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## Bird Red List and its future development in Mongolia

S. Gombobaatar, D. Sumiya (†) & J.M. Baillie

### Abstract

With the involvement of the World Bank, Zoological Society of London, Dutch Government and National University of Mongolia, the volumes of Mongolian Red Lists of Fish, Amphibians and Reptiles, Birds and Mammals were completed, and Mongolia is now among the few nations that have up-to-date conservation assessments for all vertebrates. Of the 476 assessed native bird species of Mongolia, 10 % were categorised as regionally threatened including Near Threatened. A further 0.6 % were categorised as Critically Endangered (CR), 1.7 % as Endangered (EN), 3.3 % as Vulnerable (VU), and 4.4 % as Near Threatened (NT). Almost 90 % of Mongolian birds are categorised as Least Concern (LC) (excluding DD and NA). Just 30 species were categorised as Data Deficient (DD). A further 87 species were categorised as Not Applicable, as they did not meet the requirements for regional assessment. This result highlights the need for research on raptors in Mongolia.

Of all passerines found in Mongolia, 82.1 % are categorized as Least Concern. This shows that most of the passerines have not reached threat categories. The Tree Pipit, Reed Parrotbill, Saxaul Sparrow, White-throated Bushchat, Japanese Reed Bunting and Yellow-breasted Bunting, however, all fall within threat categories. A total of 36 species of bird are regionally threatened or Near Threatened in Mongolia. Of these, 2 species are categorized as Critically Endangered, 6 species as Endangered and 12 species as Vulnerable. Sixteen species are categorized as Near Threatened. High species richness of birds in Mongolia was recorded in the regions with forest steppe and river valleys. The species richness map shows a decreasing trend in the richness from north to south. High species richness for Mongolian birds was documented in the subdivisions of Mongol Daguur, Eastern Mongolian Plain (particularly Buir lake and the north-east), Ih Kyangan and Khangai mountain ranges, Great Lakes Depression and Huvsgul mountain range (Darkhad Depression). High species richness of birds also occurred in the protected areas of Numrug, Altan Els and Mongol Daguur Strictly Protected Areas, Onon-Balj, Khustai, Hugnukhaan, Otgontenger, Uvs, Khar-Us lake and Tsambagarav National Parks, and Toson Khulstai, Khar Yamaat, Ugtam, Bulgan, and Ikh Nart Nature Reserves. Data Deficient species' richness was high in the regions of Khalkh river-Buir lake and Great Khyangan Mountain, Huvsgul Mountain Range, Great Lakes Depression including Uvs lake Depression, Baruunkhurai or Dzungaryn Gobi and basins of Ulz, Herlen, Orkhon and Selenge rivers. High species richness areas have contained high number of Data Deficient species. The areas with high species richness and a high number of Data Deficient species within Mongolia need field surveys conducting on population size and density, breeding ecology, and population threats.

Using the IUCN Red List categories of dominant threats, we have compared the threats and potential threats to all species of birds in Mongolia. 38.1 % of species are threatened by habitat loss and degradation, 13.6 % by human disturbance, 11 % by pollution and 10.7 % by changes in native species. All species of crane and pheasant are under significant threat of regional extinction. Bird conservation strategies and plans should focus on these threats. It is now imperative that the Red Lists for each vertebrate group, including the bird, be updated every five years so that trends in extinction risk can be measured through time.

**Key words:** Mongolia, birds, status, taxonomy, distribution, species richness, red list, future development

## 1. Introduction

Mongolia is a vast country with diverse natural zones and landscapes, harbouring a rich and unique assemblage of birds. The country is located in the junction of three migratory flyways: East Asian Australasian, Central Asian and West Asian. Over the past decades, Mongolia has undergone significant social and economic changes, and during this time period many groups of birds, including cranes, shorebirds, raptors and some passerines, have experienced rapid declines. These declines have been relatively well documented for a few species, such as Reed Parrotbill and Yellow-breasted Bunting.

Red Lists, or lists that highlight threatened species, have been in existence for nearly 60 years (BAILLIE & GROOMBRIDGE 1996). They have become an important tool in assessing extinction risk for widely different taxa, and are often considered the first step in setting priorities for conservation actions and focusing attention on threatened species (LAMOREUX et al. 2003).

A total of 476 species that are known in Mongolia have been assessed using the 'IUCN Red List Categories and Criteria' (IUCN 2001) which incorporate quantitative thresholds to categorise species in terms of their risk of extinction (Least Concern, Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild, and Extinct). The Regional Red List for Mongolian Birds and Summary Action Plans for Mongolian Birds were published in English in 2011 (GOMBOBAATAR et al. 2011, 2011a). Most of data and information of this paper are from the references. The Mongolian Red List of Birds by GOMBOBAATAR et al. (2011) is one of the most significant publications on the conservation of birds in Mongolia. This publication provides policy makers with the most up-to-date information on all bird species, particularly threatened birds, allowing informed decisions to be made and providing conservationists with the essential information required to develop detailed conservation action plans and to set priorities for conservation. This paper shows that several bird species have recently become threatened with extinction. Our paper will be important in highlighting the need for long term monitoring and conservation assessments, to ensure that individual species do not move towards extinction.

