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CMS

RAPTORS MOU

FOURTH MEETING OF SIGNATORIES TO THE MEMORANDUM OF UNDERSTANDING ON THE CONSERVATION OF MIGRATORY BIRDS OF PREY IN AFRICA AND EURASIA

(Victoria Falls, 30 November- 2 December 2026)

UNEP/CMS/RAPTORS/MOS4/Doc.14.5

EXPLORING THE EXPANSION OF THE GEOGRAPHICAL SCOPE OF THE RAPTORS MOU

(Prepared by the Coordinating Unit)

Summary:

This document presents the interim results of a GIS analysis identifying mapped ranges of 44 of the 94 Annex 1 species, including eleven Category 1 species, in additional areas beyond the current geographical scope of the Raptors MOU. It considers the potential conservation and institutional benefits of expanding that scope.

The Meeting of Signatories is invited to take note of the interim findings and request further scientific assessment, outreach to the countries concerned and consultation with the CMS Scientific Council, with findings and options, including administrative and budgetary implications, to be presented to MOS5.

1. The mandate to develop the Raptors MOU derived from Recommendation 8.12, *Improving the Conservation Status of Raptors and Owls in the African-Eurasian Region* (UNEP/CMS/Recommendation 8.12, Nairobi, November 2005). It invited Parties and non-Party Range States to consider whether a CMS instrument would help deliver these objectives and to participate in its development.

2. The geographical scope agreed at the negotiating meetings in 2007–2008 and set out in Annex 2 to the MOU was based on biogeographic and pragmatic considerations. The Agreement Area proposed to the first negotiating meeting (Loch Lomond, United Kingdom, October 2007; document UNEP/CMS/AERAP-IGM1/8/Add.2) was derived from an assessment of the migratory raptor species occurring regularly in the Afrotropical, Palearctic and Indomalayan realms. That proposal did not include the eastern Asian flyway[1] countries (Brunei Darussalam, Cambodia, Democratic People's Republic of Korea, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste and Viet Nam), Australasia, or several African island States and territories (Cabo Verde, Comoros, Mauritius, Mayotte, Réunion, Sao Tome and Principe and Seychelles). Although excluded from the initial geographical-scope proposal, these African island States and territories were included in Annex 2[2] of the draft MOU resulting from the first negotiating meeting in October 2007, illustrating how the proposed scope evolved during the negotiations .

3. The current geographical scope comprises the Range States and territories listed in Annex 2 to the MOU, covers the Afrotropical realm, the Palearctic realm with the exception of Japan and the Korean Peninsula. East and Southern counties belonging to the Indomalayan ream identified above and Australasia remain outside it. The initial geographical-scope proposal considered that there was insufficient evidence that extending coverage to those Asian countries would bring additional benefits for migratory raptors, while Australasia was excluded because few of the migratory species assessed were known to move beyond the Indomalayan realm.

4. Updated distribution data and GIS tools provide an opportunity to reassess these geographical limits. Figure 1 indicates that mapped species richness among Annex 1 raptors remains high in areas beyond the current scope, notably mainland Southeast Asia, the Korean Peninsula and Japan, and is lower in Australasia. These patterns warrant further assessment of migratory connectivity and the potential conservation benefits of wider geographical coverage.

[1] This flyway is now more commonly called the East Asian-Australasian Flyway

[2] https://raptors.cms.int/sites/default/files/document/Doc_06_Rev1_MoU_BOP_FinalText_E_0.pdf

