandala	LC	Sta		Y			
Turdidae	*Turdus albocinctus*	White-collared Blackbird	LC	Unk		Y			
Turdidae	*Turdus atrogularis*	Black-throated Thrush	LC	Unk		Y			
Turdidae	*Turdus boulboul*	Grey-winged Blackbird	LC	Dec		Y			
Turdidae	*Turdus dissimilis*	Black-breasted Thrush	LC	Dec		Y			
Turdidae	*Turdus eunomus*	Dusky Thrush	LC	Unk		Y			
Turdidae	*Turdus feae*	Grey-sided Thrush	VU	Dec		Y		Y	
Turdidae	*Turdus iliacus*	Redwing	NT	Dec		Y		Y	
Turdidae	*Turdus merula*	Eurasian Blackbird	LC	Inc		Y		Y	
Turdidae	*Turdus obscurus*	Eyebrowed Thrush	LC	Unk		Y		Y	
Turdidae	*Turdus philomelos*	Song Thrush	LC	Inc		Y		Y	
Turdidae	*Turdus pilaris*	Fieldfare	LC	Sta		Y		Y	
Turdidae	*Turdus rubrocanus*	Chestnut Thrush	LC	Unk		Y			

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Family	Scientific Name	Common Name	Red List Category (2022)	Pop Trend	CMS Appx I	CMS Appx II	Raptors MoU	AEMLAP	AEWA
Turdidae	*Turdus ruficollis*	Rufous-throated Thrush	LC	Unk		Y		Y	
Turdidae	*Turdus torquatus*	Ring Ouzel	LC	Sta		Y		Y	
Turdidae	*Turdus unicolor*	Tickell's Thrush	LC	Unk		Y		Y	
Turdidae	*Turdus viscivorus*	Mistle Thrush	LC	Dec		Y		Y	
Turdidae	*Zoothera dauma*	Scaly Thrush	LC	Dec		Y		Y	
Turdidae	*Zoothera dixoni*	Long-tailed Thrush	LC	Unk		Y			
Turdidae	*Zoothera griseiceps*	Sichuan Forest Thrush	LC	Sta		Y			
Turdidae	*Zoothera monticola*	Long-billed Thrush	LC	Dec		Y			
Turdidae	*Zoothera salimalii*	Himalayan Forest Thrush	LC	Sta		Y			
Turnicidae	*Turnix tanki*	Yellow-legged Buttonquail	LC	Sta				Y	
Upupidae	*Upupa epops*	Common Hoopoe	LC	Dec				Y	
Zosteropidae	*Zosterops palpebrosus*	Indian White-eye	LC	Dec				Y	

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Annex 5. Overview of Working List of Internationally Important Sites for Migratory Birds by CAF range state

Country	No. of IBAs identified as Important Sites	No. of additional sites proposed through consultation	Working total no. of important sites
Afghanistan	14		14
Armenia	12	6	18
Azerbaijan	26		26
Bahrain	4		4
Bangladesh	13	3	16
Bhutan	15		15
British Indian Ocean Territory	2		2
China (mainland)	124		124
Georgia	7	29	36
India	407		407
Iran, Islamic Republic of	94		94
Iraq	25		25
Kazakhstan	126		126
Kuwait	6		6
Kyrgyzstan	11		11
Maldives	1		1
Mongolia	69		69
Myanmar	29		29
Nepal	27		27
Oman	29		29
Pakistan	38		38
Qatar	3		3
Russia	41		41
Saudi Arabia	135		135
Sri Lanka	145		145
Tajikistan	6		6
Turkmenistan	34		34
United Arab Emirates	18		18
Uzbekistan	49		49
Yemen	29		29
Total number of sites	**1,593**	**110**	**1,703**

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Annex 6. Working List of Important Sites for Migratory Birds in the CAF

Full list of all sites per county in a separate Excel File.

File name <CAF Situation Analysis Annex 6 Working List Important Sites 24Feb23.xlsx>

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Annex 7. Overview of information on sites/habitats of critically importance for migratory birds in the CAF

As per the national questionnaires

Country	National list or database of sites/habitats of critically importance for migratory birds	Critically important sites/habitats are officially designated as protected areas
Afghanistan	List provided, Band-i-Amir National Park, Wakhan National Park, Shah Foladi Natural Landscape, Bamyan Plato, Kol-i-Hashmat Khan Waterfowl Sanctuary, Nooristan Natural Forests, Dasht-i-Nawar Sanctuary, Darqad PA, Imam Sahib Tugai Forests, Mandahir Natural Forests, Admammad PA, Pozak and Sabiri Lakes, Dara-i-Noor PA, Panjpiran PA, Dahla Dame, Dawlat Shah Natural Forests, Azra Natural Forests, Rig-i-Rawan Landscape, and Shah Foladi Second Part (Maidan Wardak).	Wakhan National Park, Shah Foladi Natural Landscape, Bamyan Plato, Kol-i-Hashmat khan Waterfowl Sanctuary, Nooristan Natural Forests, Dasht-i-Nawar Sanctuary, Darqad PA, and Imam Sahib Tugai Forests.
Armenia	List on http://rbcu.ru/programs/78/27222/ and for forestry IBA https://hcvf.ru/ru/maps	only state PAs
Azerbaijan		
Bahrain	https://criticalsites.wetlands.org/en/countries/BHR?zoom=9&lat=25.9308716322733 8&lng=50.5496405374916&view=map	Hawar Islands, Arad Island, Tubli Bay, Jarem Islands, Areen protected Area, Buhair Valley
Bangladesh	The Department of Environment has declared Tanguar Haor and Sonadia Island Ecologically Critical Area. Other sites are Baikka Beel, Hakaluki Haor, Hail Haor, St.Martins Island, Muhuri Dam, Domarchar, Ganguirar Char, Thangar Char, Hatia Beach, NijhumDwip, JaijjarChar, Muktaria Channel, Inani beach, Patenga Beach, Choroil Beel, Bakor Ali, Godagari, Bidirpur, Premtoli, Godagari, Char Shajalal, Char Birbira, Char Kukri Kukri, Char Momutaz, Char Monpura North, Char Pial, Sonar Char, Khidirpur, Alatuli Char, Homar Char, Boyalmari Char, Khorchaka, Kajla Char and Pakhimara. The IBA list is old and has not been updated since 2012. eBird has a list of bird hotspots: https://ebird.org/region/BD/hotspots	Many important sites are not protected and not all Ecologically Critical Areas are recognized as protected areas. For example, Nijhum Dweep and Tanguar Hoar were declared a protected area by the government and a few others are being processed or listed as important areas (Baikka beel, Hakaluki Haor, Sonadia Island, St. Martins Island, Sonar Char, and Char Kukri Kukri). The UNEP-WCMC (2020) has a list of protected areas. Altadighi National Park, Bangabandhu Safari Park Cox Bazar, Bangabandhu Safari Park Gazipur, Baroiyadhala National Park, Barshijora Eco-Park, Bhawal National Park, Chadpai Wildlife Sanctuary, Char Kukri-Mukri Wildlife Sanctuary, Chunati Wildlife Sanctuary, Dhangmari Wildlife Sanctuary, Dudhmukhi Wildlife Sanctuary, Dudpukuria-Dhopachari Wildlife Sanctuary, Fasiakhali Wildlife Sanctuary, Hazarikhil Wildlife Sanctuary, Himchari National Park, Inani National Park, Kadigarh National Park, Kaptai National Park, Khadim Nagar National Park, Kuakata Ecopark, Lawachara National Park,Madhupur National Park, Madhutila Eco Park, Marine Reserve, Medhakachhapia National Park, Mirpur Botanic Garden,

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Country	National list or database of sites/habitats of critically importance for migratory birds	Critically important sites/habitats are officially designated as protected areas
		Nagarbari-Mohanganj Dolphin Sanctuary, Nawabganj National Park, Nazirganj Dolphin Sanctuary, Nijhum Dweep National Park, Pablakhali Wildlife Sanctuary, Rajeshpur Eco-Park, Ramsagar National Park, Rema-Kalenga Wildlife Sanctuary, Sangu Matamuhari, Satchari National Park, Shilanda-Nagdemra Dolphin Sanctuary, Singra National Park Sitakunda Eco-Park, Sonarchar Wildlife Sanctuary, The Sundarbans Sundarbans East Wildlife Sanctuary, Sundarbans South Wildlife Sanctuary, Sundarbans West Wildlife Sanctuary, Sundarbans Reserved Forest, Swatch of No Ground Marine Protected Area, Tanguar Haor Teknaf Game Reserve, Tengragiri Wildlife Sanctuary, Tilagor Eco Park.
Bhutan	Phobjikha, Khotokha, Gaytsa, Tang, Bumdeling, Lhamoizhingkha, Bajo, Longakhola, Toorsa Amochu, and Babesa Sewage Pond.	Bumdeling, Lhamouzhingkha, Longakhola, and Phobjikha (park buffer).
British Indian Ocean Territory	http://www.datazone.birdlife.org/site/results?cty=31&fam=0&gen=0	http://www.datazone.birdlife.org/site/results?cty=31&fam=0&gen=0
China	A list of important habitats is being formulated.	All important bird habitats in China have been designated as protected areas.
Georgia		
India	A list of sites prioritised in CAF National Action Plan in Annex 2. http://moef.gov.in/wp-content/uploads/2018/03/CAF_NAP_Final-with-CL.pdf ; http://datazone.birdlife.org/site/results?thrlev1=&thrlev2=&kw=&reg=2&cty=99&snm=&fam=0&gen=0&spc=&cmn=	Annex 5. Protected wetlands, wetland clusters and land bird sites prioritized for conservation of migratory birds in India under CAF-National Action Plan
Iran		
Iraq		
Kazakhstan	List of wetlands of intranational (Ramsar sites - 10 sites) and national importance (47); List of Important Bird Areas (127 sites)	39 IBAs are fully protected as PAs and hunting concessions
Kuwait		
Kyrgyzstan		
Maldives	Important sites such as the environmentally sensitive areas are listed by the Environment Protection Agency	
Mongolia	Important Bird Area (wscc.org.mn); There is a Ramsar database at the Ministry of Environment and Tourism	Of these, 18 areas are included in the Strictly Protected Area, 26 in the National Park, 20 in the Nature Reserve, and 8 in the Historical monuments (Nyambayar, Tseveenmyadag, 2009).