## 2. Study area and methods

### Nomenclature and taxonomy

The global IUCN Red List for Birds follows the bird list of BIRDLIFE INTERNATIONAL (2011). This list is updated and modified each year by Taxonomic Working Groups. Most countries use the nomenclature and taxonomy adopted by Birdlife International. The Mongolian Bird Rarity and Taxonomy Committee and experts made the decision to use this nomenclature and taxonomy due to its widespread use in Red Lists globally, the frequency with which the taxonomy is reviewed, and the practicalities of its use. The nomenclature and taxonomy of Birdlife International follows SIBLEY & MONROE (1990, 1993) with minor changes.

### Regional distributions and species distribution maps

FOMIN & BOLD (1991) describes the distribution of birds in Mongolia based on the botanical-geographical subdivisions made by YUNATOV (1950), GRUBOV (1955, 1959, 1963, 1982), ULZIIKHUTAG (1989), PAVLOV et al. (2005). They also describe a general separation of breeding and non-breeding sites. Based on FOMIN & BOLD (1991), DAWAA et al. (1994) and other references on species distributions in Mongolia, we have drawn very general polygon distribution maps for each species in mono-colour on ArcView 3.1 and ArcMap 9.2. After completing this process, unsuitable breeding and non-breeding habitats were subtracted from the original distribution polygons. The separation of habitats was based on .shp-files for habitats such as natural zones, belts, bodies of water from small to large rivers and lakes, creeks, springs, oases, alpine meadow, alpine sub-meadow, high mountains of varying altitudes, low hills, plant communities such as *Caragana*, reeds, coniferous and deciduous trees, etc. These .shp-files were created by

numerous organizations including WWF, the Mongolian Ornithological Society, the GIS laboratory of the National University of Mongolia and the Russian and Mongolian Academy of Sciences (PAVLOV et al. 2005). Based on these .shp files, we were able to illustrate general and potential habitats for each bird species found in Mongolia.

The primary distribution map created for each species thus combines areas where the species could potentially occur during breeding season, migration and wintering seasons. The rigorous separation of breeding habitats would have been challenging to illustrate on the maps, due to the uncertainty of breeding records and lack of information. Most information on breeding was taken from FOMIN & BOLD (1991) and DAWAA et al. (1994). Due to the uncertainty of breeding records, we have illustrated potential breeding habitats using .shp-files containing the habitat division, habitat type, habitat analysis and other habitat details based on vegetation and land cover extracted from the botanical-geographical subdivisions by BANNIKOV (1954), TSEGMID (1969), YUNATOV (1950), GRUBOV (1955, 1959, 1963, 1982), ULZIIKHUTAG (1989) and PAVLOV et al. (2005) for each species that breeds in Mongolia (figure 1). We have added exact coordinates of breeding records where they exist in the literature (STUBBE et al. 2007, 2010).

The IUCN global population assessment for each species were given in the '2004 IUCN Red List of Threatened Species' (IUCN 2004) and BIRDLIFE INTERNATIONAL (2011). Regional assessments were conducted for the first time for Mongolian birds using the 'IUCN Red List Categories and Criteria: Version 3.1' (IUCN 2001) and the 'Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0' (IUCN 2003), accompanied by a distribution map for Mongolia. These maps were illustrated by the first author of the paper and his team at the National

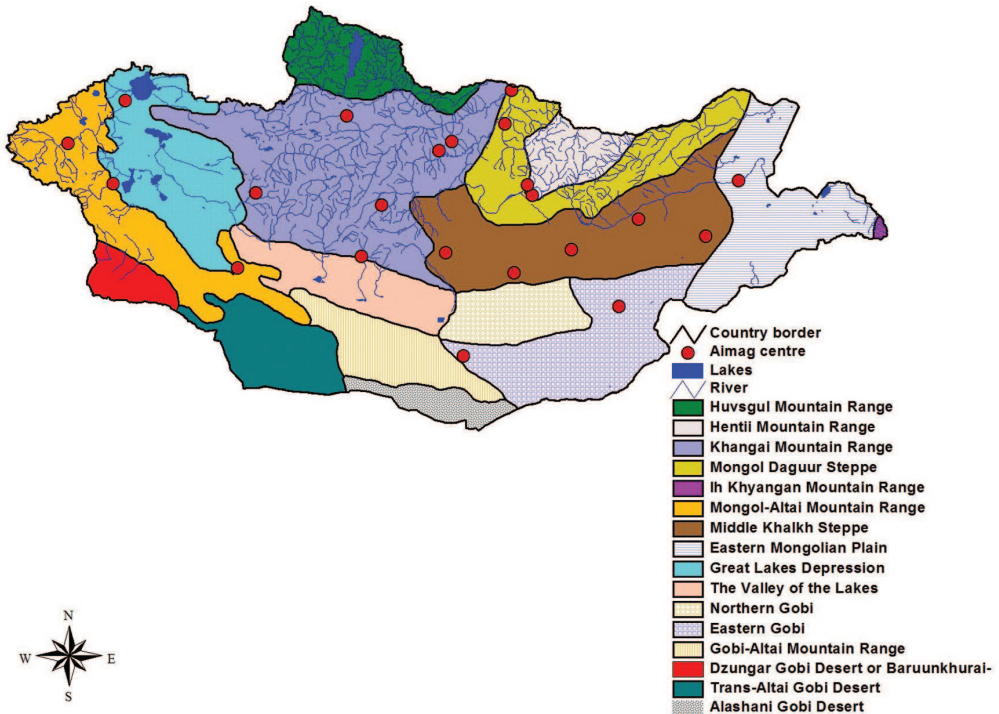


Fig. 1: Geographic subdivision of Mongolia used to describe the regional distribution of Mongolian birds (TSEGMID 1969).

