

Global Action Plan for the Conservation of the Steppe Eagle (*Aquila nipalensis*) (2026-2035)



Halt and reverse the decline of Steppe Eagles by delivering innovative actions in science-based conservation and community engagement across its whole range.

Jenny Weston, Umberto Gallo-Orsi, Márton Horváth, Igor Karyakin, Suresh Kumar, Elvira Nikolenko, Martin Odino and Mohammed Shobrak

Final Technical Draft, December 2025



Table of Contents

Executive Summary	4
Introduction	5
Species Overview	5
Conservation Action Framework	11
Threat Assessment.....	21
Evidence of mortality.....	22
Energy Infrastructure	23
Secondary poisoning & environmental contaminants	24
Illegal Killing, Taking and Trade (IKB)	26
Environmental change & resource dynamics	27
Other localised or emerging threats.....	28
Plan development and governance	28
References	30
Annexe 1 – Technical Annexes.....	37
Annexe 1.1 Contributors and Working Group	37
Annexe 1.2 Abbreviations	38
Annexe 1.3 Legend to data tables.....	39
Annexe 2 – Regional Action Prioritisation	40
Annexe 3 – Key sites for the conservation of Steppe Eagle.....	47
Annexe 4 – Population size and trend for countries/territories within the range of Steppe Eagle	61
Annexe 4a. Breeding Population Status and Trends.....	61
Annexe 4b. Non-breeding Population Status and Trends.....	62
Annexe 5 – Legal protection status of Steppe Eagle in countries/territories across its range.....	68

Geographical scope

This Global Action Plan applies to the following 62 countries and territories, which are considered range states of the Steppe Eagle

Breeding

China, Kazakhstan, Mongolia, Russian Federation, Türkiye, Uzbekistan

Non-breeding

Central Asia and Europe¹ Afghanistan, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine

Middle East and North Africa Bahrain, Egypt, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen

South and Southeast Asia Bangladesh, Bhutan, India, Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Thailand

Sub-Saharan Africa Angola, Botswana, Burundi, Democratic Republic of Congo, Djibouti, Eritrea, Eswatini, Ethiopia, Kenya, Malawi, Namibia, Rwanda, Somalia, South Africa, South Sudan, Sudan, Tanzania, Uganda, Zambia, Zimbabwe

Suggested citation

Weston, J., Gallo-Orsi, U., Horváth, M., Karyakin, I., Kumar, S., Nikolenko, E., Odino, M. and Shobrak M. 2025. Global Action Plan for the Conservation of the Steppe Eagle (*Aquila nipalensis*) (2026-2035). RSPB, Raptors MOU, Abu Dhabi, 73pp.

Disclaimer

Opinions, findings, conclusions and recommendations expressed in this publication do not necessarily reflect the official policy of CMS. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of CMS or the Raptors MOU concerning the legal status of any state, territory, city or area, or of its authorities, or concerning the delimitation of their frontiers and boundaries. Links to resources outside this document are provided as a convenience and for informational purposes only and should not be construed as an endorsement or approval by CMS or the Raptors MOU of information provided through other sites and computer systems.

¹ Included within the Breeding Range threat assessment and action framework (for applicable actions not related to monitoring breeding or increasing productivity)

Executive Summary

The Steppe Eagle, once considered the world's most common large raptor and found across the Western Palearctic steppe and grasslands, has suffered severe declines of around 50% over three generations throughout its range. Listed as *Endangered* by the IUCN since 2015 and included in CMS Appendices I and II, the species is now estimated to number fewer than 30,000 breeding pairs worldwide. From its breeding stronghold in Kazakhstan and other Central Asian countries, Steppe Eagles migrate long distances to wintering grounds in the Middle East, Sub-Saharan Africa, and South and Southeast Asia. Urgent international cooperation is required to halt and reverse this global decline.

Key threats facing the Steppe Eagle are present in all regions, but the level of impact varies geographically. These threats are:

- **Energy Infrastructure:** Electrocution and collision with unsafe powerlines and windfarms are major causes of mortality and considered a primary driver of the decline.
- **Illegal Killing, Take & Trade (IKB):** Hunting, trapping, and trade (including online markets) persist across the range, particularly in the Middle East, North Africa and Southeast Asia.
- **Poisoning & Contaminants:** Exposure to pesticides and other toxic contaminants such as NSAIDs, heavy metals, and unsafe carcass disposal threatens survival.
- **Habitat Loss & Environmental Change:** Changing prey populations, land-use change, and climate-driven shifts are reducing breeding success.

The vision of this plan is to *Halt and reverse the decline of Steppe Eagles by delivering innovative actions in science-based conservation and community engagement across its whole range*. Six Strategic Goals have been developed to tackle each of the key threats, in addition to addressing knowledge gaps, to inform conservation action across the species' global range and to ensure the support and effective implementation of the plan:

1. **Reduce the impact of energy infrastructure on Steppe Eagles along the flyway**
2. **Reduce significantly mortality due to impact of legal and illegal take and trade**
3. **Understand and reduce the impact of unintentional poisoning on Steppe Eagle populations**
4. **Attain good quality habitats that support populations of Steppe Eagle across the species' range**
5. **Address key knowledge gaps on Steppe Eagle distribution, movement, and threats through increased collaboration and coordinated research, to inform conservation action across their global range**
6. **Ensure endorsement and effective implementation of the Steppe Eagle GAP across all range states through outreach with key communities and all major stakeholders**

These Goals underpin the 49 actions necessary to tackle the main threats to the species through science-based interventions targeting key parts of the species' life cycle or spatial hotspots, with long-term research, monitoring and engagement enabling this process. The Conservation Action Framework is prioritised to reflect the relative urgency of each action, with expected timescales, key stakeholders and dependencies detailed.

This plan provides the framework for coordinated global action to ensure the survival of one of the most iconic raptors of the Central Asian and East African-Eurasian Flyways.

Introduction

The Steppe Eagle (*Aquila nipalensis*) is a large migratory raptor of Western Palearctic steppe and grasslands and a flagship of the Central Asian and East African-Eurasian Flyways. Once considered the most common large raptor (McGrady et al. 2021), declines have been seen across almost all of its range, and this has become a focus of international collaboration and conservation effort as is presented here in this Global Action Plan. Considered Endangered since 2015 (last assessed in 2021) (IUCN, 2021), Steppe Eagle is listed in Convention on Migratory Species (CMS) Appendix I and II and classified as Category 1 under the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MOU).

A call for international cooperation came at the III Eagles of the Palearctic Conference in Kazakhstan and, the Almaty Declaration (BRCC, 2023), highlighted the urgent need to a Global Action Plan for the Species. At the 14th meeting of the Conference of the Parties to CMS (CMS COP14) in February 2024, this urgent need for international cooperation and for the development of a Global Action Plan for the species was noted. [Resolution 12.12 \(Rev.COP14\)](#) and [Decision 14.145 on Action Plan for Birds](#) encouraged Parties and non-Parties, intergovernmental organizations and nongovernmental organizations, and other relevant stakeholders to make rapid progress in the development of a Single Species Action Plan, to be endorsed by CMS COP15 in early 2026. For migratory raptors, such as Steppe Eagle, international cooperation is of particular importance. Collaboratively designed and adopted international action plans provide a framework for state and non-state actors across range states to work together to improve a species' conservation status (Lees et al. 2021; McClure et al. 2018).

Species Overview

Previously considered a single species, Steppe Eagle was split from Tawny Eagle (*Aquila rapax*) at the turn of the century (Clark 1992; Sangster et al. 2002). Two subspecies are recognised: *A. n. nipalensis*, found in the eastern part of the breeding range and generally wintering in South and Southeast Asia; and *A. n. orientalis*, which breeds in the western part of the breeding range and generally winters in the Middle East, Arabia and East and Southern Africa. Satellite tracking has revealed that some individuals from the same part of the range will use wintering areas in different continents, including the same individuals in subsequent years (McGrady et al., 2021). The plumage and size variation between *A. n. nipalensis* and *A. n. orientalis* is clinal across the range, with the eastern individuals being slightly larger in size (Clark, 2005). Genetic analysis has supported that there is no significant difference between the subspecies and that Steppe Eagle can be considered monotypic (Karyakin, Zinevich, et al., 2016), for which reason we consider this action plan to be appropriate for the species as a whole.

One of the 'booted eagles', plumage changes as individuals mature over 5-7 years; juveniles are light brown with a characteristic white continuous band of underwing coverts which is gradually moulted to the brown adult plumage which is uniform but mottled (Cramp & Simmons 1980; Forsman 2016; Meyburg et al. 2020).

The most recent published world population estimate is 50,000 – 75,000 mature individuals, which equates to 31,372 (26,014 – 36,731) pairs (IUCN, 2021). However, this figure is from 2015, and at this time the population was considered to have declined by at least 50% over three-generations (i.e. 42 years (Bird et al. 2020)), so it is reasonable to assume that the current world population is likely now

30,000 pairs or less, with observations from the field confirming further declines (Pulikova et al. 2023).

Life cycle

Steppe Eagles have a wingspan of 174-260cm and weigh 2.5-4.8kg as fully grown adults, with females the slightly larger and heavier sex (Cramp & Simmons, 1980; Meyburg et al., 2020). Pairs form on the breeding grounds in the spring when returning from their spring migration, with incubation dates starting mid-April in the west and late May at higher altitudes in the Altai Mountains (Mitrofanov, 2015). Individuals and pairs appear to return to breed in the same areas each year, often to the same nest site. Laying 1-4, they incubate for 45 days on platform stick nests which are generally constructed on the ground or small rocky outcrops, although pylons, small trees, and haystacks are also used (Karyakin, Kovalenko, Barashkova, et al., 2016; McGrady et al., 2021; Meyburg et al., 2020). Young are dependent for 55-65 days (Meyburg et al., 2020), tended by both parents, and become independent after approximately 11 weeks (Cramp & Simmons, 1980). Both hatching and fledging success are strongly affected by food availability (Karyakin et al., 2023; Sundev et al., 2012). Post-fledging dependence on the natal territory lasts for 30-82 days (Karyakin et al., 2019) until juveniles begin migration, followed by post-breeding adults, with sub-adults and non-breeders leaving prior (McGrady et al., 2021; Subedi et al., 2017).

Sub-adult birds will return to the breeding range (although not necessarily the natal area) before reaching breeding age, prospecting a wide area in both the breeding range and along the flyway before reaching maturity (Karyakin et al., 2023; McGrady et al., 2021). Steppe Eagles typically reach sexual maturity at five years of age.

The IUCN Red List assesses changes in population size or range over a period of three generations. For the Steppe Eagle, generation length has been estimated using different methods, yielding values of 12.9 years (Bird et al., 2020). The IUCN Red List assesses changes in population size or range over a period of three generations. For the Steppe Eagle, generation length has been estimated using different methods, yielding values of 12.9 years (International, 2025). There are concerns that the generation length of Steppe Eagle is shorter than these models suggest; however, until more life history data is available it is not possible to refine these estimates further.

Breeding range

Steppe Eagles are birds of open habitats from Eastern Europe through Central Asia to East Asia (Figure 1). Kazakhstan is the stronghold of breeding Steppe Eagles, with 68-82% of the global population (Karyakin et al. 2018). Pulikova et al. (2023) provided the most recent national estimate as 16,750 – 28,070 pairs, which indicates a >10% decline in five years. Other key range states are Russian Federation [2,500 – 3,700 pairs, estimated by Karyakin et al. (2016)], Mongolia [1500-2000 pairs, (Bold & Boldbaatar 1999)] and China [400-600 pairs, Karyakin et al. (2016)].

Previously the breeding range extended into SE Europe and Ukraine and into western China (Dementiev 1951), but the previously wide range has contracted significantly (see map of historical range). Breeding in Europe has declined over the past four decades, with the exception of a newly discovered satellite breeding population in Türkiye confirmed in the mid-2010s (Horváth et al. 2018; Horváth et al. 2023; Horváth et al. 2022), although this population has potentially been present yet undetected for some time. Breeding has ceased in Romania, Moldova, Bulgaria (last recorded breeding in the 1940s) and Ukraine (last recorded breeding in the 1980s, although dispersing immature birds regularly recorded (Angelov 2015; Cramp & Simmons 1980).

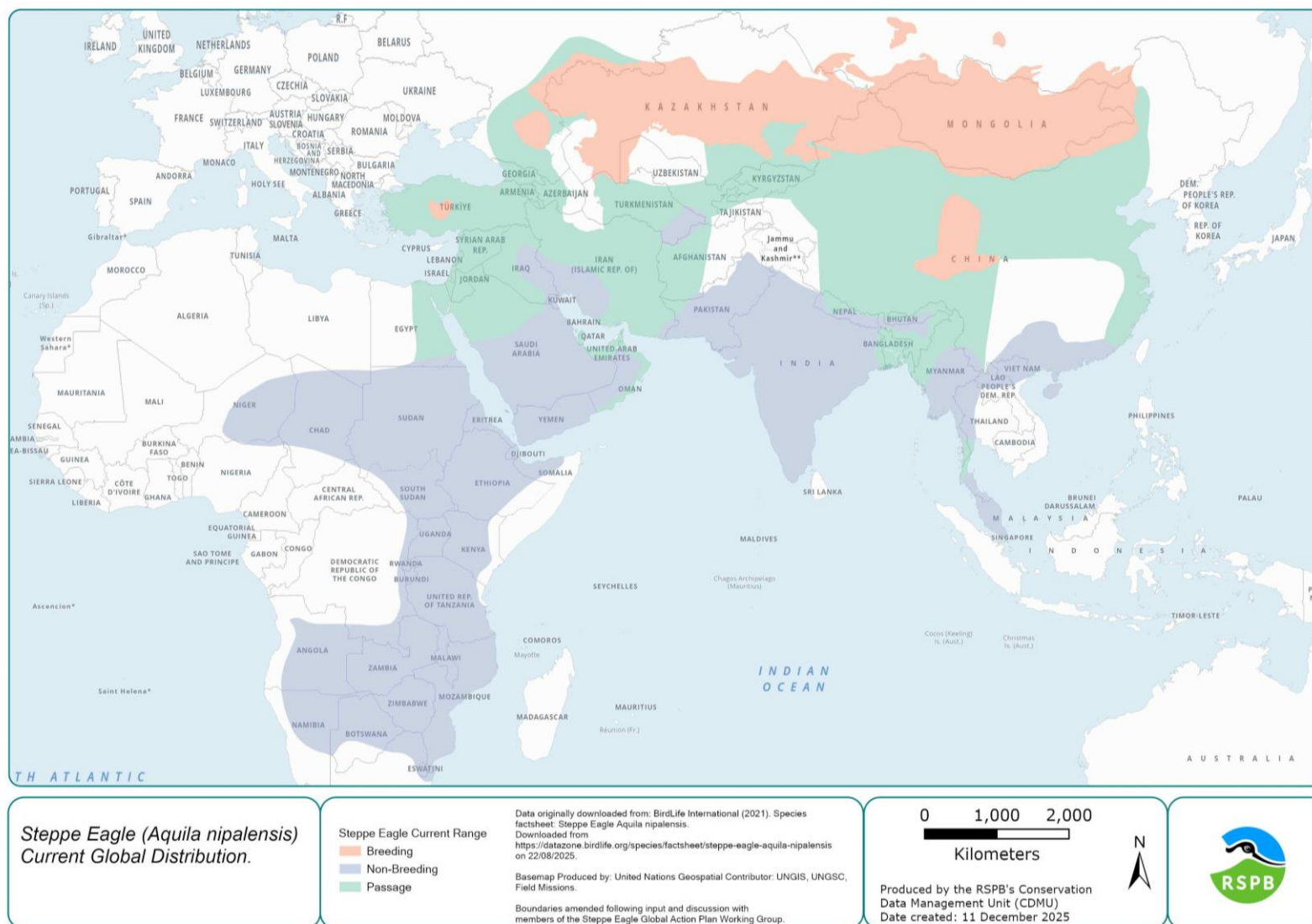


Figure 1 - Map of breeding (red), passage (green) and non-breeding (blue) range of Steppe Eagle

Migratory and non-breeding range

Some individuals remain within the borders of the breeding range year-round, associated with good resources such as a rubbish dump in south-east Kazakhstan (McGrady et al. 2021) and areas of Mongolia with high rodent densities (Bold & Boldbaatar 1999), but the vast majority of birds migrate annually. Migration follows a number of corridors from the breeding range into wintering areas (Batbayar & Lee 2017; McGrady et al. 2021; Pande et al. 2013) (Figure 1). Many juvenile birds (of all taxa) spend longer migrating show lower survival on their first migration (Newton, 2008), with inexperience playing an important factor, highlighted by juvenile Steppe Eagles being attracted to anthropogenic habitats (and potentially higher risks) and sub-adults and adults avoiding them (Efrat, Lehnardt, Bragin, et al., 2025).

Steppe Eagles and other soaring raptors reliant on land-based thermals are channelled through narrow “bottlenecks” during annual migrations (Barrios & Rodriguez, 2004; Meyburg et al., 2003), providing opportunities for counts and population monitoring both in spring and autumn. At Eilat, Israel and Thoolakharka, Nepal, birds have been aged according to plumage, with both sites showing a change in both numbers and proportions of the different age classes over time (Subedi et al., 2017; Subedi, Gurung, et al., 2025; Weiss, 2023; Weiss et al., 2019), highlighting potential changes in the population structure and dynamics. Zduniak et al. (2010) also described spring Steppe Eagle passage taking place earlier; while the exact drivers are unknown, they hypothesise that climate change or reduced availability of prime nesting sites may be causing this forward shift. During autumn migration into South and Southeast Asia, Steppe Eagles cross the Himalayas using the few suitable passes (McGrady et al., 2021). Fleming Jr (1983) reported approximately 45,000 Steppe Eagles passing the foothills of the Himalayas in autumn, whereas counts in recent years have been lower than 7,000 at Thoolakharka, Nepal (Subedi, Gurung, et al., 2025).

On the African-Eurasian Flyway, internationally important numbers have been recorded at Eilat, Israel (Shirihai & Christie, 1992), Galala, Egypt (15,851 in spring 2022 (Noby et al., 2022)), and Bab-el-Mandeb, Djibouti (76,909 individuals reported by Welch and Welch (1989), before the population decline. Birds that winter in Africa exhibit a loop migration around the Red Sea, moving south through the Arabian Peninsula and returning on northward migration through Sudan and Egypt past the bottleneck near Suez (Meyburg et al., 2003). Around 20% of the global population (an estimated 12,500 birds) migrates through Saudi Arabia (Annexe 4.2). While some of these birds remain here to overwinter, the exact number is difficult to estimate as numbers at sites fluctuate according to food availability (Boland & Alsuhaibany, 2020). Peak spring migration north through the bottlenecks near Suez peaks in late February and early March (Newton, 2008; Noby et al., 2022).

Steppe Eagles winter in four areas: sub-Saharan Africa, the Arabian Peninsula, South Asia, and Southeast Asia (Figure 1). Wintering birds can range wider than in the breeding grounds, but where food is concentrated their wintering range will contract (McGrady et al., 2021; Newton, 2008). In Africa, the wintering areas extend southwards from Sudan, with some individuals reaching South Africa and Namibia (Meyburg et al. 2003). Data from nestlings fitted with GPS transmitters in Türkiye have shown their wintering further west into Chad and Cameroon, suggesting that the wintering areas move westward in parallel with westward movement of breeding areas (B. Tatar & M. Horvath et al. unpublished data). Declines ranging from 56% to 96% decline over three generations (median 91%) have been seen across the continent (Shaw et al. 2024); Kenya alone has lost 76% of Steppe Eagles in 30-40 years (Ogada et al. 2022).

In India, a 2023 assessment of the long-term trend was inconclusive (SolB, 2023). Elsewhere in South Asia, smaller populations winter in Nepal (Subedi, Mehta, et al., 2025), Bangladesh and Pakistan

(Ahmad et al., 2022). Further into Southeast Asia Steppe Eagles also winter in South China and Myanmar, with some individuals reaching Singapore (eBird, 2025; Pande et al., 2013).

In the Middle East the largest wintering populations are in Saudi Arabia, Yemen and Oman (McGrady et al., 2021), and significant wintering populations are also found in Iraq (K. Ararat pers. comms). In the winter of 2019-20 the largest ever gathering of Steppe Eagles was recorded near Ushaiqer, Saudi Arabia, with up to 6,000 individuals present (Keijmel et al., 2020a). In the absence of systematic monitoring, it is difficult to determine trends in the Arabian Peninsula, and there is also suspicion that birds are short-stopping here, without continuing their migration into Africa (Efrat, Lehnardt, Berkowicz, et al., 2025; Keijmel et al., 2020b; Meyburg et al., 2012).