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Country	National list or database of sites/habitats of critically importance for migratory birds	Critically important sites/habitats are officially designated as protected areas
Myanmar	Davidson, N.C., McInnes, R.J. & Rodda, H.J.E. 2019. Conservation of biodiversity and improved management of protected areas in Myanmar: Provisional working list of Myanmar wetlands potentially qualifying as internationally important under the Ramsar Convention on Wetlands. Report to NWCD, Naw Pyi Taw, Myanmar. This report identifies up to 99 wetlands which may qualify for Ramsar designation, but not all are identified for migratory waterbirds. The report is not available for download, can be provided on request.	Myanmar has designated 6 Ramsar Sites, each of which qualifies for migratory waterbirds. All 6 are also designated as EAAFP Flyway Network Sites. These are: Nanthar Island & Mayyu Estuary Inlay Lake Indawgyi Meinmahla Kyun Gulf of Mottama Moeyungyi
Nepal	Important Birds and Biodiversity Area in Nepal are identified and published (Baral and Inskipp 2005). Biodiversity Profiles of Nepal produced by Department of National Parks and Wildlife Conservation. National Red List of Birds (2016; https://www.zsl.org/conservation/regions/asia/national-red-lists-of-nepals-birds-and-mammals). eBird's IBA hotspots https://ebird.org/hotspots Corridors and bottlenecks protected through different conservation projects such as Terai Arc Landscapes are also listed. A list of Ramsar sites is also available (Shrestha et al.2020).	All of Nepal's protected areas are listed as IBAs (Koshi Tappu Wildlife Reserve, Chitwan National Park, Jagdishpur Bird Sanctuary, Ghodaghodi Bird Sanctuary, Rara National Park, Suklaphata National Park, Bardia National Park, Langtang National Park, Sagarmatha National Park, Shey-Phoksundo National Park etc.). Some Ramsar sites are protected.
Oman	A general list for biodiversity, birds, and maps by the Environment Authority supervised by the Ministry of housing and urban planning.	more than 60% of important birds area considered as protected areas.
Pakistan	No database available. A system of protected areas including National Parks, Wildlife Sanctuaries, Game Reserves, Waterfowl Refuge, and Community-Managed Conservation Areas exist which provide safe habitat including for migratory species. All Ramsar sites, all barrages and headworks, and all prominent lakes across country. https://pakistandata.net/protected-areas-of-pakistan/ https://rsis.ramsar.org/sites/default/files/rsiswp_search/exports/Ramsar-Sites-annotated-summary-Pakistan.pdf?1566478226	Important habitat areas are designated as National Parks, Wildlife Sanctuaries, Waterfowl Refuge, Game Reserves and Community-Managed Conservation Areas which provide safe habitat for wildlife including migratory species. There are 19 Ramsar Sites in Pakistan which are important habitats for the migratory species.
Qatar	NA	https://www.protectedplanet.net/country/QAT
Russia	http://rbcu.ru/programs/78/27222/ and here for forestry IBA https://hcvf.ru/ru/maps	only state PA

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Country	National list or database of sites/habitats of critically importance for migratory birds	Critically important sites/habitats are officially designated as protected areas
Saudi Arabia		
Sri Lanka	http://datazone.birdlife.org/userfiles/file/IBAs/AsiaCntryPDFs/Sri_Lanka.pdf	18 sites are protected
Tajikistan		
Turkmenistan		
United Arab Emirates	Not aware of any centralised database, however the IBAs and KBAs inventory will provide some of this information	A majority of important sites within AD Emirate are covered within a network of 19 terrestrial and marine protected areas in the Emirate
Uzbekistan	No such list. IBAs exist but they don't have legal national status	
Yemen	http://datazone.birdlife.org/country/yemen/ibas	Socotra Island

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Annex 8. Migratory bird and habitat data management, analysis and use in the CAF

As per the national questionnaires

Country	Identification of important areas for designation and protection	Management (restoration) of Protected areas for migratory birds	Management (restoration) of Ramsar Sites for migratory birds	Management (restoration) of World Heritage site for migratory birds	Management (restoration) of Flyway Network sites	Management (restoration) of Important Bird Areas	Management (restoration) of Privately managed areas	Species Conservation Plans	National Reports to Conventions, Agreements, regional initiatives	National Biodiversity Strategies & Action Plans	Decisions concerning utilisation of migratory bird populations through a legalised hunting system
Afghanistan	-	Yes	No	No	No	No	No	No	Yes	Yes	No
Armenia	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-	-	-	-	-
Bahrain	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Bangladesh	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Partly
Bhutan	Partly-Yes	Yes	Yes	Partly	Partly	Yes	Partly	Yes	Partly	Yes	No
BIOT	-	-	-	-	-	-	-	-	-	-	-
China	Partly	Partly	Partly-Yes	Partly	Partly	Partly	Partly	Partly	Partly	Partly	Partly
Georgia	Partly	No	Partly	Partly	No	Partly	No	Partly	No	No	No
India	Partly	Partly	Partly	Partly	Partly	Yes	Partly	Yes	Partly	Partly	Partly
Iran	-	-	-	-	-	-	-	-	-	-	Yes
Iraq	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan	Yes	Partly	Partly	Partly		Partly	Partly	Partly	Partly	Partly	Yes
Kuwait	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kyrgyzstan	-	-	-	-	-	-	-	-	-	-	-
Maldives	Yes	Yes	No	No	No	Yes	No	Yes	Yes	Yes	No
Mongolia	Partly-Yes	Yes	Yes	Partly	Yes	Yes	Yes	Yes	Yes	Yes	No

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Country	Identification of important areas for designation and protection	Management (restoration) of Protected areas for migratory birds	Management (restoration) of Ramsar Sites for migratory birds	Management (restoration) of World Heritage site for migratory birds	Management (restoration) of Flyway Network sites	Management (restoration) of Important Bird Areas	Management (restoration) of Privately managed areas	Species Conservation Plans	National Reports to Conventions, Agreements, regional initiatives	National Biodiversity Strategies & Action Plans	Decisions concerning utilisation of migratory bird populations through a legalised hunting system
Myanmar	Yes	Yes	Yes	Partly-No	Yes	Partly-Yes	Partly-No	Yes	Yes	Partly-Yes	Yes
Nepal	Partly	Partly	Partly	Partly	No	Partly	No	Yes	Yes	Partly	No
Oman	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pakistan	Yes	Yes	Yes	Yes	Partly-Yes	Yes	Partly-Yes	Yes	Yes	Yes	Yes
Qatar	-	-	-	-	-	-	-	-	-	-	-
Russia	Yes	Partly	No	No	Partly	No	Yes	Yes	Partly	Partly	No
Saudi Arabia	Yes	-	No	No	Partly	Partly	Partly	Partly	Partly	Partly	Yes
Sri Lanka	Yes	Partly-Yes	Yes	Partly-Yes	Partly	Partly-Yes	Partly	Yes	Yes	Yes	Do not know
Tajikistan	-	-	-	-	-	-	-	-	-	-	-
Turkmenistan	Yes	Partly	Yes	NA	Yes	Partly	NA	Yes	Yes	Yes	Partly
United Arab Emirates	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Uzbekistan	Yes	Yes	Yes	Yes	Partly	Yes	No	Yes	Partly	Partly	Partly
Yemen	Partly	Partly	Partly	Partly	Partly	Partly	No	Partly	Partly	Partly	Partly
Yes	**14**	**12**	**12**	**7**	**6**	**11**	**6**	**16**	**13**	**12**	**8**
Partly	**5**	**7**	**5**	**8**	**8**	**7**	**6**	**5**	**8**	**8**	**6**
Yes-partly	**2**	**1**	**1**	**1**	**1**	**2**	**1**	**0**	**0**	**1**	**0**
No	**0**	**1**	**4**	**4**	**5**	**2**	**7**	**1**	**1**	**1**	**7**
Total	**21**	**21**	**22**	**20**	**20**	**22**	**20**	**22**	**22**	**22**	**21**
% Yes	**66.7**	**57.1**	**54.5**	**35.0**	**30.0**	**50.0**	**30.0**	**72.7**	**59.1**	**54.5**	**38.1**

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Annex 9. Summary of main threats to habitats important for migratory birds in the CAF