University of Mongolia and Mongolian Ornithological Society and reviewed by Damdin Sumiya, Natsagdorj Tseveenmaydag, Shagdarsuren Boldbaatar, Chuluunbaatar Uuganbayar, and Sandagdorj Bayarkhuu. They were updated during the Mongolian Biodiversity Databank Workshop, based on new information from the scientific literature, museum records, government and conservation organisation documents, and expert observations. As further research is conducted, changes to these maps are likely to occur.

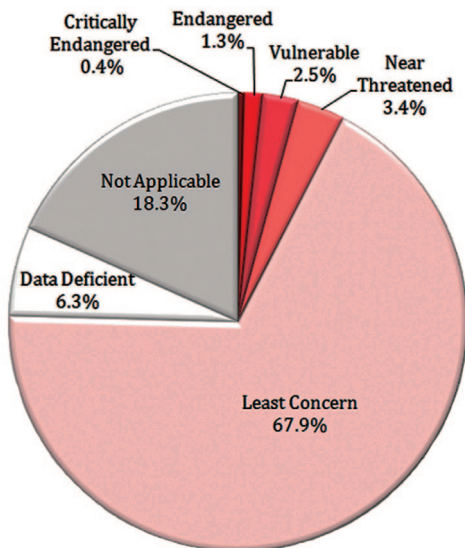
A brief outline of the dominant threats to each species and their causes identified during the Mongolian Biodiversity Databank Workshop are described in the text. Threat processes can be complex and reflect multiple factors. For more detailed information, please refer to the annex chapter and the Mongolian Biodiversity Databank.

### 3. Results and discussion

#### Status of birds in Mongolia

Of the 476 assessed native bird species of Mongolia, 9.3 % were categorised as regionally threatened including Near Threatened. A further 0.5 % were categorised as Critically Endangered (CR), 1.5 % as Endangered (EN), 3.2 % as Vulnerable (VU), and 4.1 % as Near Threatened (NT). Just 7.7 % were categorised as Data Deficient (DD). Almost 83 % of Mongolian birds are categorised as Least Concern (LC). A further 18.3 % of the species were categorised as Not Applicable, as they did not meet the requirements for regional assessment (see notes on application of the guidelines) (figure 2).

Threat status varies among different bird groups in Mongolia. All species of crane and pheasant are under significant threat of regional extinction. Water birds and raptors also fall under a high threat category in Mongolia. 11.4 % of raptor species are categorized as Data Deficient (DD). This result highlights the need for research on raptors in Mongolia. Of all passerines found in Mongolia, 82.1 % are categorized as Least Concern. This shows that most of the passerines have not reached threat categories. The Tree Pipit, Reed Parrotbill, Saxaul Sparrow, White-throated Bushchat, Japanese Reed Bunting and Yellow-breasted Bunting, however, all fall within threat categories.



A total of 36 species of bird are regionally threatened (Critically Endangered, Endangered or Vulnerable) and Near Threatened in Mongolia; of these, two species are categorized as Critically Endangered, six species as Endangered and 12 species as Vulnerable. Sixteen species are categorized as Near Threatened (table 1). Globally threatened species include Dalmatian Pelican, Lesser White-fronted Goose, Swan Goose, White-headed Duck, Baikal Teal, Greater Spotted Eagle, Pallas's Fish-eagle, Eastern Imperial Eagle, Saker Falcon, Siberian Crane, White-naped Crane, Hooded Crane, Great Bustard, Houbara Bustard, Relict Gull, White-winged Bushchat, and Yellow-breasted Bunting.

Fig. 2: Regional conservation status of 476 species of birds according to the IUCN Red List Categories and Criteria.

Table 1: Birds regionally threatened (Critically Endangered, Endangered, and Vulnerable) and Near Threatened in Mongolia

