Himachal Pradesh (30° 22' - 33° 13' North and 75° 36' - 79° 02' East) is situated in the northwest of India in the Himalayan ranges. It is bounded by Jammu and Kashmir in the north, Uttaranchal in the southeast, Haryana in the south and Punjab in the west and in the east it forms India’s international boundary with Tibet (China). Himachal Pradesh has a geographical area of 5.57 million ha. The State is mountainous with altitudes ranging between 460 and 6,600 m. It has a deeply dissected topography, a complex geological structure and a rich temperate flora in subtropical latitudes. Himachal Pradesh is drained by a number of snow-fed perennial rivers. The Chenab, the Ravi, the Beas, the Sutlej and the Yamuna are the important ones. Forestry in Himachal Pradesh constitutes the biggest land use. Agriculture and horticulture are the mainstay of Himachal’s economy as 71% of the people are engaged in these pursuits (Mathew 2003). Climatic conditions are suitable for a variety of fruits and cash crops such as seed potatoes, ginger, vegetable seeds, apples and other fruits. The main cereal crops are wheat, maize and paddy.

Himachal Pradesh is famous for its hill stations. Tourists come here mainly during the summer. The tourism department of Himachal Pradesh claims that Kharjiar in the Chamba district has earned the name “Mini Switzerland” because of the striking similarity in landscape. The State is also known for its rich wildlife, especially for rare species such as Musk Deer Moschus chrysogaster, Ibex Capra ibex, Himalayan Thar Hermitragus jemlahicus, Asiatic Brown Bear Ursus arctoides and Snow Leopard Uncia uncia. Some of the pheasant species which are very important in the State, include the Himalayan or Impeyan Monal Lophophorus impejanus, Western Tragopan Tragopan melanocephalus, Koklass Pheasant Pucrasia macrolopha and Snowcocks Tetraogallus spp.

The average rainfall in the State is 1,800 mm. The mean annual temperature ranges between 20 °C to 22.5 °C.

The total population of the State is 6.08 million (2001 census) of which 90.2% is rural and 9.8% is urban. The population density is 109 persons per sq. km.

Vegetation

There are six major forest types in Himachal Pradesh: Tropical Dry Deciduous, Sub-tropical Pine, Sub-tropical Dry Evergreen, Himalayan Moist Temperate, Himalayan Dry Temperate, and Sub-alpine and Alpine. By legal status, the reserved forest constitutes 5.1%, the protected forest 89.2% and the unclassed forest 5.7% (Ministry of Environment and Forests 2001). The Forest Survey of India report of 1999, states that there has been an overall decrease of 440 sq. km of dense forest because of the conversion of 640 sq. km to open forest, and of 33 sq. km to non-forest. Also 92 sq. km of open forest, 42 sq. km of scrub and 99 sq. km of non-forest have been converted to dense forest.
**IBAS AND PROTECTED AREAS**

Himachal Pradesh has an area of 0.71 million ha (12.87%) under the protected area network, that comprises two national parks and 32 wildlife sanctuaries, covering 0.14 million ha and 0.57 million ha respectively. The Great Himalayan National Park and the Pin Valley National Park have been identified as IBAs, and of the 32 wildlife sanctuaries, 24 are IBAs. Two non-protected areas are also considered as IBAs.

**Number of IBAs and IBA criteria**

<table>
<thead>
<tr>
<th>IBA site codes</th>
<th>IBA sites names</th>
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<td>Dhualadhar Wildlife Sanctuary and McLeod Gunj</td>
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<td>IN-HP-27</td>
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**AVIFAUNA**

Himachal Pradesh is extremely important for the protection of many species of pheasants and forest birds. Its six major forest types have Western Himalayan species, some with significant populations. A total of 390 species of birds have been identified till now from the State (Grimmett and Inskipp 2003). Seven globally threatened species are found in the State. The two vulture and two eagle species are widely found but the two pheasant species (Cheer Pheasant *Catreus wallichii* and Western Tragopan *Tragopan melanocephalus*) have restricted range, both in altitude and habitat. The Wood Snipe *Gallinago nemoricola* classified as Vulnerable (BirdLife International 2001) also had a wide distribution in the Himalayas based on old shooting records (Ali and Ripley 1987). Only few recent records are available after the prohibition of sport-hunting in India. It is reported only from Dhauladhar WLS, but is likely to be found in many more areas.
Himachal Pradesh lies in the Western Himalayas Endemic Bird Area (EBA 128). Eleven species are confined to this EBA (Stattersfield et al. 1998), out of which ten are known to occur in this State with confirmed records. They are: Western Tragopan, Cheer Pheasant, Brook’s Leaf Warbler Phylloscopus subviridis, Tyler’s Leaf Warbler Phylloscopus tyleri, Kashmir Flycatcher Ficedula subrubra (vagrant), White-cheeked Tit Aegithalos leucogenys, White-throated Tit Aegithalos niveogularis, Kashmir Nutcracker Sitta cashmirensis, Spectacled Finch Callacanthis burtoni and Orange Bullfinch Pyrrhula aurantiaca. Only Himalayan or Mountain Quail Ophrysia superciliosa, which was anyway not reported from Himachal Pradesh, is missing from the EBA list of the State. These restricted range species are confined to the Western Himalayas of Himachal Pradesh on an elevation between 1,500 to 3,600 m in the Temperate Coniferous/Broadleaf Forest, Sub-alpine Forest and Montane Grassland (Stattersfield et al. 1998).

**Species for which Himachal Pradesh is important**

Himachal Pradesh is very important for the conservation of the following three Globally Threatened species:

**Slender-billed Vulture Gyps temuirostris Critically Endangered**

This newly recognized species is classified as Critical because it has suffered an extremely rapid population decline, particularly across the Indian subcontinent (BirdLife International 2001). In Himachal Pradesh, it is reported from Gobind Sagar and Naina Devi WLS, Sarah Valley and Lower Dharamshala (J. W. den Besten per comm. 2003).

**Western Tragopan Tragopan melanopcephalus Vulnerable**

This species is classified as Vulnerable because it has sparsely distributed, small population is declining and becoming increasingly fragmented in the face of continuing forest loss and degradation throughout its restricted range (BirdLife International 2001). From Himachal Pradesh it has been reported from Daranghati Wildlife Sanctuary (Singh et al. 1990; Pandey 1994), Dhauladhar Wildlife Sanctuary and McLeod Ganj (Bose et al. 1989, Knox and Walters 1994), Gangul Siahbahi Wildlife Sanctuary (Singh et al. 1990), Great Himalayan National Park (Singh et al. 1990, Gaston 1992, Pande 1993). Kais Wildlife Sanctuary (Knox and Walters 1994; Singh et al. 1990), Kanawar Wildlife Sanctuary (Singh et al. 1990; Pandey 1993), Lippa Asrang Sanctuary (Singh et al. 1990), Manali Wildlife Sanctuary (Wynter-Blyth 1951), Nargu Sanctuary (Pande 1993), Rupi Bhabha Wildlife Sanctuary (Singh et al. 1990), Sangla (Raksham Chikul) Wildlife Sanctuary, Sangla (Raksham Chikul) Wildlife Sanctuary (Naran 1993), Sechu Tuan Nala Wildlife Sanctuary (Singh et al. 1990), Talra Wildlife Sanctuary (Singh et al. 1990), Tirthan Wildlife Sanctuary (part of the Great Himalayan National Park) (Singh et al. 1990; Pandey 1993; Gaston and Garson 1992).

Chamba district has a sizeable population of this bird (Shahid Bashir pers. comm. 2003). The important areas in Chamba are Makhan Nalla, Monda Nala (Tak 1987, Chauhan and Sharma 1991), Dalli, c. 28 km northwest of Chamba (Naran 1993), Ghrotu Kotha and Gharaatbada Reserve Forests, (Jandrotia et al. 1996); and the Kalatop and Khajjar Sanctuary (Singh et al. 1990), but the presence there appears doubtful (Javed et al. 1999).

**Cheer Pheasant Catræus wallichii Vulnerable**

This pheasant’s small population is naturally fragmented because it lives in small patches of successional grassland. Human population pressure, hunting and changing patterns of land use are resulting in its decline, classifying it as Vulnerable (BirdLife International 2001).

From Himachal Pradesh it is reported from the following sites: Gangul Siahbahi Sanctuary (Singh et al. 1990); Sara Reserve Forest, (Gaston et al. 1981), Kugti Sanctuary (Singh et al. 1990), Manali Sanctuary (Gaston et al. 1981; Singh et al. 1990), Kalatop and Khajjar Sanctuary (Khajjar-Kalatope Wildlife Sanctuary), (Gaston et al. 1981); Kais Sanctuary (Singh et al. 1990); Kanawar Sanctuary, (Gaston et al. 1981; Singh et al. 1990); Nargu Sanctuary (Singh et al. 1990, Gaston et al. 1993), Tirthan Sanctuary (Gaston et al. 1981; Singh et al. 1990), Shikari Devi Sanctuary, (Singh et al. 1990); Bandli Sanctuary (Singh et al. 1990); Daranghati (Sharma et al. 1990), Majathal Wildlife Sanctuary (Gaston et al. 1981; Garson 1983, Mishra 1996), Talra Sanctuary (Singh et al. 1990), Chail Wildlife Sanctuary (Gaston and Singh 1980, Gaston et al. 1981; Kalsi 1999) and Churdar Wildlife Sanctuary.
### Important Bird Areas in India - Himachal Pradesh

#### Endemic Bird Area 128: Western Himalayas

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
<th>Site Numbers</th>
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<tr>
<td>Cheer Pheasant</td>
<td>Catreus wallichii</td>
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<td>Western Tragopan</td>
<td>Tragopan melanocephalus</td>
<td>IN-HP-04, 05, 06, 08, 09, 11, 16, 20, 21, 23, 26, 27</td>
</tr>
<tr>
<td>Tytler’s Leaf-Warbler</td>
<td>Phylloscopus tytleri</td>
<td>IN-HP-05</td>
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<tr>
<td>Spectacled Finch</td>
<td>Callacanthis burtoni</td>
<td>IN-HP-05, 08</td>
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<tr>
<td>White-cheeked Tit</td>
<td>Aegithalos leucogenys</td>
<td>IN-HP-08, 11, 20, 27</td>
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<tr>
<td>White-throated Tit</td>
<td>Aegithalos niveogularis</td>
<td>IN-HP-08, 20</td>
</tr>
<tr>
<td>Orange Bullfinch</td>
<td>Pyrrhula aurantiaca</td>
<td>IN-HP-08, 20</td>
</tr>
</tbody>
</table>

#### Threats and Conservation Issues

In Himachal Pradesh, deforestation is not an acute problem as compared to other neighbouring states. The forest cover remains extensive and relatively stable, although destruction of the understorey through overgrazing by livestock is a major problem (IUCN 1993) and some development projects such as roads and dams also affect some of the IBA sites (Virendra Sharma pers. comm. 1999). There are few IBAs where a viable population of the Western Tragopan and Cheer Pheasants are found. Because of habitat degradation, however, they remain only in pockets as described by BirdLife International (2001). The Great Himalayan National Park is an important IBA site where a sizeable population of the Western Tragopan and the Cheer Pheasant is found. Similarly, the Majathal Wildlife Sanctuary is an important IBA for the Cheer Pheasant.

Some of the key threats are expansion of cultivation, illegal logging, overgrazing by livestock, conversion to agriculture and plantations, weaknesses in protected area management, hunting of wildlife and trapping.

New roads, dams, mines, buildings and other developments strongly contribute to habitat loss in the Western Himalayas, damaging forests, both directly and indirectly and by displacing people into forest areas (BirdLife International 2003). Construction of roads in highland areas may cause landslips, and provide improved access to remote montane habitats for shifting cultivators, illegal loggers, hunters and harvesters of forest products (BirdLife International 2003).

### Threats to IBAs

- **A**=Agriculture intensification/expansion; **B**=Dams/Dykes; **C**=Disturbance to Birds; **D**=Firewood Collection; **E**=Industrialisation/Urbanisation; **F**=Unsustainable exploitation; **G**=Others; **H**=Natural Events

#### REFERENCES


428
Important Bird Areas in India - Himachal Pradesh


Important Bird Areas in India – Himachal Pradesh

**BANDLI WILDLIFE SANCTUARY**

**IBA SITE CODE:** IN-HP-01  
**State:** Himachal Pradesh  
**District:** Mandi  
**IBA CRITERIA:** A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas)  
**PROTECTION STATUS:** Wildlife Sanctuary, established in March 1962

**GENERAL DESCRIPTION**

This small sanctuary in Mandi district has been in the news due to the state government’s plan to establish a large cement factory about 500 m from the boundary. Bandli was a Reserve Forest till 1962, when it was first notified as a Sanctuary. After the enactment of the Wildlife Protection Act, 1972, final notification took place in 1974. It is located about 7 km from Sundarnagar town. The Sanctuary was declared mainly to protect Cheer Pheasant *Catreus wallichii*, which had been exterminated from many nearby areas due to hunting. The Sanctuary is under heavy pressure due to its proximity to villages and towns.

Singh *et al.* (1990) identified only two major forest types: Himalayan Subtropical Pine Forest and Ban Oak Forest.

**AVIFAUNA**

This sanctuary helps to protect a small surviving population of Cheer Pheasant. No detailed study on avifauna has been conducted, except for surveys of pheasants.

This IBA comes under Western Himalayas Endemic Bird Area (EBA-128) and Sino-Himalayan Subtropical Forest (BirdLife International, undated). However, as we do not have the checklist of birds of this site, we do not know how many Restricted Range and Biome Restricted assemblages are found in this IBA. Besides studies on the globally threatened Cheer Pheasant to know its status and distribution in this site, detailed studies on the general avifauna are also required. It is a Data Deficient site.

**OTHER KEY FAUNA**

Leopard *Panthera pardus* is quite common and a major cause of concern to livestock owners. Asiatic Black Bear *Ursus thibetanus* is also found, but it confines itself to forest and grassland areas.

Barking Deer *Muntiacus muntjak* and Goral *Nemorhaedus goral* are the major natural prey of Leopard. Himalayan Yellow-throated Marten *Martes flavigula* are the major predators of Cheer Pheasant and other smaller prey.

**Vulnerable**

**Cheer Pheasant**  
*Catreus wallichii*

**Endemic Bird Area 128: Western Himalayas**

**Cheer Pheasant**  
*Catreus wallichii*

**KEY CONTRIBUTORS**

Sanjeeva Pandey and K. Ramesh

**KEY REFERENCES**


CHAIL WILDLIFE SANCTUARY

IBA Site Code : IN-HP-02
State : Himachal Pradesh
District : Solan, Shimla
Coordinates : 30° 58' 15" N, 77° 13' 58" E
Ownership : State
Area : 10,854 ha
Altitude : 701 - 2,408 m
Rainfall : 1,603 mm
Temperature : -4°C to 28°C
Biogeographic Zone : Himalaya
Habitats : Sub Alpine Forest, Montane Grassy Slopes, Sub-tropical Broad-leaf Hill Forest.