As per the national questionnaires

Country	Habitat loss/ destruction	Habitat degradation	Mineral exploration/ extraction	Sand mining from rivers	Unsustainable land/ resource use	Urbanization	Marine/ coastal debris (including plastics)	Other forms of solid or liquid pollution	Too much/too little water	Fire	Road/highway construction
Afghanistan	Severe	Moderate	Not known	Moderate	Severe	Moderate			Severe	Not known	Not known
Armenia	Moderate	Moderate	Severe	Severe	Moderate	Moderate	Severe	Moderate	Severe	Moderate	Moderate
Azerbaijan	-	-	-	-	-	-	-	-	-	-	-
Bahrain	Moderate	Moderate	Not known	Not known	Not known	Severe		Moderate	Not known	-	Severe
Bangladesh	Severe	Severe	Moderate	Low	Severe	Severe	Moderate-Severe	Severe	Severe	Low	Moderate
Bhutan	Moderate	Low	Low-Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low-Moderate
BIOT	Low	Low	Low	Low	Low	NA	Not known	Low	Low	Low	NA
China	Severe	Severe	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Severe	Moderate	Moderate
Georgia	Moderate	Moderate	-	Low	Moderate	Moderate	Moderate	-	Low	Low	Moderate
India	Severe	Severe	Not known	Severe	Severe	Severe	Not known	Not known	Severe	Not known	Not known
Iran	Severe	-	-	-	-	-	-	-	-	-	-
Iraq	Severe	Moderate	Low	Not known			Low	Low	Severe	Moderate	
Kazakhstan	Moderate	Moderate	Not known	Not known	Moderate	Moderate	Not known	Not known	Not known	Moderate	Not known
Kuwait	Severe	Severe	-	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-	-	-	-
Maldives	Not known	Not known	Not known	Not known	Not known	Not known	Not known	Not known			
Mongolia	Moderate	Moderate	Moderate	Low	Moderate	Low	NA	Not known	Moderate	Low	Low
Myanmar	Severe	Severe	Severe	Severe	Moderate-Severe	Moderate	Moderate	NA	Moderate	NA	Moderate
Nepal	Moderate	Moderate	Low	Moderate	Low	Moderate	NA	Moderate	Low	Moderate	Moderate

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Country	Habitat loss/ destruction	Habitat degradation	Mineral exploration/ extraction	Sand mining from rivers	Unsustainable land/ resource use	Urbanization	Marine/ coastal debris (including plastics)	Other forms of solid or liquid pollution	Too much/too little water	Fire	Road/highway construction
Oman	Severe	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Pakistan	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Severe	Severe	Moderate	Severe
Qatar	-	-	-	-	-	-	-	-	-	-	-
Russia	Moderate	Severe	Severe	Severe	Severe	Severe	Low	Moderate	Severe	Severe	Severe
Saudi Arabia	-	Low	Not known	Not known	Low	Moderate	Low	Moderate	Not known	Not known	Low
Sri Lanka	Severe	Severe	Low	Low	Moderate-Severe	Moderate	Moderate	Moderate	Low-Moderate	Low	Moderate
Tajikistan	-	-	-	-	-	-	-	-	-	-	-
Turkmenistan	Low	Moderate	Low	Low	Not known	Moderate	NA	Low	Moderate	Moderate	Low
United Arab Emirates	Low	Moderate	-	-	-	Moderate	Low	-	-	-	-
Uzbekistan	Low	Low	Moderate	Severe	Severe	Moderate	Moderate	Not known	Moderate	Low	Low
Yemen	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe	Moderate-Severe
Severe	**10**	**7**	**3**	**5**	**5**	**4**	**1**	**2**	**8**	**1**	**3**
Moderate-Severe	**2**	**2**	**2**	**2**	**4**	**2**	**3**	**1**	**1**	**1**	**1**
Moderate	**8**	**10**	**4**	**4**	**6**	**13**	**5**	**7**	**4**	**7**	**7**
Moderate-Low	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Low	**4**	**5**	**6**	**7**	**4**	**2**	**6**	**5**	**5**	**8**	**5**
Total	**24**	**24**	**16**	**18**	**19**	**21**	**15**	**15**	**19**	**17**	**17**

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Annex 10. Overall level of general awareness amongst major stakeholders in the CAF

As per the national questionnaires

Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat and migratory bird management	General urban adult population	General rural adult population	School and college children
Afghanistan	Low	Low	Low	Low	Low
Armenia	-	-	-	-	-
Azerbaijan	-	-	-	-	-
Bahrain	High	Mod	Mod	Mod	Mod
Bangladesh	Mod	Low	Low	Low	Low
Bhutan	Mod	Mod	Low	Low	Mod
BIOT	High	High	NA	NA	NA
China	High	High	Mod	Mod	Mod
Georgia	Low	Low	Low	Low	Low
India	Mod	Mod	Mod	Low	Low
Iran	-	-	-	-	-
Iraq	-	-	-	-	-
Kazakhstan	Mod	Mod	Low	Low	Low
Kuwait	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-
Maldives	High	Mod	Not known	Not known	Not known
Mongolia	Low	Low	Low	Low	Low
Myanmar	Mod	Mod	Mod	Low	Low
Nepal	Mod	Low	Low	Low	Low
Oman	High	High	Mod	Mod	low
Pakistan	High	High	Mod - Low	Low	Mod - Low
Qatar	-	-	-	-	-
Russia	Mod	Mod	Low	Low	Mod
Saudi Arabia	-	-	-	-	-
Sri Lanka	Mod	Mod	Low	Low	Low
Tajikistan	-	-	-	-	-
Turkmenistan	Mod	Low	Low	Low	Low
United Arab Emirates	Mod	Mod	High	-	Mod
Uzbekistan	Mod	Low	Low	Low	Low
Yemen	Mod	High	Low	Mod	Low
High	**7**	**5**	**1**	**1**	**1**
Moderate-High	**0**	**0**	**0**	**0**	**0**
Moderate	**12**	**10**	**6**	**4**	**5**
Moderate-Low	**0**	**0**	**0**	**0**	**0**
Low	**3**	**7**	**12**	**14**	**13**
Do not know	**0**	**0**	**1**	**1**	**1**
Total	**22**	**22**	**20**	**20**	**20**

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Annex 11. Summary of success of awareness raising activities implemented in the last three years

As per the national questionnaires

Country	Public awareness-raising campaigns	Teaching programmes in schools or colleges	Community-based celebrations, exhibitions and other events	Press & media publicity, including social media	Interpretation at nature visitor centres, reserves and other sites	Dissemination of special publications, information resources
Afghanistan	Strongly pos	Do not know	Do not know	Mod pos	Do not know	Do not know
Armenia	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-
Bahrain	Mod pos	Mod pos	Mod pos	Mod pos	Mod pos	Mod pos
Bangladesh	Mod pos	Strongly pos	Mod pos	Strongly pos	Mod pos	Slightly pos
Bhutan	Slightly pos-Strongly pos	Mod pos-Strongly pos; two each.	Mod pos	Strongly pos	Mod pos	Strongly pos
BIOT	NA	NA	NA	NA	NA	NA
China	Highly pos	Mod pos	Mod pos	Highly pos - Mod pos	Mod pos	-
Georgia	Slightly pos	Slightly pos	Slightly pos	Slightly pos	Slightly pos	Slightly pos
India	Mod pos	Mod pos	Mod pos	Mod pos	Mod pos	Slightly pos
Iran	-	-	-	-	-	-
Iraq	-	-	-	-	-	-
Kazakhstan	Do not know	Do not know	Do not know	Do not know	Do not know	Do not know
Kuwait	Highly pos	low	low	Mod pos	low	low
Kyrgyzstan	-	-	-	-	-	-
Maldives	Do not know	Do not know	Do not know	Do not know	Do not know	Do not know
Mongolia	Mod pos	Mod pos	Highly pos	Highly pos	Highly pos	Mod pos
Myanmar	Mod pos	Mod pos	Mod pos	Mod pos	Mod pos	Slightly pos
Nepal	Mod pos	Mod pos	Mod pos	Mod pos	Slightly pos	Mod pos
Oman	Mod pos	Mod pos	Slightly pos	Highly pos	No impact	Highly pos
Pakistan	Strongly pos	Strongly pos	Mod pos-Strongly pos	Slightly pos-Mod pos	Mod pos-Strongly pos	Mod pos-Strongly pos
Qatar	Highly pos	Highly pos	Highly pos	Highly pos	Highly pos	Highly pos
Russia	Highly pos	Mod pos	Mod pos	Highly pos	Mod pos	Mod pos
Saudi Arabia	-	Do not know	Do not know	Highly pos	Do not know	Do not know
Sri Lanka	Mod pos	Mod pos-Strongly pos; one each	Slightly pos-Strongly pos; one each	Strongly pos	Mod pos-Strongly pos; one vote each	Slightly pos-Strongly pos; one vote each
Tajikistan	-	-	-	-	-	-
Turkmenistan	Mod pos	Do not know	Highly pos	Do not know	Do not know	Do not know
United Arab Emirates	Strongly pos	Mod pos	-	Strongly pos	Strongly pos	-
Uzbekistan	Mod pos	Do not know	Do not know	Mod pos	Do not know	Do not know
Yemen	No impact	Slightly pos	Slightly pos	No impact	No impact	Slightly pos

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Annex 12. Overview of capacity of different stakeholders for migratory bird research in the CAF

As per the national questionnaires

Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat & migratory bird management	Research Institutions	Universities	Schools	NGOs	Volunteers / birding community	Local communities
Afghanistan	Mod	Low	Mod	Mod	Low	Low	Do not know	Low
Armenia	-	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-	-
Bahrain	Mod	Mod	Mod	Mod	Mod	Low	Low	
Bangladesh	Low	Low	Mod-High	Mod	Low	Mod-Low	Mod	Low
Bhutan	Mod	Low-Mod	Mod	Mod-Low	Low	Mod	Low	Low
BIOT	High	High	Mod	Low	Low	Low	Low	-
China	Low	Mod	High	Mod-High	High	Mod	Low-Mod	Mod
Georgia	Low	Low	Low	Mod	Do not know	High	Low	Low
India	Low	Low	High	Mod	Low	High	Low	Mod
Iran	-	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-	-
Kazakhstan	Low	Low	Mod	Low	Low	Mod	Low	Low
Kuwait	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-
Maldives	Low	Low	Mod	Mod	Low	Mod	Do not know	Low
Mongolia	Low	Low	Mod	Low	Low	High	Low	Low
Myanmar	Low	Low	Mod-Low	Mod-Low	Low	High	Low	Low
Nepal	Mod	Low	Mod	Mod-Low	Low	Mod	Mod-Low	Low
Oman	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Pakistan	Mod-High	Mod-High	Mod-High	Mod-High	Low	Mod-High	Mod	Mod
Qatar	-	-	-	-	-	-	-	-
Russia	Low	Low	Low	Mod	Low	Mod	Low	Low
Saudi Arabia	Mod	Mod	Do not know	Do not know	Do not know	Do not know	High	-
Sri Lanka	Low	Low		High	Low	Low	Mod	Low
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	Low	Low	Low	Do not know	Do not know	Low		
United Arab Emirates	Mod	High	-	Mod	-	-	-	-
Uzbekistan	Mod	Low	High	Low	Low	Mod	Mod	Low
Yemen	Mod-High	Mod	Mod	Mod	Low	Mod	Mod	Mod
High	**1**	**2**	**3**	**1**	**1**	**4**	**1**	**0**