<b>Critically Endangered (CR)</b>	<b>Endangered (EN)</b>	<b>Vulnerable (VU)</b>	<b>Near Threatened (NT)</b>
Dalmatian Pelican <i>Pelecanus crispus</i>	White-headed Duck <i>Oxyura leucocephala</i>	Lesser White-fronted Goose <i>Anser erythropus</i>	Great Bittern <i>Botaurus stellaris</i>
Siberian Crane <i>Grus leucogeranus</i>	Relict Gull <i>Larus relictus</i>	Baikal Teal <i>Anas formosa</i>	Little Bittern <i>Ixobrychus minutus</i>
	Greater Spotted Eagle <i>Aquila clanga</i>	Ferruginous Duck <i>Aythya nyroca</i>	Purple Heron <i>Ardea purpurea</i>
	Pallas's Fish-eagle <i>Haliaeetus leucoryphus</i>	Lammergeier <i>Gypaetus barbatus</i>	Greater White-fronted Goose <i>Anser albifrons</i>
	Short-toed Snake-eagle <i>Circaetus gallicus</i>	Eastern Imperial Eagle <i>Aquila heliaca</i>	Swan Goose <i>Anser cygnoides</i>
	Reed Parrotbill <i>Paradoxornis heudei</i>	Saker Falcon <i>Falco cherrug</i>	Mute Swan <i>Cygnus olor</i>
		White-naped Crane <i>Grus vipio</i>	Falcated Duck <i>Anas falcata</i>
		Hooded Crane <i>Grus monacha</i>	White-tailed Eagle <i>Haliaeetus albicilla</i>
		Asian Dowitcher <i>Limnodromus semipalmatus</i>	Altai Snowcock <i>Tetraogallus altaicus</i>
		Great Bustard <i>Otis tarda</i>	Common Pheasant <i>Phasianus colchicus</i>
		Houbara Bustard <i>Chlamydotis undulata</i>	Common Crane <i>Grus grus</i>
		Mongolian Ground-jay <i>Podoces hendersoni</i>	Tree Pipit <i>Anthus trivialis</i>
			White-throated Bush-chat <i>Saxicola insignis</i>
			Saxaul Sparrow <i>Passer ammodendri</i>
			Yellow-breasted Bunting <i>Emberiza aureola</i>
			Ochre-rumped Bunting <i>Emberiza yessoensis</i>

## Distribution and species richness of birds

Mongolian bird species richness in the north is higher than in the south. High species richness of birds in Mongolia was recorded in the regions with forest steppe and river valleys. The species richness map shows that there is a trend that richness decreases from north to south (figure 3).

High species richness for Mongolian birds is documented in the subdivisions such as Mongol Daguur, Eastern Mongolian Plain (particularly Buir lake and north-eastern the area), Ih Kyangan mountain range, Khangai mountain range, Great Lakes Depression and Huvsgul mountain range (Darkhad Depression). Low species richness was recorded in the south particularly desert steppe and Gobi desert areas such as Northern Gobi, Eastern Gobi, Dzungar Gobi or Baruunkhurai depression and Alashani Gobi (figure 4). Species richness is affected by protected areas in Mongolia. High species richness of birds occurred in the protected areas such as Numrug, Altan Els and Mongol Daguur Strictly Protected Areas (SPA), Onon-Balj, Khustai, Hugnukhaan, Otgontenger, Uvs, Khar-Us lake, and Tsambagarav national parks (NP), Toson Khulstai, Khar Yamaat, Ugtam, Bulgan, and Ikh Nart Nature Reserve (NR). In order to establish new protected areas, significance for bird conservation should be considered in sudden areas such as Buir lake, Khalkh and Herlen river basins, some parts of Hentii and northern Khangai mountain range, and Orkhon, Selenge and Tuul river valleys.

Political borders do not affect the bird distribution and richness of species. However, local administrative units such as sum and aimags or province have been playing an important role in bird conservation for the country. Therefore, we have shown the species richness in aimags (provinces) (figure 5). High species richness occurred in Dornod, Hentii, Tuv, Bulgan, Uvs, Khovd and Zavkhan aimags, and S Huvsgul, N Arkhangai, N Selenge, N Uvurkhangai some parts of Bayankhongor and Gobi-Altai provinces. These aimags are located in the main migration flyways and routes of migratory birds at regional and global levels. It means that the aimags should

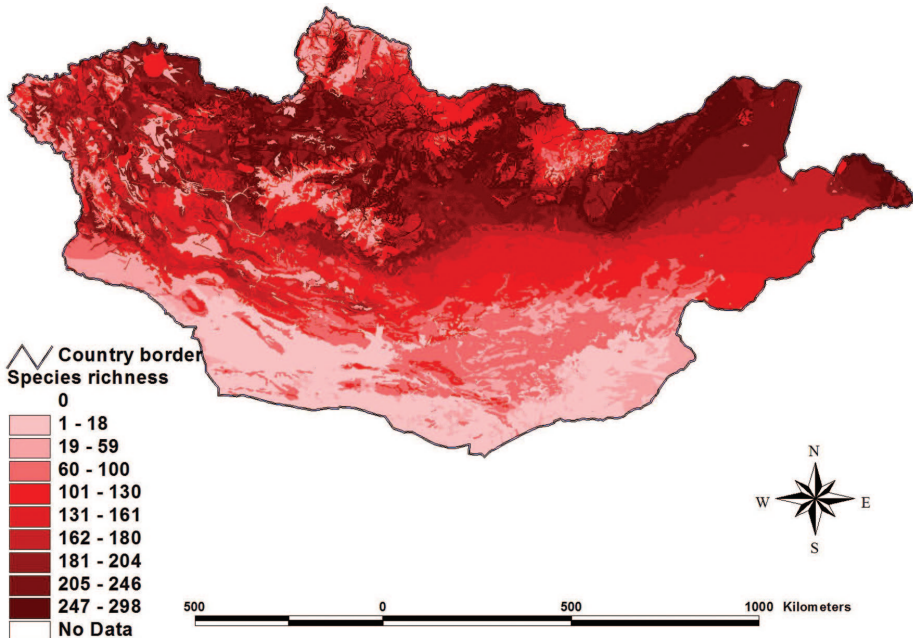


Fig. 3: Species richness of birds in Mongolia. Darker colours represent areas with higher species richness.