IBA CRITERIA: A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas), A3 (Biome-7: Sino-Himalayan Temperate Forest; Biome-8: Sino-Himalayan Sub-tropical Forest)

PROTECTION STATUS: Wildlife Sanctuary, established in March 1976

GENERAL DESCRIPTION

Chail Wildlife Sanctuary lies in Solan and Shimla districts. Formerly, it was the private game reserve of the Maharaja of Patiala. Inspite of degradation, it is still one of the best sanctuaries for the Cheer Pheasant Catreus wallichii. The Sanctuary has, within its boundaries, Chail town and numerous villages, and is connected by a forest corridor to the Shimla Water Catchment Sanctuary (an IBA) in the north. It comprises part of the catchment area of a tributary of the Giri River.

The forest cover of the Sanctuary includes Himalayan Subtropical Pine Forest, Ban Oak Forest and Moru Oak Forest, according to the forest classification by Champion and Seth (1968). The dominant forest tree is Ban Oak Quercus incana, mixed with Chir Pine Pinus roxburghii at lower altitudes. Rhododendron Rhododendron arboreum forms pure stands in places and Cedar Cedrus deodara and Blue Pine Pinus wallichiana have been planted in some areas. There is little mature forest, and much secondary growth due to disturbance (Gaston and Singh 1980). Reference to the habitat map in Garson (1983) shows that the forest is largely confined to the northern half of the sanctuary. Around 418 ha were planted with Pine, Oak, Cedar and Robinia up to 1984 (Singh et al. 1990).

AVIFAUNA

At least 139 bird species are reported from the site (Nain Akhtar pers. comm. 2003), including five species of pheasants, i.e. Cheer, Koklass Pucrasia macrolopha, Kaleej Lophura leucelomelas, Peafowl Pavo cristatus and Red Junglefowl Gallus gallus. While Cheer Pheasant occurs only in grassland, Kaleej and Koklass occur in oak forest.

This IBA is extremely important for the protection of the globally threatened Cheer Pheasant. In the late 1970s, Gaston and Singh (1980) and Gaston et al. (1981) estimated 40 to 60 pairs, while in March 1983, Garson (1983) estimated a minimum of 32 pairs. Sharma et al. (1990) conducted further surveys in March 1987, and recently Kalis (1999) surveyed Cheer Pheasant in Himchal Pradesh between March and June, and found many pairs in Chail. Most recent work on this species is by Akhtar and Narang (2003) who found “high abundance of Cheer pheasant” in Chail. It is widely distributed in places called Blossom and Khari-un. They also found one more grassland site near Bhagairh village.

This IBA lies in the Western Himalayas Endemic Bird Area (EBA) (Stattersfield et al. 1998) and Sino-Himalayan Subtropical Forest (Biome-7) and Sino-Himalayan Subtropical Forest (Biome-8) (BirdLife International, undated). Eleven species are considered restricted range in this EBA and in Chail WLS, only one species (Cheer Pheasant) has been identified till now in this category. Perhaps, more detailed studies are required here to find out whether other restricted range species occur here or not, although habitat and altitude look suitable for some of them.

Important Bird Areas in India - Himachal Pradesh

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**Endemic Bird Area 128: Western Himalayas**

- Cheer Pheasant Catreus wallichii
- Blue-capped Redstart Phoenicurus caeruleocephalus
- Rufous Sibia Heterophasia capistrata
- Green-backed Tit Parus monticolus
- Bar-tailed Tree Creeper Certhia himalayana
- White-browed Rosefinch Carpodacus thura

**Biome-7: Sino-Himalayan Temperate Forest**

- Slaty-headed Parakeet Psittacula himalayana
- Himalayan Bulbul Pycnonotus leucogenys
- Grey-winged Blackbird Turdus boulboul
- Black-headed Jay Garrulus lanceolatus

**Biome-8: Sino-Himalayan Sub-tropical Forest**

- Blue-capped Sibia Heterophasia capistrata
- Orange-flanked Bush Robin Tarsiger cyanurus
- Black-backed Redstart Phoenicurus caeruleocephalus
- Green-backed Tit Parus monticolus
- White-browed Rosefinch Carpodacus thura

Major species of the Sino-Himalayan Temperate Forest seen in Chail are Himalayan Tree Creeper Certhia himalayana, Black-capped Sibia Heterophasia capistrata, Orange-flanked Bush Robin Tarsiger cyanurus, Blue headed Redstart Phoenicurus caeruleocephalus, Green Backed Tit Parus monticolus, and White-browed Rosefinch Carpodacus thura. None of them are threatened

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**Critical Endangered**

- Oriental White-backed Vulture Gyps bengalensis

**Vulnerable**

- Cheer Pheasant Catreus wallichii

**Near Threatened**

- Red-headed Vulture Sarcogyps calvus
- Pallid Harrier (?) Circus macrourus

**Biome-7**

- Slaty-headed Parakeet Psittacula himalayana
- Himalayan Bulbul Pycnonotus leucogenys
- Grey-winged Blackbird Turdus boulboul
- Black-headed Jay Garrulus lanceolatus

**Biome-8**

- Blue-capped Sibia Heterophasia capistrata
- Orange-flanked Bush Robin Tarsiger cyanurus
- Black-headed Redstart Phoenicurus caeruleocephalus
- Green-backed Tit Parus monticolus
- White-browed Rosefinch Carpodacus thura

None of them are threatened
Residents of Chail demand that the Sanctuary should be denotified, as their private land lies within the sanctuary and they are not even able to repair their own houses due to the Indian Wildlife (Protection) Act 1972. They say that at least their land should be taken out of the Sanctuary.

Two pheasant breeding centers, at Karium and at Blossom, are located within the Sanctuary where captive breeding of Cheer, Kaleej and Red Junglefowl are being attempted.

**KEY CONTRIBUTORS**
Sanjeeva Pandey, S. Sathyakumar and Naim Akhtar

**KEY REFERENCES**


GENERAL DESCRIPTION

The Sanctuary gets its name from Chur Peak, on top of which sits a majestic statue of Lord Shiva, commanding a breathtaking view of the valleys and forests below (Singh et al. 1990). Churdhar and the nearby temples are important pilgrimage sites. Three main forest zones could be demarcated in Churdhar WLS: Alpine Pastures, Kharsu Oak Forest and Western Mixed Coniferous Forest. Forest classification is based on Champion and Seth (1968). Plantations of Deodar Cedrus deodara, Oak Quercus sp. and other species have been established by the Forest Department.

AVIFAUNA

No study on the avifauna has been conducted in this Sanctuary but Singh et al. (1990) have provided a list of 30 bird species recorded here. The IBA does not have significant populations of any globally threatened species, but the temperate forests of Churdhar still have good habitats for the Himalayan or Impeyan Monal Lophophorus impejanus, Koklass Pheasant Pucrasia macrolopha and other species of Western Mixed Coniferous Forest and Alpine Pastures (S. Pandey pers. comm. 2002).

This site lies in the Western Himalayan Endemic Bird Area (EBA). In this EBA, 11 Restricted Range species have been listed but as we do not have good information on bird life, it is not known how many birds are found in this IBA. According to BirdLife International (undated) classification of biome, this site should come under Biome-7 (Sino-Himalayan Temperate Forest). This biome occurs from 1,800 to 3,600 m, which is also the altitudinal range of this IBA. BirdLife International (undated) has listed 112 bird species that represent biome assemblages of this area. Based on the information by S. Pandey (pers. comm. 2002), only ten species of this biome are found in this IBA. Once detailed studies are conducted on the bird life of this IBA, many more biome and restricted range species are likely to be recorded. Till such studies, it is included as a Data Deficient site.

OTHER KEY FAUNA

Before relentless poaching in the 1960s and 1970s, Churdhar had a good population of the Musk Deer Moschus chrysogaster, and the Sanctuary was established primarily to protect this species. Barking Deer Muntiacus muntjak and Goral Nemorhaedus goral are still surviving in comparatively good numbers, despite some poaching. Asiatic Black Bear Ursus thibetanus is found in the higher reaches. Leopard Panthera pardus is distributed all over the sanctuary, especially near villages and settlements as it thrives on livestock and also on Wild Boar Sus scrofa. Pika Ochotona roylei is found mostly above 3,000 m and forms the prey base for many smaller predators such as weasels, cats and civets.
LAND USE
- Agriculture
- Collection of fodder, timber, fuelwood and minor forest produce
- Grazing
- Tourism and recreation

THREATS AND CONSERVATION ISSUES
- Poaching
- Human settlements
- Disturbance due to pilgrims
- Livestock grazing

Churdhar has one of the last remaining natural forests in southern Himachal Pradesh (Singh et al. 1990). Residents have rights of habitation, agriculture, extraction of timber, fuelwood and minor forest produce, livestock grazing and collection of fodder. Gujjars (nomadic graziers) are given permits for grazing and periodically bring large numbers of livestock into the Sanctuary. Entry into the Sanctuary is not regulated (Singh et al. 1990).

KEY CONTRIBUTORS
Shekar Singh and Sanjeeva Pandey

KEY REFERENCES
Champion, H. G. and Seth, S. K. (1968) A revised survey of forest types of India Govt. of India Press, Delhi. Pp. 403
**DARANGHATI WILDLIFE SANCTUARY**

**IBA Site Code**: IN-HP-04  
**State**: Himachal Pradesh  
**District**: Shimla  
**Coordinates**: 31° 26' 01" N, 77° 49' 56" E  
**Ownership**: State  
**Area**: 16,700 ha  
**Altitude**: 2,100 - 3,315 m  
**Rainfall**: 750 mm  
**Temperature**: -8 °C to 17 °C  
**Biogeographic Zone**: Himalaya  
**Habitats**: Alpine Moist Scrub, Alpine Moist Pasture, Sub-Tropical Broadleaf Hill, Sub-Alpine Forest

**IBA CRITERIA**: A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas)  
**Protection Status**: Wildlife Sanctuary, established in 1962

**GENERAL DESCRIPTION**

The Daranghati Sanctuary lies in Shimla district. It is composed of two segments, with villages and cultivated areas in between. The two units of the Sanctuary lie on either side of the Dhauladhar Range that forms part of the Middle Himalayas. Part I of the Sanctuary to the north forms the southern catchment area of the Manglad Gad. Three main rivers, including Wajadi Gad and Ghurat Gad, flow northwards into Manglad Gad. Part II of the Sanctuary to the south encompasses the southern catchment area of the Negli Gad. Main rivers flowing northwards through Part II into the Negli Gad include Bankdari Nala, Rigir Gad and Setlu Nala. Manglad and Negli are eastern tributaries of the Sutlej river. There are several wooden temples in the vicinity, featuring the unique architecture of Himachal (Singh et al. 1990).

Daranghati, a former hunting reserve of the Raja of Bushahr State, shows signs of degradation, but remains particularly important for pheasants, notably the Western Tragopan *Tragopan melanoleucus*. It also supports a variety of Himachal ungulates (Pandey 1990; Singh et al. 1990).

Pandey (1995) notes five main forest types: (1) Moist Cedar Cedrus deodara forest (1,900 m - 3,000 m) (2) Western Mixed Coniferous Forest on northern and eastern slopes above 2,000 m, comprising Blue Pine *Pinus wallichiana*, Silver Fir *Abies spectabilis* and Spruce *Picea smithiana*, with Cedar on well-drained sites. (3) Moist Temperate Deciduous, (4) Khasru Oak forest with common associates *Taxus baccata*, *Pyrus*, and *Prunus*, and (5) West Himalayan sub-alpine forest, with Silver Fir and some *Quercus semecarpifolia*, above 3,000 m.

**AVIFAUNA**

Detailed studies on birds of this site have not been conducted. Based on secondary information, Singh et al. (1990) prepared a short list of birds of this Sanctuary. Species of conservation interest is the Western Tragopan *Tragopan melanoleucus*. Gaston et al. (1981a, b), found no evidence of Cheer Pheasant *Catuevus wallachii*, although the species used to occur in this area (Wynter-Blyth 1951).

Himalayan or Impeyan Monal *Lophophorus impejanus*, Koklass Pheasant *Pucrasia macrolopha* and Kaleej Pheasant *Lophura lencomelanos* are also found here.

This site is selected as an IBA based on the presence of the globally threatened Western Tragopan. Pandey (1995) estimate a density of 1.5-birds per sq. km in winter habitat. He estimates that both parts of Daranghati WLS and the surrounding areas may support a population of 150 to 250 birds. This could be one of the most important sites for this globally threatened bird, listed as Vulnerable. It is also listed as restricted range in the Western Himalayas Endemic Bird Area (Stattersfield et al. 1998).

**OTHER KEY FAUNA**

Daranghati WLS has almost all the representative mammals of the temperate forest and subalpine zone of Himachal Pradesh. Asiatic Black Bear *Ursus thibetanus* is the largest wild carnivore of the Sanctuary, mainly found above 3,000 m in summer, much lower in winter. Brown Bear *Ursus arctos* is also found in the alpine and subalpine regions. Leopard *Panthera pardus* is the major carnivore. Wild ungulates such as Musk Deer *Moschus chrysogaster*, Barking Deer *Catreus wallichii*, Goral *Nemorhaedus goral* are also found here. Other ungulates include Red Fox *Vulpes sibirica*, Yellow-throated Marten *Martes flavigula*, Himalayan Palm Civet *Paguma larvata* and Jungle Cat *Felis chaus*. Not much is known about the reptile and amphibian fauna.

**LAND USE**

- Nature conservation and research  
- Tourism and recreation  
- Water management

**THREATS AND CONSERVATION ISSUES**

- Forest fires and firewood collection  
- Poaching  
- Grazing  
- Disturbance to birds  
- Human settlements
Like most of the sanctuaries in Himachal Pradesh, Daranghati WLS has a large human population residing in and around the Sanctuary. Villagers have rights of fuelwood and minor forest produce collection, and livestock grazing. Two villages exist inside the Sanctuary and the peripheral areas have 26 villages. Nomadic Gujjars have grazing permits. Poaching is not uncommon, especially of ungulates and pheasants.

There is a need to link both parts of the Sanctuary and further enlarge the area so ecologically viable area could be provided for the protection of Western Tragopan (Pandey 1990, 1995). Regular monitoring of bird populations should also be undertaken.

**KEY CONTRIBUTOR**
Sanjeeva Pandey

**KEY REFERENCES**


The Dhauladhar Wildlife Sanctuary is an area of high altitude forests, not yet exactly defined, but to be demarcated between Nurpur and Jogindernagar, in Himachal Pradesh. The Sanctuary and the surrounding Reserved Forests have been identified as an IBA. The forested region at the foot of the Dhauladhar between 700 and 1,400 m, around Sarah below Dharamshala should also be included in this IBA as many species from the higher zones winter in these forests. Thus a contiguous area from the base to the higher altitudes in Dhauladhar Range could be considered as an IBA.