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Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat & migratory bird management	Research Institutions	Universities	Schools	NGOs	Volunteers / birding community	Local communities
Moderate-High	2	1	2	2	0	1	0	0
Moderate	7	5	9	9	2	9	6	5
Moderate-Low	0	1	0	0	0	0	1	0
Low	11	12	3	4	14	3	8	11
Total	21	21	17	16	17	17	16	16

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Annex 13. Overview of capacity of different stakeholders to monitor migratory birds in the CAF

As per the national questionnaires

Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat and migratory bird management	Research Institutions	Universities	Schools	NGOs	Volunteers / birding community	Local communities
Afghanistan	Low	Low	Mod	Mod	Low	Low	Not known	Low
Armenia	-	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-	-
Bahrain	Mod	Mod	Mod	Mod	Mod	Low	Low	-
Bangladesh	Low	Low	Mod	Mod	Low	Mod	Mod	Low
Bhutan	Mod	Mod	Mod	Low	Low	Mod	Mod	Low
BIOT	High	High	Low	Low	Low	Low	Low	-
China	Mod	Low	High	Mod-High	High	Mod	Mod-High	Mod
Georgia	Low	Low	Low	Mod	Not known	High	Low	Low
India	Low	Mod	High	Mod	High	High	Mod	Mod
Iran	-	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-	-
Kazakhstan	Low	Low	Mod	Low	Low	Mod	Low	Low
Kuwait	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-
Maldives	Mod	Low	Mod	Mod	Low	Mod	Not known	Low
Mongolia	Low	Low	High	Low	Low	High	Low	Low
Myanmar	Low	Low	Mod-Low	Low	Low	Mod-High	High	Mod-Low
Nepal	Mod	Low	Mod	Mod	Low	Mod	Low	Low
Oman	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Pakistan	Mod-High	Mod-High	Mod	Mod	Low	Mod-High	Mod-High	Mod
Qatar	-	-	-	-	-	-	-	-
Russia	Low	Low	Low	Mod	Low	Mod	Low	Low
Saudi Arabia	Mod	Mod	Not known	Not known	Not known	Not known	High	-
Sri Lanka	Mod-Low	Mod-Low		High	Low	Low	High	Low
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	Low	Low	Low	Not known	Not known	Low	-	-
United Arab Emirates	Mod	High	-	Low	-	-	Mod	-
Uzbekistan	Mod	Low	High	Low	Low	Mod	Mod	Low
Yemen	Mod-High	Mod-Low	Mod-Low	Mod-Low	Low	Mod	Mod	Low
High	**1**	**2**	**4**	**1**	**2**	**3**	**3**	**0**

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Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat and migratory bird management	Research Institutions	Universities	Schools	NGOs	Volunteers / birding community	Local communities
Moderate-High	2	1	0	1	0	2	2	0
Moderate	9	5	9	10	2	10	7	4
Moderate-Low	1	2	2	1	0	0	0	1
Low	9	12	4	7	14	5	7	12
Total	22	22	19	20	18	20	19	17

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Annex 14. Overview of capacity of stakeholders to implement conservation action in the CAF

As per the national questionnaires

Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat and migratory bird management	Research Institutions	Universities	Schools	NGOs	Volunteers / birding community	Local communities
Afghanistan	Mod	Low	Mod	Mod	Low	Low	Not known	Low
Armenia	-	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-	-
Bahrain	High	Low	Low	Low	Low	Low	Low	-
Bangladesh	Low	Low	Mod	Mod	Low	Low	Low	Low
Bhutan	Mod	Mod	Mod	Low	Low	Mod	Low	Low
BIOT	High	High	Low	Low	Low	Low	Low	
China	Mod	Mod	Mod-High	Mod-High	High	Mod	Mod	Mod
Georgia	Low	Low	Low	Mod	Not known	High	Low	Low
India	Mod	Mod	Mod	Low	Low	Mod	Low	Mod
Iran	-	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-	-
Kazakhstan	Mod	Mod	Mod	Low	Low	Mod	Low	Low
Kuwait	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-
Maldives	Mod	Low	Mod	Mod	Low	Mod	Not known	Low
Mongolia	Low	Low	High	Low	Low	Mod-High	Low	Low
Myanmar	Mod-Low	Low	Mod-Low	Low	Low	Mod	Low	Mod-Low
Nepal	High	Low	Mod	Mod	Low	Mod	Low	Low
Oman	Low	Low	Low	Low	Low	Low	Low	Mod
Pakistan	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-
Russia	Low	Low	Low	Low	Low	Mod	Low	Low
Saudi Arabia	High	High	Not known	Not known	Not known	Not known	-	-
Sri Lanka	Mod-High	Mod-High	-	Mod-High	Low	High	Mod-High	Mod
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	Low	Low	Low	Not known	Not known	Low	-	-
United Arab Emirates	Mod	High	-	Not known	-	-	-	-
Uzbekistan	Mod	Low	High	Low	Low	Mod	Mod	Low
Yemen	Mod-High	Mod-Low	Mod-Low	Low	Low	High	High	High
High	**4**	**3**	**2**	**0**	**1**	**3**	**1**	**1**

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Country	National authorities responsible for habitat and migratory bird management	Local authorities responsible for habitat and migratory bird management	Research Institutions	Universities	Schools	NGOs	Volunteers / birding community	Local communities
Moderate-High	2	0	0	0	0	0	0	0
Moderate	8	0	0	0	0	0	0	0
Moderate-Low	1	0	0	0	0	0	0	0
Low	6	10	5	10	14	4	11	9
Total	21	13	7	10	15	7	12	10

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Annex 15. Overview of CMS resolutions addressing direct and indirect threats to migratory birds relevant for the CAF

Direct and Indirect Threats to migratory birds	**CMS resolutions**
● Loss of forests and grasslands; agricultural intensification and habitat modification through desertification and overgrazing	Res 11.17 (Rev.COP12) *Action Plan for Migratory Landbirds in the African-Eurasian Region (AEMLAP)*
● Conservation of coastal habitats	Res 12.25 *Promoting Conservation of Critical Intertidal and other Coastal Habitats for Migratory Species*
● Inappropriate wind turbine development	Res 11.27 (Rev.COP12) *Renewable Energy and Migratory Species*
● Collisions with power lines and electrocutions	Res 10.11 (Rev.COP12) *Powerlines and Migratory Birds*
● Illegal and/or unsustainable killing, taking and trade	Res 11.16 (Rev.COP12) *The Prevention of Illegal Killing, Taking and Trade of Migratory Birds*
● Overfishing and the bycatch of seabirds	Res 6.2, Recommendation 7.2, Resolutions 8.14, 9.18 and 10.14
● Lead shot and other poisoning	Res 11.15 (Rev.COP12) *Preventing Poisoning of Migratory Birds*
● Tackling Invasive alien species	Res 11.28 *Future CMS Activities related to Invasive Alien Species*
● Avian influenza and other disease	Res 8.27, 9.8 and 10.22 on Wildlife Disease
● Tackling Marine debris	Res 11.30 *Management of Marine Debris*
● Tackling artificial light pollution	Res. 13.5
● Tackling decline of insects	Res. 13.6

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Annex 16. Overview of international migratory bird frameworks that cover the CAF

Waterbird group and Frameworks	Priorities areas and number of listed actions (Time frame)	Implementing organisations/ partners
African Eurasian Migratory Landbirds Action Plan[39]	● Land-use changes – 27 ● Taking and trade and other threats – 24 ● Research And Monitoring -10 ● Education and information – 2 (Results expected within 9 years)	Range State governments, Range State conservation NGOs, International conservation NGOs, Research institutions, Development companies and agencies (e.g. agricultural and energy sectors), bodies of the Action Plan.
Raptors African Eurasian Raptors MOU	● Improvement of legal protection – 6 ● Protect and/or manage important sites and flyways – 4 ● Habitat conservation and sustainable management – 4 ● Awareness raising and measures – 6 ● Monitoring populations, research and taking action – 10 ● Supporting actions -4 (Seven years, following which a review would be undertaken and revised.)	Range State governments, Range State governments, Range State conservation NGOs, International conservation NGOs, Research institutions, Development companies and agencies, bodies of the Agreement.
Waterbirds AEWA Strategic Plan *2019-2027*	● Strengthen species conservation and recovery and reduce causes of unnecessary mortality – 6 ● Sustainable use/management of migratory waterbird populations – 6 ● Establish and sustain a coherent and comprehensive flyway network of protected areas and other sites – 5 ● Habitat conservation and management in the wider environment - 4 ● Strengthen knowledge, capacity, recognition, awareness and resources required – 6 (10 years, 2019-2027)	Range States, Secretariats and technical/scientific bodies of other MEAs and their projects/ programmes/ initiatives, notably those within the CMS Family, but also others, conservation NGOs, EAAFP, International conservation NGOs, Research institutions, universities, international hunting organisations, development organisations, bodies of the agreement.
CAF Waterbird Action Plan	● Species Conservation – 12	Range State governments, Range State conservation NGOs, MEAs, International