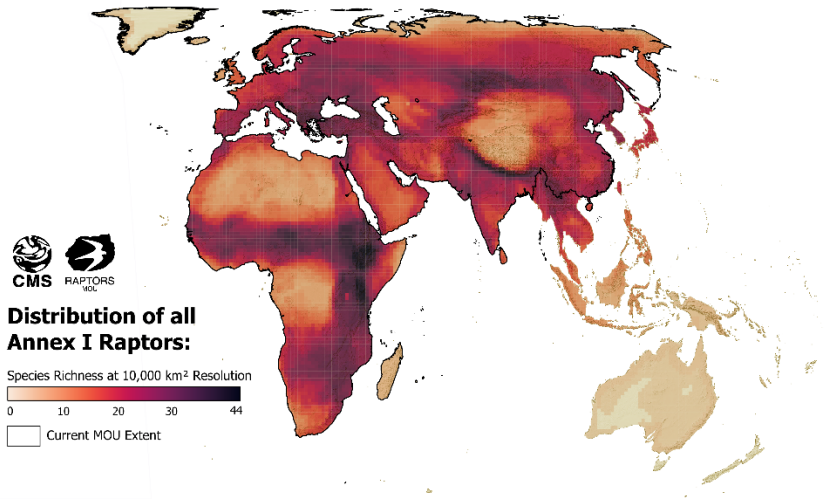

Figure 1 - *Distribution of all 94 CMS Raptors MOU Annex 1 species, showing species richness within 100 km × 100 km grid cells (10,000 km² per cell). The maximum species richness is 44 species per cell. Source: CMS Raptors MOU Coordinating Unit analysis using bird distribution data from BirdLife International, obtained via the IUCN Red List of Threatened Species. Digital Distribution Maps, version 6.3; downloaded 13 October 2026..*

Gap Analysis Methodology

5. The gap analysis was undertaken by the Coordinating Unit with the support of the Technical Advisory Group (TAG) and Professor Stephen Garnett, COP-Appointed Councillor for Birds. Species distribution data were obtained from BirdLife International' via the IUCN Red List of Threatened Species (Digital Distribution Maps, version 6.3; downloaded 13 October 2026). All 94 species listed in Annex 1 were screened against the current geographical scope of the MOU, and the 44 species with mapped ranges extending beyond it were selected for detailed analysis. Their ranges were compared with three geographical scopes (Figure 2): Scope A, the current geographical scope (Annex 2); Scope B, an extension to the eastern Asian flyway countries listed in paragraph 2; and Scope C, a further extension to Australasia (Australia, New Zealand and Papua New Guinea).

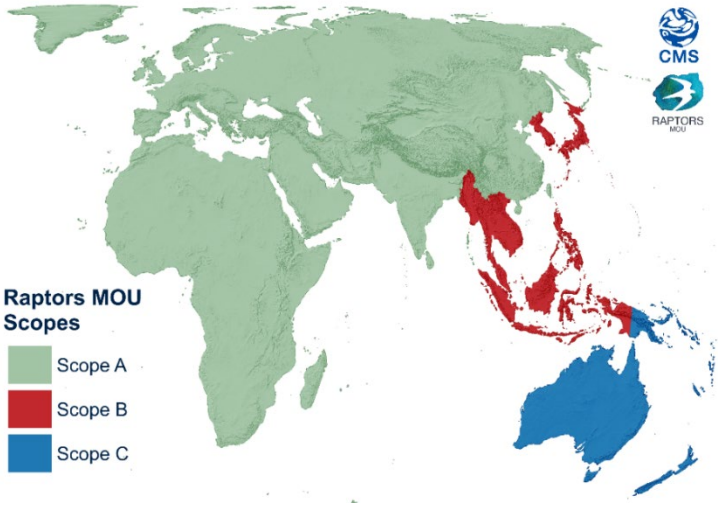

Figure 2 *- Geographical scopes used in the analysis: Scope A, the current geographical scope of the Raptors MOU (Annex 2); Scope B, the additional countries in East and Southeast Asia listed in paragraph 2; Scope C, Australia, New Zealand and Papua New Guinea..*

6. Spatial analysis was conducted in QGIS using WGS 84 / Equal Earth Greenwich (EPSG:8857). All mapped global seasonal range categories were included (resident, breeding, non-breeding and passage), as were ranges classified as “Possibly extinct”; “Extinct” ranges were excluded. Overlapping range polygons were dissolved within each species before area calculation, so each location was counted once per species. For each species, the retained range polygons were intersected separately with Scopes A, B and C. Areas were calculated in square kilometres, and percentages were calculated relative to their global range . The additional coverage associated with the expansion options was calculated for B and for B+C, respectively, with any retained range outside A, B and C reported separately.The analysis measures spatial overlap between mapped ranges and the geographical areas examined; it does not assess population size, abundance or conservation effectiveness, nor does it establish that all areas outside the current scope have equal conservation importance or require the same response. Results depend on the extent and classification of source polygons and, as multiple seasonal range categories were combined, calculated areas do not represent the area occupied at any single time.