Oak and Rhododendron forests are interspersed with grassy slopes and meadows in this IBA. Above the tree line alpine meadows and rocky mountains dominate, covered in snow for much of the year. In the reserved forests on the lower reaches of Dhauladhar, Deodar Cedrus deodara is dominant, while below 1,600 m large areas have been planted with Pine trees. Other parts of this zone have good examples of Oak forest.

AVIFAUNA

The Dhauladhar range, at elevation between 1,600 and 4,400 m, is rich in mountain birds of Biome-5, Biome-7 and Biome-8. The Himalayan or Impeyan Monal Lophophorus impejanus, Koklass Pheasant Philloscopus tytleri, and Hill Partridge Lophura leucomelana are common breeders in considerable parts of the area, while Cheer Pheasant Catreus wallichii, Snow Partridge Chlorodaemus sinicus, and Himalayan Snowcock Tetrax tetrax wintering Cinereous Vultures Aegypius monachus and wintering Cinereous Vultures Aegypius monachus and Oriental White-backed Vulture Gyps bengalensis are still fairly common in the lower areas and with small numbers of Red-headed Vultures or King Vulture Sarcogyps calvus and Imperial Eagle Aquila clanga are still fairly common in the lower areas and with small numbers of Red-headed Vultures or King Vulture Sarcogyps calvus and Imperial Eagle Aquila clanga occur in smaller numbers in more restricted habitats. (J. W. den Besten pers. comm. 2003). Hunters have always been an uncommon bird. Now, it has a small declining population, as a result of habitat loss and hunting. IBA sites such as Dhauladhar can play an important role in the conservation of this species.
This large IBA lies in the Western Himalayas Endemic Bird Area (EBA), (Stattersfield et al. 1998) and has four out of 11 Restricted Range species. BirdLife International (undated) has classified biomes based on forest types and bird assemblages (A3 criteria). This site lies in Biome-7 (Sino-Himalayan Temperate Forest). 112 birds are listed in this biome, whose distributions are largely or wholly confined to this biome. With its extensive and largely intact forest cover, Dhauladhar WLS and reserve forests is perhaps one of the best examples of Biome-7. Based on extensive survey, J. W. den Besten (pers. comm. 2003) has listed 51 species of Biome-7 from this site. He found 15 out of 48 species of Biome-5 (Eurasian High Montane-Alpine and Tibetan), mainly in winter when the birds came down. As Biome-7 and Biome-8 (Sino-Himalayan Subtropical Forest) intergrade and many species show altitudinal movement, 10 species of Biome-8 are also found in this site.

OTHER KEY FAUNA

The following mammals have recently been reported in and around the Wildlife Sanctuary: Leopard Panthera pardus, Goral Nemorhaedus goral, Barking Deer Muntiacus muntjak, Todd Cat Paradoxurus hermaphroditus, Himalayan Yellow-throated Marten Martes flavigula, Himalayan Weasel Mustela sibirica, Himalayan Mouse-Hare Ochotona roylei, Black-naped Hare Lepus nigricollis, Indian Porcupine Hystrix indica, Red Flying squirrel Petaurista petaurista, Common Langur Semnopithecus entellus, Red Fox Vulpes vulpes, Jackal Canis aureus, Asiatic Black Bear Ursus thibetanus (J. W. den Besten per. comm. 2003). Also reported in Forest Department circulars are the Leopard Cat Prionailurus bengalensis, Jungle Cat Felis chaus, Brown Bear Ursus arctos, Himalayan Tahr Hemitragus jemlahicus, Ibex Capra sibirica, Serow Nemorhaedus sumatraensis, Blue Sheep Pseudois nayaur and Snow Leopard Uncia uncia.

BUILDINGS AND ROADS ARE CONSTRUCTED VERY NEAR TO THE WLS THAT CREATE DISTURBANCE TO THE WILDLIFE.

LAND USE

- Tourism and recreation
- Burning of vegetation and firewood collection
- Grazing
- Tourism
- Poaching

While the Sanctuary extends over a large area above Dharamshala, it is influenced by the expanding Dharamshala/tourist activites at the McLeod Gunj. While construction of hotels and other buildings always takes place outside the protected area, there is some construction on private land, and also the threat of road construction up to Triund at 2,900 m, and possibly a cable track to the same. While pollution directly around the tourist centre at 1,900 m is severe, notably from solid waste and sewage, the impact of littering extends into the mountains and into the Sanctuary because of the large numbers of trekkers and visitors.

Forest fires are bound to increase with the rise in numbers of people camping, trekking and walking through the area. Tea stalls set up in small plots of private land in and around the Sanctuary often use wood for cooking and therefore add to deforestation, besides littering the area. However, the presence of tourists may help to reduce the number of poachers in the area. Collection of branches and dry wood has some impact at all levels, but at higher reaches where the production of biomass is slow because of the climate, trimming of trees is extremely detrimental. Damaged trees die quickly.

Pastures such as at Ilaka, where large numbers of herders gather on their way to and from the pastures beyond the Dhauladhar, have experienced a slow and steady decline of tree cover right at the tree-line. (J. W. den Besten pers. comm. 2003).

KEY CONTRIBUTOR

Jan Willems den Besten

KEY REFERENCES


GAMGUL SIAHBEHI WILDLIFE SANCTUARY

**IBA CRITERIA:** A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas)

**PROTECTION STATUS:** Wildlife Sanctuary, established in 1962

**IN-HP-06**

## GENERAL DESCRIPTION

This high altitude Sanctuary lies in the Chamba district in northwestern Himachal Pradesh. Its northern boundary adjoins the Doda district of Jammu and Kashmir. The Siul nullah flows along the western boundary of the Sanctuary and the nearest largest town is Bhandal. This is the only Sanctuary in Himachal Pradesh where Hangul or Kashmir Stag *Cervus elaphus hanglu*, a very rare species, was reported, but there have been no recent records.

Based on the classification by Champion and Seth (1968), three main forest types have been identified by Singh et al. (1990). These are Alpine Pastures above 3,000 m, Western Mixed Coniferous Forest and Moist Deodar Forest. The Forest Department has planted Deodar *Cedrus deodara*, *Pinus wallichiana* and other species for commercial purposes. They have even also introduced Poplar *Populus* sp.

## AVIFAUNA

Singh et al. (1990) provide a preliminary list of 100 bird species from the Sanctuary, which includes four species of pheasants, including the two globally threatened species (Western Tragopan *Tragopan melanocephalus* and Cheer Pheasant *Catreus wallichii*) and two comparatively common ones (Himalayan or Impeyan Monal *Lophophorus impejanus* and Koklass *Pucrasia macrolopha*).

Gamgul Siahbehi WLS lies in an area, which is classified as the Western Himalayas Endemic Bird Area (EBA) by Stattersfield et al. (1998). In this EBA, 11 restricted range species have been listed but as we do not have good information on the bird life, it is not known how many birds are found in this IBA. Only two restricted range species could be identified, i.e. Western Tragopan and Cheer Pheasant.

According to BirdLife International (undated) classification of biome, this site should come under Biome-7 (Sino-Himalayan Temperate Forest). This biome occurs from 1,800 to 3,600 m, which is also the altitudinal range of this IBA. The BirdLife International (undated) has listed 112 bird species that represent biome assemblages of this area. Based on the information by S. Pandey (pers. comm. 2002) and Sondhi and Sondhi (1998), only 13 species of this biome are found in this IBA.

Although this site is small (only 10,885 ha), due to its altitudinal variation and varied habitats, it is an important protected area for the conservation of globally threatened pheasants and many high altitude forest birds. Detailed studies on the bird life are urgently required to know the density and abundance of various species.

<table>
<thead>
<tr>
<th>Vulnerable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Tragopan</td>
<td><em>Tragopan melanocephalus</em></td>
</tr>
<tr>
<td>Cheer Pheasant</td>
<td><em>Catreus wallichii</em></td>
</tr>
</tbody>
</table>

## Endemic Bird Area 128: Western Himalayas

| Western Tragopan | *Tragopan melanocephalus* |
| Cheer Pheasant | *Catreus wallichii* |

## OTHER KEY FAUNA

Prior to Independence, more than 50 years ago, the Hangul could be seen throughout the year but more commonly during rutting time in October, above 3,000 m (Mukherjee and Mahajan 1978). They were never numerous in Himachal, probably not more than 25 individuals, but now even these are not seen, due to poaching in the early 1950s and 1960s. Their population in Jammu and Kashmir has also declined, so there is little hope of these mammals coming to Himachal from there.

Fortunately, the Sanctuary still has other fauna typical of the high altitude temperate forests and alpine pastures, albeit in small numbers.

The important species found in this IBA are Ibex *Capra ibex*, Musk Deer *Moschus chrysogaster*, Serow *Nemorhaedus sumatraensis*, Himalayan Tahr *Hemitragus jemlahicus* and Goral *Nemorhaedus goral*. Asiatic Black Bear *Ursus thibetanus* and Brown Bear *Ursus arctos* are also found, the latter mainly in the alpine pastures. At lower elevations, Leopard *Panthera pardus* is the main large predator. It also kills livestock, so man-animal conflict is common. Smaller predators include the Red Fox *Vulpes vulpes*, Himalayan Weasel *Mustela sibirica*, Jungle Cat *Felis chaus*, Golden Jackal *Canis aureus*, Yellow-throated Marten *Martes flavigula* and Himalayan Palm Civet *Paguma larvata* is common in the alpine areas. Barking Deer or Indian Muntjak *Muntiacus muntjak*, Indian Porcupine *Hystricon primigenius* and Common Giant Flying Squirrel *Petaurista petaurista* are mostly found below 3,000 m in forested areas.
**LAND USE**
- Nature conservation and research
- Tourism and recreation
- Urban transport
- Human settlement

**THREATS AND CONSERVATION ISSUES**
- Forest fires
- Grazing
- Firewood collection
- Disturbance to birds

The Sanctuary is under severe anthropogenic pressure. Three villages are located inside the Sanctuary and many on the border. Livestock grazing, fuelwood collection and timber extraction have great negative impact on the vegetation. In order to get fresh grass for livestock, villagers start fires, which sometimes go out of control. Poaching is not uncommon, especially of pheasants and ungulates.

**KEY CONTRIBUTOR**
Sanjeeva Pandey

**KEY REFERENCES**
Champion and Seth (1968) *A revised survey of the forest types of India*. Govt. of India Press, Delhi. Pp. 403.
**GOBIND SAGAR AND NAINA DEVI SANCTUARIES**

**IBA Site Code**: IN-HP-07  
**State**: Himachal Pradesh  
**District**: Bilaspur, Mandi  
**Coordinates**: 31° 22' 39" N, 76° 44' 48" E  
**Ownership**: State  
**Area**: 22,334 ha  
**Altitude**: 350 - 1,019 m  
**Temperature**: -2 °C to 45 °C  
**Biogeographic Zone**: Semi-Arid  
**Habitats**: Reservoir and Dry Mixed Deciduous Forest

**IBA CRITERIA**: A1 (Threatened Species), Data Deficient  
**PROTECTION STATUS**: Gobind Sagar Wildlife Sanctuary, established in 1962; Naina Devi Wildlife Sanctuary, established in 1982

### GENERAL DESCRIPTION

Gobind Sagar (10,034 ha) is situated in Bilaspur and Mandi districts, and Naina Devi (12,300 ha) in Bilaspur district of Himachal Pradesh. As the sanctuaries are located in the Lower Shiwaliks, floral and faunal affinities are close to Dry Deciduous Forests of the northern plains (Singh et al. 1990). Gobind Sagar, as the name indicates, is a water reservoir formed by the construction of the Bhakra Dam in the early 1950s on the Sutlej River. The reservoir attracts thousands of waterfowl, while the adjoining forests of Naina Devi Sanctuary represent many Biome-8 species. These two sanctuaries are treated as one IBA due to their proximity.

Forest types on the periphery of Gobind Sagar include Northern Dry Mixed Deciduous. In Naina Devi there are northern Dry Mixed Deciduous Forests (3,000 ha) and Chir Pine (1,550 ha). There are also some dry bamboo brakes. Commercial plantations of Chir and *Acacia* were established in Naina Devi over 1,427 ha between 1979 and 1984. *Eucalyptus* has also been introduced (Singh et al. 1990).

### AVIFAUNA

The avifauna is poorly recorded but Singh et al. (1990) provided a preliminary list of 15 bird species. As the forest is still intact in places, and the large wetland attracts numerous waterfowl, further surveys would yield at least ten times more species than the present record. Presently, we know of only two globally threatened species occurring here. More research is required to find out the total number of waterfowl and species-wise abundance and populations. Till such time, this site is considered as Data Deficient as far as bird information is concerned.

<table>
<thead>
<tr>
<th>Critically Endangered</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oriental White-backed Vulture</td>
<td>Gyps bengalensis</td>
</tr>
<tr>
<td>Slender-billed Vulture</td>
<td>Gyps leucocephalus</td>
</tr>
</tbody>
</table>

### OTHER KEY FAUNA

Almost all the representative large mammalian species of subtropical forests of the Lower Himalayas are found here, except for Tiger *Panthera tigris*, which became locally extinct due to hunting.

### LAND USE

- Agriculture
- Aquaculture/fisheries
- Nature conservation and research

### THREATS AND CONSERVATION ISSUES

- Grazing
- Collection of timber, fuelwood, forest products,
- Extraction of fodder
- Disturbance due to religious activities
- Water pollution
- Human habitations

The local people have rights or leases for grazing, collection of timber, fuelwood and minor forest produce, fodder extraction, and religious activities. The Bhakra Management Board has control over the Gobind Sagar Sanctuary. The Public Works Department has control over the 20 km stretch of road inside Naina Devi Sanctuary (Singh et al. 1990). Therefore, this IBA is highly disturbed.

**KEY CONTRIBUTOR**

Sanjeeva Pandey

**KEY REFERENCES**

GENERAL DESCRIPTION

The sprawling Great Himalayan National Park in Kullu district has relatively undisturbed areas which support diverse Himalayan wildlife. The Park lies in the upper catchment area of the Tirthan, Sainj and Jiwa rivers, which flow westwards and feed the Beas river. The Park includes parts of Tirthan Sanctuary, and is bordered by the Pin Valley National Park in the northeast, Kanawar Sanctuary in the northwest, and Rupi Bhabha Sanctuary in the east (all of them IBAs). These constitute Himachal Pradesh’s largest protected area with regard to wildlife. The eastern part of the Park lies above the snowline, and has glaciers and permanent ice.