Important sites for Steppe Eagle

To help target conservation actions, the most important breeding areas, migratory bottlenecks, and non-breeding sites for the species have been identified using information gathered from several complementary sources. The resulting list of key sites (Annexe 3) represents the best available data across the species' range.

The list includes:

1. Sites identified by questionnaire compilers
2. Sites from Table 3 of Annex 3 of the Raptors MOU
3. IBAs and KBAs for which Steppe Eagle is listed as a trigger species (BirdLife International, 2021)
4. Additional sites identified by BirdLife International² based on eBird data, where internationally important numbers of Steppe Eagles have been recorded (meeting IBA Criterion A1) up to 2025. Specifically, this refers to locations with either multiple counts of 15–49 individuals or at least one count of more than 50 individuals (Fink et al., 2024).

Some sites are IBAs or KBAs for other species but are still relevant for Steppe Eagles. Further details on all sites are provided in Annexe 3.

This list is not intended to be exhaustive. It will be updated as new information becomes available and will be regularly reviewed by the Steppe Eagle GAP Working Group.

Diet

Steppe Eagles are hunters, scavengers and food-pirates, showing variation in their diet throughout their annual cycle and life stages and in different regions (Cramp & Simmons, 1980). When provisioning young in the breeding season they predominantly catch live small rodents, the species composition of which changes over the breeding range - Sousliks (ground squirrels) *Spermophilus* spp., Siberian marmot *Marmota siberica* and Brandt's Vole *Lasiopodomys brandti* all feature heavily, as well as other rodents, foxes, hares, reptiles and passerines (MaMing & Zhao, 2013; Meyburg et al., 2020). Sundev et al. (2012) reported that the density of Brandt's Vole was strongly correlated with hatching and fledging success of breeding attempts in Mongolia. In years with low rodent numbers, scavenging of larger mammals like Saiga *Saiga tatarica* features more heavily (Davygora, 1992 in Sundev et al. (2012)).

The importance of carcasses increases away from the breeding grounds, and Steppe Eagle is a regular scavenger at livestock carcass dump sites across its non-breeding range during migration and

² Relating to site network analysis to better understand gaps for Raptors MOU Annex 3 Category 1 species in the site network of Raptors MOU Annex 3 Table 3

the wintering period (Keijmel et al., 2020b; McGrady et al., 2021; Sharma & Sundar, 2009). As outlined in the threat assessment, these congregation sites can increase the risk of impacts from threats such as poisoning and electrocution, so their importance should not be underestimated (McGrady et al., 2021; Shobrak et al., 2022).

In sub-Saharan Africa, Steppe Eagles often follow the rains which are drivers of swarming termites *Hodotermes* spp. and nestling Red-billed Queleas *Quelea quelea*, which, in addition to carcasses, rodents and mole rats, are key food resources when over-wintering (Cramp & Simmons, 1980; Meyburg et al., 2020).

Conservation Action Framework

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
Goal 1 - Reduce the impact of energy infrastructure on Steppe Eagles along the flyway						
<i>Objective 1.1 Improve detection methods and data sharing on the impact of energy infrastructure</i>						
1.1.1	Review, agree and adopt standard survey methods and protocols for monitoring electrocution and collision with energy transmission and generation infrastructure across the whole range.	Academic Institutions, Research Agencies, Conservation NGOs, Energy Utilities, National Authorities		HIGH	All	Immediate
1.1.2	Undertake standardised surveys in key areas to fully understand the impact of energy infrastructure on Steppe Eagle mortality to inform appropriate mitigation measures.	National Authorities (wildlife management & energy), Academic Institutions, Research Agencies, Energy Utilities, Conservation NGOs	1.1.1	HIGH	All	Short
1.1.3	Promote transparency and regular exchange (or publication) of collected data on presence and mortality of Steppe Eagles from developers, infrastructure owners and other key stakeholders including energy funding agencies.	CMS Energy Taskforce, National Authorities, Conservation NGOs, Energy Utilities.		MEDIUM	All	Short
<i>Objective 1.2 – Promote bird (eagle) safe infrastructure and solutions</i>						
1.2.1	Facilitate that national guidelines and legislation reflect international standards and the implementation of CMS Resolution 10.11 by all range states and promote implementation of bird friendly infrastructure and mitigation actions, working in partnership in part with the CMS Energy Task Force.	National Authorities, CMS Energy Taskforce		MEDIUM	All	Short
1.2.2	Ensure there are effective national legal frameworks to minimise the impacts of dangerous infrastructure in all range states.	National Authorities, CMS Energy Taskforce, Energy Utilities, CMS Energy Taskforce		MEDIUM	All	Long

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
1.2.3	Promote awareness of the risks and implications associated with unsafe energy infrastructure to the communities and economies which may be impacted by it.	Energy Utilities, CMS Energy Taskforce, National Authorities		MEDIUM	All	Short
Objective 1.3 – Prevent and mitigate hazardous energy infrastructure in high-risk areas						
1.3.1	Identify the highest risk areas through promoting wider coverage of sensitivity mapping tools (such as Avistep, etc), and by paying particular attention to bottleneck and congregation sites, prioritising assessments of the powerlines and windfarms for electrocution and collision risks in these key areas.	Energy Utilities	1.1.2 1.1.3 List of important sites (see 2025 list in Annexe)	CRITICAL	All	Short
1.3.2	Ensure all key breeding areas, bottleneck and congregation (such as dumpsites and landfills) have safe electricity transmission infrastructure through the replacement and retrofitting of dangerous infrastructure (burying underground, insulation, diverters etc) and that new infrastructure also meets these standards.	National Authorities (wildlife management & energy), Energy Utilities, Conservation NGOs	1.1.3 1.3.1	CRITICAL	All	Short
1.3.3	Improve EIA procedures to ensure appropriate consideration within EIAs for development in key areas for Steppe Eagle.	National Authorities	1.1.3 1.3.1	HIGH	All	Short
Goal 2 - Reduce significantly mortality due to impact of legal and illegal take and trade						
Objective 2.1 - Understand the magnitude and socioeconomic drivers of illegal and unsustainable legal take, sharing information across the range						
2.1.1	Adopt common methodology across the range, based on existing good practice, on the gathering and management of data on illegal and legal take and in-person trade (including questionnaires and standard database structure etc.), to identify hot spots and methods.	Academic Institutions, CITES Authorities, Research Agencies, Conservation NGOs, MIKT, SWAITB TF, ITTEA		MEDIUM	All	Immediate

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
2.1.2	Adopt common methods of monitoring online trade and sales of Steppe Eagle, including via social media and content platforms, based on existing good practice.	Academic Institutions, CITES Authorities, Research Agencies, Conservation NGOs, MIKT, SWAITB TF, ITTEA	2.1.1	MEDIUM	All	Immediate
2.1.3	Provide support and data for an international review on the magnitude of illegal and legal take and trade of Steppe Eagles (and other raptors where appropriate) throughout the species' range.	Academic Institutions, Research Agencies, Conservation NGOs, MIKT, SWAITB TF, ITTEA, CITES, CMS	2.1.1 2.1.2	MEDIUM	All	Medium
2.1.4	Undertake socioeconomic research to identify drivers of illegal take and trade (e.g. trophy hunting through recreational shooting, livestock protection or captive bird keeping) among key stakeholder groups utilising different techniques.	Academic Institutions, CITES Authorities, Research Agencies, specifically social scientists,	2.1.2	MEDIUM	All	Short
2.1.5	Identify key stakeholder groups and primary communication channels in relation to illegal and legal take and trade of Steppe Eagles including law enforcement groups at the national level.	Academic Institutions, Research Agencies, MIKT, SWAITB TF, ITTEA, CITES	2.1.2 2.1.3 2.1.4	MEDIUM	All	Short
Objective 2.2 - Strengthen legislation and law enforcement to minimise illegal and unsustainable legal take and trade						
2.2.1	Gain full protection status, with appropriate penalties where breached, for the Steppe Eagle in all range states following review of current levels, including international responsibilities through CMS and CITES.	National Authorities (wildlife management)		CRITICAL	All	Immediate
Objective 2.3 - Increase awareness and capacity amongst key stakeholders to decrease illegal and legal take of Steppe Eagles						
2.3.1	Enhance enforcement of illegal take and trade laws in hot-spot areas by building cooperation and capacity between conservation organizations (i.e. both governmental and non-governmental) and law enforcement agencies.	National Authorities, Conservation NGOs, MIKT, SWAITB TF	2.1.3	HIGH	All	Short

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
2.3.2	Prepare, disseminate and adopt best practice guidance on effective voluntary and state mechanisms for enforcing hunting and take regulations to increase awareness of key stakeholders including the full judiciary system (i.e. law enforcement agencies, prosecutors, judges etc). In addition, undertake extensive targeted outreach activities in key impact areas, such as patrols in specific markets, e-commerce enforcement units, targeting known criminal organisations and engaging decision makers.	National Authorities (law enforcement), Conservation NGOs, MIKT, SWAITB TF, CITES Authorities,	2.3.1	HIGH	All	Short
2.3.3	Develop and deliver a programme of work in key areas to reduce ownership of Steppe Eagles as 'status symbols' either by educating on its illegality or by promoting legal alternatives, to target consumer demand. Share national and international resource opportunities to undertake campaigns to include community engagement and media dissemination.	National Authorities (law enforcement), Conservation NGOs		MEDIUM	Middle East, S & SE Asia	Medium
Goal 3 - Understand and reduce the impact of unintentional poisoning on Steppe Eagle populations						
<i>Objective 3.1 - Identify critical chemicals affecting Steppe Eagle survival and/or fitness</i>						
3.1.1	Conduct research and disseminate literature on critical chemicals likely to affect the fitness (health and population productivity) and/or survival of Steppe Eagle throughout its range.	National Authorities, Academic Institutions, Research Agencies, Conservation NGOs		HIGH	All	Short
3.1.2	Understand the extent of use, impact and contamination pathway of NSAIDs, pest control chemicals and other environmental contaminants (such as heavy metals) at or near breeding and congregation sites including systematic sampling and analysis of primary food resources.	National Authorities, Academic Institutions, Research Agencies, Conservation NGOs, Waste management authorities	3.1.1 5.2.1	HIGH	All	Immediate

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
3.1.3	Sample live Steppe Eagles and fresh eagle carcasses, in a timely effective manner to determine cause of death and presence of critical chemicals and disease, recorded in a centralised database to enable data sharing.	National Authorities (state testing laboratories, wildlife management), Research Agencies, Conservation NGOs, CITES Authorities	3.1.1 3.1.2	HIGH	All	Short
<i>Objective 3.2 - Minimize exposure to critical chemicals</i>						
3.2.1	Ratify the legislation on critical chemicals use and disposal to ensure the implementation of CMS Resolution 11.15 (RevCOP14) and related CMS Preventing Poisoning Guideline use and the Bern Convention to ensure the use of critical chemicals is banned or appropriately restricted across range states.	National Authorities		HIGH	All	Immediate
3.2.2	Identify the socio-economic drivers of the use of critical chemicals and employ methods to reduce these drivers measurably.	Academic Institutions, Research Agencies, Conservation NGOs		LOW	All	Medium
3.2.3	Develop, adopt safe farmed-animal carcass management and disposal and promote with key stakeholders, ensuring that eagles still have access to safe carcasses as a food resource.	National Authorities (agriculture, drug regulation), Conservation NGOs, Waste management authorities		MEDIUM	All	Medium
3.2.4	Strengthen law enforcement, by building capacity and making resources available, to ensure effective monitoring and enforcement of existing and new legislation of critical chemicals.	National Authorities, Conservation NGOs, CMS		HIGH	All	Medium
3.2.5	Develop communication and awareness mechanism with WOA to support in banning of dangerous drugs and support using the safe alternatives.	National Authorities (agriculture, drug regulation), Conservation NGOs		MEDIUM	All	Long

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
3.2.6	Raise awareness on the environmental impact from the use of critical chemicals and promotion of alternatives in key Steppe Eagle areas (safe chemicals or alternative mitigation measures such as fences etc).	National Authorities, Conservation NGOs		HIGH	All	Medium
Goal 4 - Attain good quality habitats that support populations of Steppe Eagle across the species range						
<i>Objective 4.1 - Identify and map key habitats</i>						
4.1.1	Conduct targeted research, in the breeding, migratory and non-breeding ranges on habitat use, site connectivity and diet, to fill key knowledge gaps.	Academic Institutions, Research Agencies, Conservation NGOs		CRITICAL	All	Short
4.1.2	Develop a habitat suitability map of whole species' range, integrating sensitivity layers, telemetry data, and observation networks to identify critical habitats.	Academic Institutions, Research Agencies, Conservation NGOs	5.3.2	MEDIUM	All	Medium
<i>Objective 4.2 - Improve and maintain habitat quality</i>						
4.2.1	Implement habitat conservation and sustainable land-use management (e.g., restoring traditional pasture management practices) in priority breeding areas across the range, including baseline and follow-up assessments of habitat quality (i.e. nest and foraging sites) and prey availability. Collaborate with protected area authorities to integrate Steppe Eagle habitat requirements into site management plans.	National Authorities (protected areas), Conservation NGOs		MEDIUM	Breeding	Medium
4.2.2	Establish and enforce land management policies in critical habitats along both the African-Eurasian Flyway and the Central Asian Flyway, focusing on reducing disturbance and sustaining prey populations and promote the broader spatial scale of landscape scale restoration to ensure connectivity along global flyways and the longer-term aim of a return to historic population range.	Conservation NGOs, National authorities	4.1.2	MEDIUM	All	Long

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
4.2.3	Ensure key congregation sites (including dump sites) are managed to ensure they provide safe roosting and feeding opportunities for Steppe Eagles through safe energy infrastructure and no access to poisoned food resources.	National authorities, Waste authorities, Electricity companies		CRITICAL	All	Short
Objective 4.3 - Strengthen support for habitat conservation						
4.3.1	Develop targeted communication materials and conduct workshops with decision-makers in all range states using local languages to raise recognition of Steppe Eagle conservation needs.	National Authorities, Conservation NGOs		MEDIUM	All	Short
4.3.2	Disseminate key outreach materials to local stakeholders in critical habitats, using appropriate local languages and media formats	National Authorities, Conservation NGOs	4.3.1	MEDIUM	All	Short
4.3.3	Identify and designate a network of protected sites for Steppe Eagle by strengthening existing protection and the creation of new protected and OECM areas, providing flyway connectivity which are managed effectively (through the production and implementation of appropriate management plans) for the conservation of the species and their key prey species.	National Authorities, Conservation NGOs		MEDIUM	All	Short
4.3.4	Assess Steppe Eagle's vulnerability and adaptive capacity to climate change to inform scenario-planning and development of adaptation and dynamic management measures.	National Authorities, Academic Institutions, Research Agencies, Conservation NGOs	4.1.2	MEDIUM	All	Medium
Goal 5- Address key knowledge gaps on Steppe Eagle distribution, movement, and threats through increased collaboration and coordinated research, to inform conservation action across their global range						
Objective 5.1. Sharing best practices and standardized data collection, along with the data itself where required						
5.1.1	Develop and share standard protocols for the monitoring of Steppe Eagles at breeding sites, migratory bottlenecks and stopover sites, and wintering areas, prioritizing high-risk regions.	National Authorities, Academic Institutions, Research Agencies, Conservation NGOs		HIGH	All	Immediate

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
5.1.2	Conduct a baseline assessment of existing Steppe Eagle monitoring, telemetry, and survey data across the range, and identify priority knowledge gaps to guide optimal investment in research.	National Authorities, Academic Institutions, Research Agencies, Conservation NGOs		HIGH	All	Immediate
<i>Objective 5.2. Coordinated monitoring across the range</i>						
5.2.1	Carry out species monitoring (at all life stages) using standardised methods to guide sensitivity mapping and conservation action.	National Authorities, Conservation NGOs		CRITICAL	All	Immediate
5.2.2	Develop and maintain a centralized and dynamic data sharing group who advocate for analysis and publication of combined datasets for overall understanding of the species and the primary threats driving their decline.	National Authorities, Academic Institutions, Research Agencies, Conservation NGOs, SE GAP Working Group		MEDIUM	All	Short
5.2.3	Develop and maintain a centralised registry of trained personnel (experts), researchers, and institutions engaged in compatible Steppe Eagle monitoring, telemetry, and conservation across the species' range. The registry should include contact details, areas of expertise, and geographic focus to support improved coordination, collaboration, and better mobilization and be regularly updated.	National Authorities, Academic Institutions, Research Agencies, SE GAP Working Group		MEDIUM	All	Short
5.2.4	Develop and share opportunities and sources of funding for monitoring, data analysis, research and advocacy.	CMS Secretariat, SE GAP Working Group		HIGH	All	Short
<i>Objective 5.3. Improved understanding of changing population dynamics, species range leading to effective conservation programs across all range states</i>						
5.3.1	Implement regular horizon scanning to detect emerging and future threats, including along migratory routes.	Academic Institutions, Research Agencies, SE GAP Working Group		MEDIUM	All	Immediate

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
5.3.2	Promote the tracking of birds to further scientific aims which follows best practice and modern technologies, making the data available for wider analyses to identify threats and key habitats. Ensure resources are available for the timely recovery of dead birds to understand causes of mortality.	Academic Institutions, Research Agencies, Conservation NGOs	4.1.1	MEDIUM	All	Medium
5.3.3	Clarify the borders of and connectivity between breeding populations and their flyway (i.e. metapopulation), to identify and highlight the most important and/or vulnerable populations.	Academic Institutions, Research Agencies	5.1.2 5.3.2	HIGH	All	Medium
5.3.4	Monitor and investigate the changing productivity and how these changes impact on population dynamics and their drivers, analysing both historic and new data.	National Authorities, Academic Institutions, Research Agencies		HIGH	All	Short
Goal 6 - Ensure endorsement and effective implementation of the Steppe Eagle GAP across all range states through outreach with key communities and all major stakeholders						
<i>Objective 6.1 – Awareness of the value of Steppe Eagles and their key threats is raised among the key stakeholder groups</i>						
6.1.1	Communicate key findings on both the problems facing Steppe Eagle populations, and potential solutions to achieve positive responses to key decision-makers and communities to generate support evidence-based conservation actions.	Conservation NGOs, SE GAP working group, National Authorities		MEDIUM	All	Immediate
6.1.2	Highlight and promote the Steppe Eagle as a flagship species of the Central Asian and African-Eurasian Flyways, utilising and supporting existing national and international events to raise awareness of Steppe Eagle global conservation needs and efforts.	Conservation NGOs, CMS, National Authorities, CAFI		HIGH	All	Short

Action	Description	Stakeholders	Dependencies	Priority	Where	Timescale
6.1.3	Establish or strengthen civil society organisations in key areas along the flyway by 2030, promoting local stewardship of Steppe Eagle habitats to aid with meeting international targets and sustainability goals.	Conservation NGOs, National Authorities (protected areas, wildlife management, communities), Steppe Eagle GAP Working Group		LOW	All	Long

While almost all threats are present across the whole range, the level of each threat is different between regions (see Table 1). Each action has been scored according to their priority by region and can be found in Annexe 2.

Legend

Priority scale of actions

CRITICAL – action needed to prevent a large decline which could lead to the species’ extinction

HIGH – action needed to prevent a decline >20% of the population in <20 years

MEDIUM – action needed to prevent a decline of <20% of the population in <20 years

LOW – action needed to prevent local population declines or which is likely to have only a small impact on the whole population

Timescale

Immediate – to commence within the next year

Short – to commence within the next 3 years

Medium – to commence within the next 5 years

Long – to commence within the next 10 years

Ongoing – currently implemented and should continue

Geographic range

Breeding range (includes birds in the breeding range which may not be breeding such as sub-adults, and non-breeding range countries within Europe and Central Asia)

Middle East and North Africa

South and Southeast Asia

Sub-Saharan Africa

Threat Assessment

Fully understanding the drivers of population declines of Steppe Eagle is fundamental to halting and reversing them. Threat mapping and ranking was carried out as part of the international expert workshop held in May 2025 in Astana, Kazakhstan. This was also informed by the responses to the questionnaire sent to experts across the range states, CMS Focal Points and Raptors MOU Contact Points.