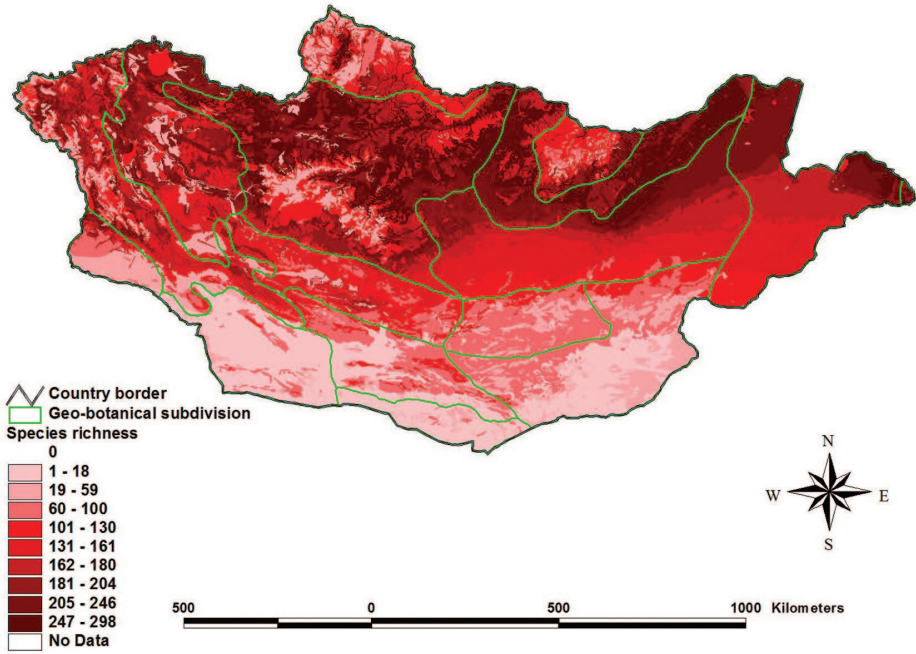


Fig. 4: Bird species richness and geo-botanical subdivision of Mongolia. Darker colours represent areas with higher species richness.

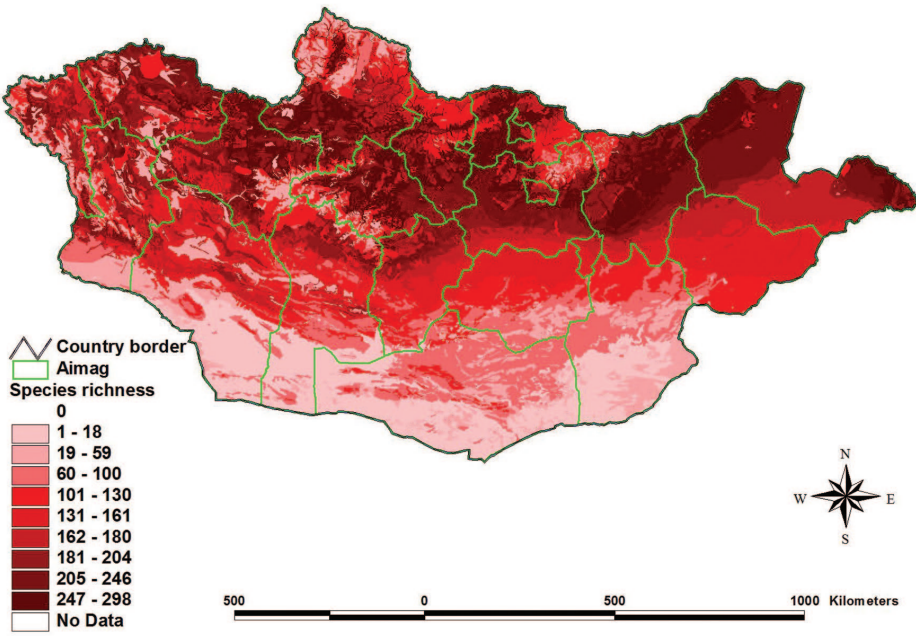


Fig. 5: Bird species richness by aimags, or provinces in Mongolia. Darker colours represent areas with higher species richness.



be strictly encouraged to develop and implement conservation action plans for Mongolia birds (GOMBOBAATAR et al. 2011, 2011a).

Species richness of threatened species is high in Mongol Daguur, Ih Khyangan, Middle Khalkh Steppe, Great Lakes Depression, Baruunkhurai Depression, Gobi-Altai Mountain Range, and eastern Gobi regions. In the south-west of Mongolia, the main range of Hentii and Khangai mountains, Huvsgul Mountain range, and Gobi Desert areas have low numbers of threatened species. Eastern Mongolia, Great Lakes Valley and Baruunkhurai Depression are located in the junction of migratory flyways and routes of migratory birds passing through Central Asian, West Asian, East Asian and Australasian Flyways (figure 6).

Most protected areas are located in Eastern Mongolia and the Great Lakes Depression, some protected areas in Southern Mongolia and Central Mongolia have been playing an important role in the conservation of threatened species. As mentioned before, administrative border lines do not affect the species richness of threatened species. However, conservation measures are taken by not only state governmental organizations but also local administrations in the country. Therefore, each aimag needs to have knowledge regarding the species richness of threatened species. Highest richness of threatened species has been recorded in Dornod, Hentii, Tuv, Selenge, Bulgan, Uvs, Khovd, Gobi-Altai, Umnugobi and Dornogobi provinces. The aimags should be mindful of gold, oil and other mineral mining activities in the areas where threatened species gather.