Interim Results of the Gap Analysis

7. Of the 44 species analysed, 15 have at least 20 per cent of their global range in areas B and C combined, four have 10 to less than 20 per cent, six have 5 to less than 10 per cent, and 19 have less than 5 per cent (summary results in Annex 1 to this document). Area C contains mapped ranges of four species: black kite (*Milvus migrans)*, osprey (*Pandion haliaetus)*, Oriental hobby (*Falco severus*) and peregrine falcon (*F. peregrinus*).

8. Eleven of the 44 species are listed in Category 1 of Table 1 in Annex 3 to the MOU: three Critically Endangered, two Endangered, three Vulnerable and three Near Threatened (Figure 3). The largest proportions of mapped range in areas B and C concern three Critically Endangered vultures: slender-billed vulture (*Gyps tenuirostris*, 74 per cent of its range outside the current scope), red-headed vulture (*Sarcogyps calvus*, 36 per cent) and white-rumped vulture (*Gyps bengalensis*, 31 per cent) – and the Near Threatened mountain hawk-eagle (*Nisaetus nipalensis*, 41 per cent). For the other seven Category 1 species, the proportion is below 7 per cent. The mapped ranges of all three Critically Endangered vultures extend into Southeast Asia outside the current geographical scope.

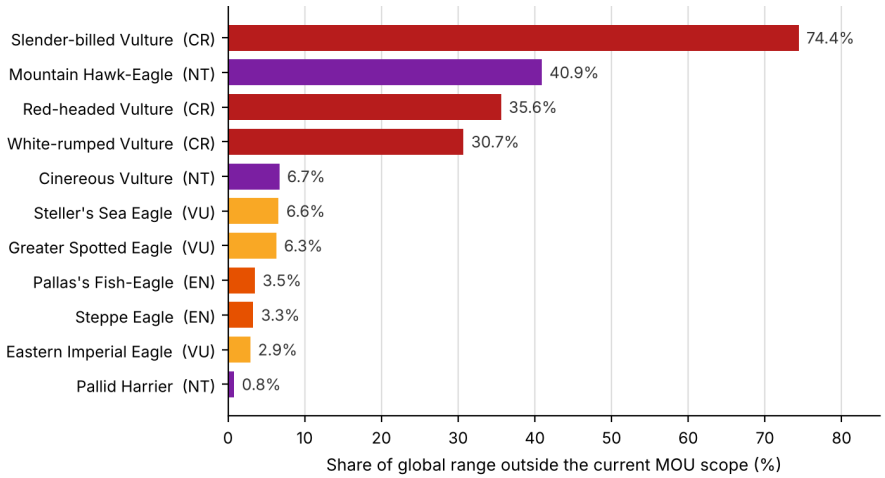

Figure 3 *- Share of the global range of the eleven Category 1 species lying outside the current geographical scope of the MOU. IUCN Red List category in brackets: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened.*

The Value of Improved Coverage and of an Expanded Pool of Signatories

9. An expanded scope could improve the geographical framework for cooperation on Annex 1 species whose mapped ranges extend into the additional areas examined. The analysis identifies 44 of the 94 species with mapped ranges in these areas, including 15 with at least one fifth of their global range in areas B and C combined. For species using these areas during breeding, passage or the non-breeding season, expansion could facilitate cooperation across a greater part of their annual cycle. It could also strengthen cooperation with additional Range States relevant to species action plans, including the CMS Multi-species Action Plan to Conserve African-Eurasian Vultures (Vulture MsAP) and the Steppe Eagle Global Action Plan (SEGAP). The implications for each plan, and the potential benefits for migratory populations, would require further assessment.

10. Expanding the geographical scope would make additional Range States eligible to join the Raptors MOU. Their participation could broaden cooperation on migratory raptors conservation and potentially diversify financial and in-kind support, subject to their interest and commitments. Engagement with non-Party Range States could also strengthen links with CMS. Existing cooperation through the East Asian–Australasian Flyway Partnership and Asia Pacific Illegal Taking of Migratory Birds Intergovernmental Task Force (ITTEA) could provide channels for outreach, taking account of their respective membership and mandates.