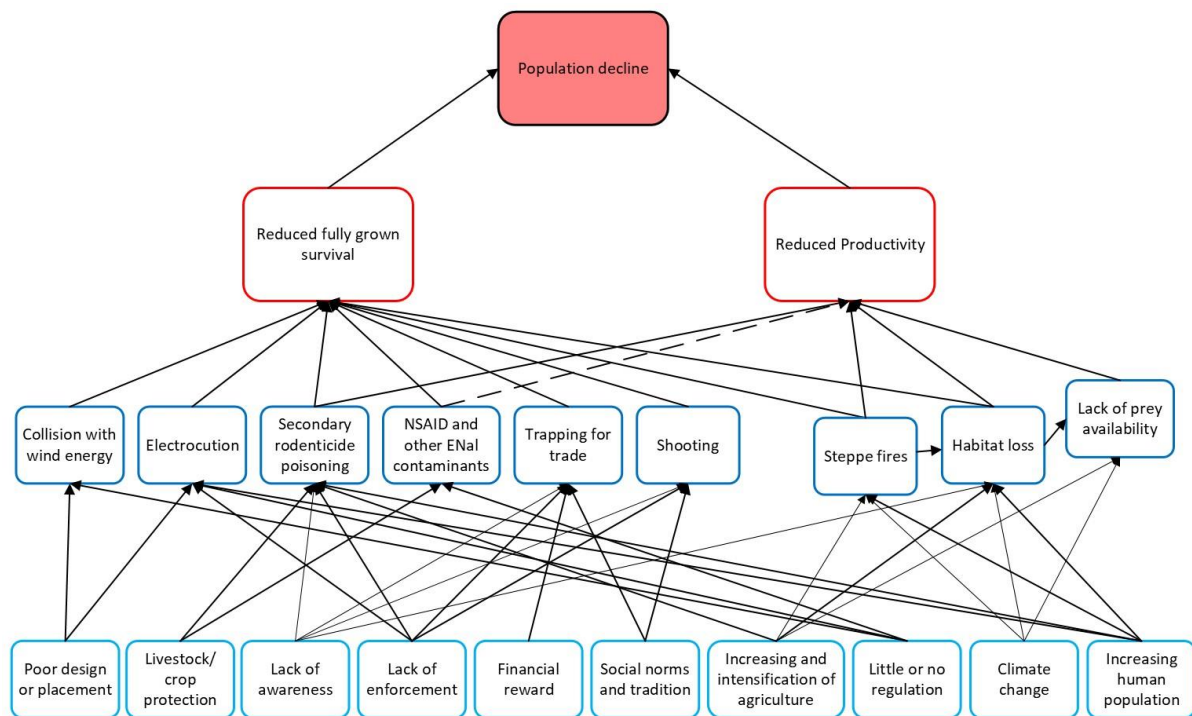


Figure 2 - Problem tree and threat mapping for Steppe Eagle showing **drivers**, **threats**, **impacts** and overall **outcome** (decline). Dashed line is where the driver or link is less well understood.

The threat mapping which forms the Problem Tree (Figure 2) identifies the threats impacting Steppe Eagle, the drivers of these threats, how each threat impacts the species (e.g. reduces fully-grown survival or impacts productivity), and whether these links are proven or hypothesised.

Threats were then scored according to their timing (current or in the future), scope (% of the population affected), and severity (how large a decline the threat could cause over three generations). This enabled a Threat Ranking as shown in Table 1. The priority scoring of the threats informed the priority given the actions to address them, as described in the Conservation Action Framework.

Table 1 Global threat ranking of Steppe Eagle by region.

Threats were scored by scope, severity and timing and considered at a global scale and by region where high indicates threats with the highest potential impact according to the latest available knowledge and evidence. Threat score (ranking) reflects IUCN extinction risk assessments:

High – a factor causing or likely to cause rapid declines (20% + over 10 years)

Medium – a factor causing or likely to cause relatively slow, but significant, declines (10-20% over 10 years)

Low – a factor causing or likely to cause fluctuations

Unknown – is used where there the severity of the threat is unknown but believed to be present

Grey – all available evidence suggests the threat is not present in the region

Threat	Whole range		Breeding range	Middle East and North Africa	Sub-Saharan Africa	South & Southeast Asia
<i>Energy Infrastructure</i>						
Electrocution	High		High	High	High	High
Windfarms	Medium		Medium	Medium	High	Medium
Collision (powerlines)	Low		Unknown	Low	Low	Low
<i>Habitat</i>						
Lack of food/prey availability	High		High	Medium		
Habitat loss	Unknown		Low	Unknown	Unknown	Medium
Steppe and bush fires	Medium		Medium		Medium	
Predation	Low		Low			
Human disturbance	Medium		Medium			
Nest rubbish	Low		Low			
Climate change	Medium		Medium		Medium	
<i>Poisoning</i>						
Rodenticide poisoning	High		High	Medium	Medium	Medium
HWC poisoning, including quelea, insecticide and feral dog poisoning	Medium			Medium	High	Medium
NSAID poisoning	Unknown		Unknown	Unknown	Unknown	Unknown
Unsafe water	Unknown			Unknown	Medium	Unknown
<i>Illegal and unsustainable take</i>						
Hunting (IKB)	Medium		Low	High	Medium	Medium
Trapping/trade	Medium		Low	High	Low	Medium

Evidence of mortality

GPS tagging and ring recoveries provide important insights into dispersal, migrations, survival and probable mortality causes (Serratos et al., 2024). Among 73 Steppe Eagles ringed or satellite tagged as nestlings in Kazakhstan and Russian Federation, the cause of death has been determined for 34 individuals (Figure 3). Of those with a determined cause, 35% were due to electrocution, 26% from illegal trapping, 12% from shooting, and the remaining birds are presumed to have died from predation, injury and exhaustion; one individual was also believed to have been poisoned. Accurately determining the cause of death for individuals can be challenging (for example, carcasses can decay

rapidly in high heat/humidity, and many birds die in remote areas where recovery is difficult), as such these proportions should be treated as minimum estimates.

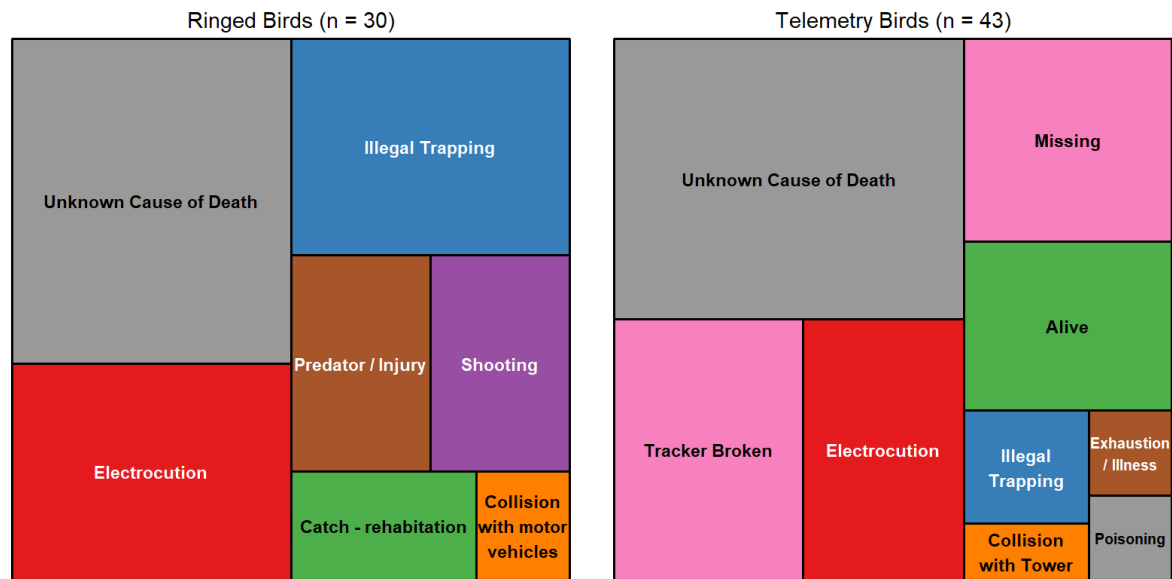


Figure 3 Cause of death for Steppe Eagles from 30 ringed birds and 43 fitted with satellite devices. Sources: (Al-Sheikhly et al., 2017; Bekmansurov et al., 2016; Karyakin et al., 2015; Karyakin et al., 2018; Karyakin et al., 2019); Karyakin et al., unpublished.

These values are comparable with the findings of Serratosa et al. (2024) from satellite tagged birds, which found that of all known deaths of predatory raptors on the African-Eurasian Flyway, more than a third are human-induced, of which 36% were electrocuted, 24% were illegally killed and around 15% were poisoned.

Energy Infrastructure

Energy infrastructure presents three related risks for Steppe Eagle: electrocution, powerline collision, and wind-turbine collision.

Electrocution (Overall High)

Electrocution is a key threat to large raptors globally (Oppel et al., 2021; Serratosa et al., 2024; Slater et al., 2020). In the largely treeless landscapes used by Steppe Eagle, electricity infrastructure offers perching and nesting sites, but birds are at risk when they simultaneously contact two uninsulated components or an uninsulated component and the ground (Slater et al., 2020). Large numbers of Steppe Eagles have been recorded as electrocuted across the species' range, highlighting the universal nature of this issue Table 1 (McGrady et al., 2021). True mortality is underestimated due to carcass decay and scavenging; within Kazakhstan alone, detection-bias adjustments suggest 9 to 90 times more deaths than found (see summary in Dwyer et al., 2022). Electrocution also affects people via electricity outages and increased risk of steppe/bush fire in already fire-vulnerable habitats; the wider economic costs remain unquantified (Guil et al., 2018).

In Kazakhstan and Mongolia, where the species breeds, electrocution is widespread. Surveys have recorded an average of 22 dead Steppe Eagles per 10 km in western Kazakhstan (Alexandrovich et al., 2024) and 8.1 dead Golden and Steppe Eagle in Mongolia (Purevdorj et al., 2025). Karyakin (2008) estimated that 51% of all raptor electrocutions in Kazakhstan are of Steppe Eagle, and risk may increase locally where prey densities are unusually high (Purevdorj et al., 2025). In their wintering

range, large congregations at refuse and dump sites can bring birds into close proximity with unsafe lines (Keijmel et al., 2020). In Saudi Arabia, 14 km of powerlines near dumps may kill up to 240 individuals annually (Shobrak et al., 2022). Electrocution is also of growing concern in sub-Saharan Africa for Steppe Eagle and other migrating raptors (S. Thomsett, pers. comm.), with Steppe Eagle considered particularly high risk in the region (Ngila et al., 2024). While insulation and undergrounding have been implemented in some regions, most of the mitigation measures have not specifically been targeted at Steppe Eagle hotspots.

Wind turbine collision (Overall Medium)

Rapid wind power expansion is of growing concern for large soaring birds (De Lucas et al., 2008). For Steppe Eagle, the spread of wind energy facilities along key breeding areas, migration bottlenecks and congregation sites poses a risk of fatal collisions (Karyakin et al., 2021). Modelling from satellite tagging indicates up to 7% of the 6,888–7,371 Steppe Eagles migrating annually through a proposed site could be at risk of collision (Karyakin et al., 2021). Avoidance rates remain largely untested for this species, but potential impacts at bottlenecks are clear. Wind farms also result in habitat loss through displacement, causing eagles to avoid the area near the turbines; while construction footprints are relatively small, disturbance and collisions can be far more consequential (Percival 2005). Risks increase with large turbines and long wind blades (>30 meters long), and where prey/carrion attract raptors (Percival, 2005; Schaub et al., 2024). Whether adults or subadults are more affected is unstudied for Steppe Eagle (cf. Dahl et al., 2013), but given current declines, either could have population-level effects.

Wind farms can also create barriers to migration, forcing birds to take longer or more energy-intensive routes, since soaring raptors reliant on land-based thermals are channelled through narrow “bottlenecks” (Barrios & Rodriguez, 2004; Meyburg et al., 2003). In eastern Kazakhstan, the Karatau Ridge (a critical migration bottleneck for Steppe, Eastern Imperial (*A. heliaca*), and Greater Spotted Eagles (*Clanga clanga*)), is threatened by existing and planned wind farms (Karyakin et al., 2021; Karyakin et al., 2024), with similar risks documented in other globally important migratory corridors, including the Rift Valley, the Red Sea, the eastern Mediterranean, and the Caspian Sea (Hilgerloh et al., 2011; Watson et al., 2018).

Secondary poisoning & environmental contaminants

Poisoning and environmental contaminants are one of the most critical pressures on raptors globally (McClure et al., 2018; Serratos et al., 2024) and Steppe Eagles are at risk of poisoning across their range and annual cycle (Karyakin et al., 2025; Keith & Bruggers, 1998; McGrady et al., 2021), primarily via indirect secondary poisoning rather than direct targeting (though see Unsafe water under localised threats). The drivers of secondary poisoning are both specific targeted campaigns, generally funded and/or endorsed by governments, and individuals (potentially inadvertently) using pesticides incorrectly. Risk is heightened on wintering grounds where scavenging increases (McGrady et al., 2021).

Rodenticides and insecticides (Overall Medium)

Rodenticides are used at dumpsites and around domestic, industrial and agricultural operations. While legislation varies by country, commonly encountered compounds are second generation rodenticides such as bromadiolone (Nakayama et al., 2019). Secondary poisoning of non-target wildlife is a known shortcoming of second-generation anticoagulant (SGA) rodenticides; some are licensed only for covered/indoor use but are applied inappropriately, increasing exposure of scavengers to poisoned carcasses. In Mongolia, for example, 1 million hectares were treated with bromadiolone to regulate Brandt’s Vole (*Microtus brandtii*) (Kovács et al., 2014), causing additional

mortality of Steppe Eagle and other raptors, and a 33% decline in the number of breeding pairs on the Kazakhstan-Mongolian border in the years immediately following the poisoning event (Karyakin, 2010).

Plague management (to reduce rodent numbers following population explosion) and its wider impacts through secondary poisoning across the breeding range are poorly understood but represent a significant risk to Steppe Eagles. During the breeding season, rodents form a significant proportion of the diet of adults and provisioned young (e.g. McGrady *et al.*, 2021, Karyakin *et al.*, 2023), so even small-scale rodenticide use could be threat. Outside the breeding season, Steppe Eagles often congregate at dumpsites or slaughterhouses, where they are exposed to rodent control practices. These sites also attract other scavengers, and lethal control of mammalian scavengers (including the use of strychnine and other controlled substances) is common. If carcasses are not removed or safely disposed of (buried/burned), they become a secondary-poisoning risk. Control of insects such as locusts has also been widespread, with instances of secondary poisoning reported (S. Thomsett, pers. comm.). Because there is no universal requirement to report 'by-catch' casualties, data on the impacts on Steppe Eagle and other raptors are limited.

NSAIDs (Unknown)

The effects of Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) on Steppe Eagle (as well as other non-vulture Accipitriformes) is limited. The strongest evidence comes from Sharma *et al.* (2014): necropsies of two Steppe Eagles from the Jorbeer carcass-disposal site (India) showed clinical signs, histopathology and diclofenac residues consistent with diclofenac toxicity in *Gyps* vultures. Several subsequent publications report dead Steppe Eagles at the same site (Bohra & Rao, 2023; Bohra & Vyas, 2018), including 231 Steppe Eagles found dead between 2017-2022, though no post-mortem toxicity testing exists to corroborate these findings, nor to indicate toxicity of related veterinary drugs. NSAIDs, specifically diclofenac, caused the collapse of the South and Southeast Asia's Vulture population (Green *et al.*, 2004). There is limited evidence that NSAIDs are a primary driver of Steppe Eagle decline but given the species' association with livestock carcasses where NSAID use persists, NSAIDs represent a potentially high threat (McGrady *et al.* 2021). Therefore, there is an urgent need to improve population monitoring and toxicology capacity in the Indian sub-continent and other areas where NSAID use continues.

Red-billed Quelea mass poisoning (Unknown)

Colonies of Red-billed Quelea *Quelea quelea* are an important food source for large migratory raptors in Africa (Biggs, 2001), including Steppe Eagles wintering in South Africa (Meyburg *et al.*, 2010). Quelea establish breeding colonies in areas following rainfall and subsequent seed germination growth (Newton, 2010), which in turn drives raptor distributions; such colonies may anchor some Steppe Eagles' wintering ranges (McGrady *et al.*, 2021). Widely considered an agricultural pest, Quelea have historically been exterminated to prevent crop damage, often via pesticide application at colonies (Cheke & Sidatt, 2019), commonly fenthion (McWilliam & Cheke, 2004). Secondary poisoning of non-target species, particularly of predatory and scavenging raptors, has been widely observed at treated colonies (Bruggers *et al.*, 1989; Loon, 1995; McWilliam & Cheke, 2004), and Steppe Eagles have been found dead at treated Red-billed Quelea colonies (Keith & Bruggers, 1998). While evidence of secondary poisoning exists, current information is insufficient to assess population-scale impacts for Steppe Eagle (Karyakin, *et al.*, 2016). This reflects incomplete knowledge of the proportion of the population overwintering in Africa and the dietary importance of Quelea to those individuals. Nevertheless, observed mortality events and ongoing fenthion use at unknown scale indicate a significant knowledge gap and potential risk (Cheke & Sidatt, 2019).

Environmental contaminants (Unknown)

Impacts of environmental contaminants on large raptors' survival and productivity are comparatively understudied, with little specific to Steppe Eagle. Similar species are impacted at population scale by various toxins; lead poisoning, for example, is a global issue with individual and population-level effects (Garvin et al., 2020; Katzner et al., 2024). Lead enters via fragments of shot in food, bullet fragments lodged in tissues, and contaminated water (see Garvin et al. (2020)). There are both lethal and sublethal effects of lead on raptors, with the critical levels varying by species (Garvin et al., 2020). Indirect mortality may occur through increased bone fragility, reduced vision and higher infection susceptibility (Krone, 2018), and reduced reproduction has been observed in some taxa (Pain et al. (2009)). While specific evidence is not available for Steppe Eagle, lead is known to be toxic to other *Aquila* eagles. For example, lead exposure is widespread in Golden Eagles and estimated to account for 2.1-4.8% of all mortality in the USA (Russell & Franson, 2014). As with other poisoning pathways, risk to Steppe Eagle is likely highest when scavenging (Slabe et al., 2020). Beyond lead, other pharmaceuticals (antibiotics, contraceptives and other medicines) may affect predators and scavengers, but pathways and population-level impacts remain largely unknown (Arnold et al., 2014; Bean et al., 2024; Newton, 1998).

Illegal Killing, Taking and Trade (IKB)

The illegal and unsustainable take of Steppe Eagle is reported from across the entire species' range, in different forms 'Take' includes hunting for sport or taxidermy and live take for the pet/falconry trade (Brochet et al. 2016), though legality varies by country. IKB pressure is often concentrated at migration bottlenecks where birds are predictable and accessible. Overall, the IKB pressure is strongest where migration funnels through narrow corridors, and where enforcement capacity is limited (see Van Maanen et al. (2001) for an example from Georgia). Detection is imperfect and incidents are underreported, so available figures likely underestimate true levels.

Illegal killing (Overall Medium)

Illegal shooting of Steppe Eagle is particularly severe in the Levant (Syria, Lebanon), where migrating birds concentrate along the eastern Mediterranean and are killed for sport or for taxidermy (Brochet et al. 2019; Van Maanen et al. 2001). Falcon trappers operating in North Africa and the Middle East also kill Steppe Eagles because they are perceived as threats to their falcons or disruptive to trapping activities (Karyakin et al. 2016; Khoury et al. 2020). Shooting is also a pressure in the breeding range, with a satellite tagged individual shot when still within their natal range (E. Bragin pers. comms.).

Take & live trade (Overall Medium)

Live market trade of Steppe Eagles is well documented, as has been observed in Cairo (Habib 2023) and the Al Ghazil market in Bagdad, where dozens can be seen in autumn and spring (Al-Sheikhly et al. 2017). Increasingly, trade has shifted online, with sales via social media and e-commerce platforms (Aidek & Eid 2025; Eid & Handal 2018). Similar online trends are reported in Southeast Asia (e.g. Myanmar). In the breeding range, some Steppe Eagles are used for traditional hunting, although Golden Eagle *A. chrysaetos* is generally preferred (Sklyarenko 2023). Persecution of eagles is also reported from parts of China (Karyakin et al. 2016; MaMing 2023; MaMing & Zhao 2013) and parts of Africa (Ogada et al. 2022).