Based on the forest classification by Champion and Seth (1968), 14 forest types could be identified in Great Himalayan NP. In brief, about a third of the Park supports undisturbed forest, mainly around Jiva, Sainj and Tirthan nullah (streams) and their tributaries, extending from the base of the valley to 3,300 m, depending upon the aspect (Anon. 1997). A little over half of the Park area lies above 4,000 m, forming alpine meadows, particularly on the south side of Sainj Valley above Shangarh and at Dela Thach, above Lopah. The vegetation of Tirthan Valley has the northern aspect which is clothed in dense forest, dominated by Blue Pine Pinus wallichiana, and higher up by a diverse Deciduous Broadleaf Forest on moderately sloping areas and Fr Abies pindrow on steep areas. Tirthan Valley, between Bandal and Rolla, also supports small areas of Oak forest (Quercus sp. and Q. incana). The southerly aspects are generally more open: stands of Cedar Cedrus deodara are interspersed with grassy and shrub-clad hillsides, with a zone of Kharus Oak Q. semecarpifolia forest above 2,800 m. There is a stand of Yew Taxus baccata near Manjhan village in Jiwa Valley. This species is under constant threat due to its valuable medicinal properties.

AVIFAUNA

The area is particularly noted for its prolific pheasant populations. The Park is home to over 300 species of birds (Gaston et al. 1994), an excellent representation of West Himalayan avifauna. The Himalayan Monal Lophophorus impejanus, Koklass Pheasant Pucrasia macrolopha, Kaleej Pheasant Lophura leucomelanos and Hill Partridge Arborophila torquata are common, while Cheer Pheasant Catreus wallichii and the Western Tragopan Tragopan melanocephalus have more restricted ranges. Chukar Partridge Alectoris chukar, Snow Partridge Lervia iberna and Himalayan Snowcock Tetraogallus himalayensis occur in suitable habitats all over the Park. This IBA site could be the most important site in Himachal Pradesh as far as Galliform conservation is concerned. Ramesh et al. (1999) studied pheasants in this Park during 1997-1999 and reported encounter rates (Number of birds per km walk) for Himalayan Monal (range 1.5 to 3.9), Western Tragopan (0 to 0.4) and Koklass Pheasant (0.3 to 1.4).

This sprawling Park, and the adjoining IBA has the largest intact Montane Broadleaf Deciduous Forests and Mixed Broadleaf Coniferous Forests left in the Western Himalayas. BirdLife International (undated) has identified various biome-restricted bird assemblages. In this IBA, the main biome is Sino-Himalayan Temperate Forest (Biome-7), between 1,800 m to 3,600 m but on the higher reaches, above 3,600 m, Eurasian High Montane (Alpine and Tibetan) bird fauna is seen (Biome-5), while below 2,000 m, in the Sino-Himalayan Subtropical Forest (Biome-8), many subtropical bird assemblages are found. As expected, the largest number of bird species are from Biome-7. BirdLife International (undated) has listed 112 species, out of which 50 have been identified till now. Forty-eight birds are listed for Biome-5. This site has 12 of them. As the area is remote, perhaps more than double the known number would be present, if detailed surveys are conducted. Eleven out of 95 species of Biome-8 could be located till now. More are likely to be found.

This large IBA lies in the Western Himalayas Endemic Bird Area (EBA), (Stattersfield et al. 1998) and has five out of 11 restricted range species. Looking at the undisturbed habitat available, some restricted range species would have considerable percentage of their numbers in this IBA alone.
OTHER KEY FAUNA

The Park has almost all the representative mammalian fauna of the Western Himalayas. Among primates, both Rhesus Macaque *Macaca mulatta* and Langur *Semnopithecus entellus* are present. Carnivores such as Leopard *Panthera pardus* and both Asiatic Black Bear *Ursus thibetanus* and Brown Bear *Ursus arctos* are commonly encountered. Himalayan Tahr *Hemitragus jemlahicus* and Goral *Nemorhaedus goral* occur in good numbers, and Barking Deer Indian Muntjak *Muntiacus muntjak* and Serow *Nemorhaedus sumatraensis* in smaller numbers. Himalayan Musk Deer *Moschus chrysogaster* has been recorded in Tirthan and Sainj valley (Gaston et al. 1981; S. Sathyakumar pers. comm. 2003). Bharal *Pseudois nayaur* is also found in the upper reaches of Tirthan and Sainj valleys (Fox 1987; Vinod and Sathyakumar 1999).

LAND USE

- Nature conservation and research
- Tourism and recreation
- Water management

THREATS AND CONSERVATION ISSUES

- Forest fires
- Construction of dams
- Grazing
- Firewood collection

Despite its large size and protected status, the Great Himalayan NP is not free from human disturbances. There are 4 villages and numerous settlements inside the Park, and 75 villages in the buffer zone. Villagers have the right to graze livestock, collect timber, fuelwood, herbs and other minor forest produce. Nomadic graziers can get permits to graze their livestock. In order to promote the growth of new grass, graziers start fires, which sometimes go out of control.

Some poaching is known to occur, and a few cases have been registered. The locals are known to deliberately start fires in the forest area to catch escaping animals.

However, the greatest and irreversible threat to the Park comes from denotification of certain areas for development projects. On the pretext of settlement of people’s rights, 1,060 ha of Jiwanal Valley was denotified in May 1999. The real reason was to make way for a hydroelectric project. The Deodar-dominated forest of this valley is extremely important for the Western Tragopan. Brushing aside all protests from conservationists, the Prime Minister himself laid the foundation stone of the Project.

KEY CONTRIBUTORS
Sanjeeva Pandey, S. Sathyakumar and K. Ramesh

KEY REFERENCES


Champion and Seth (1968) A revised survey of the forest types of India, Govt. of India Press, Delhi. Pp. 403.


Kais Wildlife Sanctuary

**IBA Criteria:** A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas)

**Protection Status:** Wildlife Sanctuary, established in February 1954

**General Description**

The Kais Wildlife Sanctuary, lies in the Kullu district of Himachal Pradesh. This small (1,419 ha) high altitude sanctuary includes parts of the catchment of the Kais Nala, an important tributary of the River Beas. It was declared mainly to protect the Musk Deer *Moschus chrysogaster* and pheasants, in 1954 under the then Punjab Wild Birds and Wild Animals Protection Act, 1933.

There is a lack of published information on the vegetation of Kais WLS. It is estimated that 1,174 ha of the Sanctuary is forested. Fir *Abies pindrow* and Spruce *Picea smithiana*, with some Oak *Quercus semecarpifolia*, Maple *Acer sp.*, Poplar *Populus sp.*, Walnut *Juglans regia* and Cedar *Cedrus deodara*, predominate at lower altitudes, while the alpine zone bears Birch *Betula utilis* and Rhododendron scrub forest.

**Avifauna**

Practically no work has been done on the avifauna of this Sanctuary, although there is some information on the pheasants, for which it is famous. The globally threatened Western Tragopan *Tragopan melanocephalus* and Cheer Pheasant *Catрус walliсhi* are reported to be present (Singh *et al.* 1990). The more common species include Himalayan Monal *Lophophorus impejanus*, Kaleej Pheasant *Lophura leucomelana* and Koklass pheasant *Pucrasia macrolopha*. The Chukar Partridge *Alectoris chukar* is also present. This site is designated an IBA based on the presence of two threatened pheasant species. Checklist of the birds of this site is not available so we do not know how many restricted range and biome species are found here. This site is considered as Data Deficient.

**Other Key Fauna**

Musk Deer is the most famous mammal of this Sanctuary, but its population has declined drastically due to poaching for its musk pod. Brown Bear *Ursus arctos* is seen in the subalpine and alpine areas, while Asiatic Black Bear *Ursus thibetanus* is found at lower altitudes. Himalayan Tahr *Hemitragus jemlahicus*, Barking Deer or Indian Muntjak *Muntiacus muntjak* and Goral *Nemorhaedus goral* are the major wild ungulates that have to share the limited resources of the area with a large number of domestic animals. Leopard *Panthera pardus* is sometimes found very close to villages and settlements in search of easy prey. Not much is known about the lesser carnivores of the Sanctuary.

**Land Use**

- Nature conservation and research
- Tourism and recreation
- Water management

**Threats and Conservation Issues**

- Burning of vegetation
- Grazing
- Firewood collection

There are no villages inside the Sanctuary though there are many villages around it. Local inhabitants have the right to graze domestic animals, collect fuelwood, medicinal plants and minor forest produce. A shrine located inside the Sanctuary attracts many pilgrims every year. The Forest Department issues permits to nomadic graziers to graze their livestock inside the Sanctuary. There is a road inside the Sanctuary, under the control of the Public Works Department.

**Key Contributor**

Sanjeeva Pandey

**Key Reference**

**KALATOP KHAJJAR WILDLIFE SANCTUARY**

**IBA Site Code:** IN-HP-10  
**State:** Himachal Pradesh  
**District:** Chamba  
**Coordinates:** 32° 33’ 36” N, 76° 01’ 11”E  
**Ownership:** State  
**Area:** 6,100 ha  
**Altitude:** 1,158 - 2,768 m  
**Rainfall:** 2,647 mm  
**Temperature:** -10 °C to 35 °C  
**Biogeographic Zone:** Himalaya  
**Habitats:** Sub Alpine Forest, Sub-tropical Broad-leaved Hill Forest, Alpine Moist Pasture

**IBA CRITERIA:** A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas)

**PROTECTION STATUS:** Wildlife Sanctuary, established in 1958

**GENERAL DESCRIPTION**

The Sanctuary lies in the catchment area of the Beas River, and contains patches of good coniferous and Oak Forests. Khajjar is a meadow, with a small lake in the centre, which is a popular tourist spot. The Sanctuary is drained by several tributaries of the Ravi River, which lies just north of it. The golden domed temple at the edge of this meadow is also situated inside the Sanctuary. The terrain is steep to very steep, with many rocky cliffs, good for Himalayan Tahr *Hemitragus jemlahicus* and Ibex *Capra ibex*. Most of the Sanctuary is forested, the main forest types being Ban Oak *Quercus incana*, Cedar *Cedrus deodara* and Western Mixed Coniferous, interspersed with alpine pasture (Department of Forest Farming and Conservation 1984). Cedar and Blue Pine *Pinus wallichiana* are predominant in lower altitude coniferous forest, and mixed with some Moru Oak *Quercus dilatata* and Rhododendron *Rhododendron arboreum*.

**AVIFAUNA**

Some 117 species of birds were recorded by Gaston *et al.* (1981a) in the Ravi Valley, including the Dalhousie-Chamba area. Published information specific to Kalatop-Khajjar is limited to pheasants. Koklass Pheasant *Pucrasia macrolopha* and Kaleej Pheasant *Lophura leucomelanos* are common. One or two Cheer Pheasant *Catreus wallichii* were heard calling at Khajjar in November 1978, and January 1979 (Gaston *et al.* 1981b). The Himalayan Monal *Lophophorus impejanus* reportedly visits the site in winter (Gaston *et al.* 1981a, 1981b). Thakur *et al.* (2002) have reported 66 bird species but there would be many more. Practically no work has been done on the avifauna, so this site can be considered as Data Deficient.

**OTHER KEY FAUNA**

Almost all mammals of the high altitude areas of Himachal Pradesh are known to occur in Kalatop-Khajjar Sanctuary but their status and population structure is not known. Serow *Nemorhaedus sumatraensis* is considered fairly common. Goral *Nemorhaedus goral* is also seen at slightly lower elevations, with Indian Muntjak *Muntiacus muntjak* and Leopard *Panthera pardus*.

**LAND USE**

- Agriculture
- Nature conservation and research
- Tourism and recreation

**THREATS AND CONSERVATION ISSUES**

- Forest fire
- Livestock grazing
- Tourism
- Firewood collection, charcoal production

Kalatop-Khajjar WLS suffers from a long litany of problems, all related to man. Grazing, collection of fuelwood and minor forest produce are permitted under the rights given to villagers. Medicinal plants are collected from all over the Sanctuary, wherever an intrepid villager can reach. Fifteen villages exist inside the Sanctuary, and 35 surrounding it. Their collective impact on the
fragile ecosystem can be imagined. The law allows even charcoal production, a major destructive activity. Migratory graziers are issued permits. Trekking camps are regularly organised. Parts of the Sanctuary are used for roads, housing, and tree nurseries by various government departments (Singh et al. 1990).

**KEY CONTRIBUTORS**
Sanjeeva Pandey, S. Sathyakumar and Murari Thakur

**KEY REFERENCES**


KANAWAR WILDLIFE SANCTUARY

**IBA Site Code**: IN-HP-11  
**State**: Himachal Pradesh  
**District**: Kullu  
**Coordinates**: 31° 58' 57" N, 77° 21' 30" E  
**Ownership**: State  
**Area**: 5,400 ha  
**Altitude**: 1,800 - 4,833 m  
**Rainfall**: 1,000 mm  
**Temperature**: -10 °C to 25 °C  
**Biogeographic Zone**: Himalaya  
**Habitats**: Alpine Dry Pasture, Alpine Dry Scrub, Alpine Moist Pasture, Sub-tropical Broadleaf Hill Forest.

**GENERAL DESCRIPTION**

This small Sanctuary is contiguous with the Great Himalayan National Park, another IBA of Himachal Pradesh. The terrain is steep, with deep valleys and rocky cliffs. The Sanctuary has an altitudinal variation from 1,800 m to nearly 5,000 m. There are two main mountain peaks, Satupurna (3,519 m) and Shacha (3,542 m). The Parvati river flows north of the Sanctuary. There are lakes and natural springs of religious and historical importance at Khirganga and Mantalai on the outskirts of the Sanctuary. There is also a temple and a gurudwara at Manikaran, adjacent to the Sanctuary (Singh et al. 1990).

Owing to its great altitudinal variation, seven forest types are present in this Sanctuary. Based on the classification of Champion and Seth (1968), they are Alpine Pastures, West Himalayan Sub-Alpine Forest, Kharsu Oak Forest, Moist Temperate Deciduous Forest, Western Mixed Coniferous Forest, Moist Deodar Forest and Ban Oak Forest. The Moist Temperate Deciduous Forest is one of the few undisturbed fragments of this type extant in Himachal Pradesh.

**AVIFAUNA**

Good populations of two globally threatened species i.e. Western Tragopan *Tragopan melanocephalus* and Cheer Pheasant *Catreus wallichii* are found in this Sanctuary, due to which it was selected as an IBA. It also has many biome species. No detailed work has been done in this area on birds, but Singh et al. (1990) provided a preliminary list of 80 bird species recorded in the Sanctuary.

This site lies in the Western Himalayas Endemic Bird Area (EBA). In this EBA, 11 Restricted Range species have been listed, three are found in this IBA. According to BirdLife International (undated) classification of biomes, this site should come under Biome-7 (Sino-Himalayan Temperate Forest), occurring from 1,800 m to 3,600 m, and Biome-5 (Eurasian High Montane), which occurs above 3,600 m. As we do not have good bird checklist, it is not known how many biome species assemblages are found in this IBA. This site certainly needs more detailed work to be done on bird distribution, abundance and densities.