[39] Version 28 April 2014 *UNEP/CMS/Res.11.17 (Rev.COP13)/Rev.1/Annex*

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Waterbird group and Frameworks	Priorities areas and number of listed actions (Time frame)	Implementing organisations/ partners
	● Habitat Conservation and Management – 9 ● Management of Human Activities – 20 ● Training, Education and Public Awareness - 5 (3 year review cycle proposed)	conservation NGOs, universities, experts

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Annex 17. Overview of current international conservation action plans for migratory birds that cover the CAF

Species / group	Conservation plans	Implementation frameworks / mechanisms
Landbirds	All migratory landbirds AEMLAP	A Programme Of Work (PoW) for the Working Group (WG) of the African-Eurasian Migratory Landbirds Action Plan (AEMLAP) 2021-2026 has been developed to guide the work of implementation of the Action Plan[40]
	Yellow-breasted Bunting	Single Species Action Plan under preparation under AEMLAP
	Great Indian Bustard (2020)	Concerted Action under CMS[41]
	Bengal Florican (2020)	Concerted Action under CMS[42]
Waterbirds	All migratory waterbirds – - AEWA Strategic Plan and Action Plan	AEWA Technical Committee provides technical guidance to work of implementation of the Strategy & Action Plan.
	- CAF Action Plan (2006)	No mechanism exists to implement the CAF Action Plan
	- EAAFP Strategic Implementation Plan	EAAFP Technical Sub Committee provides technical guidance to its implementation
	Siberian Crane	MOU and Working Group
	Eurasian Spoonbill	
	Dalmatian Pelican	
	Lesser Flamingo	Working Group
	Sociable Lapwing	
	Spoon-billed Sandpiper	EAAFP Task Force
	White-headed Duck	
	Baer's Pochard	EAAFP Task Force
	Ferruginous Duck	
	Indian Skimmer	Prioritized for development of a single species action plan by COP13 decision.
Raptors	All migratory birds of prey (including owls) & vultures	Technical Committee, with a major review in 2020 and an update (Pritchard 2020).
	Vulture MsAP Strategic Implementation Plan (2020)[43]	
	Blueprint for the Recovery of South Asia's Critically Endangered Gyps Vultures[44]	
	Egyptian Vulture[45]	
	Cinereous Vulture[46]	
	Saker Falcon	Saker Falcon Task Force[47] to bring together Range States, Partners and interested parties, to develop a coordinated Global Action Plan, including a management and monitoring system.

[40] https://www.cms.int/sites/default/files/document/AEML%20WG%20POW%202021-2026%20Final%20version.pdf
[41] https://www.cms.int/sites/default/files/document/cms_cop13_ca.13.10_e.pdf
[42] https://www.cms.int/en/document/concerted-action-bengal-florican-houbaropsis-bengalensis-bengalensis
[43] https://www.cms.int/en/publication/vulture-msap-strategic-implementation-plan-report-implementation-date
[44] https://www.cms.int/en/publication/blueprint-recovery-south-asias-critically-endangered-gyps-vultures-save-blueprint
[45] https://www.cms.int/raptors/en/publication/flyway-action-plan-conservation-balkan-and-central-asian-populations-egyptian-vulture
[46] https://www.cms.int/raptors/en/publication/flyway-action-plan-conservation-cinereous-vulture-aegypius-monachus-cvfap
[47] https://www.cms.int/raptors/en/workinggroup/saker-falcon-task-force

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Annex 18. Legislation and policies for protection of migratory species in the CAF

As per the national questionnaires; information from some range states is not available.

Range state	Legislation and policies for protection of migratory species, with links and notes
Afghanistan	There is national legislation that is adequate for the protection of migratory birds,
Armenia	
Azerbaijan	
Bahrain	All wildlife is protected as per Law (2) of 1995 Regarding the Protection of Wildlife
Bangladesh	All bird species (resident and migratory) are protected by the Wildlife (Conservation and Security) Act, 2012.
Bhutan	Protection and management of migratory bird species is covered under national legislation and policies. Forest and Nature Conservation Act of Bhutan 1995. Prohibits the killing, hunting, and keeping of wildlife as pets: providing a measure of protection for all migratory bird species in the country.
BIOT	There are a number of generic wildlife protection measures (Ordinances and regulations) but they do not specify migratory species. They protect all species of bird from activities within the territory. There are no policies or national legislation that protect individual bird species.
China	The Law of the People's Republic of China on the protection of Wildlife, List of Wildlife under National key Protection, List of Nationally Protected Terrestrial Wild Animals with Important Ecological, Scientific and Social Values
Georgia	
India	All migratory species of birds have been accorded high protection level under Wild Life (Protection) Act of India, 1972. Latest amendment 2021 is expected to be notified.
Iran	Legislation includes detailed hunting and trapping regulations, which were used to define activities that are illegal there. In Iran, the hunting is well regulated.
Iraq	The Iraq government issued Law No. 17 of 2010 (Law of Protecting Wild Animals) to update and abolish an older law (Law No. 21 of 1979) but, as yet, is still working out the specific regulations and instructions that will implement the law. The law, which is composed of 23 articles and is provided in Annex 1, focuses on the regulation of hunting. Hunting of wildlife is not regulated thoroughly. The Iraqi national legislation relevant to wildlife protection and trade regulation has not been fully implemented.
Kazakhstan	
Kuwait	All killing of birds in this Kuwait is illegal. In 2014, Kuwait protected fauna and flora by passing New Environment Protection Law No 42
Kyrgyzstan	
Maldives	All migratory birds are protected under Environment Protection and Preservation Act of Maldives and Protected Species Regulation.
Myanmar	Most migratory birds are protected by the Conservation of Biodiversity and Protected Area Law of 2018.
Mongolia	Migratory birds are mainly protected by following legislation: Most migratory birds are protected by the Conservation of Biodiversity and Protected Area Law of 2018. Law on

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Range state	Legislation and policies for protection of migratory species, with links and notes
	Fauna legalinfo.mn. Mongolian Red Book, Mongolian Red List of Birds, Law on Fauna. https://1drv.ms/x/s!AkyEgLoGI6CImzxegwWrdveCq8Ed?e=6PJM2W,
Nepal	All bird species are protected by law. National Parks and Wildlife Conservation Act, 1973 lists nine species of birds with priority protection Tragopan satyra (Satyr Tragopan), Lophophorus impejanus (Danphe), Catreus wallichi (Cheer), Buceros bicornis (Great Hornbill), Houbaropsis bengalensis (Bengal Florican), Sypheotides indica (Lesser Florican), Grus antigone (Crane), Ciconia ciconia (White Stork) and C. nigra (Black Stork). https://dnpwc.gov.np/en/aves/.
Oman	Oman imposes strict penalties against those who hunt or smuggle animals as part of a national strategy to protect its flora and fauna. Ministerial Decision (101/2002) on the prohibition of hunting or killing or captured of wild animals and birds.
Pakistan	Detail of provincial/territorial wildlife laws of Pakistan is as under: 1.Azad Jammu and Kashmir Wildlife (Protection, Preservation, Conservation and Management) Act, 2014. https://law.ajk.gov.pk/assets/lawlibrary/2019-02-13-5c6464173753e1550083095.pdf [link doesn't work] 2. Balochistan (Wildlife Protection, Preservation, Conservation and Management) Act, 2014 https://www.cms.int/huemul/sites/default/files/document/cms_nlp_pak_act_XV_2014.pdf 37 waterfowl (max 10), 10 pheasants and grouses (max 3 to 15 depending on species), all pigeons and doves (max 5) during certain seasons. 3. Gilgit-Baltistan (Northern Areas) Wildlife Protection Act, 1975 https://www.cms.int/ruddy-headed-goose/sites/default/files/document/cms_nlp_pak_act_1975.pdf Some species are huntable and listed in Schedule I. 4. Islamabad Wildlife (Protection, Preservation, Conservation and Management) Ordinance, 1979 https://www.cms.int/ruddy-headed-goose/sites/default/files/document/cms_nlp_pak_ordinance_1979.pdf Some species are huntable and listed in Schedule I. 5. Khyber Pakhtunkhwa Wildlife and Biodiversity (Protection, Preservation, Conservation and Management) Act, 2015. https://www.cms.int/ruddy-headed-goose/sites/default/files/document/cms_nlp_pak_act_I_2015.pdf Huntable birds include 10 species of Anatidae, 3 species of Rallidae, 5 species of Charadriidae, 6 species of sandgrouse, all pigeons and doves, and 6 species of Pheasants, partridges and quails. 6. Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974 https://www.cms.int/ruddy-headed-goose/sites/default/files/document/cms_nlp_pak_act_II_1974.pdf 7. Sindh Wildlife Protection, Preservation, Conservation and Management Act, 2020 http://sindhlaws.gov.pk/setup/Publications/PUB-20-000055.pdf [link error]
Qatar	Law No. 4 of 2002 Regulation of the Hunting of Wild Animals including Mammals, Birds and Reptiles 4 / 2002 Until now no hunting and trapping legislation in place, just articles within the National Environmental law no.26 of 1995
Russia	https://docs.cntd.ru/document/565612496 Hunting rules https://docs.cntd.ru/document/901732262 Low on the rights of native communities