Overall, the IKB pressure is strongest where migration funnels through narrow corridors, and where enforcement capacity is limited (see Van Maanen et al. (2001) for an example from Georgia). Detection is imperfect and incidents are under-reported, so available figures likely underestimate true levels.

Environmental change & resource dynamics

Habitat change, prey dynamics and fire regimes act together, with climate change amplifying many pathways. Effects are both direct (e.g., nest loss to fire) and indirect (vegetation structure → prey cycles → foraging success), and they vary by region and season. Concern has also been raised about the relatively high proportion of pairs holding territory but not breeding after a few years of previously successful attempts (I.V. Karyakin *pers. comms*), the scale and drivers of which are currently not well understood.

Habitat loss and alteration (Unknown)

In Türkiye, conversion of grasslands to agricultural fields is considered a High threat, alongside the drainage of wetlands (Ministry of Agriculture & Forestry 2023). Afforestation of steppe habitats is considered a low threat in Türkiye (Ministry of Agriculture & Forestry 2023) and is not described as a major pressure elsewhere. Loss of habitat due to mining exploration and associated infrastructure, which leads to changes in vegetation structure and depletion of natural resources in China, has driven localised declines of raptors in China (MaMing & Zhao 2013). The conversion of prime steppe habitat to agriculture was raised as a threat as early as the 1950's by Dementiev & Gladkov (1951), with both conversion to arable fields and increased raising pressure from pastoral activities still cited (Karyakin et al. 2016). In Southeast Asia, habitat change is likely to affect local foraging in some areas, but quantified species-level impacts remain limited.

Prey availability (Overall High)

On the breeding grounds, Steppe Eagle nesting sites are often associated with colonial burrowing mammals, including ground squirrels (*Spermophilus* spp.) and pikas (*Ochotona* spp.). Where these prey peak in spring, territories are more likely to be occupied and pairs more likely to breed successfully, whereas scarcity corresponds to lower occupancy and productivity. In the Altai–Sayan and adjacent steppe, high abundance/availability of ground squirrels and pikas in spring has been shown to determine both nest occupation and breeding success in Steppe Eagles (Karyakin et al. 2023). As the Steppe Eagle's prey base depends on open, short grass structure and active burrow systems, land-use change and vegetation overgrowth can depress prey populations independently of poisoning or infrastructure. Across the Palearctic, ground-squirrel colonies are prone to disappear when habitat is not maintained and becomes overgrown (Petluš et al. 2021).

Fire and vegetation dynamics (Overall Medium)

Steppe fires are a natural part of ecosystems across much of the range, but increasing frequency and intensity can alter vegetation structure for several years post-fire (Smelansky et al., 2015), with knock-on effects for small-mammal and insect prey cycles. In Kazakhstan, at least half of the range is projected to face increased fire hazard (Karyakin et al. 2025). Fire affects Steppe Eagles directly (mortality of eggs/young in nests) and indirectly (habitat change). In Karaganda, 3.93% of active nests were reported lost to fire Karyakin et al. (2017).

Climate change (Unknown)

Climate change acts mainly by modulating the above pathways: shifting prey baselines, raising wildfire risk, extending droughts that drive congregation at carcass sites and water points (with attendant exposure to poisoning/unsafe water), and altering wind regimes that intensify wind-farm siting pressure along bottlenecks. Along with biodiversity loss, climate change is one of the emergencies facing the natural environment and will have wide ranging impacts on birds of prey such as the Steppe Eagle (Martínez-Ruiz et al. 2023). Modelled responses in ecologically similar species reinforce concern: for example, Tawny Eagle was predicted to face extinction with <10%

change in annual precipitation in Southern Africa (Wichmann et al. 2005). Furthermore, the Climatic Atlas of European Breeding Birds suggests the Western part of Steppe Eagle's range is becoming less suitable (Huntley et al. 2007), although breeding is now almost non-existent already here.

Other localised or emerging threats

These pressures are geographically limited or episodic. Scores reflect local impact and evidence certainty and do not imply overall importance at flyway scale.

*Hybridisation with Eastern Imperial Eagle *Aquila heliaca* (Overall Low)*

Steppe Eagle and Eastern Imperial Eagle are closely related and their ranges overlap significantly (Lerner & Mindell, 2005). Hybrid pairs and offspring have been reported in the small and isolated Turkish population (Horváth et al., 2018) and in areas where Steppe Eagle has declined while Eastern Imperial Eagle has increased ((Karyakin, Kovalenko, & Zinevich, 2016). Some of these individual hybrids have been fitted with GPS satellite tags as nestlings, providing insights into their subsequent movements and survival (B. Tatar & M. Horvath et al., unpublished data), and at least some of these offspring have been fertile. Although a potential genetic concern, events appear occasional and are unlikely to become a priority pressure at current population sizes.

Nest rubbish (Overall low)

Steppe Eagles are known to incorporate anthropogenic rubbish fabric, plastic bags and work gloves into their nests, which may be for decoration, in addition to more natural materials such as wool, bones, and structural sticks (Horváth et al., 2022; Karyakin, Kovalenko, Barashkova, et al., 2016). While this can be considered a natural behaviour, entanglement in plastics can pose a risk to nestlings (and potentially adults also) which may have localised impacts (Mallet et al., 2020; Sundev et al., 2012).

Unsafe water (Unknown)

A threat which appears to be specific to Southern Africa is the poisoning of Steppe Eagles through the direct targeting of water resources during the dry season with poisons. This deliberate poisoning (using various toxins) is widespread and for the purpose of human food (A. Botha pers comms).

Disease (Unknown)

The latent impact of disease on Steppe Eagle is little understood, but the outbreak of Highly Pathogenic Avian Influenza (HPAI) has the potential to impact their survival. HPAI has been reported in Steppe Eagle, with two individuals tested positive for H5N8 in Russian Federation in 2017 (data from the WAHIS database), and these cases are likely a minimum figure given sporadic testing programmes. The outbreak has impacted populations of wild birds of varying taxa and levels of the food chain, and for some raptors the effect on their reproductive success is significant and gaining further study (Smith et al., 2025; Wilson et al., 2025).

Plan development and governance

Following [Resolution 12.12 \(Rev.COP14\)](#) and [Decision 14.145 on Action Plan for Birds](#) CMS COP14 to develop a Species Action Plan, to report on progress and present options for future action under CMS at COP15, this plan has been developed. Using the principles of IUCN's Conservation Planning Specialist Group of evidence based participatory decision making, a lead Coordinator, supported by the Raptors MOU Coordinating Unit and a Core Working Group, oversaw the collation and presentation of information. A wider expert group representing the species range was convened and a hybrid workshop was held in Astana, Kazakhstan in May 2025. Here known species information was

presented in addition to carrying out threat mapping and assessment and developing the Conservation Action Framework.

A questionnaire was also developed and distributed to CMS National Focal Points, Raptors National Contact Points, range states and species experts where information could be shared on the status and threats of Steppe Eagle in their country. This information has contributed to both the threat assessment (Table 1) and the list of key sites for the conservation of the species, presented in Annexe 3. Information was also collated on the population size and legal protection status by range state across the range and is presented in Annexe 4 and Annexe 5.

It is envisioned that the Steppe Eagle Global Action Plan will be implemented over a 10-year period (2026-2035). This should be reviewed at the 5-year midpoint to target resources for the remaining plan period. An emergency review will be undertaken if there is a sudden change which may affect the population or a new significant threat.

Within the first year of implementation, a multi-disciplinary Working Group of experts should be convened, which will then meet at least annually. This will link with CMS Parties and Raptors MOU Signatories, and an Action Plan Coordinator should be appointed. The aim of this group will be to:

- Review latest available information and research on the species
- Review progress and the completion of the actions in range states
- Plan implementation of the priority actions
- Support the delivery of actions outlined in the Conservation Action Framework
- Carry out a Mid-Term Implementation Review in 2030
- Carry out regular horizon scanning to detect emerging and future threats along the flyway.
- Develop and maintain a centralized and dynamic data sharing group and advocate for analysis and publication of combined datasets for the greater understanding of the species and their threats (from action 5.2.2)
- Support the Secretariat in reporting to CMS Conference of the Parties and the Meetings of Signatories to the Raptors MOU

References

- Ahmad, S., Khattak, R. H., Teng, L., Kaneez, K., & Liu, Z. (2022). Factors affecting habitat selection of endangered steppe eagle (*Aquila nipalensis*) in Pakistan: implications for raptors conservation. *Diversity*, 14(12), 1135.
- Aidek, A., & Eid, E. (2025). Exploring the Animal Market on Facebook: A Case Study of the Syrian Wildlife Trade. *Sustainability and Biodiversity Conservation*, 4(1), 1–21.
- Al-Sheikhly, O. F., Al-Barazangi, A. N., Haba, M. K., Fazaa, N. A., Abdulzahra, H. K., Turab, M. K. A., & Al-Azawi, A. J. (2017). Ring Recoveries from Steppe Eagles and Eastern Imperial Eagles from the Russian and Kazakhstan Breeding Populations and a Review of Major Threats to Eagles in Iraq. *Raptors Conservation*, 35.
- Alexandrovich, R. N., Abushin, A. A., Salemgareev, R. R., Urazaliev, R. S., & Smelansky, I. E. (2024). Steppe eagle mortality on power lines in the west of Kazakhstan, 2023-2024. *Selevinia*, 32, 11.
- Angelov, I. (2015). Steppe Eagle. In V. Golemansky *et al* (Ed.), *Red Data Book of the Republic of Bulgaria. Volume 2. Animals*. BAS & MoEW. Sofia
- Arnold, K. E., Brown, A. R., Ankley, G. T., & Sumpter, J. P. (2014). Medicating the environment: assessing risks of pharmaceuticals to wildlife and ecosystems. *The Royal Society* 369
- Barrios, L., & Rodriguez, A. (2004). Behavioural and environmental correlates of soaring-bird mortality at on-shore wind turbines. *Journal of Applied Ecology*, 41(1), 72–81.
- Batbayar, N., & Lee, H. (2017). Steppe eagle migration from Mongolia to India. *Bird migration across the Himalayas: wetland functioning amidst mountains and glaciers*, 6, 117–127.
- Bean, T. G., Chadwick, E. A., Herrero-Villar, M., Mateo, R., Naidoo, V., & Rattner, B. A. (2024). Do pharmaceuticals in the environment pose a risk to wildlife? *Environmental Toxicology and Chemistry*, 43(3), 595–610.
- Bekmansurov, R. H., Karyakin, I. V., Babushkin, M. V., Vazhov, S. V., Levashkin, A. P., Pimenov, V. N., & Pchelintsev, V. G. (2016). Results of work of the Raptor Ringing Center of the Russian Raptor Research and Conservation Network in 2015. *Raptors Conservation* (33), 24–45.
- Biggs, D. (2001). Eagles feast at quelea colony in Kruger. *Africa Birds & Birding*, 6(2), 16–17.
- Bird, J. P., Martin, R., Akçakaya, H. R., Gilroy, J., Burfield, I. J., Garnett, S. T., Symes, A., Taylor, J., Şekercioğlu, Ç. H., & Butchart, S. H. (2020). Generation lengths of the world's birds and their implications for extinction risk. *Conservation Biology*, 34(5), 1252–1261.
- BirdLife International (2021). Species factsheet: Steppe Eagle *Aquila nipalensis*. Downloaded from <https://datazone.birdlife.org/species/factsheet/steppe-eagle-aquila-nipalensis> on 01/09/2025
- BirdLife International (2025). Generation lengths of the world's birds. Version 3.1. Available from <https://datazone.birdlife.org>
- Bohra, D., & Rao, M. (2023). Raptors mortality in North-West Rajasthan, India (2017–2022). *Raptors Conservation*(52), 172–174.
- Bohra, D., & Vyas, S. (2018). Human Impact on Steppe Eagle and other Birds of Prey in North-West Rajasthan, India. *Raptors Conservation*, 100–101.
- Boland, C., & Alsuhaibany, A. (2020). The Birds of Saudi Arabia (Vol. 2). Motivate Media Group.
- Bold, A., & Boldbaatar, S. (1999). Rare Mongolian Birds of Prey. *Biology Institute research paper*, 1.
- BRCC. (2023). *The Outcomes of the III International Meeting on Conservation of the Steppe Eagle*. Retrieved 29/09/2025 from <https://www.brcc.kz/en/projects-and-plans/eagles-of-the-palearctic-outcomes/>
- Brochet, A.-L., Jbour, S., Sheldon, R. D., Porter, R., Jones, V. R., Al Fazari, W., Al Saghier, O., Alkhuzai, S., Al-Obeidi, L., & Angwin, R. (2019). A preliminary assessment of the scope and scale of illegal killing and taking of wild birds in the Arabian peninsula, Iran and Iraq. *Sandgrouse*, 41, 154–175.
- Brochet, A.-L., Van den Bossche, W., Jbour, S., Ntang'ang'a, P. K., Jones, V. R., Abdou, W. A. L. I., Al-Hmoud, A. R., Asswad, N. G., Atienza, J. C., & Atrash, I. (2016). Preliminary assessment of the

- scope and scale of illegal killing and taking of birds in the Mediterranean. *Bird Conservation International*, 26(1), 1–28.
- Bruggers, R. L., Jaeger, M. M., Keith, J. O., Hegdal, P. L., Bourassa, J. B., Latigo, A. A., & Gillis, J. N. (1989). Impact of fenthion on nontarget birds during quelea control in Kenya. *Wildlife Society Bulletin* (1973–2006), 17(2), 149–160.
- Cheke, R. A., & Sidatt, M. E. H. (2019). A review of alternatives to fenthion for quelea bird control. *Crop Protection*, 116, 15–23.
- Clark, W. S. (1992). The taxonomy of Steppe and Tawny Eagles, with criteria for separation of museum specimens and live eagles. *Bulletin of the British Ornithologists' Club*, 112(3), 150–157.
- Cramp, S., & Simmons, K. E. L. (1980). *Handbook of the Birds of Europe, the Middle East and North Africa: the Birds of the Western Palearctic. Vol. II Hawks to Bustards. (Vol. 2).*
- Clark, W. S. (2005). Steppe Eagle *Aquila nipalensis* is monotypic. *Bulletin of the British Ornithologists' Club*, 125(2), 3.
- Dahl, E. L., May, R., Hoel, P. L., Bevanger, K., Pedersen, H. C., Røskaft, E., & Stokke, B. G. (2013). White-tailed eagles (*Haliaeetus albicilla*) at the Smøla wind-power plant, Central Norway, lack behavioral flight responses to wind turbines. *Wildlife Society Bulletin*, 37(1), 66–74.
- De Lucas, M., Janss, G. F., Whitfield, D. P., & Ferrer, M. (2008). Collision fatality of raptors in wind farms does not depend on raptor abundance. *Journal of Applied Ecology*, 45(6), 1695–1703.
- Dementiev, G. P. (1951). Birds of prey: Accipitres or Falconiformes in Birds of the Soviet Union. In (Vol. 1, pp. 70–341).
- Dwyer, J. F., Karyakin, I. V., López, J. R. G., & Nikolenko, E. G. (2022). Avian electrocutions on power lines in Kazakhstan and Russia. *Ardeola*, 70(1), 3–27.
- Dzhamirzoev, G., Bekmansurov, R., Korepov, M., Stryukov, S., & Ismailov, H. (2023). Wintering Eastern Imperial Eagles in Dagestan, Russia. *Raptors Conservation* (S2), 323–327.
- eBird. (2025). eBird: An online database of bird distribution and abundance [web application]. eBird.
- Efrat, R., Lehnardt, Y., Berkowicz, D., Leshem, Y., Dor, R., Bragin, A., Bragin, E., Katzner, T., & Sapir, N. (2025). Using GPS tracking data to validate the conservation value of bird migration counts. *Biological Conservation*, 302, 110959.
- Efrat, R., Lehnardt, Y., Bragin, A., Bragin, E., Avgar, T., Katzner, T., & Sapir, N. (2025). Age-dependent response to anthropogenic habitat during migration of an endangered raptor. *Current Biology*, 35(17), 4301–4308.
- Eid, E., & Handal, R. (2018). Illegal hunting in Jordan: Using social media to assess impacts on wildlife. *Oryx*, 52(4), 730–735.
- Fink, D., T. Auer, A. Johnston, M. Strimas-Mackey, S. Ligocki, O. Robinson, W. Hochachka, L. Jaromczyk, C. Crowley, K. Dunham, A. Stillman, C. Davis, M. Stokowski, P. Sharma, V. Pantoja, D. Burgin, P. Crowe, M. Bell, S. Ray, I. Davies, V. Ruiz-Gutierrez, C. Wood, A. Rodewald. 2024. eBird Status and Trends, Data Version: 2023; Released: 2025. Cornell Lab of Ornithology, Ithaca, New York. <https://doi.org/10.2173/WZTW8903>
- Fleming Jr, R. L. (1983). An east-west Aquila eagle migration in the Himalayas. *Journal of the Bombay Natural History Society. Bombay*, 80(1), 58–62.
- Forsman, D. (2016). *Flight identification of raptors of Europe, North Africa and the Middle East.* Bloomsbury Publishing.
- Garvin, J. C., Slabe, V. A., & Cuadros Díaz, S. F. (2020). Conservation letter: lead poisoning of raptors. *Journal of Raptor Research*, 54(4), 473–479.
- Green, R. E., Newton, I., Shultz, S., Cunningham, A. A., Gilbert, M., Pain, D. J., & Prakash, V. (2004). Diclofenac poisoning as a cause of vulture population declines across the Indian subcontinent. *Journal of Applied Ecology*, 41(5), 793–800.
- Guil, F., Soria, M. Á., Margalida, A., & Pérez-García, J. M. (2018). Wildfires as collateral effects of wildlife electrocution: An economic approach to the situation in Spain in recent years. *Science of the Total Environment*, 625, 460–469.

- Habib, M. (2023). Wintering Steppe Eagle in Hurghada (Egypt) from 2016 till 2022. *Raptors Conservation* (S2), 271–272.
- Hilgerloh, G., Michalik, A., & Raddatz, B. (2011). Autumn migration of soaring birds through the Gebel El Zeit Important Bird Area (IBA), Egypt, threatened by wind farm projects. *Bird Conservation International*, 21(4), 365–375.
- Horváth, M., Béres, I., Özcan, C., Juhász, T., Kovács, A., Tatar, B., Karyakin, I. V., Schmidt, M., & Tavares, J. (2018). Breeding population surveys of Eastern Imperial Eagles and Steppe Eagles in central Anatolia, Turkey. *Raptors Conservation* (1), 113–114.
- Horváth, M., Juhász, T., Béres, I., Özcan, C., Tatar, B., Özkoç, Ö., İsfendiyaroğlu, S., Schmidt, M., & Karyakin, I. (2023). Steppe Eagle breeding surveys in Turkey between 2015 and 2022. *Raptors Conservation* (S2), 217–219.
- Horváth, M., Karyakin, I., Johasz, T., Zinevich, L., Kalocsa, B., & Haraszthy, L. (2022). First breeding records of Steppe Eagles *Aquila nipalensis* in Turkey in the twenty-first century. *Sandgrouse*, 44(1), 169–174.
- Huntley, B., Green, R. E., Collingham, Y. C., & Willis, S. G. (2007). *A climatic atlas of European breeding birds*.
- IUCN. (2021). *The IUCN Red List of Threatened Species*. Available at <https://www.iucnredlist.org/species/22696038/www.iucnredlist.org>. Retrieved 5 September from
- Karyakin, I. (2008). Lines-killers continue to harvest the mortal crop in Kazakhstan. *Raptors Conservation*, 11, 14–21.
- Karyakin, I. (2010). Catastrophic consequences of deratization with use of bromadiolone in Mongolia in 2001–2003. *Pest Management*, 1, 7.
- Karyakin, I., MV, B., Vazhov, S., Bachtin, R., Nikolenko, E., & Shnayder, E. (2015). Results of work of the Raptor Ringing Center of the Russian Raptor Research and Conservation Network in 2014. *Raptors Conservation*, 37, 15–48.
- Karyakin, I., Kovalenko, A. V., Barashkova, A., Smelansky, I., & Nikolenko, E. (2016). *Strategy of the Steppe Eagle conservation in the Russian Federation*.
- Karyakin, I., Kovalenko, A. V., & Zinevich, L. S. (2016). The First Record of Case of the Imperial Eagle and the Steppe Eagle Successful Breeding in the Mixed Pair in Western Kazakhstan and Records of Probable Hybrids of These Species in Russia and Kazakhstan. *Raptors Conservation* (32), 118–125.
- Karyakin, I., Zinevich, L. S., Schepetov, D. M., & Sorokina, S. Y. (2016). Population structure of the Steppe Eagle Range and preliminary data on the population genetic diversity and status of subspecies. *Raptors Conservation*(32), 67–88.
- Karyakin, I., Nikolenko, E., Zinevich, L., & Pulikova, G. I. (2017). Steppe Eagle in the Karaganda Region, Kazakhstan. *Raptors Conservation*, 35, 33.
- Karyakin, I., Nikolenko, E., & Shnayder, E. (2018). Status of the Steppe Eagle in the world: “white spots” in distribution, population numbers, ecology and threats. *Eagles of Palearctic: Study and conservation*, 1, 81–84.
- Karyakin, I., Nikolenko, E., Shnayder, E., Babushkin, M. V., Bekmansurov, R., Kitel, D., Pimenov, V. N., Pchelintsev, V. G., Khlopotova, A., & Shershnev, M. (2018). Results of Work of the Raptor Ringing Center of the Russian Raptor Research and Conservation Network in 2017. *Raptors Conservation*, 37, 15–48.
- Karyakin, I., Nikolenko, E., Shnayder, E., Zinevich, L., Pulikova, G., Bartoszu, K., Horváth, M., Juhász, T., Aghababayan, K., & Andreyenkova, N. (2019). Results of the GPS/GSM-Tracking of Juvenile Steppe Eagles from Russia and Kazakhstan. *Raptors Conservation* (39).
- Karyakin, I., Nikolenko, E. G., Shnayder, E., Zinevich, L., Pulikova, G., & Andreyenkova, N. (2021). Wind Power Development in Eastern Kazakhstan Threatens Migration of Eagles. *Raptors Conservation* (43).