**OTHER KEY FAUNA**

The most important mammal of this Sanctuary is the highly elusive and rare Snow Leopard *Uncia uncia*. Its natural prey are Blue Sheep *Pseudois nayaur*, Ibex *Capra sibirica*, Musk Deer *Moschus chrysogaster* and Himalayan Tahr *Hemitragus jemlahicus*. At lower elevations, Leopard *Panthera pardus* is present, which mainly feeds on Goral *Nemorhaedus goral*, Barking Deer *Muntiacus muntjak*, and Serow *Nemorhaedus sumatraensis*. Both *Uncia uncia* and *P. pardus* also prey regularly on domestic animals. Brown Bear *Ursus arctos* is generally found above 3,500 m in the sub-alpine and alpine regions, while the Asiatic Black Bear *Ursus thibetanus* is seen in temperate forests between 1,600 m and 3,500 m. Tibetan Wolf *Canis lupus chanco* is also reported from the alpine zone. The smaller predators are Yellow-throated Marten *Martes flavigula*, Himalayan Palm Civet *Paguma larvata*, Himalayan Weasel *Mustela sibirica*, Indian Fox *Vulpes vulpes*, and Golden Jackal *Canis aureus*. The Common Giant Flying Squirrel *Petaurista petraurista* is found in temperate forests at lower elevations in the Sanctuary (Singh et al. 1990).

**LAND USE**

- Nature conservation and research
- Tourism and recreation
- Urban transport
- Water management
- Human habitation
THREATS AND CONSERVATION ISSUES

- Construction of dams
- Burning of vegetation
- Livestock grazing
- Firewood collection
- Disturbance to birds
- Unsustainable exploitation

There are 2 villages within the Sanctuary, and 14 adjacent to it. Besides, there are many temporary settlements of graziers. Villagers have grazing rights inside the Sanctuary, as a result of which nearly 15,000 animals graze there. The local people also have the right to extract fuelwood, and minor forest produce. Crop fields totaling about 200 ha are present inside the Sanctuary. Thus, the Sanctuary is under tremendous anthropogenic pressure. Both Snow Leopard and Leopard kill domestic livestock, especially in summer, resulting in man-animal conflict. Religious places adjacent to the Sanctuary also attract pilgrims, who put additional pressure on the natural resources as demand for fuelwood increases during yatras and festivals. In order to allow fresh growth of grass, graziers burn the grasslands. These fires go out of control and devastate large areas.

KEY CONTRIBUTOR
Sanjeeva Pandey

KEY REFERENCES
KIBBER WILDLIFE SANCTUARY

IBA Site Code : IN-HP-12
State : Himachal Pradesh
District : Lahaul and Spiti
Coordinates : 32° 32' 42" N, 77° 36' 17" E
Ownership : State
Area : 1,40,050 ha
Altitude : 4,000 – 5,600 m
Rainfall : 40 - 160 mm (heavy snowfall)
Temperature : -32 °C to 30 °C
Biogeographic Zone : Trans-Himalaya
Habitats : Alpine Dry Scrub, Alpine Moist Pasture

IBA CRITERIA: A3 (Biome-5: Eurasian High Montane)
PROTECTION STATUS: Wildlife Sanctuary, established in April 1992

GENERAL DESCRIPTION
The Kibber Wildlife Sanctuary in the Trans-Himalayan district of Lahaul and Spiti, is situated in the cold desert area of the Himalayas, and has the unique flora and fauna characteristic of this area. The site falls in the rain-shadow area of the Himalayas, so the rainfall is very low. Most of the moisture is provided by snow. Summer is extremely dry, while winter is extremely cold, with the mercury dropping to -32 °C.

Kaza is the headquarters of Spiti subdivision, and of the Pin Valley NP (an IBA) and Kibber WLS. Kibber is also administered by the Director of Pin Valley NP. The Sanctuary is named after Kibber village, on its northern boundary.

The vegetation cover consists of two zones: Dry Temperate Zone (3,100-4,000 m), with woody species only in small patches, their value being leafy fodder, firewood and secondary timber. The main species are Juniperus macropoda, Salix and Betula sp. The herbaceous growth is remarkable for its variety. In the Alpine Zone (4,000-5,000 m) most of the plants such as Junipers and Rhododendrons are in the form of small shrubs, growing amid large patches of bare ground. Shrub species are Ephedra, Rheum, Rosularia, Rhodiola, Caragana and Lindelofia. The grasses frequently met with are Poa and Agropyron, which have high nutritive value.

AVIFAUNA
Practically no work has been done on the avifauna of this Sanctuary, except for stray observations by Sanjeeva Pandey. He sighted most of the high altitude birds such as the Himalayan Snowcock Gyps himalayensis, Golden Eagle Aquila chrysaetos, Lammergeier Gypaetus barbatus, Himalayan Griffon Gyps himalayensis, Snow Pigeon Columba leuconota, Yellow-billed Chough Pyrrhocorax graculus and others. Chukar Alectoris chukar is common at lower elevations. This site is selected as an IBA on the basis of criteria A3 (Biome species) as it has most of the representative avifauna of the Indian part of the Eurasian High Montane (Biome-5), except perhaps the spectacular Black-necked Crane Grus nigricollis.

According to Sanjeeva Pandey (pers. comm. 2003), migratory waterfowl have been seen on passage through the passes and the valleys.

According to BirdLife International (undated) classification of biomes, this site should come under Biome-5 (Eurasian High Montane (Alpine and Tibetan)) as it occurs in the Trans-Himalayas. Biome-5 is found above 3,600 m, which is also the altitudinal range of this IBA. Forty-eight bird species have been listed in Biome, out of which six have been seen here on preliminary observations. Probably, many more species occur in this IBA.

OTHER KEY FAUNA
The highly endangered Snow Leopard Uncia uncia, locally known as ‘Shin’, is found in this Sanctuary. Due to it, every year, a few cases of livestock damage inside cowsheds are reported. The Snow Leopard’s main wild prey are Ibex Capra ibex and Blue Sheep or Bharal Pseudis nayaur. The Tibetan Wolf Canis lupus chanco, a subspecies found in the Tibetan highlands, is reported from this Sanctuary. Locally, it is known as ‘shanko’, hence its subspecific name. The Red fox Vulpes vulpes is also present, in alpine and subalpine pastures, and around villages. It generally feeds on Tibetan Woolly Hare Lepus oiosotulus, Himalayan Marmot Marmota himalayana, Mouse Hare Ochotona roylei and avifauna. The area is reputed for its lone sighting of Nayan Ovis ammon hodgsoni, a subspecies or race of Argali Ovis ammon, from the state of Himachal Pradesh (Sanjeeva Pandey pers. comm. 2002). Wild Yak Bos grunniens, called ‘Dong Yak’ are sometimes seen when they cross through the Parachhu River and stray into the Sutlej Valley and catchment of the Lingti River.

LAND USE
- Agriculture
- Pastures for livestock
THREATS AND CONSERVATION ISSUES
- Grazing
- Lopping of vegetation
- Military exercise
- Tourism
- Non-degradable waste

The preservation of vegetation is a major problem in the Kibber WLS due to intensive grazing by goats, sheep and domestic yaks. In the prevailing geographical and climatic conditions, these animals are indispensable. The winter being extremely severe, the local people need fuelwood to keep their houses warm, hence the scanty vegetation becomes the major victim. The local people are aware of the fact that the root system in the plants growing in this harsh climate is more developed than the shoot system. Hence, in many instances, the entire plant is dug out and the roots are used as fuelwood. During summer, the local people, with the help of their yaks, collect any available plant in the area. The flat rooftops in their habitation are well stacked with bushes during summer when the daytime sun quickly dries up this fuelwood material. Poaching is not a major issue, as most of the people are Buddhists and do not kill animals. As the area lies on the international border, military and para-military forces regularly patrol the area and conduct exercises.

KEY CONTRIBUTOR
Sanjeeva Pandey

KEY REFERENCE
GENERAL DESCRIPTION

The Kugti Wildlife Sanctuary in Chamba district is connected in the west by a forest corridor to the Tundah Sanctuary, another IBA. Kugti has a diverse topography and abundant water sources, many of them originating from glaciers (Singh et al. 1990).

The nearest town is Bharmaur, c. 13 km away. It houses the famous Manimahesh temple, an attraction to thousands of pilgrims despite the difficult terrain and extreme cold conditions. The motorable road ends at Hadsar, a small village and then one has to trek to Kugti or Manimahesh temple.

According to the classification of Champion and Seth (1968) the vegetation consists of Alpine Pasture, Western Mixed Coniferous Forest and Moist Deodar Forest. These forest types are seen at different altitudinal zones, sometimes within a few hundred metres. High altitude coniferous forest is dominated by Fir Abies pindrow, with some mixed deciduous woodland, particularly at the bottom of the valley. Extensive stands of Cedar Cedrus deodara are seen, along with many species of Sino-Himalayan Temperate Forest biome. Similarly, subalpine forest and alpine scrub (Gaston et al. 1981a) provide good habitats to many mammals and birds. The Western Mixed Coniferous Forest component provides another habitat type for the birds.

AVIFAUNA

Not much work has been done on the bird fauna of Kugti WLS. Gaston et al. (1981a) have recorded 117 species in the Ravi Valley from Dalhousie and Chamba upwards. Three species of pheasants are found at different levels: Himalayan Monal Lophophorus impejanus is reported to be common (S. Sathyakumun pers. comm. 2003), Koklass Pucrasia macrolopha is also numerous and Cheer Pheasant Catreus wallichii has been recorded on the north side of Budhil Nala, but not within the sanctuary itself (Gaston et al. 1981a, 1981b). Sondhi (unpublished tour report) during his survey in June 1997, recorded 40 species, including many species of the Sino-Himalayan Temperate Forest (Biome-7), and some of Eurasian High Montane (Alpine and Tibetan) (Biome-5) and Sino-Himalayan Subtropical forests (Biome-8). Sino-Himalayan Subtropical Forest biome species includes Slaty-headed Parakeet Psittacula himalayana.

Kugti WLS will come in the Western Himalayas Endemic Bird Area (EBA). This large EBA, ranging in altitude from 1,500 m to 2,600 m, and in an area of about 130,000 sq. km in Afghanistan, Pakistan, India and Nepal has many globally threatened and restricted range species. In India, there are 11 Restricted Range species. Looking at the undisturbed habitat available in this IBA, some restricted range species would have considerable percentage of their overall numbers in this IBA alone. More research is required to study abundance and density of different bird species. We consider this site as Data Deficient.

OTHER KEY FAUNA

The information on other fauna is also meagre, except for the work by Gaston et al. (1981a, 1983) which records: Asian Black Bear Ursus thibetanus, Brown Bear Ursus arctos, Musk Deer Moschus chrysogaster, Goral Nemorhaedus goral, Serow Nemorhaedus goral...
sumatraensis. Ibex Capra sibirica and Himalayan Tahr Hemitragus jemlahicus. Kugti is one of the best protected areas in Himachal Pradesh for Brown Bear (S. Sathyakumar pers. comm. 2003). Other mammals listed by Singh et al. (1990) include the Leopard Panthera pardus, Leopard Cat Prionailurus bengalensis, Common Langur Semnopithecus entellus and Yellow-throated Marten Martes flavigula.

LAND USE
- Nature conservation and research
- Tourism and recreation
- Urban transport
- Water management

THREATS AND CONSERVATION ISSUES
- Construction of dams
- Burning of vegetation
- Livestock grazing
- Firewood collection
- Disturbance to birds
- Pilgrims and annual fairs
- Soil erosion

There are two villages and 10 settlements inside the Sanctuary, and nine villages in the surrounding areas. The inhabitants hold rights to fodder, fuelwood, cultivation, burial grounds and religious activities. These activities till now did not have a major impact on the ecosystem, but increasing population pressures, of both humans and livestock, are now having a negative impact. Hydro projects and transmission lines have permanently modified the landscape, and resulted in soil erosion. The so-called natural disasters such as avalanches are becoming common linked as they are to changes in the topography.

KEY CONTRIBUTORS
S. Sathyakumar, G. S. Rawat and Sanjeeva Pandey

KEY REFERENCES
LIPPA ASRANG WILDLIFE SANCTUARY

GENERAL DESCRIPTION
This high altitude Sanctuary lies c. 28 km from Morang, the nearest town, in Kinnaur district. The Sanctuary can be reached by a motorable road up to a village called Jangi and then onward by foot. Much of this high altitude Sanctuary is a plateau of barren cold desert. Lippa Asrang is one of the few sanctuaries in India where feral Yak Bos grunniens have been reported.

AVIFAUNA
There is practically no literature on birds of this IBA. Most of the Sanctuary is closed to tourists, and there are few visitors. As the Sanctuary represents undisturbed alpine habitat, many birds of Biome-5 are present, hence it was selected as an IBA.

Threats and Conservation Issues
• Grazing

This Sanctuary is away from human habitations and has very few visitors in its barren, cold desert plateau habitat. Grazing of livestock takes place, which is unsustainable due to the fragile ecosystem. Otherwise, little can be said without data regarding conservation issues.

OTHER KEY FAUNA
Mammals reportedly include the Asiatic Black Bear Ursus thibetanus, Brown Bear Ursus arctos, Musk Deer Moschus chrysogaster, Goral Nemorhaedus goral, Ibex Capra ibex, Blue Sheep Pseudois nayaur and Yak Bos grunniens (Singh et al. 1990).

LND USE
• Grazing
• Research and nature conservation
MAJATHAL WILDLIFE SANCTUARY

**GENERAL DESCRIPTION**

Majathal Wildlife Sanctuary, located in Shimla and Solan districts, is part of the catchment area of the Sutlej river. It is bounded to the north by the Sutlej, and to the south by a mountain ridge. The Sanctuary comprises a short section of the southern slopes of the Sutlej Valley, with steep terrain. Places of religious interest include the Harsingh Temple (Singh et al. 1990). The Sanctuary may be one of the most important sites in Himachal Pradesh for Cheer Pheasant *Catreus wallichii*, and the only site present within the Sutlej catchment. Seven species of Galliformes have been reported from this area (Mishra 1996).

Chir Pine *Pinus roxburghii* and Ban Oak *Quercus leucotrichophora* forests, and subtropical *Euphorbia* scrub are the major vegetation types (Mishra 1996). The slopes are sparsely forested with Chir Pine and Ban Oak, and mostly dominated by grassy tracts, often extending continuously from the ridge-tops down to about 1,000 m (Garson 1983).

**AVIFAUNA**

Not much work has been done on the bird life of this interesting site, covering tracts of Himalayan Sub-tropical forest. Mishra (1996) during his studies on the Goral from November 1992 to May 1993, counted 106 species of birds, including the globally threatened Cheer Pheasant. He also recorded Kaleej Pheasant *Lophura leucomelana* and Koklass *Pucrasia macrolopha*. Recently, Shah et al. (2002) have worked on the Black Francolin *Francolinus francolinus*, a common Galliform.

