

## Central Asian Flyway Action Plan for Water birds and their Habitat

### Country Report - BHUTAN

#### A. Introduction

Bhutan situated in the eastern section of the only Great Himalaya of Earth covering an area of about 40,000 km<sup>2</sup>. It encompasses two major bio-geographical realms with 8 distinctly different bio-ecoregions and many different ecosystems and habitats, the country is known amongst the top 10 global hotspot of biodiversity countries. Bhutan is known to support 770 species of bird species, out of these 106 species are water birds. 74 water bird species are enlisted as species of concern by the Central Asian Flyway (CAF). Bhutan remains in the eastern region of the CAF and provides some important wintering and staging populations of water bird species. It provides shortest transit corridor to migratory waterbirds of Bangladesh and parts of north east India of the Bhramaputra watershed. Bhutan is also a key breeding area for many other water birds such as *Ibidorhyncha struthersii* (Ibisbill), *Vanellus daucelii* (River Lapwing) and *Tadorna ferruginea* (Ruddy Shelduck), *Esacus recurvirostris* (Great Thick-knee), globally threatened water birds such as *Ardea insignis* (White-bellied Heron) and *Haliaeetus leucoryphus* (Pallas's Fish Eagle). It is also a key wintering area of vulnerable *Grus nigricollis* (Black-necked Crane).

Having located in the eastern region of the CAF, the seven major river systems provide important migration routes connecting large intra-continental territory between wetlands and water bodies of Indo-Malayan and Palearctic regions. Realizing the importance of the wetlands within the geographic boundary of Bhutan for migratory bird species, Bhutan has developed a network of protected areas with biological corridors connecting protected areas and a few conservation areas. Being a mountainous country, wetlands of Bhutan is represented by small marshes, fresh water lakes and rivers. However, being a developing nation with agricultural economy transcending to hydro-power economy, wetlands are one of the most used habitat with water bird and human interface. The land mass of Bhutan is very much dependent to the normal annual precipitation of monsoonal rainfall and snow fall is to subjected to drought and flood making the wetlands vulnerable to severe ecological changes. It is, therefore, necessary to monitor the wetlands as well as the water birds dependent there on.

Bhutan considers its resident water birds as well as wintering and passage migrant water birds as national heritage and has developed supportive legislations to protect all species. While under its Forest and Nature Conservation Act 1995, protection and management of all species is a priority. Bhutan would also study and consider to work together with regional and international community for developing specific frame work and an action plan for proper conservation and management of migrating water birds.



## B. National policy and legislation relating to migratory waterbirds and wetlands

The Biodiversity Action Plan dually supported by the Forests and Nature Conservation Act provides the legislation relating to all species and habitat types. In addition, other legislations such as National Environment Act and National Water Act are some of the additional legislations supporting wetland and migratory waterfowl habitats managements. Further, Bhutan is signatory to CITES.

## C. National government institutions involved in migratory waterbirds and wetlands research/management

The Ministry of Agriculture, Royal Government of Bhutan is the Nodal Agency relating to conservation and management of wetlands and water birds (all species and habitats). To this end the MoA, RGoB has a network of National Institutions under its umbrella whose programme scope includes research, management, awareness raising, conservation of ecosystems and all flora and fauna species.

Table 2: National government institutions involved in migratory waterbirds and wetlands research/management

Name of Institution (with contact details)	Geographic scope	Thematic Focus or programmes	Principle outputs on waterbirds and wetlands
1. Nature Conservation Division.	Entire Country	<ol style="list-style-type: none"> <li>1. Taxonomic documentation of avifauna including water birds.</li> <li>2. Planning a national network of protected areas and biological corridors</li> <li>3. Species Research and Monitoring</li> <li>4. Awareness Raising</li> </ol>	<ol style="list-style-type: none"> <li>1. wetland inventory and water bird census.</li> </ol>

## D. Main non-government organizations and academic institutions involved in migratory waterbirds and wetlands research/management

Bhutan has a single non-governmental organization involved in wetland conservation and water bird research. The Royal Society for Protection of Nature involved in *Grus nigricollis* (Black-necked Crane) wintering area conservation and management, and a focal species research of a water bird. Organizations like WWF-Bhutan

Program and Bhutan Trust Fund for Environment Conservation have been providing support in developing protected area network and awareness in Bhutan. The International Crane Foundation has also been involved in Black-necked Crane conservation. Wetland International have influenced in initiating annual water bird census.