- Karyakin, I., Nikolenko, E., & Shnayder, E. (2023). Steppe Eagle in the Altai-Sayan region - research results 2019–2023. *Raptors Conservation*(S2), 233–241.
- Karyakin, I. V., Knizhov, K. I., Nikolenko, E. G., Shnayder, E. P., Pulikova, G. I., & Kaptyonkina, A. G. (2024). Golden Eagle in Karatau and Chu-Ili Mountains (Kazakhstan) and Assessment of Risks to its Populations from Developing Wind Energy. *Raptors Conservation* (48), 11–99.
- Karyakin, I., Nikolenko, E. G., & Pulikova, G. (2025). *Status of Steppe Eagle Populations in Kazakhstan, Adverse Factors and Conservation Measures for the Species*.
- Katzner, T. E., Pain, D. J., McTee, M., Brown, L., Cuadros, S., Pokras, M., Slabe, V. A., Watson, R. T., Wiemeyer, G., & Bedrosian, B. (2024). Lead poisoning of raptors: state of the science and cross-discipline mitigation options for a global problem. *Biological Reviews*, 99(5), 1672–1699.
- Keijmel, M., Babbington, J., Roberts, P., McGrady, M., & Meyburg, B. (2020). The world's largest gathering of Steppe Eagles *Aquila nipalensis* discovered in central Saudi Arabia. *Sandgrouse*, 42, 59–68.
- Keith, J. O., & Bruggers, R. L. (1998). Review of hazards to raptors from pest control in Sahelian Africa. *Journal of Raptor Research*, 32(2), 12.
- Khoury, F., Makarewicz, C., Al-Hmoud, A., & Mithen, S. (2020). The illegal trapping of large falcons in Jordan. *Sandgrouse*, 42, 9.
- Kovács, A., Williams, N., & Galbraith, C. (2014). *Saker Falcon Falco cherrug Global Action Plan (SakerGAP), including a management and monitoring system, to conserve the species*. (Raptors MOU Technical Publication No. 2, CMS Technical Series No. 31.
- Krone, O. (2018). Lead poisoning in birds of prey. In *Birds of prey: biology and conservation in the XXI century* (pp. 251–272). Springer.
- Kumar, S. (2025). Pan India Assessment and Monitoring of Endangered Species - Vultures.
- Lee, A. (2025). Steppe Eagle. In Lee ATK, Rose S, Banda S, Bezeng SB, Maphalala MI, Maphisa DH, & S.-R. H (Eds.), *The 2025 Red Data Book of Birds of South Africa, Lesotho and Eswatini*. BirdLife South Africa.
- Lees, C., Rutschmann, A., Santure, A., & Beggs, J. (2021). Science-based, stakeholder-inclusive and participatory conservation planning helps reverse the decline of threatened species. *Biological Conservation*, 260, 109194.
- Lerner, H. R., & Mindell, D. P. (2005). Phylogeny of eagles, Old World vultures, and other Accipitridae based on nuclear and mitochondrial DNA. *Molecular phylogenetics and evolution*, 37(2), 327–346.
- Loon, R. (1995). The effectiveness of the law in the conservation of birds of prey in South Africa. *South African Journal of Environmental Law and Policy*, 2(2), 169–185.
- Mallet, J., Liébana, M. S., Santillán, M. Á., & Grande, J. M. (2020). Raptor entanglement with human debris at nests: A patchy and species-specific problem. *Journal of Raptor Research*, 54(3), 316–318.
- MaMing. (2023). The survival status of Golden and Steppe Eagles in a capturing areas in China. *Raptors Conservation* (S2), 191–192.
- MaMing, R., & Zhao, X. (2013). Distribution Patterns and Ecology of the Steppe Eagle in China. *Raptors Conservation* (27).
- Martínez-Ruiz, M., Dykstra, C. R., Booms, T. L., & Henderson, M. T. (2023). Conservation letter: Effects of global climate change on raptors. *Journal of Raptor Research*, 57(1), 92–105.
- McClure, C. J., Westrip, J. R., Johnson, J. A., Schulwitz, S. E., Virani, M. Z., Davies, R., Symes, A., Wheatley, H., Thorstrom, R., & Amar, A. (2018). State of the world's raptors: Distributions, threats, and conservation recommendations. *Biological Conservation*, 227, 390–402.
- McGrady, M., Bragin, E., Karyakin, I., Batbayar, N., & Katzner, T. (2021). Steppe eagle *Aquila nipalensis*. In *Migration Strategies of Birds of Prey in Western Palearctic* (pp. 108–116). CRC Press.

- McWilliam, A. N., & Cheke, R. A. (2004). A review of the impacts of control operations against the red-billed quelea (*Quelea quelea*) on non-target organisms. *Environmental Conservation*, 31(2), 130–137.
- Meyburg, B.-U., Meyburg, C., & Paillat, P. (2012). Steppe Eagle migration strategies—revealed by satellite telemetry. *British Birds*, 105(9), 506.
- Meyburg, B., Matthes, J., & Meyburg, C. (2010). Überwinterungsökologie: Schreiadler und Blutschnabelweber. *Falke*, 57, 236–243.
- Meyburg, B.-U., Boesman, P., Marks, J., & Sharpe, C. (2020). Steppe Eagle (*Aquila nipalensis*), version 1.0. In J. Del Hoyo, A. Elliott, D. A. Sargatal, D. A. Christie, & E. de Juana (Eds.), *Birds of the World*. Cornell Lab of Ornithology. <https://doi.org/https://doi.org/10.2173/bow.steeag1.01>
- Meyburg, B.-U., Paillat, P., & Meyburg, C. (2003). Migration routes of Steppe Eagles between Asia and Africa: a study by means of satellite telemetry. *The Condor*, 105(2), 219–227.
- Mitrofanov, O. B. (2015). To the distribution of the Steppe Eagle in the Altai reserve. In A. F. Kovshar, *14th International Ornithological Conference of Norther Eurasia*
- Ministry of Agriculture & Forestry, (2023). *Steppe Eagle Action Plan*. Ministry of Agriculture and Forestry, Ankara, Turkiye
- Nakayama, S. M., Morita, A., Ikenaka, Y., Mizukawa, H., & Ishizuka, M. (2019). A review: poisoning by anticoagulant rodenticides in non-target animals globally. *Journal of Veterinary Medical Science*, 81(2), 298–313.
- Newton, I. (1998). *Population limitation in birds*. Academic press.
- Newton, I. (2008). *The migration ecology of birds*. Elsevier.
- Newton, I. (2010). *Bird migration* (Vol. 113). Harper Collins.
- Ngila, P. M., Chiawo, D., Owuor, M. A., Wasonga, V. O., Ellwood, E., & Mugo, D. (2024). Assessing the susceptibility of raptor species to electrocution: a framework for Kenya. *Environmental and Sustainability Indicators*, 22, 100400.
- Noby, K., Mossad, H., El Din, S., Elbolkin, N., Abdalla, T., Jobson, B., Williams, J., Gemerden, B., Weston, J., Hayward, W., Chandra, S., Arkumarev, V., Dobrev, V., Ivanova, E., Nikolov, S. C., & Oppel, S. (2022). Globally important proportions of six raptor populations migrate past Galala Bird Observatory, Egypt, in spring. *Sandgrouse*, 44, 11.
- Ogada, D., Virani, M. Z., Thiollay, J. M., Kendall, C. J., Thomsett, S., Odino, M., Kapila, S., Patel, T., Wairasho, P., & Dunn, L. (2022). Evidence of widespread declines in Kenya's raptor populations over a 40-year period. *Biological Conservation*, 266, 109361.
- Oppel, S., Arkumarev, V., Bakari, S., Dobrev, V., Saravia-Mullin, V., Adefolu, S., Sözüer, L. A., Apeverga, P. T., Arslan, Ş., & Barshep, Y. (2021). Major threats to a migratory raptor vary geographically along the eastern Mediterranean flyway. *Biological Conservation*, 262, 109277.
- Pain, D. J., Fisher, I., & Thomas, V. G. (2009). A global update of lead poisoning in terrestrial birds from ammunition sources. Ingestion of lead from spent ammunition: implications for wildlife and humans, 99–118.
- Pande, S., Deshpande, P., Mahabal, A., & Sharma, R. (2013). Distribution of the Steppe Eagle in the Indian Subcontinent: Review of Records from 1882 to 2013 AD. *Raptors Conservation* (27).
- Percival, S. (2005). Birds and windfarms. *British Birds*, 98, 194–204.
- Petluš, P., Petlušová, V., Baláž, I., Ševčík, M., Lešová, A., & Hapl, E. (2021). Impact of management measures on the European ground squirrel population development. *Folia Oecologica*, 48(2).
- Pulikova, G., Kaptyonkina, A., Smelansky, I., & Zinevich, L. (2023). The present status of Steppe Eagle in Kazakhstan. *Raptors Conservation*(S2), 247–252.
- Purevdorj, A., Purev-Ochir, G., Gungaa, A., Bold, B., Davaasuren, B., Ganbold, M., Galtbalt, B., Batbayar, N., Rahman, L., & Dixon, A. (2025). Electrocution of Steppe Eagles and Golden Eagles in Mongolia. *Journal of Raptor Research*, 59(2), 1–8.
- Russell, R. E., & Franson, J. C. (2014). Causes of mortality in eagles submitted to the National Wildlife Health Center 1975–2013. *Wildlife Society Bulletin*, 38(4), 697–704.

- Sangster, G., Knox, A. G., Helbig, A. J., & Parkin, D. T. (2002). Taxonomic recommendations for European birds. *Ibis*, 144(1), 153–159.
- Schaub, T., Klaassen, R. H., De Zutter, C., Albert, P., Bedotti, O., Bourrioux, J.-L., Buij, R., Chadœuf, J., Grande, C., & Illner, H. (2024). Effects of wind turbine dimensions on the collision risk of raptors: A simulation approach based on flight height distributions. *Science of the Total Environment*, 954, 176551.
- Serratosa, J., Oppel, S., Rotics, S., Santangeli, A., Butchart, S. H., Cano-Alonso, L. S., Tellería, J. L., Kemp, R., Nicholas, A., & Kalvāns, A. (2024). Tracking data highlight the importance of human-induced mortality for large migratory birds at a flyway scale. *Biological Conservation*, 293, 110525.
- Sharma, P., & Sundar, K. (2009). Counts of Steppe Eagles *Aquila nipalensis* at a carcass dump in Jorbeer, Rajasthan, India. *Oriental Bird Club*. (pp. 160–163)
- Sharma, A. K., Saini, M., Singh, S. D., Prakash, V., Das, A., Dasan, R. B., Pandey, S., Bohara, D., Galligan, T. H., & Green, R. E. (2014). Diclofenac is toxic to the Steppe Eagle *Aquila nipalensis*: widening the diversity of raptors threatened by NSAID misuse in South Asia. *Bird Conservation International*, 24(3), 282–286.
- Shaw, P., Ogada, D., Dunn, L., Buij, R., Amar, A., Garbett, R., Herremans, M., Virani, M. Z., Kendall, C. J., Croes, B. M., Odino, M., Kapila, S., Wairasho, P., Rutz, C., Botha, A., Gallo-Orsi, U., Murn, C., Maude, G., & Thomsett, S. (2024). African savanna raptors show evidence of widespread population collapse and a growing dependence on protected areas. *Nature Ecology & Evolution*, 8(1), 45–56. <https://doi.org/10.1038/s41559-023-02236-0>
- Shirihai, H., & Christie, D. A. (1992). Raptor migration at Eilat. *British Birds*, 85(4), 141–186.
- Shobrak, M., Alasmari, S., Alqthami, A., Alqthami, F., Al-Otaibi, A., Al Zoubi, M., El Moghrabi, L., Jbour, S., Asswad, N. G., & Oppel, S. (2022). Electric infrastructure poses a significant threat at congregation sites of the globally threatened Steppe Eagle *Aquila nipalensis* in Saudi Arabia. *Bird Conservation International*, 32(2), 313–321.
- Sklyarenko, S. (2023). Legislative Protection of Birds of Prey and Strengthening the Fight Against Their Illegal Traffic in Kazakhstan. *Raptors Conservation*(S2), 186–190.
- Slabe, V. A., Anderson, J. T., Cooper, J., Miller, T. A., Brown, B., Wrona, A., Ortiz, P., Buchweitz, J., McRuer, D., & Dominguez-Villegas, E. (2020). Feeding ecology drives lead exposure of facultative and obligate avian scavengers in the eastern United States. *Environmental Toxicology and Chemistry*, 39(4), 882–892.
- Slater, S. J., Dwyer, J. F., & Murgatroyd, M. (2020). Conservation letter: raptors and overhead electrical systems. *Journal of Raptor Research*, 54(2), 198–203.
- Smelansky, I., Buyvolov, Y., Bazhenov, Y., Bakirova, R., & Burovik, L. (2015). Steppe fires and fire management in steppe protected areas: environmental and conservation aspects. *Analytical Survey*, 144.
- Smith, G. D., McGrady, M. J., Beckmann, B. C., & Oli, M. K. (2025). Potential effects of HPAI on occupancy rates, breeding success, age and turnover of breeding Peregrine Falcons *Falco peregrinus* in southern Scotland. *Bird Study*, 1–5.
- SolB. (2023). State of India's Birds, 2023: Range, trends, and conservation status. The SolB Partnership. <https://doi.org/10.5281/zenodo.11124590>
- Subedi, T. R., DeCandido, R., Baral, H. S., Gurung, S., Gurung, S., Puan, C. L., & Sah, S. A. M. (2017). Population structure and annual migration pattern of Steppe Eagles at Thoolakharka Watch Site, Nepal, 2012–2014. *Journal of Raptor Research*, 51(2), 165–171.
- Subedi, T. R., Gurung, S., & Dheeraj, C. (2025). Raptor Migration Count 2024- Thoolakharka Nepal.
- Subedi, T. R., Mehta, P., & Shi, X. (2025). Raptor Conservation in East and South Asia. *State of the World's Raptors*, 12.11–12.23.
- Sundev, G., Yosef, R., Birazana, O., & Damdin, S. (2012). Breeding Ecology of the Steppe Eagle (*Aquila nipalensis*) in Mongolia. *Ornis Mongolica*, 1, 7.

- Van Maanen, E., Goradze, I., Gavashelishvili, A., & Goradze, R. (2001). Trapping and hunting of migratory raptors in western Georgia. *Bird Conservation International*, 11(2), 77–92.
- Watson, R. T., Kolar, P. S., Ferrer, M., Nygård, T., Johnston, N., Hunt, W. G., Smit-Robinson, H. A., Farmer, C. J., Huso, M., & Katzner, T. E. (2018). Raptor interactions with wind energy: case studies from around the world. *Journal of Raptor Research*, 52(1), 1–18.
- Weiss, N. (2023). Steppe Eagle's population structure on migration through the bottleneck of Eilat in spring. *Raptors Conservation* (S2), 269–270.
- Weiss, N., Haviv, E., Alon, D., Perlman, Y., & Schäckermann, J. (2019). How Fast Does the Steppe Eagle Population Decline? Survey Results from Eilat, Israel. *Raptors Conservation*, 38.
- Welch, G., & Welch, H. (1989). Autumn migration across the Bab-el-Mandeb Straits. Raptors in the modern world. World Working Group on Birds of Prey, Berlin, 123–126.
- Wichmann, M. C., Groeneveld, J., Jeltsch, F., & Grimm, V. (2005). Mitigation of climate change impacts on raptors by behavioural adaptation: ecological buffering mechanisms. *Global and Planetary Change*, 47(2-4), 273–281.
- Wilson, M. W., Beckmann, B. C., & Wernham, C. V. (2025). Reduced breeding success consistent with effects of high pathogenicity avian influenza (HPAI) on raptors in Scotland in 2022. *Bird Study*, 72(1), 51–60.
- Zduniak, P., Yosef, R., Sparks, T. H., Smit, H., & Tryjanowski, P. (2010). Rapid advances in the timing of the spring passage migration through Israel of the steppe eagle *Aquila nipalensis*. *Climate Research*, 42(3), 217–222.

Annexe 1 – Technical Annexes

Annexe 1.1 Contributors and Working Group

Contributors

Armenia: Karen Aghababyan, Lusine Aghajanyan, Eliza Poghosyan; **Azerbaijan:** Zülfü Farajli; **Bahrain:** Khalil Hasan Ali; **Bangladesh:** Alam Sarowar Dipu; **Bhutan:** Tshering Tobgay; **Bulgaria:** Vladimir Dobrev, Boris P. Nikolov, Yana Velina; **China:** MaMing; **Egypt:** Khaled El Noby, Shaimaa Taha; **Ethiopia:** Yilma Dellelegn Abebe; **Finland:** Esko Hyvärinen; **India:** Dau Lal Bohra, Kiran Srivastava; **Iran (Islamic Republic of):** Mohammad Asghari Tabari; **Iraq:** Jassim Alasadi, Laith Ali, Azzam Alwash, Korsh Ararat; **Israel:** Ron Efrat, Ohad Hazofe, Noam Weiss; **Jordan:** Ibrahim Al Hasani, Laith El-Moghrabi, Fares Khouri, Tareq Qaneer; **Kazakhstan:** Ayazhan Duisengaliyeva, Andrey Kim, Alyona Kaptyonkina, Nurlan Ongarbayev, Genriyetta Pulikova, Ilya Smelansky, Ruslan Urazaliyev, Vera Voronova, Ksenia Zyukova; **Kenya:** Simon Thomsett; **Kyrgyzstan:** Andrei Averin, Jeremie Berlioux; **Mongolia:** Batmunkh Davaasuren; **Myanmar:** Thiri Da Wei Aung; **Nepal:** Sandesh Gurung, Tulsi Ram Subedi; **Nigeria:** Mathew Olufemi Okunuga; **Oman:** Rabab Al Lawati, Taimur Al Said, Michael McGrady, Maia Sarrouf-Willson; **Pakistan:** Muhammad Samar Hussain Khan; **Poland:** Monika Lesz; **Russian Federation:** Oleg Goroshko, Elena Shnayder; **Saudi Arabia:** Sahim Alasmari, Ali Al Faqih, Fahad Algethami, Fahad Alqthami, Mohammad Alzoubi, Abdullah Alsalem, Sharif Jbour, Jacky Judas, Mátyás Prommer; **South and Southern Africa:** André Botha; **Sri Lanka:** Chandani Ganga Wijesinghe; **Türkiye:** İlker Özbahar, Cansu Özcan, Burak Tatar; **Turkmenistan:** Eldar A. Rustamov; **United Arab Emirates:** Obaid Ali Alshamsi, Reza Khan; **Ukraine:** Sergey Domashevsky; **Uzbekistan:** Anna Ten, Jurabek Tulayev; **Yemen:** Omer Ahmed Baeshen; **Zambia:** Frank Willems; **Zimbabwe:** Neil Deacon; **Other:** Guy Anderson, Michele Bowe, Jamie Copsey, Anand Choudhary, Mary Davies, Mark Day, Adam Devenish, Katie Firth (map preparation), Joe Fraser-Turner (Annexe preparation), Dronashish Goswami, Rhys Green, Konika Jangir, Vicky Jones, Todd Katzner, Phil Miller, Steffen Oppel, Luke Ozsanlav-Harris, Emily Simmonds, Genevieve Stephens, Jojo Sunderland, Ding Li Yong.