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Range state	Legislation and policies for protection of migratory species, with links and notes
	https://docs.cntd.ru/document/9011346 Low on fauna https://docs.cntd.ru/document/902167488 Low on hunting https://docs.cntd.ru/document/9010833 Low on PA
Saudi Arabia	
Sri Lanka	National Legislation cover protection for migratory species. The Fauna and Flora Protection Ordinance (FFPO) is the overarching law that protects migrants in Sri Lanka's political territory. It covers all the species reported in Sri Lanka including the species to be reported and discovered in the future.
Tajikistan	
Turkmenistan	
UAE	A Federal decree (Law No. 9) of 1983 'Regulating the Hunting of Birds and Animals' is another piece of legislation to protect migratory and resident birds. As per Article 1 of the law 'hunting, gathering or destruction of eggs' of land and seabirds is banned except for cormorants. Provisions for the protection of the country's marine environment are made in Federal Law No. 23 of 1999, regulating the exploitation, protection and development of marine biological resources, which indirectly also protect birds and in particular shorebirds and breeding seabirds. The Federal Law No. 11 of 2002 deals with the regulation and control of international trade in endangered species
Uzbekistan	The list of species of wild plants and vertebrates subject to state registration, accounting for the volume of their use and inclusion in the state cadastre of objects of flora and fauna dated 05/25/2020. The list contains, among other things, rare and endangered species of wild animals, hunting species, economically significant species and near-water and waterfowl that are not included in the categories of "rare" and "hunting" species. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan, dated 20.10.2014 No. 290 https://lex.uz/docs/2485767. Order of the Chairman of the State Committee of the Republic of Uzbekistan for Nature Protection, registered 02.05.2006, reg. number 1569 https://lex.uz/docs/1004486 Rules of hunting and fishing on the territory of the Republic of Uzbekistan http://old.regulation.gov.uz/ru/documents/120 The Law of the Republic of Uzbekistan on weapons dated 29.07.2019. No. ZRU-550 https://lex.uz/docs/4445290
Yemen	Until now no hunting and trapping legislation in place, just articles within the National Environmental law no.26 of 1995

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Annex 19. Legislation and management of legal hunting/taking of migratory species in the CAF

As per the national questionnaires. information from some range states is not available

Range state	Whether protection & management of migratory bird species are covered under national legislation and/or policies?	Whether there are existing national and local legislation measures adequate to protect migratory birds?	Is there a specific list of huntable migratory species?	Whether hunting quotas are set at sustainable levels for population /species?	Legal collection of eggs of migratory species for food or other purposes	Adequacy of regulation of hunting legislation ?	Adequacy of local enforcement of hunting legislation?	Adequacy of system for hunters to report their catch/ hunting bag and use of system by hunters?
Afghanistan	Yes	Yes	No	No	No	No	No	No
Armenia	Yes	No	Yes	Yes	No	Yes	No	No
Azerbaijan	-	-	-	-	-	-	-	-
Bahrain	Yes	No	No	No	No	Yes	Yes	No
Bangladesh	Yes	Yes	No	No	No	Yes	No	No
Bhutan	Yes	No	No	Yes-No	No	Yes	Yes	No
BIOT	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
China	Yes	No	No	-	No	Yes-No	No	No
Georgia	Yes	No	No	No	No	No	No	No
India	Yes	Yes	No	No	No	Yes	No	No
Iran	Yes	-	-	-	-	-	No	-
Iraq	Yes	Yes		No	yes	Yes	Yes	No
Kazakhstan	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Kuwait	Yes	Yes	Yes	No	No	No	No	No
Kyrgyzstan	-	-	-	-	-	-	-	-
Maldives	Yes	No	No	No	No	No	NA	-
Mongolia	Yes	No	Yes	No	No	Yes	No	No
Myanmar	Yes	Yes	No	No	No	No	No	No
Nepal	Yes	No	No	No	No	Yes-No	No	No
Oman	Yes	No	No	No	No	No	No	No
Pakistan	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Qatar	Yes	Yes					Yes	
Russia	Yes	Yes-No	Yes	No	Yes	No	Yes-No	Yes
Saudi Arabia	Yes	Yes	Yes	Yes	No	-	Yes	Yes
Sri Lanka	Yes	Yes	No	No	No	Yes	Yes	No
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	Yes	Yes	No	No	No	No	No	No
United Arab Emirates	Yes	-	No	Yes	Yes	-	-	-
Uzbekistan	Yes	Yes	No	Yes	Yes	No	No	NA
Yemen	No	No	Yes-No	No	yes	No	No	No
Totals - Yes	**26**	**14**	**6**	**7**	**7**	**11**	**9**	**4**
No	**1**	**10**	**17**	**16**	**18**	**10**	**15**	**18**

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Range state	Whether protection & management of migratory bird species are covered under national legislation and/or policies?	Whether there are existing national and local legislation measures adequate to protect migratory birds?	Is there a specific list of huntable migratory species?	Whether hunting quotas are set at sustainable levels for population /species?	Legal collection of eggs of migratory species for food or other purposes	Adequacy of regulation of hunting legislation?	Adequacy of local enforcement of hunting legislation?	Adequacy of system for hunters to report their catch/ hunting bag and use of system by hunters?
Yes-No	0	1	1	1	0	2	1	0
Total	27	25	24	24	25	23	25	22
Total Yes %	96.3	56.0	25.0	29.2	28.0	47.8	36.0	18.2

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Annex 20. Overview of responses of management practices being used to benefit migratory birds at protected areas in the CAF

As per the national questionnaires; information from some range states is not available

Country	Regulation of water levels to provide appropriate habitat conditions for the birds	Eradication or control of invasive species of plants and animals	Regulation of use of certain fish nets / tackle that can lead to bycatch of birds	Tourism activities (control on numbers, access to areas at certain times of year)	Control on selected sports within sensitive areas that are known to harm birds or disturb their daily activities[1]	Use of drones for filming at feeding, roosting or nesting areas	Seasonal restrictions on cattle grazing	Control on feral dogs or domestic cats
Afghanistan	Not known	Not known	No	Not known	No	No	Not known	No
Armenia	-	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-	-
Bahrain	Partly	Partly	Yes	Partly	Yes	No	No	Partly
Bangladesh	No	No	Partly	Partly	Partly	No	Partly	No
Bhutan	No	Yes	Partly	Yes	Partly	Yes	No	Partly
British Indian Ocean Territory	-	Yes	-	-	-	-	-	-
China	No	Partly	Partly	Partly	Partly	No	Partly	-
Georgia	No	No	Not known	Yes	Not known	Not known	Partly	No
India	Partly	Partly	Partly	Partly	Yes	Partly	Partly	No
Iran	-	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-	-
Kazakhstan	Partly	No	Yes	Partly	Partly	Not known	Partly	Partly
Kuwait	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-
Maldives	No	No	Yes	Partly	No	No	No	No
Mongolia	Partly	Partly	No	Partly	Partly	Partly	Partly	Partly
Myanmar	Partly	Partly	Partly	Partly	Partly	Partly	No	No
Nepal	No	Partly	Partly	No	No	Yes	No	No
Oman	-	-	Partly	Partly	Partly	-	-	-
Pakistan	Partly	Partly	Partly	Partly	Partly	No	No-Partly	No-Partly
Qatar	-	-	-	-	-	-	-	-
Russia	Partly	No	Yes	Yes	Yes	Yes	No	Yes
Saudi Arabia	Partly	Partly	Partly	Not known	Not known	Not known	Not known	Not known
Sri Lanka	Partly	Partly	Partly	Partly	No	Partly	Partly	No
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	-	-	-	-	-	-	-	-

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Country	Regulation of water levels to provide appropriate habitat conditions for the birds	Eradication or control of invasive species of plants and animals	Regulation of use of certain fish nets / tackle that can lead to bycatch of birds	Tourism activities (control on numbers, access to areas at certain times of year)	Control on selected sports within sensitive areas that are known to harm birds or disturb their daily activities[1]	Use of drones for filming at feeding, roosting or nesting areas	Seasonal restrictions on cattle grazing	Control on feral dogs or domestic cats
United Arab Emirates	Yes	Partly	Partly	-	Partly	No	Yes	Partly
Uzbekistan	No	Partly	Not known	No	No	No	Partly	No
Yemen	Partly	Partly	Yes	Partly	Yes	No	No	Partly
Yes	**1**	**2**	**5**	**3**	**4**	**3**	**1**	**1**
Partly	**10**	**12**	**11**	**12**	**9**	**4**	**8**	**6**
No-Partly	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
No	**7**	**5**	**1**	**2**	**4**	**8**	**7**	**8**
Do not know	**1**	**1**	**2**	**2**	**2**	**3**	**2**	**1**
Total	**19**	**20**	**19**	**19**	**19**	**18**	**19**	**17**

1 – Activities that may disturb birds include motor boats, jet skis, off road vehicles, wind surfing, parasailing and kite flying

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Annex 21. Legislation and policies relating to climate change in the CAF

Individual national policy documents under the UNFCCC and CBD can be found at the following registries:

- UNFCCC Nationally Determined Contributions (NDCs): https://unfccc.int/NDCREG
- UNFCCC National Adaptation Plans (NAPs): https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx
- UNFCCC Least Developed Countries (LDCs) National Adaptation Programmes of Action (NAPAs): https://unfccc.int/topics/resilience/workstreams/national-adaptation-programmes-of-action/napas-received
- UNFCCC National Communication (NC) submissions from Non-Annex I Parties: https://unfccc.int/non-annex-I-NCs
- UNFCCC NC submissions from Annex I parties: https://unfccc.int/NC8
- CBD National Biodiversity Strategic Action Plans (NBSAPs) and National Reports: https://www.cbd.int/nbsap/search/

For national legislation, confirmation of the status of each legislative process would be required to determine relevance. NDCs, NAPAs, NAPs, NCs, and NBSAPs need to be reviewed for further assessment regarding specific benefits to individual migratory species. However, climate mitigation and adaptation action will have systemic benefits for ecosystem function, with risks from specific actions, e.g., clearing intact habitat for mitigation infrastructure or monoculture plantations, destroying potentially endangered species.