Table 3: Main non-government organizations and academic institutions involved in migratory waterbirds and wetlands research/management

Name of non-government organization/ University (with contact details)	Geographic scope	Thematic Focus or programmes	Principle outputs on waterbirds and wetlands
1. Royal Society for Protection Nature	Selective Conservation Areas	1. Black-necked Crane Conservation. 2. Research on a focal wetland bird.	1. Prepared species specific action plan for certain water birds

#### E. International Instruments

Bhutan is signatory to a few important international instruments on conservation. However, with respect to wetlands and water birds, Bhutan is currently not the signatory member of RAMSAR.

Table 4: International Instruments that are relevant to the migratory water birds and wetlands of the country

<b>Instruments – informal</b>	<b>Geographic scope</b>	<b>Thematic Focus</b>	<b>Implementing Strategy or Action Plan</b>
International Crane Foundation	Wintering Areas	Conservation of important wetlands that act as wintering ground for the Black-necked Cranes	1. Annual Census 2. Advisory role on Habitat utilization research

## F. International Programs and Activities

Table 5: International activities involving the countries migratory water birds  
(initiated in or since 2000, earlier programmes may also be included)

Activity	Waterbird Group	International partners	Principle outputs
Annual Black-necked Crane Count	Crane	RSPN, ICF, NCD	Action plan on Black-necked Crane
Annual Water Bird Census	Both migratory and resident	NCD, RSPN, WI	Monitoring water birds

## G. List of Regular Breeding and Migratory Waterbirds

Around 106 species of waterfowls are recorded in Bhutan, of these, 46 species are resident to Bhutan. Other water bird species are either winter or summer visitor and passage migrant or vagrant. Of the listed water birds, one species is endangered, three species vulnerable, two species near threatened.

Table 6. List of regular breeding and migratory water birds of Bhutan and species of CAF concern.

<i>Migratory waterbirds of Bhutan</i>							
Sl.No.	Species	English name	IUCN	CMS App2	CAF App	Breeding	Residency
1	<i>Aix galericulata</i>	Mandarin Duck					dd
2	<i>Alcedo atthis</i>	Common Kingfisher				b	r
3	<i>Alcedo hercules</i>	Blyth's Kingfisher	nt				r
4	<i>Amaurornis phoenicurus</i>	White-breasted Waterhen			CAF		sv
5	<i>Anas acuta</i>	Northern Pintail		II	CAF		wv,pm
6	<i>Anas clypeata</i>	Northern Shoveler		II	CAF		wv,pm
7	<i>Anas crecca</i>	Green-winged Teal		II	CAF		wv,pm
8	<i>Anas falcata</i>	Falcated Teal		II	CAF		wv,pm
9	<i>Anas formosa</i>	Baikal Teal					wv,pm
10	<i>Anas penelope</i>	Eurasian Wigeon		II	CAF		wv,pm
11	<i>Anas platyrhynchos</i>	Mallard		II	CAF		wv,pm
12	<i>Anas poecilorhyncha</i>	Spot-billed Duck		II	CAF		wv,pm
13	<i>Anas querquedula</i>	Garganey		II	CAF		wv,pm
14	<i>Anas strepera</i>	Gadwall		II	CAF		wv,pm
15	<i>Anser anser</i>	Greylag Goose		II	CAF		wv,pm
16	<i>Anser indicus</i>	Bar-headed Goose		II	CAF		wv,pm
17	<i>Ardea cinerea</i>	Grey Heron			CAF		wv,pm
18	<i>Ardea insignis</i>	White-bellied Heron	EN			b	r
19	<i>Ardeola grayii</i>	Indian Pond Heron				b	r
20	<i>Aythya baeri</i>	Baer's Pochard	VU	II	CAF		wv,pm
21	<i>Aythya ferina</i>	Common Pochard		II	CAF		wv,pm