Core Working Group

Jenny Weston (RSPB/Birdlife UK), **Umberto Gallo-Orsi** (CMS Raptors MOU Coordinating Unit), **Márton Horváth** (MME/Birdlife Hungary), **Igor Karyakin** (RRRCN), **Suresh Kumar** (Wildlife Institute of India), **Elvira Nikolenko** (RRRCN), **Martin Odino** (The Peregrine Fund), **Mohammed Shobrak** (National Centre for Wildlife).

Annexe 1.2 Abbreviations

ACBK	- Association for the Conservation of Biodiversity of Kazakhstan (BirdLife Kazakhstan)
AVISTEP	- Avian Sensitivity Tool for Energy Planning
BRCC	- Biodiversity Research & Conservation Center
CAF	- Central Asian Flyway
CITES	- Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	- Convention on the Conservation of Migratory Species of Wild Animals
COP	- Conference of Parties
Raptors MoU	- Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia
EAD	- Environment Agency - Abu Dhabi
EIA	- Environmental Impact Assessment
IBA	- Important Bird and Biodiversity Area
ind.	- individuals
IUCN	- International Union for Conservation of Nature
IKB	- Illegal Killing, Taking and Trade
ITTEA	- Asia Pacific Illegal Taking of Migratory Birds Intergovernmental Task Force
KBA	- Key Biodiversity Area
MEA	- Multilateral Environmental Agreement
MIKT	- Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean
MME	- Hungarian Ornithological and Nature Conservation Society (BirdLife Hungary)
MOU A3 site	- Site named in Annex 3, Table 3 of the Raptors Memorandum of Understanding
MSB	- Migratory Soaring Birds
NCW	- National Centre for Wildlife
NGO	- Non-governmental organisation
NSAID	- Non-steroidal anti-inflammatory drug
OECM	- Other Effective Area-based Conservation Measures
PA	- Protected area
PVA	- Population Viability Analysis
RRRCN	- Russian Raptor Research Conservation Network
RSCN	- Royal Society for the Conservation of Nature (BirdLife Jordan)
RSPB	- Royal Society for the Protection of Birds (BirdLife UK)
SAP	- Species Action Plan
SEA	- Strategic Environmental Assessment
SEGAP	- Global Action Plan for the Conservation of the Steppe Eagle (<i>Aquila nipalensis</i>)
SWAITB TF	- South-West Asia Illegal Taking of Migratory Birds Intergovernmental Task Force
UAE	- United Arab Emirates
VMP	- Veterinary medicinal product
Vulture MsAP	- Multi-species Action Plan to conserve African-Eurasian Vultures
WG	- Working Group
WOAH	- World Organisation for Animal Health

Annexe 1.3 Legend to data tables

Season

B - Breeding

NB - Non-breeding but in breeding range

V - Non-breeding visitor

M - Migration

W - Wintering

A - All seasons

Population data quality

GO - Good Observed The figure is based on reliable or representative quantitative data derived from complete counts or comprehensive surveys.

GE - Good Estimated The figure is based on reliable or representative quantitative data derived from sampling or interpolation.

ME - Medium Estimated The figure is based on incomplete quantitative data derived from sampling or interpolation.

MI - Medium Inferred The figure is based on incomplete or poor quantitative data derived from indirect evidence.

P - Poor The figure is not based on quantitative data, but instead on estimates derived from circumstantial evidence.

U - Unknown Information on quality not available.

Status

Bold = Steppe Eagle is a trigger species, or specifically named feature, for the site.

Source

A site of an Internationally Significant Count according to IBA Criteria A1 (at least 15 individuals (the equivalent of 5 Pairs/Reproductive Units) of a CR or EN species with a global population of >1,500 individuals) as recorded by eBird checklist. Refers specifically to sites with more than one count at the site including counts of fewer than fifty individuals, or a site with only one count which exceeds 50 individuals.

Annexe 2 – Regional Action Prioritisation

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
Goal 1 - Reduce the impact of energy infrastructure on Steppe Eagles along the flyway						
<i>Objective 1.1 Improve detection methods and data sharing on the impact of energy infrastructure</i>						
1.1.1	Review, agree and adopt standard survey methods and protocols for monitoring electrocution and collision with energy transmission and generation infrastructure across the whole range.	MEDIUM	Medium	Medium	Medium	Medium
1.1.2	Undertake standardised surveys in key areas to fully understand the impact of energy infrastructure on Steppe Eagle mortality to inform appropriate mitigation measures.	HIGH	High	High	High	High
1.1.3	Promote transparency and regular exchange (or publication) of collected data on presence and mortality of Steppe Eagles from developers, infrastructure owners and other key stakeholders including energy funding agencies.	MEDIUM	Medium	Medium	High	Medium
<i>Objective 1.2 – Promote bird (eagle) safe infrastructure and solutions</i>						
1.2.1	Facilitate that national guidelines and legislation reflect international standards and the implementation of CMS Resolution 10.11 by all countries/territories and promote implementation of bird friendly infrastructure and mitigation actions, working in partnership in part with the CMS Energy Task Force.	MEDIUM	Medium	Medium	High	Medium
1.2.2	Ensure there are effective national legal frameworks to minimise the impacts of dangerous infrastructure in all countries/territories.	MEDIUM	Medium	Medium	Medium	Medium
1.2.3	Promote awareness of the risks and implications associated with unsafe energy infrastructure to the communities and economies which may be impacted by it.	MEDIUM	Medium	Medium	Medium	Medium
<i>Objective 1.3 – Prevent and mitigate hazardous energy infrastructure in high-risk areas</i>						
1.3.1	Identify the highest risk areas through promoting wider coverage of sensitivity mapping tools (such as Avistep, etc), and by paying particular attention to bottleneck and congregation sites, prioritising assessments of the powerlines and windfarms for electrocution and collision risks in these key areas.	CRITICAL	Critical	Critical	Critical	Critical

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
1.3.2	Ensure all key breeding areas, bottleneck and congregation have safe electricity transmission infrastructure through the replacement and retrofitting of dangerous infrastructure (burying underground, insulation, diverters etc) and that new infrastructure also meets these standards.	CRITICAL	Critical	Critical	Critical	Critical
1.3.3	Improve EIA procedures to ensure appropriate consideration within EIAs for development in key areas for Steppe Eagle.	HIGH	High	High	High	High
Goal 2 - Reduce significantly mortality due to impact of legal and illegal take and trade						
<i>Objective 2.1 - Understand the magnitude and socioeconomic drivers of illegal and unsustainable legal take, sharing information across the range</i>						
2.1.1	Adopt common methodology across the range, based on existing good practice, on the gathering and management of data on illegal and legal take and in-person trade (including questionnaires and standard database structure etc.), to identify hot spots and methods.	MEDIUM	Medium	High	Medium	Medium
2.1.2	Adopt common methods of monitoring online trade and sales of Steppe Eagle, including via social media and content platforms, based on existing good practice.	MEDIUM	Medium	High	Medium	Medium
2.1.3	Provide support and data for an international review on the magnitude of illegal and legal take and trade of Steppe Eagles (and other raptors where appropriate) throughout the species' range.	MEDIUM	Medium	High	Medium	Medium
2.1.4	Undertake socioeconomic research to identify drivers of illegal take and trade (e.g. trophy hunting through recreational shooting, livestock protection or captive bird keeping) among key stakeholder groups utilising different techniques.	MEDIUM	Low	High	Medium	Medium
2.1.5	Identify key stakeholder groups and primary communication channels in relation to illegal and legal take and trade of Steppe Eagles including law enforcement groups at the national level.	MEDIUM	Low	High	Medium	Medium
<i>Objective 2.2 - Strengthen legislation and law enforcement to minimise illegal and unsustainable legal take and trade</i>						

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
2.2.1	Gain full protection status, with appropriate penalties where breached, for the Steppe Eagle in all countries/territories following review of current levels, including international responsibilities through CMS and CITES.	CRITICAL	Critical	Critical	Critical	Critical
Objective 2.3 - Increase awareness and capacity amongst key stakeholders to decrease illegal and legal take of Steppe Eagles						
2.3.1	Enhance enforcement of illegal take and trade laws in hot-spot areas by building cooperation and capacity between conservation organizations (i.e. both governmental and non-governmental) and law enforcement agencies to	HIGH	Medium	Critical	High	High
2.3.2	Prepare, disseminate and adopt best practice guidance on effective voluntary and state mechanisms for enforcing hunting and take regulations to increase awareness of key stakeholders including the full judiciary system (i.e. law enforcement agencies, prosecutors, judges etc). In addition, undertake extensive targeted outreach activities in key impact areas, such as patrols in specific markets, e-commerce enforcement units, targeting known criminal organisations and engaging decision makers.	HIGH	Medium	Critical	High	High
2.3.3	Develop and deliver a programme of work in key areas to reduce ownership of Steppe Eagles as 'status symbols' either by educating on its illegality or by promoting legal alternatives, to target consumer demand. Share national and international resource opportunities to undertake campaigns to include community engagement and media dissemination.	MEDIUM	Low	High	Medium	High
Goal 3 - Understand and reduce the impact of unintentional poisoning on Steppe Eagle populations						
Objective 3.1 - Identify critical chemicals affecting Steppe Eagle survival and/or fitness						
3.1.1	Conduct research and disseminate literature on critical chemicals likely to affect the fitness (health and population productivity) and/or survival of Steppe Eagle throughout its range.	HIGH	High	High	High	High
3.1.2	Understand the extent of use, impact and contamination pathway of NSAIDs, pest control chemicals and other environmental contaminants at or near breeding and congregation sites including systematic sampling and analysis of primary food resources.	HIGH	High	High	High	High

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
3.1.3	Sample live Steppe Eagles and fresh eagle carcasses, in a timely effective manner to determine cause of death and presence of critical chemicals, recorded in a centralised database to enable data sharing.	HIGH	High	High	High	High
Objective 3.2 - Minimize exposure to critical chemicals						
3.2.1	Ratify the legislation on critical chemicals use and disposal to ensure the implementation of CMS Resolution 11.15 (RevCOP14) and related CMS Preventing Poisoning Guideline use and the Bern Convention to ensure the use of critical chemicals is banned or appropriately restricted across countries/territories.	HIGH	High	High	High	High
3.2.2	Identify the socio-economic drivers of the use of critical chemicals and employ methods to reduce these drivers measurably.	LOW	Medium	Low	Medium	Medium
3.2.3	Develop, adopt safe farmed-animal carcass management and disposal and promote with key stakeholders, ensuring that eagles still have access to safe carcasses as a food resource.	MEDIUM	Low	High	High	High
3.2.4	Strengthen law enforcement, by building capacity and making resources available, to ensure effective monitoring and enforcement of existing and new legislation of critical chemicals.	HIGH	High	High	High	High
3.2.5	Develop communication and awareness mechanism with WOA to support in banning of dangerous drugs and support using the safe alternatives.	MEDIUM	Medium	High	Medium	High
3.2.6	Raise awareness on the environmental impact from the use of critical chemicals and promotion of alternatives in key Steppe Eagle areas (safe chemicals or alternative mitigation measures such as fences etc).	HIGH	High	High	High	High
Goal 4 - Attain good quality habitats that support populations of Steppe Eagle across the species range						
Objective 4.1 - Identify and map key habitats						
4.1.1	Conduct targeted research, both in the breeding and non-breeding ranges on habitat use, site connectivity and diet, to fill key knowledge gaps.	CRITICAL	Critical	Critical	Critical	Critical
4.1.2	Develop a habitat suitability map of whole species' range, integrating sensitivity layers, telemetry data, and observation networks.	MEDIUM	High	Medium	Medium	Medium
Objective 4.2 - Improve and maintain habitat quality						

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
4.2.1	Implement habitat conservation and sustainable land-use management (e.g., restoring traditional pasture management practices) in at least five priority breeding areas across the range, including baseline and follow-up assessments of habitat quality (i.e. nest and foraging sites) and prey availability. Collaborate with protected area authorities to integrate Steppe Eagle habitat requirements into site management plans.	MEDIUM	High	Medium	Medium	Medium
4.2.2	Establish and enforce land management policies in critical habitats along both the African-Eurasian Flyway and the Central Asian Flyway, focusing on reducing disturbance and sustaining prey populations and promote the broader spatial scale of landscape scale restoration to ensure connectivity along global flyways and the longer-term aim of a return to historic population range.	MEDIUM	Medium	Medium	Medium	Medium
4.2.3	Ensure key congregation sites (including dump sites) are managed to ensure they provide safe roosting and feeding opportunities for Steppe Eagles through safe energy infrastructure and no access to poisoned food resources.	CRITICAL	Critical	Critical	Critical	Critical
Objective 4.3 - Strengthen support for habitat conservation						
4.3.1	Develop targeted communication materials and conduct workshops with decision-makers in all countries/territories using local languages to raise recognition of Steppe Eagle conservation needs.	MEDIUM	Medium	Medium	Medium	Medium
4.3.2	Monitor and investigate the changing productivity and how these changes impact on population dynamics and their drivers, analysing both historic and new data.	MEDIUM	High	Medium	Medium	Medium
4.3.3	Identify and designate a network of protected sites for Steppe Eagle by strengthening existing protection and the creation of new protected and OECM areas, providing flyway connectivity which are managed effectively (through the production and implementation of appropriate management plans) for the conservation of the species and their key prey species.	MEDIUM	Medium	Medium	Medium	Medium

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
4.3.4	Assess Steppe Eagle's vulnerability and adaptive capacity to climate change to inform scenario-planning and development of adaptation and dynamic management measures.	MEDIUM	Medium	Medium	Medium	Medium
Goal 5- Address key knowledge gaps on Steppe Eagle distribution, movement, and threats through increased collaboration and coordinated research, to inform conservation action across their global range.						
<i>Objective 5.1. Sharing best practices and standardized data collection, along with the data itself where required</i>						
5.1.1	Develop and share standard protocols for the monitoring of Steppe Eagles at breeding sites, migratory bottlenecks and stopover sites, and wintering areas, prioritizing high-risk regions.	HIGH	High	High	High	High
5.1.2	Conduct a baseline assessment of existing Steppe Eagle monitoring, telemetry, and survey data across the range, and identify priority knowledge gaps to guide optimal investment in research.	HIGH	High	High	High	High
<i>Objective 5.2. Coordinated monitoring across the range</i>						
5.2.1	Carry out species monitoring using standardised methods to guide sensitivity mapping and conservation action.	CRITICAL	Critical	Critical	Critical	Critical
5.2.2	Develop and maintain a centralized and dynamic data sharing group who advocate for analysis and publication of combined datasets for overall understanding of the species and the primary threats driving their decline.	MEDIUM	Medium	Medium	Medium	Medium
5.2.3	Develop and maintain a centralised registry of trained personnel (experts), researchers, and institutions engaged in compatible Steppe Eagle monitoring, telemetry, and conservation across the species' range. The registry should include contact details, areas of expertise, and geographic focus to support improved coordination, collaboration, and better mobilization and be regularly updated.	MEDIUM	Medium	High	High	Medium
5.2.4	Develop and share opportunities and sources of funding for monitoring, data analysis, research and advocacy.	HIGH	High	High	High	High
<i>Objective 5.3. Improved understanding of changing population dynamics, species range leading to effective conservation programs across all countries/territories.</i>						

Action	Description	Global Priority	Breeding range	Middle East & North Africa	Sub-Saharan Africa	S & SE Asia
5.3.1	Implement regular horizon scanning to detect emerging and future threats, including along migratory routes.	MEDIUM	Medium	Medium	Medium	Medium
5.3.2	Promote the tracking of birds to further scientific aims which follows best practice and modern technologies, making the data available for wider analyses to identify threats and key habitats. Ensure resources are available for the timely recovery of dead birds to understand causes of mortality.	MEDIUM	Medium	Medium	Medium	Medium
5.3.3	Clarify the borders of and connectivity between breeding populations and their flyway (i.e. metapopulation), to identify and highlight the most important and/or vulnerable populations.	MEDIUM	Medium	Medium	Medium	Medium
5.3.4	Monitor and investigate the changing productivity and how these changes impact on population dynamics and their drivers, analysing both historic and new data.	HIGH	Critical	Medium	Medium	Medium
Goal 6 - Ensure endorsement and effective implementation of the Steppe Eagle GAP across all countries/territories through outreach with key communities and all major stakeholders						
<i>Objective 6.1 – Awareness of the value of Steppe Eagles and their key threats is raised among the key stakeholder groups</i>						
6.1.1	Communicate key findings on both the problems facing Steppe Eagle populations, and potential solutions to achieve positive responses to key decision-makers and communities to generate support evidence-based conservation actions.	MEDIUM	Medium	Medium	Medium	Medium
6.1.2	Highlight and promote the Steppe Eagle as a flagship species of the Central Asian and African-Eurasian Flyways, utilising and supporting existing national and international events to raise awareness of Steppe Eagle global conservation needs and efforts.	HIGH	High	High	High	High
6.1.3	Establish or strengthen civil society organisations in key areas along the flyway by 2030, promoting local stewardship of Steppe Eagle habitats to aid with meeting international targets and sustainability goals.	LOW	Medium	Low	Low	Low

Annexe 3 – Key sites for the conservation of Steppe Eagle

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
Armenia	Shirak Plateau	M	40.63116	43.89992	400-500 individuals	GE	2022-2024		Proposed by questionnaire compiler
	Lori Plateau	M	40.98364	44.52365	300-400 individuals	GE	2022-2024		Proposed by questionnaire compiler
	Lake Sevan and environs	M	40.3513	45.3378	600-700 individuals	GE	2022-2024	IBA; KBA	Proposed by questionnaire compiler
	Sisian Plateau	M	39.44191	45.94349	250-350 individuals	GE	2022-2024		Proposed by questionnaire compiler
	Ararat Plain	M	39.93658	44.71841	200-300 individuals	GE	2022-2024		Proposed by questionnaire compiler
	Akhuryan-Araks River valley	M	40.28364	43.65028	100-200 individuals	GE	2022-2024		Proposed by questionnaire compiler
Azerbaijan	Shahdidi spit	M	40.28312	50.39269				IBA; KBA	Internationally Significant Count
Bangladesh	Padma River island, Chapai nawab gonj	W	24.60898	88.12305	2-4 individuals	P	N/A		Proposed by questionnaire compiler
	Padma River island, Rajshahi,	W	24.33844	88.57053	1 individual	P	N/A		Proposed by questionnaire compiler
	Padma River Islands, Godagari	W	24.46663	88.27838	1 individual	P	N/A		Proposed by questionnaire compiler
	Muhuri Dam coastal area,	W	22.74351	91.44814	2-3 individuals	P		IBA; KBA	Proposed by questionnaire compiler
	Mawa, Padma River	W	23.41377	90.33785	1 individual	P	2025		Proposed by questionnaire compiler
Bhutan	Phuntsholing	M	26.86124	89.38555	3 individuals		2024		Proposed by questionnaire compiler
	Trongsa	M	27.50019	90.50799	1 individual		2021		Proposed by questionnaire compiler