In this IBA, the main biome is Sino-Himalayan Subtropical Forest (Biome-8), which occurs between 1,000 to 2,000 m. Nine species of this of biome have been listed by Mishra (1996). None of them are of conservation concern.

This IBA lies in the Western Himalayas Endemic Bird Area (EBA-128). As we do not have a detailed checklist of this site, it is likely that there would be some more Restricted Range species, especially small forest birds, than we know as of now. More detailed work is needed on the bird fauna of this site. Presently, we consider this as a Data Deficient site.

**OTHER KEY FAUNA**


**LAND USE**

- Agriculture
- Grazing
- Collection of timber, fuelwood, fodder and minor forest produce
- Tourism and recreation
- Nature conservation and research

**THREATS AND CONSERVATION ISSUES**

- Human settlements
- Disturbance due to pilgrims
- Tourism and recreation
- Forest fire
- Poaching

According to Mishra (1996), 17 settlements with a population of about 650 inhabitants are present inside the Sanctuary. They have rights to cultivate, graze livestock, and collect fodder, timber, fuelwood and minor forest produce. Crop damage by ungulates,
and livestock killing by Leopard and Black Bear create resentment against the Sanctuary among the villagers. Besides the local people, nomads also come during winter from the higher reaches to graze their livestock, which exerts further pressure on the limited resources of the Sanctuary. Graziers start forest fires to get better grass for livestock.

A temple is located in the Sanctuary which attracts thousands of pilgrims. The state government has started a project to provide drinking water to 100 villages in the western part of the Sanctuary. One of the major threats is the establishment of a cement manufacturing plant just outside the Sanctuary.

Poaching is quite common. Mishra (1996) found 39 gun licence holders, and many unlicenced guns. Ungulates and pheasants are their major targets, as they provide good meat for the table.

**KEY CONTRIBUTOR**
Charudutt Mishra

**KEY REFERENCES**
GENERAL DESCRIPTION

Manali is a popular tourist resort in Himachal Pradesh, due to its spectacular scenery, but not many people, even officials, know that there is a little-known 3,180 ha Manali Wildlife Sanctuary, notified as long ago as 1954 under the Punjab Birds and Wild Animals Protection Act, 1933. It was mainly established to safeguard the catchment area of Manalsu Nullah, an important tributary of the Beas River. The Manali Sanctuary and adjoining forested areas provide good habitats for many pheasant species, even though the Forest Department had planted many non-native species such as Poplar, Willow and Robinia.

The vegetation type, as classified by Champion and Seth (1968) is as follows: Alpine Pastures, Kharsu Oak Forest, Moist Temperate Deciduous Forest, Western Mixed Coniferous Forest, Moist Deodar Forest and Ban Oak Forest. Juniper Juniperus communis is present above the tree-line, along with Rhododendron.

AVIFAUNA

At least 149 species of birds have been recorded from the Manali area (Gaston et al. 1981). Western Tragopan Tragopan melanocephalus, Himalayan Monal Lophophorus impejanus, and Koklass Pheasant Pucrasia macrolopha are present in small numbers. Based on their surveys in 1979-1980, Gaston et al. (1981) estimate about 50 Western Tragopan. The Monal population is much larger, in the range of 250 pairs.

OTHER KEY FAUNA

Of larger mammals, 18 species have been recorded in the Manali area (Gaston et al. 1981, 1983, Singh et al. 1990). These include the Asiatic Black Bear Ursus thibetanus, Brown Bear Ursus arctos, Leopard Panthera pardus, Musk Deer Moschus chrysogaster, and Serow Nemorhaedus sumatraensis. Smaller carnivores include the Jungle Cat Felis chaus, Himalayan Palm Civet Paguma larvata and Yellow-throated Marten Martes flavigula.

LAND USE

Tourism and recreation
Nature conservation and research

THREATS AND CONSERVATION ISSUES

Livestock grazing
Collection of fuelwood, timber, forest products
Extraction of fodder
Tourism and recreation
The Sanctuary forms part of the catchment of Manalsu Nullah, an important tributary of the River Beas. It is particularly important as a refuge for Western Tragopan (Gaston et al. 1981). People from nearby villages have rights to graze livestock, extract fodder, fuelwood, timber and minor forest produce and quarrying. Semi-nomadic Gujjars and Gaddis also have grazing rights. Rodgers and Panwar (1988) had recommended that Manali Sanctuary which is only 3,100 ha be extended to 25,000 ha by including the still viable habitat to the north, including the Solang Nullah watershed to the source of the Beas river.

KEY CONTRIBUTORS
Sanjeeva Pandey and S. Sathyakumar

KEY REFERENCES
Champion, H. G. and Seth, S. K. (1968) A revised survey of forest types of India. Govt. of India Press, Delhi.
GENERAL DESCRIPTION

Nargu is one of the most densely populated protected areas of Himachal Pradesh, with human density above 100 per sq. km and livestock density 200 per sq. km. Interestingly, all legal procedures such as the final notification for declaration of a Sanctuary have been completed. Human beings have already occupied most of the flat areas and cultivable portions, leaving only inaccessible reaches for wildlife. Livestock graze all over the Sanctuary.

Based on the classification of Champion and Seth (1968), six types of vegetation can be seen in this area: A small portion of Sub-alpine forest in the higher reaches, followed by Kharsu Oak Forest, Moist Temperate Deciduous Forest, Western Mixed Coniferous Forest, Moist Deodar Forest, Moru Oak Forest, Ban Oak Forest, and finally, Subtropical Pine Forest.

AVIFAUNA

There is no information on the bird life, although unconfirmed reports indicate that Western Tragopan Tragopan melanocephalus and Cheer Catreus wallichii are found. Four species listed in Biome-7 have been identified, but there may be many more. This site is included as an IBA due to its potential as habitat of Cheer Pheasant and Biome species.

OTHER KEY FAUNA

Asiatic Black Bear Ursus thibetanus, Leopard Panthera pardus, Himalayan Palm Civet Paguma larvata, Barking deer Muntiacus muntjak, Musk Deer Moschas chrysogaster and Goral Nemorhaedus goral are still found in remote areas but their conservation status is unknown. Not much is known about the reptiles and other fauna of this potential IBA.

IBA SITE CODE: IN-HP-17
State: Himachal Pradesh
District: Mandi
Coordinates: 31° 56' 18" N, 76° 59' 03" E
Ownership: State
Area: 27,837 ha
Altitude: 970 - 4,034 m
Rainfall: 1,380 mm
Temperature: 10 °C to 35 °C
Biogeographic Zone: Himalaya
Habitats: Himalayan Moist Temperate Forest, Sub-Alpine Forest, Subtropical Pine Forest

IBA CRITERIA: A3 (Biome-7: Sino-Himalayan Temperate Forest), Data Deficient
PROTECTION STATUS: Wildlife Sanctuary, established in 1962

LAND USE

- Agriculture

THREATS AND CONSERVATION ISSUES

- Human settlements
- Forest fire - natural and man-induced
- Intense grazing pressure
- Collection of firewood, other forest products
- Grazing of livestock

Anthropogenic pressure is the major issue. There are 170 villages inside the Sanctuary, with a population of nearly 50,000 people and three times as many heads of livestock. Furthermore, itinerant graziers visit the Sanctuary during summer with huge herds of livestock. Local people are allowed fuelwood and medicinal plant collection. Musk Deer is hunted by organized gangs of poachers.

Rodgers and Panwar (1988) and Rodgers et al. (2000) have recommended joining this Sanctuary to the 1,400 ha Khokan WLS by including intervening forest, to make it a large sanctuary of 32,000 ha.

KEY CONTRIBUTOR

S. Sathyakumar

KEY REFERENCE


PIN VALLEY NATIONAL PARK

IBA Site Code : IN-HP-18
State : Himachal Pradesh
District : Lahaul and Spiti
Coordinates : 32° 01' 60" N, 77° 52' 60" E
Ownership : State
Area : 67,500 ha
Altitude : c. 4,300 m
Rainfall : 170 mm
Temperature : -30 °C to 30 °C
Biogeographic Zone : Trans-Himalaya
Habitats : Alpine Dry Pasture

GENERAL DESCRIPTION

The Pin Valley National Park is located in the Spiti subdivision of Lahaul and Spiti districts. High mountain ranges and narrow river valleys are typical of the area, where flat land is uncommon. According to the biogeographic classification of Rodgers and Panwar (1988), Pin Valley lies in the Northwest Himalayan Zone. The Sutlej River divides it into two provinces namely, northwest and west. Spiti is a typical mountain desert, massive glaciers covering a major portion of the Park. There is no major lake in the Park. The mountainsides are bare, except for a few mountain folds where some vegetation manages to grow in protected niches. The terrain and the climate are antagonistic to the growth of forests in this area. The precipitation is mostly in the form of snowfall. The general topography is highly rugged, with high altitude barren areas and an arid climate.

The drainage system is made up of six rivulets namely Kidul Cho, Khaminger, Debsa, Kilung, Pin and its tributary. The former four rivers join to become the Parahio River in the main valley. Glaciers feed all these rivers.

Light tremors occasionally occur in the Park, as Lahaul-Spiti district lies in a major earthquake prone area, i.e., the alpine Himalayan mountain system. This Park adjoins the buffer zone of the Great Himalayan National Park to the west and shares its southern boundary with Rupi-Bhabha Sanctuary (another IBA). The valleys of the Park are highly disturbed because of the high incidence of grazing.

Pin Valley NP is a typical cold desert ecosystem. According to the classification of Champion and Seth (1968), the vegetation comes under Dry Alpine Scrub and Dwarf Juniper. Cretegusus sp., Berberis sp. and Lonicera sp. are the important shrubs. A few thorny trees and bushes are found in the vicinity of the villages.

AVIFAUNA

Not many studies have been done on the avifauna of the National Park, since it is situated at high altitude and also because of its cold desert type of climate. The site falls under the Biome-5 (Eurasian High Montane). The key habitats of the site are scrub and open habitats at and above the tree line, including alpine and subalpine scrub and grassland; inland cliffs and rocky slopes and also montane wetlands and some gravel and sand plains where Himalayan Snowcock Tetraogallus himalayensis, Tibetan Partridge Perdix hodgsoniae, Ibisbill Ibidorhyncha struthersii and other species of Biome-5 are found.

OTHER KEY FAUNA

The Pin Valley NP has most of the mammal species typical of the cold desert of Ladakh and Tibet: Snow leopard Uncia uncia, Himalayan Ibex Capra ibex, Bharal Pseudois nayaur, Lynx lynx, Fox Vulpes vulpes, Tibetan Wolf Canis lupus chanco, Himalayan Marmot Marmota bobak, Woolly Hare Lepus oiiostolus and Mouse hare Pika Ochotona roylei.

LAND USE

- Nature conservation and research
- Tourism and recreation
- Construction of offices

Snow Pigeon Columba leuconota of Biome-5 is commonly seen in Pin Valley NP.

OTHER KEY FAUNA

Himalayan Griffon Gyps himalayensis
Himalayan Snowcock Tetraogallus himalayensis
Tibetan Partridge Perdix hodgsoniae
Ibisbill Ibidorhyncha struthersii
Snow Pigeon Columba leuconota
Guldenstadt’s Redstart Phoenicurus erythrogastr
Common Great Rosefinch Carpodacus rubicilla
Yellow-billed Chough Pyrrhocorax graculus
THREATS AND CONSERVATION ISSUES

- Grazing
- Construction works
- Tourism and recreation
- Unsustainable exploitation of the resources
- Collection of medicinal herbs
- Cutting of bushes for fuel.

Pin Valley is a high altitude Himalayan Park, typical of the Tibetan cold desert. It supports a variety of rare and threatened mammals, but is largely unstudied owing to its remote location within a politically sensitive area (Singh et al. 1990).

The Park is uninhabited, but 17 villages are located in the buffer zone. The villagers are allowed to graze their livestock inside the Park, and have herb collection rights.

There is a virtual invasion of Government machinery in the villages of Pin Valley. Various departments such as Public Welfare and Development, Forest, Revenue, Health and Education have their offices in the Pin Valley. The construction work undertaken by these departments does not appear to be directly linked with the needs of the people of Pin Valley. There is instead great need for a well thought out integrated development programme for the local population, in accordance with their immediate and long term needs.

In recent years, hundreds of labourers from Bihar and Chhatisgarh have been brought in to build and repair roads. Poaching incidents also have increased. The local people, being Buddhists do not kill animals, but the emigrant labourers do not have the same sentiments.

KEY CONTRIBUTOR
IBA Team

KEY REFERENCES
GENERAL DESCRIPTION

The Pong reservoir, also called the Maharana Pratap Sagar, was created in 1976 by the damming of the River Beas in the foothills of the Himalayas on the northern edge of the Indo-Gangetic plain. It contains several deforested islands which attracts a large number of waterbirds. The northern edge is very flat, with mudflats and wet grasslands and attracts major concentrations of birds.

Pong Dam was basically an irrigation reservoir but when a large number of birds started coming regularly to the wetland, the reservoir was declared a bird sanctuary in 1983.

There is some submerged vegetation, but the shoreline does not support much emergent vegetation due to the pronounced seasonal changes in water level. There is an extensive swamp with reed beds and grasslands in the seepage area below the dam (Gaston 1985, 1986). The surrounding hillsides still support some Mixed Deciduous and Chir Pine *Pinus roxburghii* forest.

AVIFAUNA

The lake is an important wintering ground for waterfowl. About 10,000 ducks were recorded in December 1985, with Mallard *Anas platyrhynchos* predominant, and smaller numbers of Northern Pintail *A. acuta*, Common Teal *A. crecca* and Common Pochard *Aythya ferina* (Gaston 1985; Gaston and Pandey 1987). Two Red-necked Grebes *Podiceps griseigena*, and several Great Black-headed Gulls *Larus ichthyaetus*, a species that is fairly uncommon away from the coast in India were also observed.

Waders such as Greenshank *Tringa nebularia*, Green sandpiper *T. ochropus*, Common sandpiper *T. hypoleucos* and Temminck’s stint *Calidris temminckii* occur in considerable numbers. A great variety of raptors were also recorded, including Osprey *Pandion haliaetus*, Pallas’s Fish-Eagle *Haliaeetus leucoryphus*, Marsh Harrier *Circus aeruginosus* and Tawny Eagle *Aquila rapax*. Gaston (1985) observed a total of 103 species in the area, but more than 220 species have since been recorded (Pandey 1989).
Recent counts have shown that the concentration of wintering waterfowl has sharply increased to over 60,000 and over 75,000 in 2002 and 2003 respectively. The most numerous species are Northern Pintail [25,000], Bar-headed Goose Anser indicus [10,000], Common Teal [>6000], Eurasian Wigeon [>6000], Common Pochard [>5000] and Great Cormorant [>4500] (J. W. den Besten pers. comm. 2003). Most of these numbers are much above the 1% population threshold recently described by Wetlands International (2002). For instance, Wetlands International estimates the Bar-headed Goose population to be between 52,000 and 60,000. With 10,000 present in this IBA site, it means that almost 20% of the population of this species occurs in Pong Dam! No other IBA site in India holds such a huge population of this species.