22	<i>Aythya fuligula</i>	Tufted Duck		II	CAF		wv,pm
23	<i>Aythya nyroca</i>	Ferruginous Duck	nt	I	CAF		wv,pm
24	<i>Bubulcus ibis</i>	Cattle Egret			CAF		r
25	<i>Butorides striatus</i>	Little Heron					r
26	<i>Calidris ferruginea</i>	Curlew Sandpiper		II	CAF		wv,pm
27	<i>Calidris temminckii</i>	Temminck's Stint		II	CAF		wv,pm
28	<i>Casmerodius albus</i>	Great Egret					wv,pm
29	<i>Ceryle rudis</i>	Pied Kingfisher					r
30	<i>Ceyx erithacus</i>	Oriental Dwarf Kingfisher					r
31	<i>Chaimarrornis leucocephalus</i>	White-capped Water Redstart				b	r
32	<i>Charadrius alexandrinus</i>	Kentish Plover		II	CAF		wv,pm
33	<i>Charadrius dubius</i>	Little Ringed Plover		II	CAF	b	r
34	<i>Charadrius mongolus</i>	Lesser (Mongolian) Plover		II	CAF		wv,pm
35	<i>Charadrius placidus</i>	Long-billed Plover		II	CAF	b	r
36	<i>Ciconia nigra</i>	Black Stork		II	CAF		wv,pm
37	<i>Cinclus cinclus</i>	White-throated Dipper				b	r
38	<i>Cinclus pallasii</i>	Brown Dipper				b	r
39	<i>Dendrocygna bicolor</i>	Fulvous/Greater Whistling Duck		II	CAF		dd
40	<i>Dendronanthus indicus</i>	Forest Wagtail					sv
41	<i>Egretta garzetta</i>	Little Egret			CAF		r
42	<i>Enicurus immaculatus</i>	Black-backed Forktail					r
43	<i>Enicurus leschenaulti</i>	White-crowned Forktail				b	r
44	<i>Enicurus maculatus</i>	Spotted Forktail				b	r
45	<i>Enicurus scouleri</i>	Little Forktail				b	r
46	<i>Fulica atra</i>	Common Coot			CAF		wv,pm
47	<i>Gallinago gallinago</i>	Common Snipe		II	CAF		r
48	<i>Gallinago nemoricola</i>	Wood Snipe	VU	I	CAF		r
49	<i>Gallinago solitaria</i>	Solitary Snipe		II	CAF		r
50	<i>Gallinago stenura</i>	Pintail Snipe		II	CAF		r
51	<i>Gallinula chloropus</i>	Moorhen			CAF		wv,pm
52	<i>Gallirallus striatus</i>	Slaty-breasted Rail			CAF	b	sv
53	<i>Glareola lactea</i>	Small Pratincole					r
54	<i>Grus grus</i>	Common Crane		II	CAF		wv,pm
55	<i>Grus nigricollis</i>	Black-necked Crane	VU	I	CAF		wv
56	<i>Grus virgo</i>	Demoiselle Crane		II	CAF		wv,pm
57	<i>Halcyon coromanda</i>	Ruddy Kingfisher				b	r
58	<i>Halcyon pileata</i>	Black-capped Kingfisher					dd
59	<i>Halcyon smyrnensis</i>	White-throated Kingfisher				b	r
60	<i>Haliaeetus albicilla</i>	White-tailed Fish Eagle					w v
61	<i>Haliaeetus leucoryphus</i>	Pallas's Fish Eagle				b	r
62	<i>Ibidorhyncha struthersii</i>	Ibisbill			CAF	b	r
63	<i>Ichthyophaga humilis</i>	Lesser Fish Eagle					r
64	<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern			CAF		r
65	<i>Larus brunnicephalus</i>	Brown-headed Gull			CAF		wv,pm
66	<i>Larus genei</i>	Slender-billed Gull		II	CAF		wv,pm
67	<i>Larus ichthyaetus</i>	Pallas's/Great Black-headed Gull			CAF		wv,pm
68	<i>Lymnocyptes minimus</i>	Jack Snipe		II	CAF		w v
69	<i>Megaceryle lugubris</i>	Crested Kingfisher					r