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Trashigang	M	27.33256	91.55201	16 individuals		2020		Proposed by questionnaire compiler
	Gelephu	M	26.8727	90.49315	1 individual		2019	IBA & KBA (Part)	Proposed by questionnaire compiler
	Gasa	M	27.89787	89.73126	1 individual		2021		Proposed by questionnaire compiler
	Lhamozingkha	M	26.71793	89.85058	1 individual		2017		Proposed by questionnaire compiler
China	Nagpag Co (Napa Hai) Nature Reserve	B	27.8686	99.64208				IBA; KBA	Internationally Significant Count
	Zoigê (Ruo'ergai) Marshes	B	33.75015	102.7399				MOUA3; IBA; KBA	Internationally Significant Count
Egypt	Sharm El Sheikh	M	27.94436	34.30344	40-50 (spring-autumn)	GE	2018-2024		Proposed by questionnaire compiler
	Sant Katherine	M	28.04133	34.25543	50-100 (spring-autumn)	GE	2018-2024	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	RAS GHARIB	M	28.07145	33.19146	15,919-15,968 (spring-autumn)		2020-2021		Proposed by questionnaire compiler
	El galala bird observatory	M	29.44332	32.44689					Proposed by questionnaire compiler
	Gebel El Zeit	M	27.98652	33.31264				MOUA3; IBA; KBA	Internationally Significant Count
	Ain Sukhna	M	29.60113	32.30699				MOUA3; IBA; KBA	Internationally Significant Count
Ethiopia	Yangudi Rasa NP	W	11	41	Unknown	P	NA	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Awash NP	W	9	40	Unknown	P		MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Bale Mountains NP	W	6.8	39.5	Unknown	P		MOUA3; IBA; KBA	Proposed by questionnaire compiler; Internationally Significant Count

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Nechisar NP	W	5.9780	37.7640	Unknown	P		MOUA3; IBA	Proposed by questionnaire compiler
	Haylaideghe NP	W	9.3797	40.3593	Unknown	P			Proposed by questionnaire compiler
	Abijatta Shalla NP	W	7.5	38.5	Unknown	P		MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Sululta Plains	W	9.183056	38.75	Unknown	P		MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Borana NP (Yabelo)	W	4.883056	38.08306	Unknown	P			Proposed by questionnaire compiler
	Lake Chelekleka	W	9.1	37.25	Unknown	P		MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Mille-Sardo Wildlife Reserve North	W	11.8	41.06	<17 individuals		2019	IBA	IBA for Steppe Eagle
Georgia	Batumi	M	41.63378	41.71022				IBA; KBA	Internationally Significant Count
	Kvernaki Bridge	M	41.96389	44.34778				MOUA3; IBA; KBA	Internationally Significant Count
	Kazbegi	M	42.61996	44.54399				MOUA3; IBA; KBA	Internationally Significant Count
India	Nargu Wildlife Sanctuary	W	31.91863	76.96175				IBA; KBA	Internationally Significant Count
	Dehra Gali (DKG) forest	W	33.73857	74.10437				IBA; KBA	Internationally Significant Count
	Askot Wildlife Sanctuary and Goriganga Basin	W	30.16877	80.26329				IBA; KBA	Internationally Significant Count
	Binog Sanctuary - Bhadraj - Jharipani	W	30.46582	78.05702				IBA; KBA	Internationally Significant Count
	Kedarnath Musk Deer Sanctuary and surrounding Reserve Forests	W	30.58071	79.19196				IBA; KBA	Internationally Significant Count

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Chamba Valley	W	32.41409	76.31998				KBA	Internationally Significant Count
	Jor Beer	W	27.96666	73.38143				IBA; KBA	Internationally Significant Count
	Banni Grassland and Chhari Dhand	W	23.61969	69.63368				MOUA3; IBA; KBA	Internationally Significant Count
	Wild Ass Wildlife Sanctuary	W	23.46574	71.20948				MOUA3; IBA; KBA	Internationally Significant Count
	Pong Dam Lake Wildlife Sanctuary	W	31.99941	76.06455				MOUA3; IBA; KBA	Internationally Significant Count
	Desert National Park	W	26.31284	70.55663				MOUA3; IBA; KBA	Internationally Significant Count
	Corbett Tiger Reserve	W	29.52147	78.95465				MOUA3; IBA; KBA	Internationally Significant Count
	Rajaji National Park	W	30.02853	78.15367				MOUA3; IBA; KBA	Internationally Significant Count
Iran (Islamic Republic of)	Lake Maharlu	W	29.44702	52.80618				MOUA3; IBA; KBA	Internationally Significant Count
	Hamoun-i Sabari and Hamoun-i Hirmand	W	30.95253	61.22436				MOUA3; IBA; KBA	Internationally Significant Count
	Bahu Kalat (Gandu) Protected Area	W	25.62078	61.49727				MOUA3; IBA; KBA	Internationally Significant Count
Iraq	Garmian area	W	35.10141	44.47171	>100 individuals		2007-2025		Proposed by questionnaire compiler
	Steppes near Erbil	W	35.91936	43.98532	>50 individuals		2007-2025		Proposed by questionnaire compiler
	West Hammar	W	30.8333	46.7167	>30 individuals		2007-2025	IBA; KBA	Proposed by questionnaire compiler
	East Hammar	W	30.7797	47.3947	>20 individuals		2007-2025	IBA; KBA	Proposed by questionnaire compiler
	Dalmaj Marsh	W	32.2000	45.4667	>20 individuals		2007-2025	MOUA3; IBA; KBA	Proposed by questionnaire compiler

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Sharazur Steppe	W	35.30971	45.79816	>50 individuals		2007-2025	IBA & KBA (Part)	Proposed by questionnaire compiler
	Bitwen Steppe/ NW of Dukan Lake	W	36.22064	44.71119	>20 individuals		2007-2025	IBA & KBA (Part)	Proposed by questionnaire compiler
	Najaf Desert	W	31.85605	43.945813	>70 individuals		2007-2025		Proposed by questionnaire compiler
Israel	Eilat Mountains	M	29.5666	34.8833	16,000 individuals	GO	2015-18, 2024-2025		Proposed by questionnaire compiler
	Jezre'el, Harod and Bet She'an valleys	M	32.59414	35.34836				MOUA3; IBA; KBA	Internationally Significant Count
	Judean foothills	M	31.604	34.8298				MOUA3; IBA; KBA	Internationally Significant Count
	Judean desert	M	31.26433	35.30843				MOUA3; IBA; KBA	Internationally Significant Count
	Western Negev	M	31.10362	34.55834				MOUA3; IBA; KBA	Internationally Significant Count
	Cliffs of Zin and the Negev highlands	M	30.80307	34.88601				MOUA3; IBA; KBA	Internationally Significant Count
	Southern Arava valley and Elat mountains	M	29.89057	34.98722				MOUA3; IBA; KBA	Internationally Significant Count
Jordan	Al Karak waste disposal site	W	31.237	35.9321	>1,000 individuals	GE	2021-2024		Proposed by questionnaire compiler
	Aqaba coast and mountains	W	29.41659	35.08005				MOUA3; IBA; KBA	Internationally Significant Count
Kazakhstan	The foothills of the Kalba Range in the basins of the Kokpekty, Char (Shar), Kyzylsu, Chernovaya, and Voylochevka rivers	B			1,200 breeding pairs	GE	2006	IBA & KBA (Part)	Proposed by questionnaire compiler; IBA & KBA for Steppe Eagle

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Semi-deserts between Ustyurt and Emba	B			250-2,404 breeding pairs	GE	2006	IBA & KBA (Part)	Proposed by questionnaire compiler
	Mugalzhar	B			238-298 breeding pairs	GO, GE	2004-2006		Proposed by questionnaire compiler
	Donyz-Tau cliff faces, KZ019	B	46.48	56.63	26 breeding pairs	GO	2003-2006	IBA; KBA	Proposed by questionnaire compiler; IBA & KBA for Steppe Eagle
	Chingiztau Mountains	B	48.42	79.67	70 breeding pairs	GO	2007	IBA; KBA	Proposed by questionnaire compiler; IBA & KBA for Steppe Eagle
	Eastern Kazakhstan Uplands	B	48	81.2	7-36 breeding pairs	GO	2007	IBA; KBA	Proposed by questionnaire compiler; IBA & KBA for Steppe Eagle
	The Northern Balkhash area	B			140 breeding pairs	GO, GE	2009		Proposed by questionnaire compiler
	Alekseyevka, Ebita River, Or River, Mugodzhary, and Ishkargantau	B			7,125-8,895 breeding pairs	GO, GE	2012-2013	IBA & KBA (Part)	Proposed by questionnaire compiler
	Bokeyorda Reserve, Aschiozek Sanctuary	B			>100 breeding pairs	GO	2022-2025	IBA & KBA (Part)	Proposed by questionnaire compiler; IBA & KBA for Steppe Eagle
	Mugodzhary IBA, KZ022	B	48.75	58.8	Est. 150 breeding pairs	GO	2024	IBA; KBA	Proposed by questionnaire compiler; IBA & KBA for Steppe Eagle
	Korgalzhyn State Nature Reserve	NB	50.42	69.23	12-30 individuals		2006	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Ereymantau Mountains	B	51.4	73.28	5-8 breeding pairs		2007	MOUA3; IBA; KBA	MOUA3 site & IBA for Steppe Eagle
	Western edge of the Karakoyin and Zhetikonyr Sands	P	46.5	68.3333	5 individuals		2007	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Sagyz	B	48.2833	54.6833	5-7 breeding pairs		2006	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Middle reaches of the Sarysu River	P	47.0833	68	8 individuals		2007	IBA; KBA	IBA & KBA for Steppe Eagle
	Ayak-Bestau Hills	B	47.8333	70.35	40-50 breeding pairs		2007	IBA; KBA	IBA & KBA for Steppe Eagle
	Sarykopa Lake System	B	50.2167	64.1333				IBA; KBA	IBA for Steppe Eagle
	Chokpak Pass	M	42.5167	70.6333				IBA; KBA	Internationally Significant Count
	Zhagalbayly and Tuyemoynak Hills	B	47.8167	82.2167	10-15 breeding pairs		2007	IBA; KBA	IBA for Steppe Eagle
	Irgiz-Turgay Lakes	B	48.6667	62.1333				IBA; KBA	IBA for Steppe Eagle
	Urda Sands	B	48.6167	48.5	15 breeding pairs		2006	IBA; KBA	IBA & KBA for Steppe Eagle
	Zhagabulak Forest	B	48.5667	57.6	10 breeding pairs		2003-2006	IBA; KBA	IBA & KBA for Steppe Eagle
	Ulytau Mountains	B	48.4	66.6833	3-5 breeding pairs		2005	IBA; KBA	IBA & KBA for Steppe Eagle
	Lower reaches of the Sarysu River	B	46.4667	67.1667	15 individuals		2007	IBA; KBA	IBA & KBA for Steppe Eagle
	Manyrak Mountains	B	47.5	84.15	5 breeding pairs		2007	IBA; KBA	IBA & KBA for Steppe Eagle
	Naurzum State Nature Reserve	B	51.5167	64.2833	1-49 individuals		2004	IBA; KBA	IBA for Steppe Eagle; Internationally Significant Count
	Ortau Upland Massif	B	47.7167	72.25	2-4 breeding pairs		2007	IBA; KBA	IBA for Steppe Eagle

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Sorbulak Lake System	B	43.6667	76.6				IBA; KBA	Internationally Significant Count
Kenya	Lake Turkana	W	3.45	36.07				IBA; KBA	Proposed by questionnaire compiler
	Mt. Kulal	W	2.6005	36.9479				KBA (Part)	Proposed by questionnaire compiler
	Mt. Kenya	W	-0.1824	37.3336				IBA; KBA	Proposed by questionnaire compiler
	Tsavo West National Park	W	-3.350044	38.12604				IBA; KBA	Internationally Significant Count
	Tsavo East National Park	W	-2.786858	38.74861				MOUA3; IBA; KBA	Internationally Significant Count
	Masai Mara	W	-1.373784	35.33731				MOUA3; IBA; KBA	Internationally Significant Count
Kyrgyzstan	Water reservation of the northern Chu valley	M	43.006	74.3131	<20 individuals observed in one day at the peak of migration	P	2020-2024	IBA; KBA	Proposed by questionnaire compiler
	Tolok valley	M	43.0710	74.0456	<20 individuals observed in one day at the peak of migration	P	2020-2024	IBA	Proposed by questionnaire compiler
	Bishkek	M	42.86896	74.59874	2-3 individuals	P	2020-2024		Proposed by questionnaire compiler
Kuwait	Dawhat Kazima	W	29.37928	47.72952				IBA; KBA	Internationally Significant Count
	Al-Abraq Al-Khabari	W	29.36905	46.95585				IBA; KBA	Internationally Significant Count
	Jal Az-Zor	W	29.5734	47.80454				MOUA3; IBA; KBA	Internationally Significant Count
	Al-Jahra Pool Nature Reserve	W	29.35325	47.70811				MOUA3; IBA; KBA	Internationally Significant Count
	Al-Batin Park	W	29.27151	46.8711				MOUA3; IBA; KBA	Internationally Significant Count

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
Mongolia	Undurkhaan Mt., nearby Chinggis city	B	47.36452	110.6722	250-500 individuals	GO	2016-2025		Proposed by questionnaire compiler
	Erdenesant Mt.	B, M	47.25735	104.5246	2-4 breeding pairs, 10-20 individuals as passage	GE	2015-2025	IBA; KBA	Proposed by questionnaire compiler
	Altai City	M	46.39718	96.19215	30-60 individuals (pre-migratory congregation)	GO	2015-2020		Proposed by questionnaire compiler
	Kherlen River valley	M	47.78096	112.5047	30-50 individuals (pre-migratory congregation)	GO	2020		Proposed by questionnaire compiler
	Darkhad Depression	B	51.0167	99.45				MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Khasagt Khaikhan Mountain	B	46.75	95.8				MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Eej Khad	B	47.30028	106.8857				MOUA3; IBA; KBA	Internationally Significant Count
	Khustain Nuruu National Park	B	47.69389	105.9368				MOUA3; IBA; KBA	Internationally Significant Count
Nepal	Gandaki Province, Thoolakharka watch site	M	28.3	83.81667	Max. 8,686 individuals (2013)	GO	2012-2024		Proposed by questionnaire compiler
	Kathmandu valley	W	27.66838	85.35017	200-400 individuals	GO	2021-2024		Proposed by questionnaire compiler
	Shivapuri-Nagarjun National Park	W	27.79883	85.37398	>16 individuals		2023	IBA; KBA	IBA for Steppe Eagle; Internationally Significant Count
	Annapurna Conservation Area	W	28.73284	83.96546	>315 individuals		2015-2024	MOUA3; IBA; KBA	IBA for Steppe Eagle; Internationally Significant Count
	Chitwan National Park (and Buffer Zone)	W	27.50783	84.36411	>15 individuals		2023-2025	MOUA3; IBA; KBA	IBA for Steppe Eagle; Internationally Significant Count

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Api Nampa Conservation Area	W	29.5	80.37	>15 individuals		2016-	IBA	IBA for Steppe Eagle
	Argha	W	28.02	83.12	>15 individuals		2020-2026	IBA	IBA for Steppe Eagle
	Gadhi-Siraichuli	M	27.77	84.58	>7 individuals		2023	IBA	IBA for Steppe Eagle
	Kanchenjunga Conservation Area	M	27.7	88.13				IBA	IBA for Steppe Eagle
	Reshunga Forest Conservation Area	M	28.27	83.37	>15 individuals		2020	IBA	IBA for Steppe Eagle
Oman	Raysut*	W	16.982	53.953	>2,500 individuals	GE	2018-19		Proposed by questionnaire compiler
	Thumrait	W	17.407	54.079	Approx. 100 individuals	GE	2019-2025		Proposed by questionnaire compiler
	A'Safa	W	17.89	54.167	Estimated 150 individuals	P	2018-2025		Proposed by questionnaire compiler
	Al Multaqa	W	23.34	58.542	Approx 20 individuals	ME	2013-2025		Proposed by questionnaire compiler
Pakistan	Haleji Wildlife Sanctuary	W	24.80397	67.77528				MOUA3; IBA/KBA	Internationally Significant Count
	Kirthar National Park (including Hub Dam)	W	25.63086	67.5095				MOUA3; IBA/KBA	Internationally Significant Count
	Kinjhar (Kalri) Wildlife Sanctuary	W	24.95882	68.0496				MOUA3; IBA/KBA	Internationally Significant Count
Palestine	Ein Al-Fashkha	M	31.6519	35.4201				KBA/IBA	Internationally Significant Count
	Wadi Al-Qelt	M	31.8333	35.4				KBA/IBA	Internationally Significant Count
	Ein Al-Oja	M	31.95	35.4333				KBA/IBA	Internationally Significant Count
	Ein el 'Auja and Wadi el Qilt region	M	31.8997	35.3693				KBA	Internationally Significant Count

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Wadi Qana and Wadi Al Shaer region	M	32.1145	35.1436				KBA	Internationally Significant Count
	Jerusalem (east)	M	31.755	35.2276				MOUA3, KBA/IBA	Internationally Significant Count
Russian Federation	Tazhinski liman	B	49.2595	45.4292	4-6 breeding pairs		2007	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Lysyi Liman lake and valley of Vostochniy Manych river	B	45.7858	44.0817	1-2 breeding pairs		2006	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Plateau Ukok	B	49.3092	87.5667	4-12 breeding pairs		2005	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Kalausskiye floods	B	45.7675	43.8567	2 breeding pairs		2005-2006	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Sources of Akshibai river	B	47.3772	44.2281	20-30 breeding pairs		1999	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Aginskiye lakes	B	50.7381	115.0078	3-5 breeding pairs		2012	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Bain-Tsaganskiye lakes	B	50.3105	115.2769	3-4 breeding pairs		2012	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Middle Onon	B	49.7578	112.368	5-12 breeding pairs		2012	MOUA3; IBA; KBA	MOUA3 site, IBA & KBA for Steppe Eagle
	Agar-Dag	B	50.2603	94.5492				IBA; KBA	IBA for Steppe Eagle
Saudi Arabia	Tabarjal	W	30.07	38.52	860-2,900 individuals	GO	2022-2024	IBA	Proposed by questionnaire compiler; IBA for Steppe Eagle; Internationally Significant Count
	Ushaiqer	W	25.32062	45.15601	500-6,000 individuals	GO	20,202,024		Proposed by questionnaire compiler

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
	Shaqra	W	25.15951	45.19455	1,200 individuals	GO	2020		Proposed by questionnaire compiler
	Al-Hada	W	21.37186	40.25655	300 - 1,960 individuals	GO	2024, 1991		Proposed by questionnaire compiler
	SW Riyadh	W	24.56857	46.56046	4,000 individuals	GO	Jan-24		Proposed by questionnaire compiler
	King Salman Royal Nature Reserve (northern section)	W	29.7727	38.2678				KBA	KBA for Steppe Eagle; Internationally Significant Count
	Turaif-Qurayyat	M	31.58	37.17	97-277 individuals		22	IBA	IBA for Steppe Eagle
	Wadi Rabigh springs	W	22.795	39.2833				MOUA3; IBA; KBA	Internationally Significant Count
South Africa	Greater Kruger National Park	W	- 24.05798	31.37116				KBA	Internationally Significant Count
	Kruger National Park and adjacent areas	W	-24.0508	31.46775				MOUA3; KBA	Internationally Significant Count
Syria	Slenfeh mountains	M	35.59	36.21				MOUA3; IBA; KBA	MOUA3 site for Steppe Eagle
	Abu Qubais	M						MOUA3	MOUA3 site for Steppe Eagle
	Golan Heights	M	33.04336	35.7885				MOUA3; IBA; KBA	Internationally Significant Count
Tanzania	Tarangire NP	W	- 4.145352	36.10214				MOUA3; IBA; KBA	Internationally Significant Count
Türkiye	Lake Tuz	B	38.68	33.52	10-20 breeding pairs	ME	2015-2025	MOUA3; IBA; KBA	Proposed by questionnaire compiler; MOUA3 site, IBA & KBA for Steppe Eagle
	Seyfe Lake	B	39.27	34.43	5-10 breeding pairs	ME	2015-2025	IBA; KBA	Proposed by questionnaire compiler
	Hodulbaba Mountain	B	38.03	32.98	1-2 breeding pairs		1998-	MOUA3; IBA; KBA	Proposed by questionnaire compiler;