The lake sustains some breeding birds. There are up to several dozen pairs of Black-crowned Night Heron Nycticorax nycticorax, Gull-billed Tern Gelochelidon nilotica, Little Tern Sterna albifrons, Yellow-wattled Lapwing Vanellus malabaricus and large numbers of River Tern Sterna aurantia, and Red-wattled Lapwing Vanellus indicus. A few pairs of Sarus Crane Grus antigone breed in the vicinity. The outflow area of Shah Nehr barrage sustains breeding populations of Common Moorhen Gallinula chloropus, Purple Swamphen Porphyrio porphyrio, Purple Heron Ardea purpurea, Cinnamon Bittern Ixobrychus cinnaeomeus, Yellow Bittern I. sinensis and White-tailed Stonechat Saxicola leucura.

**OTHER KEY FAUNA**

In recent years, Golden Jackal Canis aureus, Himalayan Yellow-throated Marten Martes flavigula, Small Indian Civet Viverricula indica, Wild Boar Sus scrofa and Nilgai Boselaphus tragocamelus have been reported, the last two species in the outflow area (J. W. den Besten pers. comm. 2003). Reptiles include the Common Cobra Naja naja, Python Python molurus and Common Monitor Varanus bengalensis. Fish species found are Mahseer Tor tor, Mallip Wallago attu and Sole Ophiocaphalus marulius.

**LAND USE**

- Agriculture
- Nature conservation and research

**CRITICALLY ENDANGERED**

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
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<tr>
<td>Gyps bengalensis</td>
<td>Oriental White-backed Vulture</td>
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<tr>
<td>Gyps tenuirostris</td>
<td>Gull-billed Tern</td>
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</tbody>
</table>

**OTHER KEY CONTRIBUTORS**

Jan Willem den Besten, Sanjeeva Pandey and Murari Thakur.

**KEY REFERENCES**


RUPI BHABHA WILDLIFE SANCTUARY

GENERAL DESCRIPTION
This Sanctuary has a wide variation in altitudes, and supports a large diversity of habitats and wildlife. It lies in the catchment area of the Sutlej river and is irrigated by many small streams. The northern portion is covered with glaciers. The Great Himalayan National Park and the Pin Valley National Park are located on its western and northern boundaries respectively. Thus, it forms a large protected area complex, extremely important for alpine, sub-alpine and broadleaf forest birds. The nearest town is Rampur-Bushahr, about 40 km away. Despite its large size and remoteness from human habitation, this Sanctuary is facing many biotic pressures, such as hydroelectric power generation schemes.

Based on the classification of Champion and Seth (1968), there are five forest types in this IBA: Alpine Pastures, Dry Temperate Coniferous Forests, Dry Broadleaf and Coniferous Forests, Kharsu Oak Forest, and Lower Western Himalayan Temperate Forest.

The Forest Department has undertaken many plantation schemes for commercial timber and for the fuelwood requirement of the local people. Besides indigenous species, they have also planted exotics such as Poplar (Salix) and Robinia (Robinia pseudacacia).

AVIFAUNA
No work has been done on the avifauna of this important protected area of the Western Himalayas. Singh et al. (1990) have provided a preliminary list of 27 bird species recorded in the Sanctuary. It is an important habitat for the globally threatened Western Tragopan (Tragopan melanocephalus) and Cheer Pheasant (Catreus wallichii). Besides these two pheasants, which are restricted to the Western Himalayas, three more Restricted Range species have been identified. However, population density and abundance of any species are not known.

Based on the preliminary listing, nine species of Biome-7 and four from Biome-8 have been identified. This list should be considered as only indicative, till more studies are conducted in this IBA. At present, we consider the site as Data Deficient.
Musk Deer *Moschus chrysogaster*, Himalayan Tahr *Hemitragus jemlahicus* and Himalayan Ibex *Capra sibirica*. At lower elevations, it is replaced by the common Leopard *Panthera pardus* which hunts Barking deer *Muntiacus muntjak*, Goral *Nemorhaedus goral* and Serow *Nemorhaedus sumatrensis*. The Brown Bear *Ursus arctos* and Asiatic Black Bear *U. thibetanus* are found in the altitudinal range of 1,600 to 4,000 m. There are also many smaller mammals recorded.

**LAND USE**
- Nature conservation and research
- Tourism and recreation
- Urban transport
- Water management

**THREATS AND CONSERVATION ISSUES**
- Construction and impact of dams
- Burning of vegetation
- Grazing
- Firewood collection
- Agriculture.

Rupi Bhaba Sanctuary faces a major threat from the Sanjay Vidyut Project, a hydel scheme. Apart from the construction of the generating plant and dam, ancillary activities such as building, industry, transmission lines and housing will affect the area. Another hydel project, the Nathpa Jhakro project, will submerge part of the Sanctuary. Forest fires, hailstorms and drought already affect the area. Both local residents and nomadic Gaddi and Gujar communities have grazing rights. Sheep from the breeding center at Jeori come to graze. There are 15 villages inside the Sanctuary, so anthropogenic pressure is high.

**KEY CONTRIBUTOR**
Sanjeeva Pandey

**KEY REFERENCES**
Champion, H. G. and Seth, S. K. (1968) *A revised survey of forest types of India*. Govt. of India Press, Delhi.
Agriculture

Lophura leucomelana

Other pheasants are Himalayan or Impeyan Monal Tragopan. Highly endangered species of pheasants, including the Western Tragopan Tragopan melanocephalus are found in this Sanctuary. Other pheasants are Himalayan or Impeyan Monal Lophophorus impejanus, Koklass Pucrasia macrolopha and Kaleej Pheasant Lophura leucomelana. Sangla also has many species from Biome-5 (Eurasian High Montane), Biome-7 (Sino-Himalayan Temperate Forest) and Biome-8 (Sino-Himalayan Subtropical Forest).

A good bird checklist of this high altitude IBA is not available as no work on bird fauna has been done. From the preliminary list, we find that four out of 48 species of Biome-5 listed by BirdLife International (undated) are found here. They are Himalayan Griffon Vulture Gyps himalayensis, Himalayan Snowcock Tengmalm's Pipit Anthus rossae and Plain Mountain Finch Leucosticte nemoricola. This is just an indicative list. As some parts of this IBA lie in the Sino-Himalayan Temperate Forest, we see birds of this biome such as Koklass Pheasant, Himalayan Monal, Speckled Wood Pigeon Columba hodgsonii, Himalayan Woodpecker Dendrocopos himalayensis and Yellow-billed Blue Magpie Urocissa flavirostris. Again, this is not an exhaustive list. As the forest is intact in many places, there are chances that many more birds of this Biome would be present.

The site lies in the Western Himalayas Endemic Bird Area (EBA) where Stattersfield et al. (1998) have identified 11 restricted range species. From this list of 11 birds, only Cheer Pheasant has been confirmed till now, but more are likely to be present once we have more information on the bird life of this IBA.

OTHER KEY FAUNA

The main large mammals found in this sanctuary are Snow Leopard Uncia uncia, Musk Deer Moschus chrysogaster, Bharal Nemorhaedus goral, Serow Nemorhaedus sumatraensis, Leopard Panthera pardus, and Common Langur Semnopithecus entellus are found. No information is available on smaller mammals, reptiles and other fauna.

LAND USE

Agriculture

SANGLA (RAKSHAM CHITKUL) WILDLIFE SANCTUARY

IBA CRITERIA: A1 (Threatened Species), A2 (Endemic Bird Area 128: Western Himalayas)

PROTECTION STATUS: Wildlife Sanctuary, established in May 1989
Important Bird Areas in India - Himachal Pradesh

THREATS AND CONSERVATION ISSUES

- Hydroelectric project
- Hunting

The villagers of Sangla WLS are by and large agrarian. During recent years, the Sangla WLS which is in the extreme western part of Kinnaur district, is open to outside influences, and has seen a great deal of commercialization, specially in the main Baspa Valley. Huge hydroelectric projects called Baspa I and Baspa II have changed the face of the area forever. The construction of the Vidyut Pariyojana has brought in roads, equipment of building construction, engineers and infrastructure. In addition to being employed in the hydroelectric projects, the villagers have started growing apple and other fruits as commercial crops. Agriculture, however, continues to be the major occupation of the local residents.

The conditions of people living in upper Baspa Valley, including the villages of Chitkul, Mastrang, and others, are in direct contrast to those of the Baspa Valley. People in these remote villages are poor, mostly illiterate and cling to age-old customs and traditions. In the past, after snowfall, hunting of wild animals had been their major occupation. The Musk Deer used to be ruthlessly hunted for its musk pod, which fetched them a good price in the market towns of Rampur, Shimla and Amritsar. Even today, the local people say that the Musk Deer of Chitkul forests produces the best quality and quantity of musk in the whole Himalayan region. Most of the people are non-vegetarian. Barking deer or Muntjac, which once had a good population, has now become almost extinct because of persecution for meat. Monal pheasant has been traditionally hunted for its crest feathers, which the villagers wear on their caps, as a status symbol. Other pheasants are also killed for meat.

KEY CONTRIBUTOR
Sanjeeva Pandey

KEY REFERENCES


GENERAL DESCRIPTION

The valley from north to west of Sarah, below Dharamshala town, is a rare example of a valley at the foot of the Dhauladhar Range that is still largely covered with good forest, despite the fact that human population pressure is high in this zone, which has large well watered areas ideal for agriculture. There are only a few valleys that connect the dry deciduous forests of the Siwalik Hills to the temperate forests on the higher Dhauladhar Range. The forest in the valley around Sarah is more lush than most of the forests found in the Shiwaliks. It is a fine example of broad-leaf forest in a zone where most forests have given way to intensive, irrigated agriculture or to plantation of pine trees.

Sub-tropical mixed forest with good undergrowth and deciduous and broad-leaved species interspersed with Chir Pine trees cover this area. The higher reaches of the valley are partly covered by tea gardens.

AVIFAUNA

Except for two species of vultures (Slender-billed *Gyps tenuirostris* and Oriental White-backed *Gyps bengalensis*) that have recently been listed in the Red Data Book (BirdLife International 2001), and which are in any case widespread, there are no globally threatened species or restricted range species found in Sarah Valley. However, the forest in this Valley sustains healthy populations of birds that have disappeared from many other valleys at the foot of the Dhauladhar (J. W. den Besten, pers. comm. 2003). Many species here are typical of the Siwaliks, and even more than the Siwalik forests, they include high densities of wintering species from Biome-5 and Biome-7. Breeding species of Biome-8 and Biome-11 are also found here.

This is one of the few sites that was selected more or less purely on the basis of biome restricted assemblages (A3 criteria). Perhaps, there are more such sites in Himachal Pradesh but data are lacking. Sarah Valley lies in Sino-Himalayan Subtropical Forest (Biome-8). BirdLife International (undated) has listed 95 species, put of which 14 species have been seen here, but more are likely to be found. As biome-7 (Sino-Himalayan Temperate Forest) overlaps with Biome-8 and many species show altitudinal movement, 33 of Biome-7 are seen in Sarah Valley.

During winter, four species of Biome-5 (Eurasian High Montane – Alpine and Tibetan) are seen here (Himalayan Griffon *Gyps himalayensis*, Wallcreepers *Tichodroma muraria*, Olivaceous Leaf Warbler *Phylloscopus griseus* and Rosy Pipit *Anthus roseatus*). Except for the Himalayan Griffon which is largely confined to the Himalayas (with altitudinal movement), the three remaining species winter in the foothills and north Indian plains, so their presence in Sarah Valley is not surprising. However, what is most interesting about this IBA is the presence of at least 15 species of Biome-11 (Indo-Malayan Tropical Dry Zone). This is due to the fact that this relatively wet Valley is connected with the dry deciduous forest of the Siwaliks and many birds of Siwalik and plains move in during summer for breeding in this Valley. Thus, we have a site where we can see resident birds from the high Himalayas and also from the dry Indian plains, mixing with birds of the middle and lower Himalayas. Many species are temporarily and spatially separated but all are found in this IBA at one time of the year or another.

**Critically Endangered**

- Oriental White-backed Vulture *Gyps bengalensis*
- Slender-billed Vulture *Gyps tenuirostris*

**Biome 8: Sino-Himalayan Sub-tropical Forest**

- Slaty-headed Parakeet *Psittacula himalayana*
- Black-winged Cuckoo-Shrike *Coracina melachistos*
- Rosy Minivet *Pericrocotus roseus*
- Himalayan Bulbul *Pycnonotus leucogenys*
- Black Bulbul *Hypnigites leucocephalus*
- Blue-headed Rock-Thrush *Monticola cinclorhynchus*
- Tickell’s Thrush *Turdus unicolor*
- Grey-winged Blackbird *Turdus boulboul*
- Rusty-cheeked Scimitar- Babbler *Pomatorhinus erythrogenys*
- Black-chinned Babbler *Stachyris pyrrhops*
- Grey-headed Flycatcher-Warbler *Seicercus zambezensis*
- Red-headed Tit *Aegithalos concinnus*
- Black-headed Jay *Garrulus lanceolatus*
- Grey Treepie *Dendrocitta formosa*
OTHER KEY FAUNA

Not much is known about the mammalian and reptilian fauna of this site. Leopard *Panthera pardus* is common, as in most of the mid- to low-level forests of Himachal Pradesh. Barking Deer *Muntiacus muntjak*, its natural prey, but cattle it commonly killed, much to the resentment of villagers. Todd Cat *Paradoxurus hermaphroditus*, Himalayan Yellow-throated Marten *Martes flavigula*, and Porcupine *Hystrix indica* are the smaller predators. Monitor Lizard *Varanus bengalensis* is said to occur in this IBA.

THREATS AND CONSERVATION ISSUES

- Forest fires
- Illegal felling
- Grazing
- Collection of firewood and animal fodder

Though the area is under no particular protection, the forest is well maintained and developed by the local citizens who depend on it for their livelihood.

KEY CONTRIBUTOR

Jan Willem den Besten

KEY REFERENCES


Important Bird Areas in India - Himachal Pradesh

SECHU TUAN NALA WILDLIFE SANCTUARY

IBA Site Code: IN-HP-23
State: Himachal Pradesh
District: Chamba
Coordinates: 32° 30' 11" N, 76° 49' 44" E
Ownership: State
Area: 10,295 ha
Altitude: 2,550 - 6,072 m
Rainfall: 500 mm
Temperature: -20 °C to 27 °C
Biogeographic Zone: Himalaya
Habitats: Himalayan Moist Temperate, Alpine Moist Scrub, and Dry Alpine Scrub

GENERAL DESCRIPTION

This Sanctuary lies in Chamba district, 113 km from Chamba town. Access is from Kilar by foot to Sechu (15 km), alternatively via Kishtwar in Jammu and Kashmir to Sarsu and onwards by foot to Sechu. The Sanctuary includes several glaciers. Hindu and Buddhist temples are also located at Bhat, Tuan, Hilu, Chroti and Kalichor. There are 11 villages inside the Sanctuary, with a total population of more than a thousand people. Fourteen villages with a population of about 3,000 are located in the surrounding area. The number of livestock grazing inside the Sanctuary is above 3,000 (Singh et al. 1990).