Range state	Legislation and policies for climate change, with links and notes
Afghanistan	Submitted an NDC, NAP and NBSAP. The only known species conservation plan is for the Snow Leopard, none for migratory species.
Bahrain	Submitted an NDC, NC and NBSAP. A site management plan has been drafted for Hawar Island Protected Area.
Bangladesh	Submitted NDC, NAPA, and NBSAP. NDC includes some references to nature. The Bangladesh climate change Strategy and Action Plan (BCCSAP) was established in 2009. Plans for different protected areas (under consultations from external consultants) including but not limited to: Tanguar Haor Management Plan; Hakaluki Hoar Management Plan; Lawachara National Park Management Plan; Nishorgo Project Management plans for 5 PAs. Spoon-billed Sandpiper Conservation Action Plan is ongoing. Additional policies relating to climate and biodiversity and River Water Quality are available from the Ministry of Environment and Forest.
Bhutan	Submitted NDC, NAPA, and NBSAP. NDC includes reference to nature. Black-necked Crane Conservation Action Plan 2021-2024; Wildlife Habitat Management Plan Bhutan, 2022; CC adaptation plan for Protected Areas (site specific) under development.
China	Submitted NDC, NBSAP, Xinjiang Biodiversity Conservation Strategy and Action Plan, and Local wildlife protection and development planning.
BIOT	No legislation or policies identified

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Range state	Legislation and policies for climate change, with links and notes
Iraq	Submitted NDC and NBSAP
Iran	Submitted NDC and NBSAP
India	Submitted NDC, NBSAP, NC. Some states have included separate climate policies, e.g. Tamilnadu state has launched state climate change mission in 2022, and site management plan for the Himalayas.
Kazakhstan	Submitted NDC, NBSAP
Kuwait	Submitted NDC, NAP, and NBSAP. NDC includes some references to nature.
Maldives	Submitted NDC, NBSAP, and NAPA. There are some references to nature regarding adaptation. The Maldives Climate Change Policy Framework 2015 outlines full details. There are existing management plans for protected areas which are also important areas for migratory birds.
Mongolia	Submitted NDC, NAP, NBSAP, with further details outlined in The National Action Programme on Climate Change and the National Biodiversity Programme and Regional climate assessments have been published. The NDC has some reference to nature. Mongolia has also developed a National Program on the Protection of Very Rare and Rare Species and all of the protected areas have a biodiversity conservation management plan in place.
Myanmar	Submitted NDC, NAPA and NBSAP. NDC includes reference to nature.
Nepal	Submitted NDC, NAPA, NAP, NBSAP and has a Local Adaptation Plan for Action, National Environment Policy, National Forest Policy, and National Ramsar Strategy and Action Plan. NDC includes reference to nature. Site specific management plans for different national parks are available here and also include: Management plan for Jagadishpur Bird Sanctuary; Ghodhaghodi Lake Bird Sanctuary Integrated Basin Management; Plan of Lake Cluster of Pokhara Valley 2016, National Ramsar Strategy and Action Plan. Protected Area Management Plans, species conservation action plans. Other projects and documents include BCN's Darwin Initiatives project documents, Terai Arc Landscape Strategic Plan, Chitwan-Annapurna Linkage Strategic Plan, and Ghodaghodi Lake Management Master Plan.
Oman	Submitted NDC and NBSAP.
Pakistan	Submitted NDC, NAP currently under development, and NBSAP. NDC includes some reference to nature. Has specific climate legislation in place: Pakistan Climate Change Act, 2017. Other relevant national policies include the National Climate Change Policy, National Forest Policy: National Wildlife Policy under process.
Russia	Submitted NDC. NDC includes some reference to nature.
Sri Lanka	Submitted NDC, NAP, and NBSAP. NDC includes reference to nature. Sri Lanka has also set up a National Climate Change Panel attached to the Ministry of Environment
Turkmenistan	Submitted NDC with a NBSAP currently under development.
United Arab Emirates	Submitted NDC and NBSAP. NDC includes reference to nature. UAE has implemented a National Climate Change Plan of the UAE.
Uzbekistan	Submitted NDC and NBSAP. Has climate related legislation: Strategy of long-term use of non-irrigated dry lands of Uzbekistan, On ratification of Paris Agreement, On rangelands.

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Range state	Legislation and policies for climate change, with links and notes
Qatar	NDC . NDC only includes reference to nature for adaptation. Qatar has a long-standing commitment to addressing global environmental challenges. Qatar is an active partner in the international community's campaign to confront the climate crisis.
Yemen	Intended NDC (not submitted), NAPA. Relevant legislation includes: National Strategic Plan, Environmental Protection Law No. 95 of 1995, and Resolution 275 of 2000 to protect and divide the Socotra Archipelago into areas of protection and development. There has been poor implementation of all polices, legislation and planning due to war activities and security issues.

Information from some range states is not available

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Annex 22. Summary of priority actions related to legislation and policy to enhance the conservation of migratory birds in the CAF based on the national questionnaires

As per the national questionnaires; information from some range states is not available

Country	Review or update to strengthen current legislation and policies	Implementation and enforcement of legislation and policies	Awareness raising of existing legislation and policies	Migratory species considerations have been specifically integrated into national sectoral legislation (incl. energy, agriculture, forestry, climate policy)
Afghanistan		Moderate		
Armenia	Moderate	High	High	High
Azerbaijan	-	-	-	-
Bahrain	High	High	High	High
Bangladesh	Moderate	High	High	M-H
Bhutan	High	High	High	High
BIOT	High	-	-	-
China	Moderate	High	Moderate	Moderate
Georgia	Moderate	Moderate	Moderate	Moderate
India	Moderate	High	High	High
Iran	-	High	High	-
Iraq	-	-	-	-
Kazakhstan	Moderate	High	Moderate	High
Kuwait	-	-	-	-
Kyrgyzstan	-	-	-	-
Maldives	Moderate	High	High	High
Mongolia	Moderate	High	High	Moderate
Myanmar	High	High	High	High
Nepal	Moderate	Moderate	Moderate	Moderate
Oman	Moderate	Moderate	Moderate	
Pakistan	Moderate	High	High	Moderate
Qatar	-	-	-	-
Russia	Moderate	High	Moderate	High
Saudi Arabia	-	-	-	-
Sri Lanka	Moderate	High	Moderate	High
Tajikistan	-	-	-	-
Turkmenistan	Moderate	High	High	High
United Arab Emirates	High	Moderate	-	-
Uzbekistan	Moderate	Moderate	Moderate	High
Yemen	High	High	High	High
High	**6**	**16**	**12**	**12**
Moderate	**15**	**6**	**8**	**5**
Moderate-High	**0**	**0**	**0**	**0**
Total	**21**	**22**	**20**	**17**

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Annex 23. Summary of priority actions to enhance the conservation of migratory birds in the CAF

As per the national questionnaires; information from some range states is not available

Country	Reduction or elimination of illegal direct killing and taking	Reduction or elimination of bycatch (accidental killing in fish or other nets or fishing lines)	Collisions with man-made structures	Electrocution by powerlines	Mortality from other causes	Disturbance and disruption to migratory birds or their habitats, that affects their use of these areas.	Addressing habitat degradation/ destruction	Reducing scale of legal hunting take through improved regulation/ enforcement
Afghanistan	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	
Armenia	High	Moderate	Moderate	High	High	High	High	High
Azerbaijan	-	-	-	-	-	-	-	-
Bahrain	High	High	High	High	High	High	High	High
Bangladesh	High	Moderate	Moderate	Moderate	Moderate	High	High	High
Bhutan	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	High	Moderate
BIOT	NA	Moderate	-	-	-	High	High	NA
China	High	High-Moderate	Moderate	High	Moderate	High	High	Moderate
Georgia	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
India	High	Moderate	High	High	Moderate	High	High	High
Iran	-	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-	-
Kazakhstan	Moderate	Moderate	Moderate	High	Moderate	High	High	High
Kuwait	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-	-
Maldives	Moderate	Moderate	Moderate	NA	Moderate	Moderate	High	NA
Mongolia	High	Moderate	High	High	Moderate	High	High	High
Myanmar	High	High	High	High	Moderate	High	High	High

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Country	Reduction or elimination of illegal direct killing and taking	Reduction or elimination of bycatch (accidental killing in fish or other nets or fishing lines)	Collisions with man-made structures	Electrocution by powerlines	Mortality from other causes	Disturbance and disruption to migratory birds or their habitats, that affects their use of these areas.	Addressing habitat degradation/ destruction	Reducing scale of legal hunting take through improved regulation/ enforcement
Nepal	High	Moderate	High	High	High	High	High	NA
Oman	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Pakistan	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate-High	Moderate-High	High
Qatar	-	-	-	-	-	-	-	-
Russia	Moderate	Moderate	High	High	Moderate	High	High	High
Saudi Arabia	-	-	-	-	-	-	-	-
Sri Lanka	Moderate	Moderate	High	High	High	High	High	NA
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	High	Moderate	High	High		Moderate	Moderate	Moderate
United Arab Emirates	-	-	-	-	-	-	-	-
Uzbekistan	Moderate	Moderate	High	High	High	High	High	Moderate
Yemen	High	High	High	High	High	High	High	High
High	**10**	**3**	**10**	**13**	**6**	**14**	**16**	**10**
Moderate	**10**	**17**	**10**	**6**	**13**	**6**	**4**	**6**
Moderate-high	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**
NA (Not Applicable)	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**4**
Total	**21**	**20**	**20**	**20**	**19**	**21**	**21**	**20**

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Annex 24. Summary of priority actions to enhance conservation/management/restoration of important habitats for migratory birds in the CAF

As per the national questionnaires; information from some range states is not available