Next Steps

11. Any extension of the geographical scope would require consideration and agreement by the current Signatories, informed by scientific evidence, consultation with the countries concerned and an assessment of administrative and budgetary implications. Amendment to Annex 2, and any consequential amendments to the MOU text, Annex 1 or Annex 3, would require adoption by consensus in accordance with paragraph 22 of the MOU and Rule 16 of the current Rules of Procedure (UNEP/CMS/RAPTORS/MOS4/Doc.3).

12. To inform this consideration, further preparatory work is proposed in three areas: (i) completing and validating the geographical analysis, comparing the expansion options A+B and A+B+C (ii) consulting the countries concerned to explore their interest in participating in an expanded Raptors MOU; and; (iii) seeking advice from the CMS Scientific Council, through the CMS Secretariat, on the scientific aspects of the options examined. The Coordinating Unit would facilitate this work, with scientific and technical support from the TAG and the COP-Appointed Councillor for Birds, subject to available resources. Financial and in-kind support would be sought for this preparatory work.

13. The findings and options would be presented to MOS5 for consideration, distinguishing the resources required for the preparatory assessment from the longer-term staffing, technical, translation, reporting and meeting-participation implications of an expanded MOU. Where justified by the findings and consultations, draft amendments would also be prepared for submission by one or more Signatories or the TAG, in accordance with Rule 16.

Recommended Actions

The Meeting of Signatories is invited to:

a) Take note of the interim findings that 44 of the 94 Annex 1 species have mapped ranges in the additional areas examined, including eleven Category 1 species, and of the methodological limitations set out in this document;

b) recognise the potential conservation and institutional benefits of wider geographical cooperation and support further assessment of the options for extending the MOU's geographical scope;

c) request the Coordinating Unit, with scientific and technical support from the Technical Advisory Group and the COP-Appointed Councillor for Birds, to complete and validate the analysis, compare options A+B and A+B+C and identify any additional migratory raptor species that may warrant inclusion in Annex 1, together with any consequential changes to Table 1 of Annex 3;

d) request the Coordinating Unit, to consult the countries concerned on their interest in participating in an expanded Raptors MOU, their conservation priorities and opportunities for cooperation and support;

e) request the Coordinating Unit, in consultation with the CMS Secretariat, to seek advice from the CMS Scientific Council on the scientific basis and options for a possible expansion, through the applicable procedures;

f) invite Signatories, Cooperating Partners and other interested contributors to provide financial or in-kind support for the preparatory assessment and consultations; and

g) request the Coordinating Unit to report to MOS5 on the findings, consultations and expansion options, distinguishing preparatory assessment costs from the longer-term administrative and budgetary implications of an expanded MOU, and to facilitate the preparation of draft amendments where justified, for submission by one or more Signatories or the TAG in accordance with paragraph 22 of the MOU and Rule 16 of the Rules of Procedure adopted at MOS3.

Annex 1

Summary results of the GIS analysis

Totals are calculated from unrounded values; displayed components may differ from totals owing to rounding. Percentage of range outside the three scopes is indicated only for species with values above the rounding errors.