70	<i>Mergus merganser</i>	Goosander/Common Merganser		II	CAF		wv,pm
71	<i>Mesophoyx intermedia</i>	Intermediate Egret					r
72	<i>Metopidius indicus</i>	Bronze-winged Jacana					wv,pm
73	<i>Mitacilla citreola</i>	Citrine Wagtail					r
74	<i>Motacilla alba</i>	White Wagtail				b	r
75	<i>Motacilla cinerea</i>	Grey Wagtail					r
76	<i>Motacilla flava</i>	Yellow Wagtail					r
77	<i>Motacilla maderaspatensis</i>	White-browed Wagtail				b	r
78	<i>Netta rufina</i> ( <i>Rhodonessa r.</i> )	Red-crested Pochard		II	CAF		wv,pm
79	<i>Numenius phaeopus</i>	Whimbrel		II	CAF		wv,pm
80	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron			CAF		r
81	<i>Pandion haliaetus</i>	Osprey					r
82	<i>Phalacrocorax carbo</i>	Great cormorant			CAF		wv,pm
83	<i>Phalacrocorax fuscicollis</i>	Indian cormorant					sv
84	<i>Phalacrocorax niger</i>	Little cormorant					sv
85	<i>Philomachus pugnax</i>	Ruff		II	CAF		wv,pm
86	<i>Podiceps cristatus</i>	Great Crested Grebe			CAF		wv,pm
87	<i>Porzana fusca</i>	Ruddy-breasted crake			CAF		wv,pm
88	<i>Porzana parva</i>	Little crake			CAF		wv
89	<i>Recurvirostra avosetta</i>	Pied Avocet		II	CAF		wv,pm
90	<i>Rhyacornis fuliginosus</i>	Plumbeous Water Redstart				b	r
91	<i>Rostratulla benghalensis</i>	Greater Painted Snipe					dd
92	<i>Scolopax rusticola</i>	Eurasian Woodcock		II	CAF		r
93	<i>Sterna aurantia</i>	River Tern					wv,pm
94	<i>Sterna hirundo</i>	Common Tern			CAF		wv,pm
95	<i>Tachybaptus ruficollis</i>	Little Grebe			CAF		wv,pm
96	<i>Tadorna ferruginea</i>	Ruddy Shelduck		II	CAF	b	r,wv,pm
97	<i>Tadorna tadorna</i>	Common Shelduck		II	CAF		r,wv,pm
98	<i>Tringa (Actitis) hypoleucos</i>	Common Sandpiper		II	CAF		r
99	<i>Tringa glareola</i>	Wood Sandpiper		II	CAF		wv,pm
100	<i>Tringa nebularia</i>	Common Greenshank		II	CAF		wv,pm
101	<i>Tringa ochropus</i>	Green Sandpiper		II	CAF		r
102	<i>Tringa totanus</i>	Common Redshank		II	CAF		wv,pm
103	<i>Vanellus malarbaricus</i>	Yellow-wattled Lapwing					sv
104	<i>Vanellus indicus</i>	Red-wattled Lapwing				b	r
105	<i>Vanellus vanellus</i>	Northern Lapwing		II	CAF	b	wv,pm
106	<i>Vanellus duvaucelii</i>	River Lapwing					r

<p><b>Keys</b></p> <p>VU: vulnerable  nt: near-threatened  b: breeding  r: resident</p>	<p>EN: endangered  c: species of c concern  sv: summer visitor  wv: winter visitor  pm: passage migrant</p>
---	---

## H. Migration Routes, Staging Sites, and Non-breeding Areas

Bhutan has about good number of species of migrant waterfowls which are extralimital seasonal immigrants, mostly from Palaearctic and Indo-Malayan Region. The most abundant and regular winter migrants are the ducks and geese (Anatidae), waders or shore birds (Charadriidae) and cranes (Gruidae). A large number of migratory species, especially ducks and geese, that enter the country from the north in autumn fly down the valleys of Amo Chu, Wang Chu (Raidak), Punatshang Chu (Sunkosk), Mangde Chu, Chamkhar Chu, Kuri Chu, Drangme Chu and Nera Ama Chu. Similarly huge number of migratory water birds uses same large river corridors for spring migration funneled through the Brahamaputra valley from south. Sections of wide valley of Punatshang Chu (chu=river) provide excellent wintering areas as well as autumn and spring staging/transit habitat. It is along this river valley, huge congregations of water birds are observed. The small wetlands of Phobjikha, Khotokha in western part, Geytsa, Chamkhar and Thangbi in central part and Bumdeling in eastern part of the country are the major wintering areas of vulnerable *Grus nigricollis* (Black-necked Crane). A single species *Ibidorhyncha struthersii* (Ibisbill) representing a family and other waders such as *Charadrius placidus* (Long-billed Plover), *C.dubius* (Little-ringed Plover) and Great Thick-knee are breeding residents. The river banks of sandy and gravel shingles support good breeding habitat. An endangered species, *Ardea insignis* (White-bellied Heron) and a vulnerable species, *Haliaeetus leucoryphus* (Pallas's Fish Eagle) also breed in Bhutan. There are some species of waterfowls especially *Tadorna ferruginea* (Ruddy Shelduck), whose southernmost Palaearctic breeding range extends into Bhutanese boundaries in northern parts of the high altitude wetlands of the country. There exist much more gaps than we currently know on the migratory as well resident water birds of Bhutan.

Table 7. The key breeding, staging and non-breeding areas of the Bhutan's water birds

Sl. No.	Breeding sites	Staging sites	Non-breeding sites*
1	Large River Bank	Bajo	Phobjikha
2	High Altitude Lakes		Khotokha, Geytsa

## I. Recommendations to Improve International Migratory Water bird Conservation

While much of the recommendations will emerge as the consensus outcome of the CAF meeting the Government of India delegation would consider the following points to be the prime and most important recommendations.

1. Wetland atlas.
2. Identification of all important staging grounds and breeding grounds.
3. Management of Anthropogenic Activities in the wetlands in CAF.
4. Research and monitoring

5. Education and Public Awareness
6. Facilitation and development of bilateral agreements between neighbouring countries in the region for specific action plans for migratory water birds.
7. Examination and identification of trans-boundary wetlands.