Data Deficient species' richness is high in the regions of Khalkh river-Buir lake and Great Khyangan Mountain, Huvsgul Mountain Range, Great Lakes Depression including Uvs lake Depression, Baruunkhurai or Dzungaryn Gobi and basins of Ulz, Herlen, Orkhon and Selenge rivers (figure 7). High species richness' areas have contained high numbers of Data Deficient species. The Gobi Desert including northern, eastern, Trans-Altai and Alashani Gobi, desert steppe and the southern steppe zone have lower richness of Data Deficient species. This shows that the areas with high species richness and high numbers of Data Deficient species within Mongolia need field surveys conducting on species composition, population size and density, breeding ecology, and population threats. Bird conservation activities need to be implemented.

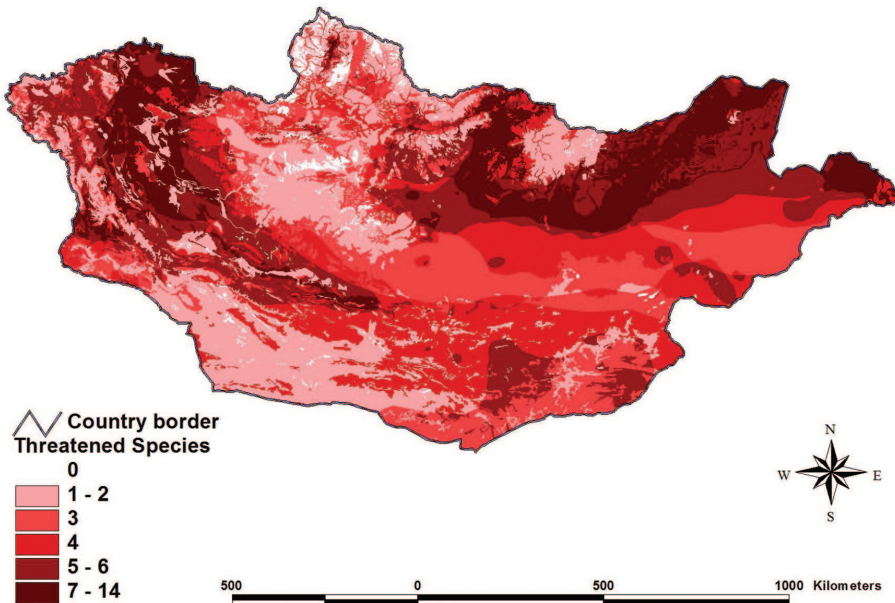


Fig. 6: Threatened bird species richness of Mongolia. Darker colours represent areas with higher species richness.

## Threats to Mongolian birds

Using the IUCN Red List categories of dominant threats, we have compared the threats and potential threats to all species of birds in Mongolia. 38.1 % of species are threatened by habitat loss and degradation, 13.6 % by human disturbance, 11 % by pollution and 10.7 % by changes in native species (figure 8).

Bird conservation strategies and plans should focus on these threats. The combination of threats such as overgrazing and drought, changes in native species dynamics and human disturbance, are having significant impacts on both breeding and migrating bird populations in Mongolia.

The dominant threats vary among species groups. The greatest threats to habitat loss and degradation are mining, human settlement, tourism or recreation and fires. Breeding, migrating and stop-over habitats have been significantly degraded over the last few years. Habitat degradation and loss have been intensified by combinations of threats in Mongolia. The primary activity is that of poaching. Birds are commonly poached and stuffed for sale as souvenirs in public service areas and shops. The second greatest threat is that of subsistence use or local trade for Mongolian and Tibetan traditional medicine. Local people in Mongolia hunt species such as the Altai Snowcock, Black Kite, Mongolian Ground-jay and others for the treatment of certain illnesses; however, such health benefits have not been scientifically proven.

Collision with various types of high power electric wires, illegal shooting and poisoning with insecticide and rodenticide are also threatening the birds of Mongolia. Entanglement with abandoned gill nets used for illegal and legal fishing is a potent threat to species of diving bird and shore feeders. Pollution such as atmospheric pollution caused by global warming, and domestic land pollution have been negatively affecting both breeding and non-breeding birds. Atmospheric and land pollution intensify the drought of breeding and non-breeding habitats of water birds and forest species. Threats relating to changes in predator numbers and prey / food are of great concern. Outbreak of highly pathogenic avian influenza is one of the worst threats to waterfowl, waders and some raptors.