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
									MOUA3 site, IBA & KBA for Steppe Eagle
	Yüksekova	M	37.51181	44.26393				MOUA3; IBA; KBA	Internationally Significant Count
Turkmenistan	Tallymerjen	W	37.99	65.52	2-4 individuals	GE	2021-2023	IBA; KBA	Proposed by questionnaire compiler
	Zeyit-Kelif	W	37.53	65.1	2-4 individuals	GE	2020-2025	IBA; KBA	Proposed by questionnaire compiler
	Garabil	W	35.9166	63.2666	2-4 individuals	MI	2021-2025	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Garachop	W	35.2833	62.5333	2-4 individuals	P		MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Badhyz	W	35.7166	61.6	2-4 individuals	GE	2021-2023	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Tejen	W	36.7833	60.7833	2-4 individuals	MI	2021-2023	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Gurykhovudan	W	37.7666	58.6166	<2 individuals	ME	2021-2023	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Chokrak-Tutly	W	39.2166	56.1	<2 individuals	GE	2021-2023	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Sumbar	W	38.4	56.4166	4-6 individuals	GE	2021-2023	MOUA3; IBA; KBA	Proposed by questionnaire compiler
	Delili-Garajabatyr	W	37.5333	54.45	<2 individuals	MI	2021-2023	MOUA3; IBA; KBA	Proposed by questionnaire compiler
UAE - Dubai	Al Marmoom Desert Conservation Reserve	M	24.86195	55.27417	2 individuals	GO, GE	2020-2024	KBA	Proposed by questionnaire compiler
	Dubai Desert Conservation Reserve	M	24.87865	55.66426	1 individual	GO	2015-2024	KBA	Proposed by questionnaire compiler

Country/ Territory	Site name	Season	Latitude	Longitude	Est. population size	Data quality	Year	Status	Source
Ukraine	Azov-Black Sea region	M, V	47.03536	36.02162				2 IBAs (Part)	Proposed by questionnaire compiler
Uzbekistan	Ustyurt Plateau	B	43.8	58.9	25–35 breeding pairs	ME	2021–2023	MOUA3; 3 KBAs (Part)	Proposed by questionnaire compiler
	Golodnaya Steppe	M	40.2	67.8	30–40 individuals	ME	2022–2024		Proposed by questionnaire compiler
	Aydar-Arnasay Lakes	W	41.2	65.9	50-55 individuals	ME	2023	IBA & KBA (Part)	Proposed by questionnaire compiler
	Kashkadarya foothills	M, W	38.6	66.4	30–60 individuals	MI	2023		Proposed by questionnaire compiler
Yemen	Jabal Bura	M	14.9	43.48	>200 individuals		1985-1986	MOUA3; IBA; KBA	MOUA3 site & IBA for Steppe Eagle
	Bab al-Mandab - Mawza	M	12.9	43.58	76,586-104,000 individuals		1985-1987	MOUA3; IBA; KBA	IBA for Steppe Eagle
	High mountains of Ibb	W	13.93	44.23				MOUA3; IBA; KBA	IBA for Steppe Eagle
	Jabal Sumarah	W	14.18	44.29				MOUA3; IBA; KBA	IBA for Steppe Eagle
	Mafrag al-Mukha	M	13.37	43.63	2,500-10,000 individuals		1979	MOUA3; IBA (B2); KBA	IBA for Steppe Eagle
Zimbabwe	Hwange NP	W	- 19.07904	26.55983				MOUA3; IBA; KBA	Internationally Significant Count

Annexe 4 – Population size and trend for countries/territories within the range of Steppe Eagle

Annexe 4a. Breeding Population Status and Trends

Country / Territory	Breeding Pairs (and years covered by estimate)	Year	Quality	Breeding population trend (last 10 years)	Quality (trend)	References (where available)
China	400-600 (till 2013)	2013		Unknown		MaMing and Zhao (2013)
Kazakhstan	16,750-28,070 (2023)	2023	GE	Declining, est. -14% between 2018-2025	GE	Pulikova et al. (2023)
Mongolia	1500-2500 (2000s)	2000s	ME	Declining	ME	Range state questionnaire
Russian Federation	2,500–3,700 (2016)	2016		Declining		Karyakin <i>et al.</i> (2016) ' Strategy of the Steppe Eagle conservation in the Russian Federation '
Türkiye	30 (2015-2025)	2015-2025	ME	Stable or declining	ME	Steppe Eagle Action Plan, Türkiye
Ukraine	0 (historic breeder) (Until 2010)	Until 2010		N/A - The species last nested in the late 1970s.		Questionnaire response
Uzbekistan	Estimated 25–35 (2021-2024)	2021–2024		Stable or slight decline	ME	National bird census programmes and field observations

Annexe 4b. Non-breeding Population Status and Trends

Country / Territory	Max. size of migrating population (individuals)	Max. size of non-breeding/wintering population (individuals)	Quality	Migrating/ non-breeding population trend (last 10 years)	Quality	References (where available)
Afghanistan	No data	No data	-	No data	-	
Angola	No data	No data	-	No data	-	
Armenia	2,450 (2024)	10 non-breeding birds in summer; 0 in winter (2024)	GE	Decline, est. -9%	GE	Questionnaire
Azerbaijan	700-1800 (2025)	Est 50	MI	Unknown	-	Field observations
Bahrain	1 (1991-2001)	1 (1991-2001)	P	Unknown	-	Questionnaire
Bangladesh	No data	20 wintering (2022 / 2013-2025)	P	Unknown	-	eBird public data
Bhutan	16 (Highest count, January 2020) (2024)	16 (Highest count); 5-10 annually (2024)	P	Decline	P	Questionnaire
Botswana	No data	No data	-	No data	-	
Bulgaria	4 (2012)	0 (2012)	ME	Stable	GE	Questionnaire
Burundi	No data	No data	-	No data	-	
China	Est. 7800–9200	Unknown	ME	Unknown	-	MaMing and Zhao (2013)

Country / Territory	Max. size of migrating population (individuals)	Max. size of non-breeding/wintering population (individuals)	Quality	Migrating/ non-breeding population trend (last 10 years)	Quality	References (where available)
Democratic Republic of the Congo	No data	No data	-	No data	-	
Djibouti	No data	No data	-	No data	-	
Egypt	34,996 (Spring 2024)	Around few hundreds (Spring 2024)	GO	Increases seen are likely due to the increase in observer effort in monitoring migration.	GO	Noby et al. (2022)
Eritrea	No data	No data	-	No data	-	
Eswatini	No data	No data	-	No data	-	
Ethiopia	<5000	100's Unknown	P	Unknown, but longer-term declines	P	Questionnaire
Georgia	111-437 (2015-2025)	Unknown	GO	Slight decline	GO	https://www.batumiraptorcount.org/data
Greece	No data	No data	-	No data	-	
India	Min. 1338	(2025)	G	Possible decline	ME	Pan India Assessment and Monitoring of Endangered Species – Vultures (Kumar, 2025) State of India's Birds (SolB, 2023)
Iran (Islamic Republic of)	Unknown	Unknown	-	Unknown	-	Questionnaire
Iraq	>2000 (2008-2025)	>2000 (2008-2025)	GE	Decline	GE	Field Observations; Questionnaire

Country / Territory	Max. size of migrating population (individuals)	Max. size of non-breeding/wintering population (individuals)	Quality	Migrating/ non-breeding population trend (last 10 years)	Quality	References (where available)
Israel	Est. 30,000	15 (wintering) (2025)	ME	Decline, est. 3.1% annually 1980s-2010s	GE	16,500 counted at Eilat bottleneck (2025)
Jordan	Not estimated	not estimated		Stable	MI	Questionnaire
Kazakhstan	Est 50,000	50-200	GO, GE	Unknown	GO, GE	
Kenya	No data	No data		Decline	GO	Shaw et al. (2024)
Kuwait	No data	No data	-	No data	-	
Kyrgyzstan	>1,000 (2022-2024)	0 (2024)	P	Unknown	P	Field Observations
Lebanon	No data	No data	-	No data	-	
Malawi	No data	No data	-	No data	-	
Malaysia	No data	No data	-	No data	-	
Myanmar	No data	No data	-	No data	-	
Mongolia	~5000 (2000s)	No available information	ME	Decline	ME	Questionnaire
Namibia	No data	No data	-	No data	-	
Nepal	Est. 10,000 (2012-2024)	Est. 3000 – 4000 (2012-2024)	GO	Declining between 2012-2020, now showing signs of increase	GO	Questionnaire

Country / Territory	Max. size of migrating population (individuals)	Max. size of non-breeding/wintering population (individuals)	Quality	Migrating/ non-breeding population trend (last 10 years)	Quality	References (where available)
Oman	>10,000 (2020-2025)	>5,000 (2020-2025)	ME	Seemingly declining, but may be slowly increasing	ME	Questionnaire
Pakistan	N/A	~2000	MI	Stable	P	Questionnaire
Palestine	No data	No data	-	No data	-	
Qatar	No data	No data	-	No data	-	
Russian Federation	Est. 5,000-10,000	Est. 55 (2022)	MI	Unknown	-	Dzhamirzoev et al. (2023) (wintering)
Rwanda	No data	No data	-	No data	-	
Saudi Arabia	Est. 12,500 (2019-2025)	Est 10,000 – 15,000 (2024)	GE, MI	Unknown (no's influenced by temporary food sources and associated congregations such as dump sites)	MI	Boland & Al Suhaibani, 2020; The Birds of Saudi Arabia. Vol. 2. Aramco Co, Saudi Arabia).
Singapore	No data	No data	-	No data	-	
Somalia	No data	No data	-	No data	-	
South Africa	No data	No data	-	No data	-	
Southern Africa	No data	Max. 2,500 – 3,700, likely much less	P	Decline	GE	*Lesotho, South Africa, Eswatini Lee (2025) Southern Africa Bird Atlas Project 2
South Sudan	No data	No data	-	No data	-	

Country / Territory	Max. size of migrating population (individuals)	Max. size of non-breeding/wintering population (individuals)	Quality	Migrating/ non-breeding population trend (last 10 years)	Quality	References (where available)
Sri Lanka	Unknown	Unknown	-	N/A	-	Questionnaire
Sudan	No data	No data	-	No data	-	
Syria	No data	No data	-	No data	-	
Tajikistan	>100	No data	-	No data	-	
Tanzania	No data	No data	-	No data	-	
Thailand	No data	No data	-	No data	-	
Türkiye	Est. ~200 (2015-2025)	N/A	ME	Unknown	-	Steppe Eagle Action Plan for Türkiye
Turkmenistan	Est. 1000's	200-300 (2020)	GE	Decline	GE	Field observations
United Arab Emirates	Est. 1–5 (2000-2024)	Est. 1-5 (2000-2024)	GO	Unknown at national scale. In Dubai, it's stable to decreasing trends locally.	GO	Questionnaire
Uganda	No data	No data	-	No data	-	
Ukraine	Est. 10-15 (until 2010)	Est. 2-5 (until 2010)	ME	Unknown	-	Questionnaire
Uzbekistan	Est. >2000 (2021-2024)	<200–300 (2021-2024)		Stable to slight decline, with notable fluctuations linked to weather and prey availability.	ME	Field Observations, Questionnaire
Yemen	Unknown	Unknown	GO	Unknown	GO	Questionnaire

Country / Territory	Max. size of migrating population (individuals)	Max. size of non-breeding/wintering population (individuals)	Quality	Migrating/ non-breeding population trend (last 10 years)	Quality	References (where available)
Zambia	Est. 100 (2015-2025)	Est. 10-50 (2015-2025)	ME	Stable or declining; almost certainly sharp declines 10-25 years ago	ME	eBird public data
Zimbabwe	No data	No data	-	No data	-	

*Countries/territories highlighted in blue are also in breeding range.

Annexe 5 – Legal protection status of Steppe Eagle in countries/territories across its range

Country / Territory	CMS Party	Raptors MOU Signatory	Legal protection given to species	Percentage of national population within protected areas
Armenia	✓	✓	Listed in the Red Book of Animals of Armenia (2024) as Vulnerable C2a(i), D1. Protected under Law on Fauna and Governmental Decree No. 71-N “On approval of Red Book of wild fauna species of Armenia”	40%
Bahrain	✓		Protected under the Wildlife Protection Law No.2 of 1995, and Law No. 7 of 2022 on the Environment (Abstract in English here). Bahrain is also working toward the establishment of a new decision that will include an official list of protected species.	Unknown
Bangladesh	✓		Wildlife (Conservation & Security) Act, 2012 prohibits hunting of any specified or all wild animals. It's illegal to hunt or capture a steppe eagle from nature and can be punished with imprisonment and/or penalty. There are also Conservation strategic Action plans for Raptors in Bangladesh	Unknown
Bhutan			Protected under Schedule II under Forest and Nature Conservation Rules and Regulations, 2023	Unknown
Bulgaria	✓		Protected species under Annex 3, Bulgarian Biodiversity Act	None
Egypt	✓	✓	Protection by environmental law no. 4 for 1994 and all the international conventions signed by Egypt	Unknown
Ethiopia	✓	✓	Specific national legislation that explicitly protects the Steppe Eagle has not been identified in publicly available resources.	Unknown
Iran (Islamic Republic of)	✓	✓	Protected under Resolution of Environment Protection Supreme Council regarding claim of damage of wildlife and Game and fishing law 1966. Any taking hunting, trade, killing and, poisoning of the raptors according to the legal definition of the category of wild birds in the country is forbidden.	Unknown

Country / Territory	CMS Party	Raptors MOU Signatory	Legal protection given to species	Percentage of national population within protected areas
Iraq	✓		Protected under the Iraqi Environmental Law No. 27 of 2009 and Law No. 17 of 2010 on the Protection of Wild Animals . The law prohibits the hunting, capturing, harming, or trading of endangered and protected species, including this one. Additionally, relevant ministries and authorities are mandated to enforce habitat protection and support scientific research for the conservation of such species	
Israel	✓	✓	Protected by Wildlife Protection Regulations, 5736-1976, enforcement by Nature and Parks Authority and volunteers.	Est. 50%.
Jordan	✓	✓	Legal protection through international treaties, national legislation, designated protected areas, and the supervision of the Royal Society for the Conservation of Nature (RSCN). Under Regulation No. 113 of 1973 on the protection of birds and wildlife, and on regulating their hunting, species listed under Appendices I–III (including the Steppe Eagle) are protected. Violations are subject to fines and imprisonment. Agriculture Law No. 44 of 2002 and its amendments and Environmental Protection Law No. 6 of 2017	

Country / Territory	CMS Party	Raptors MOU Signatory	Legal protection given to species	Percentage of national population within protected areas
Kazakhstan	✓	✓	Full legal protection, listed in the legally approved List of Rare and Endangered Animal Species of the Republic of Kazakhstan and the Red Data Book of the Republic of Kazakhstan under Category V (“recovered but requiring ongoing monitoring”), making it a nationally protected species whose capture, killing, or disturbance is formally prohibited. See also Ecological Code of the Republic of Kazakhstan of 2 January 2021 # 400-VI ZRK and Law On Protected Areas of 7 July 2006 #175. Nationally, its protection is reinforced by Kazakhstan’s Law on the Protection, Reproduction and Use of Wildlife and related government decrees regulating activities with rare and endangered species, which require state monitoring, habitat protection, and special permits for any exceptional use. It is included in. A legal act under the law states that any harm to the population of a species under protection (killing, poaching, destroying nests, etc) entails not only fine (what is the same amount for any species) but also paying a species-specific compensation. Rates of compensation for damage caused by violation of the legislation of the Republic of Kazakhstan in the area of protection, reproduction, and use of wildlife, approved by the Order of the Ministry of Agriculture on 27 February 2015 #18-03/158 and Methodology for calculating the amount of compensation for damage caused by violation of the legislation of the Republic of Kazakhstan in the area of protection, reproduction, and use of wildlife, approved by the Order of the Ministry of Agriculture on 3 December 2015 #18-03/1058.	
Kyrgyzstan	✓	✓	The Steppe Eagle is listed as a protected species in the Kyrgyz Republic Red Data Book.	~1%.
Mongolia	✓	✓	No specific conservation measures taken as considered Least Concern.	7.8%
Nepal		✓	Not a protected species in Nepal. However, legally protected within the protected areas (PA) and buffer zone of PAs. If someone found killing or harming this species within the protected areas and buffer zone areas there is a provision of punishment (either NPR 20,000 – 50,000 cash or imprisonment from 6 months to 1 year or both) under the Department of National Parks and Wildlife Conservation Act 1973 .	Unknown but estimate low

Country / Territory	CMS Party	Raptors MOU Signatory	Legal protection given to species	Percentage of national population within protected areas
Nigeria	✓		The species is recognised as threatened, however, the legal protection is weak. The CITES is domesticated by the Department of Forestry and enforced by the National Environmental Standards and Regulations Enforcement Agency (NESREA)	Approximately 50%
Oman			Protected under Law on Conservation of the Environment and Protection of Pollution (Appendix 2), Royal Decree 114/2001, as well as within the GCC countries under Convention of the Conservation of Wildlife and their Natural Habitats in the Countries of the Gulf Cooperation Council 2003 (Steppe eagle named in Appendix 2) as are 'all falcon, owl, vulture, eagle' species.	<1%
Pakistan	✓	✓	The species is protected under the provincial/territorial wildlife laws, which prohibit its capturing, killing and trade including: Azad Jammu and Kashmir Wildlife (Protection, Preservation, Conservation and Management) Act, 2014; Balochistan (Wildlife Protection, Preservation, Conservation and Management) Act, 2014 ; Gilgit-Baltistan (Northern Areas) Wildlife Protection Act, 1975 ; Islamabad Nature Conservation and Wildlife Management Act, 2024 ; Khyber Pakhtunkhwa Wildlife and Biodiversity (Protection, Preservation, Conservation and Management) Act, 2015 ; Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974 ; Sindh Wildlife Protection, Preservation, Conservation and Management Act, 2020	Unknown

Country / Territory	CMS Party	Raptors MOU Signatory	Legal protection given to species	Percentage of national population within protected areas
Saudi Arabia	✓	✓	The species is protected under the Environment Legislation (Royal degree no. 165, Date: 10/7/2020, which described through three executive Regulation (Bylaw): a) Hunting of Wildlife Terrestrial Species no. 1442/1/312179, Date: 17/1/2021 (protecting all global and regional threatened species based on standards that consider threatened species and those listed in international agreements and MoUs as protected species. Moreover, this hunting act defines hunting species, seasons, and quotas; b) Trade on Wildlife and their Products act no. 1442/1/356344, Date: 8/2/2021, which enforces the CITES agreement to protect endangered species; c) Protected Areas act, no. 1443/45/67867, Date: 27/9/2021, with plan to protect 30% of the terrestrial areas by 2030 (a new IBA was listed and protected specially for occurrence of the Steppe Eagle in the norther of Saudi Arabia). To implement the above acts and legislations a Special Forces for Environmental Security established in 2019 under the Ministry of Interior, to implement these laws. In addition, a wildlife crime unit at National Center for Wildlife was established to monitor the wildlife crime and violations against wildlife in social media with cooperation from the Special Force for Environmental Security.	Est <10%
Sri Lanka	✓		N/A	N/A
Türkiye			Hunting, killing, keeping and take is banned by the Land Hunting Law coded 4915 and Regulation on Protection of Game and Wild Animals and Their Habitat, Procedures and Principles of Pest Control .	100%
Turkmenistan	✓		Protected under the Law of Turkmenistan on Wildlife (2013)	< 10% of overwintering population

Country / Territory	CMS Party	Raptors MOU Signatory	Legal protection given to species	Percentage of national population within protected areas
UAE	✓	✓	Fully protected under multiple legal and policy instruments in the United Arab Emirates. At the national level, it is protected by Federal Law No. 24 of 1999 Concerning the Protection and Development of the Environment, which prohibits the hunting, possession, or trade of wild animals without a license and mandates the conservation of wildlife and natural habitats. Additionally, the species is covered by Federal Law No. 11 of 2002 on Regulating and Controlling the International Trade in Endangered Species of Wild Fauna and Flora, which enforces CITES provisions in the UAE. At the emirate level: in Abu Dhabi, Law No. (22) of 2005 on the regulation and establishment of protected areas provides direct legal protection to habitats where the Steppe Eagle may occur during migration or wintering; in Dubai, Local Law No. (11) of 2003 governs the designation and management of protected areas, within which hunting and disturbance of wildlife are strictly prohibited.	>90% of recorded sightings occur within legally protected areas.
Ukraine	✓		Listed as Endangered in the Red Book of Ukraine	0%
Uzbekistan	✓	✓	Included in the national Red Data Book of Uzbekistan (2019 edition) and protected under Law on the Protection and Use of Wildlife Resources and other hunting and wildlife conservation laws	Est. 20–25%
Yemen	✓	✓	Protected under Environmental Protection Law No. 26 for 1995 and Prime ministers Resolution No. 104 of 2002 regarding the regulations for the protection of endangered species and the regulation of the trade	Unknown
Zambia			All raptors are protected by law under the Wildlife Act of 2015 . A new act is in the making.	20-50%