Species	IUCN Red List category	Scope A Coverage	Additional Range Scope B	Additional Range Scope C	Total Gap: Scope B + C	Range out-side the Scopes
Slender-billed Vulture (Gyps tenuirostris)	CR	25.36%	74.38%	0.00%	74.38%	
Red-headed Vulture (Sarcogyps calvus)	CR	64.27%	35.55%	0.00%	35.55%	
White-rumped Vulture (Gyps bengalensis)	CR	69.11%	30.71%	0.00%	30.71%	
Pallas's Fish-eagle (Haliaeetus leucoryphus)	EN	96.22%	3.50%	0.00%	3.50%	
Steppe Eagle (Aquila nipalensis)	EN	96.49%	3.29%	0.00%	3.29%	
Steller's Sea-eagle (Haliaeetus pelagicus)	VU	92.80%	6.57%	0.00%	6.57%	
Greater Spotted Eagle (Clanga clanga)	VU	93.33%	6.31%	0.00%	6.31%	
Eastern Imperial Eagle (Aquila heliaca)	VU	96.76%	2.87%	0.00%	2.87%	
Mountain Hawk-eagle (Nisaetus nipalensis)	NT	57.68%	40.90%	0.00%	40.90%	
Cinereous Vulture (Aegypius monachus)	NT	93.26%	6.71%	0.00%	6.71%	
Pallid Harrier (Circus macrourus)	NT	98.95%	0.84%	0.00%	0.84%	
Jerdon's Baza (Aviceda jerdoni)	LC	16.80%	82.23%	0.00%	82.23%	
Oriental Hobby (Falco severus)	LC	31.09%	57.96%	10.04%	68.00%	
Grey-faced Buzzard (Butastur indicus)	LC	43.19%	55.47%	0.00%	55.47%	
Black Baza (Aviceda leuphotes)	LC	45.08%	54.47%	0.00%	54.47%	
Short-eared Owl (Asio flammeus)	LC	55.93%	3.04%	0.00%	3.04%	41.03%
Peregrine Falcon (Falco peregrinus)	LC	57.58%	3.83%	7.64%	11.46%	30.96%
Merlin (Falco columbarius)	LC	57.95%	0.61%	0.00%	0.61%	41.44%
Eurasian Goshawk (Accipiter gentilis)	LC	59.32%	1.74%	0.00%	1.74%	38.94%
Osprey (Pandion haliaetus)	LC	59.48%	5.05%	2.46%	7.51%	33.01%
Chinese Sparrowhawk (Accipiter soloensis)	LC	60.51%	37.71%	0.00%	37.71%	
Japanese Sparrowhawk (Accipiter gularis)	LC	61.48%	37.61%	0.00%	37.61%	

Species	IUCN Red List category	Scope A Coverage	Additional Range Scope B	Additional Range Scope C	Total Gap: Scope B + C	Range out-side the Scopes
Besra (Accipiter virgatus)	LC	62.47%	36.30%	0.00%	36.30%	
Northern Long-eared Owl (Asio otus)	LC	64.66%	1.64%	0.00%	1.64%	33.70%
Oriental Scops-owl (Otus sunia)	LC	65.56%	33.73%	0.00%	33.73%	
Rough-legged Hawk (Buteo lagopus)	LC	66.37%	0.66%	0.00%	0.66%	32.97%
Northern Boobook (Ninox japonica)	LC	68.09%	30.54%	0.00%	30.54%	
Golden Eagle (Aquila chrysaetos)	LC	69.13%	1.03%	0.00%	1.03%	29.84%
Oriental Honey-buzzard (Pernis ptilorhynchus)	LC	75.79%	23.63%	0.00%	23.63%	
Eastern Marsh-harrier (Circus spilonotus)	LC	77.96%	21.32%	0.00%	21.32%	
Pied Harrier (Circus melanoleucos)	LC	80.01%	19.49%	0.00%	19.49%	
Eastern Buzzard (Buteo japonicus)	LC	85.11%	14.44%	0.00%	14.44%	
Black Kite (Milvus migrans)	LC	87.70%	3.60%	8.47%	12.06%	
Shikra (Accipiter badius)	LC	91.92%	7.91%	0.00%	7.91%	
Amur Falcon (Falco amurensis)	LC	94.40%	5.41%	0.00%	5.41%	
Ural Owl (Strix uralensis)	LC	95.19%	4.73%	0.00%	4.73%	
Eurasian Kestrel (Falco tinnunculus)	LC	95.54%	4.15%	0.00%	4.15%	
Eurasian Sparrowhawk (Accipiter nisus)	LC	95.60%	4.21%	0.00%	4.21%	
Hen Harrier (Circus cyaneus)	LC	96.96%	2.72%	0.00%	2.72%	
Upland Buzzard (Buteo hemilasius)	LC	97.49%	2.46%	0.00%	2.46%	
White-tailed Sea Eagle (Haliaeetus albicilla)	LC	98.21%	1.79%	0.00%	1.79%	
Eurasian Hobby (Falco subbuteo)	LC	98.36%	1.49%	0.00%	1.49%	
Lesser Kestrel (Falco naumanni)	LC	99.49%	0.35%	0.00%	0.35%	
Booted Eagle (Hieraaetus pennatus)	LC	99.80%	0.09%	0.00%	0.09%	