Country	Creation/update of a national list or database of sites/habitats of critically importance for migratory birds	Better enforcement of existing laws	Improved management of protected areas for migratory birds in the country	Strengthen capacity of stakeholders in enhancing management (incl. restoration) of protected areas	Improved management (incl. restoration) of OECMs	Strengthen capacity of stakeholders in enhancing management (incl. restoration) of OECMs	Ensure adequate resourcing to undertake conservation / management action
Afghanistan	High	High	High	High	High	High	High
Armenia	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-
Bahrain	High	High	High	High	High	High	High
Bangladesh	Moderate	High	High	Moderate-High	High	High	High
Bhutan	High	High	High	Moderate-High	High	Moderate-High	High
BIOT	-	-	-	-	-	-	-
China	High	High	High	High	High	High	High
Georgia	High	High	High	High	High	High	High
India	High	High	High	High	High	Moderate-High	High
Iran	-	-	-	-	-	-	-
Iraq	-	-	High	-	-	-	-
Kazakhstan	High	High	Moderate	Moderate	Moderate	Moderate	High
Kuwait	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-
Maldives	-	Moderate	High	Moderate-High	High	Moderate-High	High
Mongolia	High	High	High	Moderate-High	Moderate-High	High	High
Myanmar	-	-	-	-	-	-	-

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Country	Creation/update of a national list or database of sites/habitats of critically importance for migratory birds	Better enforcement of existing laws	Improved management of protected areas for migratory birds in the country	Strengthen capacity of stakeholders in enhancing management (incl. restoration) of protected areas	Improved management (incl. restoration) of OECMs	Strengthen capacity of stakeholders in enhancing management (incl. restoration) of OECMs	Ensure adequate resourcing to undertake conservation / management action
Nepal	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Oman	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Pakistan	Moderate	Moderate-High	Moderate-High	Moderate-High	Moderate	High	Moderate
Qatar	-	-	-	-	-	-	-
Russia	Moderate	High	High	High	-	Moderate-High	-
Saudi Arabia	-	-	-	-	-	-	-
Sri Lanka	High	High	Moderate	High	High	High	High
Tajikistan	-	-	-	-	-	-	-
Turkmenistan	High	Moderate	High	High	Moderate	-	-
United Arab Emirates	-	-	-	-	-	-	-
Uzbekistan	High	High	High	High	High	High	High
Yemen	High	High	High	High	High	High	High
High	**12**	**13**	**14**	**10**	**11**	**10**	**13**
Moderate	**5**	**4**	**4**	**3**	**5**	**3**	**3**
Moderate-high	**0**	**1**	**1**	**5**	**1**	**4**	**0**
Total	**17**	**18**	**19**	**18**	**17**	**17**	**16**
% high	70.6	72.2	73.7	55.6	64.7	58.8	81.3

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Annex 25. Summary of priority awareness-raising related actions to enhance conservation of migratory birds and important habitats in the CAF

As per the national questionnaires; information from some range states is not available

Country	Awareness raising	Building/strengthening capacity to implement awareness raising programmes	Access to information materials to support development of awareness raising tools and resources	Ensuring adequate resourcing to implement awareness actions for migratory birds and their habitats at local and national level	Identifying innovative financing to support awareness raising activities, including from the private sector
Afghanistan	High	High	High	High	High
Armenia	-	-	-	-	-
Azerbaijan	-	-	-	-	-
Bahrain	High	High	High	High	High
Bangladesh	High	High	High	High	High
Bhutan	High	High	High	High	High
BIOT	-	-	-	-	-
China	High	High	High	High	High
Georgia	High	High	High	High	High
India	High	High	Moderate	High	High
Iran	-	-	-	-	-
Iraq	High	-	-	-	-
Kazakhstan	High	High	High	High	High
Kuwait	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-
Maldives	High	Moderate	Moderate	High	High
Mongolia	High	Moderate-High	Moderate-High	Moderate-High	Moderate-High
Myanmar	High	High	High	High	High
Nepal	Moderate	Moderate	High	High	High
Oman	Moderate	Moderate	Moderate	Moderate	Moderate
Pakistan	High	Moderate-High	Moderate-High	Moderate-High	Moderate
Qatar	-	-	-	-	-
Russia	-	High	Moderate	High	High
Saudi Arabia	-	-	-	-	-
Sri Lanka	High	High	High	High	High
Tajikistan	-	-	-	-	-
Turkmenistan	High	Moderate	Moderate	High	Moderate
United Arab Emirates	-	-	-	-	-
Uzbekistan	High	High	High	High	High
Yemen	High	High	High	High	High
High	**17**	**13**	**12**	**16**	**15**

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Country	Awareness raising	Building/strengthening capacity to implement awareness raising programmes	Access to information materials to support development of awareness raising tools and resources	Ensuring adequate resourcing to implement awareness actions for migratory birds and their habitats at local and national level	Identifying innovative financing to support awareness raising activities, including from the private sector
Moderate	**2**	**4**	**5**	**1**	**3**
Moderate-high	**0**	**2**	**2**	**2**	**1**
Total	**19**	**19**	**19**	**19**	**19**
% high	89.5	68.4	63.2	84.2	78.9

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Annex 26. Summary of priority capacity building actions to enhance conservation of migratory birds and important habitats in the CAF

As per the national questionnaires; information from some range states is not available

Country	Better use of existing knowledge/ information on migratory strategies, habits and movements of migratory birds to support national planning	Enhancing knowledge/ information on migratory strategies, habits and movements of different migratory birds in the country	Enhancing monitoring of migratory birds	Strengthen capacity of stakeholders to enhance knowledge on migratory birds and their habitats	Strengthen capacity of stakeholders to enhance conservation / management action for migratory birds	Ensure adequate resourcing to undertake research and monitoring of migratory birds and their habitats	Ensure adequate resourcing to undertake conservation / management action for migratory birds and their habitats
Afghanistan	High	High	High	High	High	High	High
Armenia	-	-	-	-	-	-	-
Azerbaijan	-	-	-	-	-	-	-
Bahrain	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Bangladesh	High	Moderate	High	High	Moderate-High	High	High
Bhutan	High	High	High	High	High	High	High
British Indian Ocean Territory	-	-	-	-	-	-	-
China	High	High	Moderate	Moderate-High	Moderate-High	Moderate	Moderate-High
Georgia	High	Moderate	Moderate	High	High	-	-
India	High	High	High	High	High	High	High
Iran	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-
Kazakhstan	High	High	High	High	High	High	High
Kuwait	-	-	-	-	-	-	-
Kyrgyzstan	-	-	-	-	-	-	-
Maldives	Moderate	High	High	Moderate-High	Moderate	High	High
Mongolia	High	High	High	High	High	High	High
Myanmar	High	High	High	Moderate-High	Moderate-High	High	High
Nepal	High	High	High	Moderate-High	High	High	High
Oman	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Pakistan	High	High	Moderate-High	Moderate-High	Moderate-High	Moderate-High	Moderate-High
Qatar	-	-	-	-	-	-	-
Russia	High	High	High	Moderate	Moderate	High	High
Saudi Arabia	-	-	-	-	-	-	-
Sri Lanka	High	High	High	Moderate-High	Moderate-High	High	High
Tajikistan	-	-	-	-	-	-	-
Turkmenistan	High	High	High	Moderate-High	-	High	High

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Country	Better use of existing knowledge/ information on migratory strategies, habits and movements of migratory birds to support national planning	Enhancing knowledge/ information on migratory strategies, habits and movements of different migratory birds in the country	Enhancing monitoring of migratory birds	Strengthen capacity of stakeholders to enhance knowledge on migratory birds and their habitats	Strengthen capacity of stakeholders to enhance conservation / management action for migratory birds	Ensure adequate resourcing to undertake research and monitoring of migratory birds and their habitats	Ensure adequate resourcing to undertake conservation / management action for migratory birds and their habitats
United Arab Emirates	-	-	-	-	-	-	-
Uzbekistan	High	High	High	High	High	High	High
Yemen	High	High	High	High	High	High	High
High	**16**	**15**	**14**	**9**	**9**	**14**	**14**
Moderate	**3**	**4**	**4**	**3**	**4**	**3**	**2**
Moderate-high	**0**	**0**	**1**	**7**	**5**	**1**	**2**
Total	**19**	**19**	**19**	**19**	**18**	**18**	**18**

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Annex 27. Summary of priority international cooperation actions to enhance conservation of migratory birds and important habitats in the CAF

As per the national questionnaires; information from some range states is not available

Country	Initiate / implement international cooperative actions to achieve conservation of migratory birds and their habitats at local and national level	Build/strengthen capacity of national agencies to engage in international agreements/initiatives	Build/strengthen capacity of stakeholders to engage in migratory bird and habitat related research, monitoring and conservation actions implemented through international agreements or co-operative programmes
Afghanistan	High	High	High
Armenia	-	-	-
Azerbaijan	-	-	-
Bahrain	Moderate	Moderate	Moderate
Bangladesh	High	Moderate-High	Moderate-High
Bhutan	High	High	High
BIOT	-	-	-
China	High	High	High
Georgia	High	High	High
India	High	High	Moderate
Iran	-	-	-
Iraq	High	-	High
Kazakhstan	High	High	Moderate-High
Kuwait	-	-	-
Kyrgyzstan	-	-	-
Maldives	High	High	High
Mongolia	High	High	High
Myanmar	High	High	Moderate-High
Nepal	High	High	High
Oman	Moderate	Moderate	Moderate
Pakistan	Moderate-High	High	Moderate-High
Qatar	-	-	-
Russia	High	Moderate	High
Saudi Arabia	-	-	-
Sri Lanka	High	High	High
Tajikistan	-	-	-
Turkmenistan	High	High	Moderate-High
United Arab Emirates	Moderate	High	High
Uzbekistan	High	High	High
Yemen	High	High	High
High	**17**	**16**	**13**
Moderate	**3**	**3**	**3**
Moderate-high	**1**	**1**	**5**
Total	**21**	**20**	**21**
%high	**81.0**	**80.0**	**61.9**