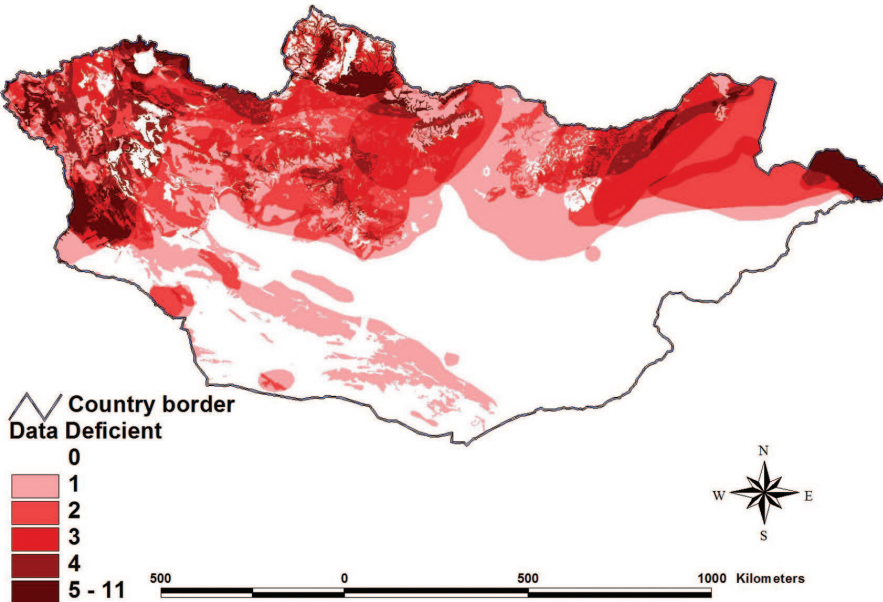


Fig. 7: Data Deficient species richness of Mongolia. Darker colours represent areas with higher species richness.

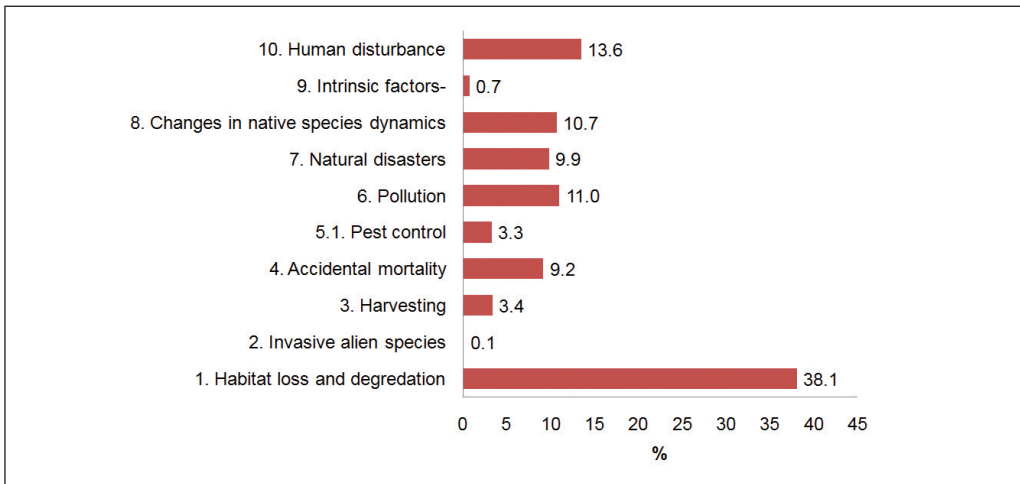


Fig. 8: Comparison of dominant threats to the birds in Mongolia.

When considering all threat categories, intrinsic factors do not have a major impact on all bird species in Mongolia. However, it should be noted that the impact of such a threat is critical to threatened species.

Human disturbance is one of the main threats to all species in the forms of recreation / tourism, transport and fire. Developments such as tourist resorts, mining and human settlements are dominant threats to breeding and non-breeding species. Autumn and spring steppe and forest fires burn breeding and non-breeding habitats, occasionally with eggs and young chicks in the nest.

Our assessment identified the main activities and the direct threats that cause the decline of species. We ranked direct threats as primary, secondary and tertiary levels for each species. Habitat loss and degradation, drought and fires caused by human activities were the principal primary threats. These factors are seriously threatening to waterfowl and other wetland-dependent species such as Dalmatian Pelican, Siberian Crane, Pallas's Fish-eagle, Reed Parrotbill, White-headed Duck, Relict Gull, Great Bittern, Little Bittern, Purple Heron etc.

The primary threats to Altai Snowcock, Ring-necked Pheasant, and Dalmatian Pelican are poaching and cultural uses, such as medicinal uses of Altai Snowcock and Ring-necked Pheasant and use of the Pelican bill as a race horse scraper. The secondary and tertiary threats are more varied among species; they include pollution, climate change, logging, tourism and recreation etc. ...

### Taxonomical changes

BIRDLIFE INTERNATIONAL (2011) and other major bird taxonomy references have not treated the following subspecies as being separate: Macqueen's Bustard (*Chlamydotis undulate macqueenii*) (SANGSTER et al. 1999, KNOX et al. 2002); Black-throated Thrush or Dark-throated Thrush (*Turdus ruficollis atrogularis*) (DAWAA et al. 1994; CLEMENT et al. 2000; CLEMENTS 2007, 2010; ARLOTT 2007; SIBLEY & MONROE 1990, 1993; BIRDLIFE INTERNATIONAL 2010, 2011); Dusky Thrush (*Turdus naumanni oenomus*) (DAWAA et al. 1994; CLEMENTS 2007, 2010; ARLOTT 2007; SIBLEY & MONROE 1990, 1993; BIRDLIFE INTERNATIONAL 2010, 2011); Pale Sand Martin (*Riparia riparia diluta*) (GAVRILOV & SAVCHENKO 1991, GOROSHKO 1993, DEL HOYO et al. 2004, LOSKOT 2006, SCHWEIZER & AYE 2007, CLEMENTS 2007); Masked Wagtail or Pied Wagtail (*Motacilla alba personata*) (STEPANYAN 1978, 1990, 2003; BOLD et al. 2007; GOMBOBAATAR 2009); Green-headed Wagtail (*Motacilla flava taivana*) (STEPANYAN 1990, FOMIN & BOLD 1991, DAWAA et al. 1994, SANGSTER et al. 1998, BOLD et al. 2001, BOLD et

al. 2007, GOMBOBAATAR 2009); Hooded Crow (*Corvus corone cornix*) (FOMIN & BOLD 1991, STEPANYAN 1990, SNOW et al. 1998, KNOX et al. 2002, STEPANYAN 2003, BOLD et al. 2007, GOMBOBAATAR 2009); Two-barred Greenish Warbler (*Phylloscopus trochiloides plumbeitarsus*) and Bright Green Warbler (*Phylloscopus trochiloides nitidus*) (STEPANYAN 1990, FOMIN & BOLD 1991, DAWAA et al. 1994, BOLD et al. 2001, BOLD et al. 2007, GOMBOBAATAR 2009); Turkestan Tit (*Parus major bokharensis*) (DAWAA et al. 1994, BOLD et al. 2007, GOMBOBAATAR 2009); Grey-crowned Goldfinch (*Carduelis carduelis caniceps*) (CLEMENT et al. 1993; HOWARD & MOORE 1994; DAWAA et al. 1994; STEPANYAN 1978, 1990, 2003; GAVRILOV 1999; GAVRILOV & GAVRILOV 2005; BOLD et al. 2007; GOMBOBAATAR 2009); Baikal Bullfinch (*Pyrrhula pyrrhula cineracea*) (STEPANYAN 1978, 1990, 2003; FOMIN & BOLD 1991; DAWAA et al. 1994; GAVRILOV 1999; GAVRILOV & GAVRILOV 2005; BOLD et al. 2007; GOMBOBAATAR 2009).

The English name of Desert Warbler has changed to Asian Desert Warbler (HOWARD & MOORE 1994, SHIRIHAI et al. 2001, AERC TAC 2003, DEL HOYO et al. 2006, BIRDLIFE INTERNATIONAL 2011).

Several genera have changed as follows: Mountain Hawk-eagle (*Spizaetus nipalensis*) to (*Nisaetus nipalensis*) (BIRDLIFE INTERNATIONAL 2011); Swinhoe's Rail (*Porzana exquisitus*) to (*Coturnicops exquisitus*) (BIRDLIFE INTERNATIONAL 2011); Sociable Plover (*Chettusia gregarius*) to (*Vanellus gregarius*) (SIBLEY & MONROE 1990, 1993; BIRDLIFE INTERNATIONAL 2011); Grey-headed Lapwing (*Microsarcops cinereus*) to *Vanellus cinereus* (SIBLEY & MONROE 1990, 1993; BIRDLIFE INTERNATIONAL 2011); Siberian Thrush (*Turdus sibiricus*) to Siberian Thrush (*Zoothera sibiricus*) (DEL HOYO et al. 2005; BIRDLIFE INTERNATIONAL 2011); Vinous-throated Parrotbill (*Suthora webbiana*) to (*Paradoxornis webbiana*); and Eurasian Siskin (*Spinus spinus*) to (*Cardeulis spinus*) (BIRDLIFE INTERNATIONAL 2011).

Due to the above changes to genera, several Mongolian names have changed as follows: Bichilhen tunjger to Bichilhen tunjeehei (*Coturnicops exquisitus*); Heeriin khavtgalj to Heeriin khavtgaalj (*Chettusia gregarius*); Saaral zuunkhurga (*Vanellus cinereus*) to Saaral khavtgaalj; Shiver huundeii (*Zoothera sibiricus*) to Shiver huundii (*Turdus sibiricus*); Bor amurag (*Suthora webbiana*) to Amurag khuragchbor (*Paradoxornis webbiana*), and from Egel nogoolzoi (*Spinus spinus*) to Egel bujiranga (*Cardeulis spinus*).

For the purpose of this Red List a number of changes were not accepted. These include the following: Marsh Grassbird from (*Megalurus pryeri*) to (*Locustella pryeri*); Mongolian Finch from (*Bucanetes mongolicus*) to (*Eremopsaltria mongolicus*); Small Snowfinch from (*Pyrgilauda davidiana*) to (*Montifringilla davidiana*). **At the time of writing, Birdlife International (2011) treat the Mongolian Gull (*Larus mongolicus*) as the Herring Gull (*Larus argentatus*), however, we do not accept this change.**

## Future development of the Red List of Mongolian birds

In order to develop, the Bird Red List and Conservation Action Plans in Mongolia, following actions are essential:

- Raise funds for long term financial independence
- Continue to re-assess all species of birds in 2019
- Complete field guides for Mongolian birds
- Encourage the adoption of the action plans and recommendations into the policy for Biodiversity Conservation of Ministry of Environment and Green Development
- Update the National Database on birds each year.

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