According to Champion and Seth (1968), three forest types are found in this IBA: Dry Alpine Scrub, Moist Alpine Scrub, and Lower Western Himalayan Temperate Forest. Species of medicinal value include Aconitum heterophyllum, Jurinea macrocephala and Ephedra gerardiana (Singh et al. 1990). Plantations of fuelwood and other commercial forest products have been established by the Forest Department. Species planted include Cedar Cedrus deodara, Poplar Salix sp., Kail Pinus wallichiana, Willow Alnus, Robinia Robinia sp. and Walnut Juglans regia (Singh et al. 1990).

AVIFAUNA

There is a paucity of published records on the birds of this Sanctuary. Singh et al. (1990) provide a preliminary list of 16 bird species recorded in the Sanctuary, but considering the size and altitude gradient, there could be ten times more species. Five species from Biome-5 (Eurasian High Montane) and four of Biome-7 (Sino-Himalayan Temperate Forest) have been identified in the preliminary list. The globally threatened Western Tragopan Tragopan melanocephalus is present in this IBA, but its density and distribution are not known. Himalayan Snowcock Tetraogallus himalayensis, Himalayan or Impeyan Monal Lophophorus impejanus and Koklass Pheasant Pucrasia macrolopha are found here but data on general bird life is lacking. The site is considered Data Deficient till we have more information on avifauna.

Vulnerable

Western Tragopan Tragopan melanocephalus

Endemic Bird Area 128: Western Himalayas

Western Tragopan Tragopan melanocephalus

Biome-5: Eurasian High Montane

Himalayan Griffon Gyps himalayensis
Himalayan Snowcock Tetraogallus himalayensis
Snow Partridge Leuca leuca
Snow Pigeon Columba leucosota
Alpine Accentor Prunella collaris

Biome-7: Sino Himalayan Temperate Forest

Koklass Pheasant Pucrasia macrolopha
Himalayan Monal Lophophorus impejanus
Simla Crested tit Parus rufonuchalis
Green-backed Tit Parus monticolus

OTHER KEY FAUNA

Sechu Tuan is a high altitude sanctuary with significant populations of Himalayan Ibex Capra sibirica and Musk deer Moschus chrysogaster. Snow Leopard Uncia uncia has also been reported (Singh et al. 1990).

In the alpine and sub-alpine regions, besides the Snow Leopard, Ibex Capra sibirica, Blue Sheep Pseudois nayaur and Himalayan Mouse Hare or Pika Ochotona roylei have been recorded. At slightly lower elevations, Asiatic Black Bear Ursus thibetanus,
Brown Bear *Ursus arctos*, Goral *Nemorhaedus goral*, Serow *Nemorhaedus sumatraensis*, and Himalayan Tahr *Hemitragus jemlahicus* can be seen.

**LAND USE**
- Agriculture
- Grazing

**THREATS AND CONSERVATION ISSUES**
- Human habitation
- Firewood collection
- Illegal felling of trees
- Forest fires

The villagers hold rights or leases for the collection of timber and fuelwood, agriculture, settlement, burial grounds and religious practices. There are 23 km of Public Works Department roads, and Irrigation Department pipelines and canals within the Sanctuary. In addition, about 3 ha is used for schools by the Education Department, and some area for medical dispensaries at Chasog. Timber extraction goes on under Forest Development Corporation, and the Forest Department maintains three nurseries (Singh *et al.* 1990).

Rodgers and Panwar (1988) have recommended upgrading of this Sanctuary to a National Park status as this site still has viable populations of high altitude mammals and pheasants.

**KEY CONTRIBUTOR**
Sanjeeva Pandey

**KEY REFERENCES**


GENERAL DESCRIPTION

This high altitude Sanctuary is named after the goddess Shikari Devi, to whom a temple is dedicated and the place is considered sacred by Hindus. An area of 7,200 ha surrounding the temple was declared a sanctuary in 1962. Nearly 40 villages are present inside the Sanctuary, and many more in the surrounding areas. However, there are still good habitats for wild animals. Even the Snow Leopard *Uncia uncia* has been reported from this site in winter but it needs confirmation.

Owing to great variation in altitude, Shikari Devi Sanctuary has seven forest types, according to the classification by Champion and Seth (1968): Alpine Pasture, Sub-alpine Forest, Moist Temperate Deciduous Forest, West Himalayan Upper Oak/Fir forest, Kharsu Oak Forest, Western Mixed Coniferous Forest, and Ban Oak Forest (Singh et al. 1990). This Sanctuary covers the middle altitudinal range from 1,800 to 3,400 m of the Himalayas, showing transition from pine through oak to alpine meadow (Rodgers and Panwar 1988). Information on percentage of different forest types and their ecological condition is not available. However, there are some good patches of temperate forest that have representative bird fauna of the Western Himalayas.

AVIFAUNA

Not much information is available about bird life of this site, except that the globally threatened Cheer Pheasant *Catreus wallichii* is found, probably in good numbers. Himalayan or Impeyan Monal *Lophophorus impejanus*, Koklass Pheasant *Pucrasia macrolopha*, Kaleej *Lophura leucemelana* and Western Tragopan *Tragopan melanocephalus* are also found. The last species needs confirmation from this site.

This IBA lies in the Western Himalayas Endemic Bird Area (EBA). It also has biome-restricted species of Eurasian High Montane (Biome-5) and Sino-Himalayan Temperate Forest (Biome-7). BirdLife International (undated) has listed 48 species in Biome-5. From the preliminary list that we have, we could find only five species, most of them quite common and of no conservation concern. Similarly, in Biome-7, 112 species are listed but we could find published evidence of only four species. This indicates the paucity of information and not paucity of bird life of this IBA. If more detailed studies are conducted on birds, perhaps more biome and globally threatened species would be found.

<table>
<thead>
<tr>
<th>Vulnerable</th>
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<tr>
<td>Cheer Pheasant</td>
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**Endemic Bird Area 128: Western Himalayas**

<table>
<thead>
<tr>
<th>Cheer Pheasant</th>
<th><em>Catreus wallichii</em></th>
</tr>
</thead>
</table>

**Biome-5: Eurasian High Montane**

| Himalayan Griffon | *Gyps himalayensis* |
| Altit Accentor | *Prunella himalayana* |
| Plain-backed Thrush | *Zoothera mollissima* |
| Tickell’s Warbler | *Phylloscopus affinis* |
| Wallcreeper | *Tichodroma muraria* |

**Biome-7: Sino-Himalayan Temperate Forest**

| Koklass Pheasant | *Pucrasia macrolopha* |
| Himalayan Monal | *Lophophorus impejanus* |
| Simla Crested Tit | *Parus rufonuchalis* |
| Green-backed Tit | *Parus monticolus* |
OTHER KEY FAUNA

Shikari Devi WLS has several high altitude mammals such as Asiatic Black Bear *Ursus thibetanus* and Goral *Nemorhaedus goral*. There are unconfirmed reports of Snow Leopard. At temperate forest level, Leopard *Panthera pardus*, Barking Deer *Muntiacus muntjak*, Langur *Semnopithecus entellus* and Rhesus Macaque *Macaca mulatta* are reported. The Giant Flying Squirrel *Petaurista petaurista albiventer*, Kashmir Flying Squirrel *Hylopetes fimbriatus*, Stone Marten *Martes foina*, and Himalayan Weasel *Mustela sibirica* are also found here. There is no information on the reptile fauna.

LAND USE

- Agriculture
- Nature conservation

THREATS AND CONSERVATION ISSUES

- Grazing
- Human habitation
- Collection of fuelwood and other forest produce
- Poaching

Despite its sacred status, the Sanctuary is under tremendous human pressure from fuelwood collection, grazing (both local and nomadic), collection of minor forest produce, medicinal plants and grass. During the annual religious fair in May-June, thousands of pilgrims visit the shrine and also bring pressure on the scarce resources. Poaching of Musk Deer for musk pod is still a problem. Pheasants and smaller animals are trapped for the pot.

Rodgers and Panwar (1988) have suggested increasing the Sanctuary area to 31,400 ha by incorporating surrounding forest land, to allow development of a core disturbance-free area. The western ridge with alpine pasture should be included. This will protect important habitat for many high altitude mammals and birds.

KEY CONTRIBUTOR

Sanjeeva Pandey

KEY REFERENCES


**SHIMLA WATER CATCHMENT SANCTUARY**

**General Description**

This IBA is one of the few sanctuaries in the state free from human habitation, mainly due to a long history of protection and the steep terrain which discouraged human habitation. It was protected in British India as the catchment area for supply of water to Shimla, the summer capital of the British. After India’s Independence in 1947, the area came under state control and was notified as a protected forest in 1952. To the south, it is connected by a forest corridor to Chail Sanctuary (another IBA). The Sanctuary area is within the purview of the Simla Municipal Corporation.

The entire Sanctuary is forested, mostly with temperate coniferous forest. Cedar Cedrus deodara is predominant, mixed with Ban Oak Quercus incana and Chir Pine Pinus roxburghii at lower altitudes, and Fir Abies pindrow, Blue Pine Pinus wallichiana, Moru Oak Quercus. dilatata and Spruce Picea smithiana at higher altitudes. Shrub and ground layers are generally well developed, with shrubs covering 50% of the area. Ground vegetation is mainly grasses, but includes a variety of ferns and forbs (Gaston 1979).

**Avifauna**

Documentation on the avifauna is limited to pheasants. The density of Koklass Pheasant Pucrasia macrolopha, estimated at 17-25 pairs per sq. km in April 1979, is probably close to the maximum reached under natural conditions (Gaston et al. 1981). Similar densities were recorded by P. J. Garson in 1988. The population of Kaleej Pheasant Lophura leucomelanos also appears to be large (Gaston et al. 1981) but actual density estimates are not available.

This IBA lies in the Western Himalayas Endemic Bird Areas (EBA). It also has biome-restricted species of Sino-Himalayan Temperate Forest (Biome-7) and some of Sino-Himalayan Subtropical Forest (Biome-8). BirdLife International (undated) has listed 112 species in Biome-7. From the preliminary list that we have, we could find only seven species from this site. This shows the paucity of information and not paucity of bird life of this IBA. If detailed studies of birds are conducted, perhaps more biome and globally threatened species would be found in this site.

**Avifauna**

This site is selected as an IBA due to the presence of the globally threatened Cheer Pheasant, and also the presence of middle-altitude forest of the lower ranges of the Western Himalayas. As we do not have much information on the general bird life, the site is considered as Data Deficient.

**Vulnerable**
- Cheer Pheasant Catreus wallichii

**Endemic Bird Area 128: Western Himalayas**
- Cheer Pheasant Catreus wallichii

**Biome-7: Sino-Himalayan Temperate Forest**
- Koklass Pheasant Pucrasia macrolopha
- Speckled Wood-Pigeon Columba Hodgsonii
- Himalayan Pied Woodpecker Dendrocopus Himalayensis
- Simla Crested Tit Parus rufonuchalis
- Spot-winged Crested Tit Parus melanolophus
- Green-backed Tit Parus monticulus
- Yellow-billed Blue Magpie Urocissa flavirostris

**Other Key Fauna**

Large mammals include Leopard Panthera pardus, Barking Deer or Indian Muntjak Muntiacus muntjak, and Goral Nemorhaedus goral. Non-human primates include the Rhesus Macaque Macaca mulatta and Common Langur Semnopithecus entellus. The Yellow-throated Marten Martes flavivaga, and Porcupine Hystrix indica are also found (Gaston et al. 1981, 1983). Flying Squirrel Petaurista Petaurista is also present, but the Himalayan Musk Deer Moschus chrysogaster, of which Gaston (1979) had found signs in this area, may be locally extinct (Green 1981).

**Land Use**
- Nature conservation and research
- Water catchment

**Threats and Conservation Issues**
- Illegal grazing

Shimla Water Catchment area represents the only remaining undisturbed middle altitude forest in the lower ranges of the Western Himalayas and is the main water catchment area for Shimla (Gaston et al. 1981, Singh et al. 1990).
Apart from a little tree felling during World War II, the area has been totally protected, since settlements were relocated in the early part of the 20th Century (Gaston et al. 1981). Public access is prohibited, but permits are issued for extraction of fodder.

**KEY CONTRIBUTOR**
IBA team

**KEY REFERENCES**


GENERAL DESCRIPTION

Talra Wildlife Sanctuary was first notified in 1962 and then renominated in 1974, under the Indian Wildlife (Protection) Act 1972. During the British period, and for almost two decades after Independence, it was a popular hunting area for big game as well as birds. Hunters used to come here for Asiatic Black Bear *Ursus thibetanus*, Barking Deer *Muntiacus muntjak* and pheasants. Poachers hunted Musk Deer *Moschus chrysogaster*.

In order to protect these animals, and also to protect the catchment areas of perennial streams, this Sanctuary came into existence. However, due to the growth in human population, very few areas are now left undisturbed. Only steep and inaccessible areas harbour natural forest and wildlife (Singh *et al.* 1990).

Two main forest types seen here are: West Himalayan Upper Oak/Fir Forest and Lower Western Himalayan Temperate Forest, according to the classification of Champion and Seth (1968).

AVIFAUNA

The globally threatened Cheer Pheasant *Catreus wallichii* and Western Tragopan *Tragopan melanocephalus* are seen in small numbers, while Himalayan or Impeyan Monal *Lophophorus impejanus* and Koklass *Pucrasia macrolopha* are fairly common.

Mahabal (2000) has identified 61 species from this Sanctuary. Fifty-one are resident birds, most of them quite common. The site lies in Biome-7 (Sino-Himalayan Temperate Forest) and Biome-8 (Sino-Himalayan Sub-tropical Forest). Birds of both these biomes were seen but most birds belong to Biome-7. Biome-7 occurs between c. 1,800 m to 3,600 m, which is also the range of this site (1,500 - 3,324 m). Biome-8 ranges from c. 1,000 m to 2,000 m so for some altitudinal range, both these biomes overlap. Moreover, many species show altitudinal movement so it is not unexpected that they are seen in different biomes. At this IBA site, 17 species of Biome-7, 5 species of Biome-8 and one species of Biome-5 (Himalayan Griffon *Gyps himalayensis*) are found.

This IBA lies in the Western Himalayas Endemic Bird Areas (EBA). Two restricted range species are found, both happen to be also globally threatened birds (BirdLife International 2001).

OTHER KEY FAUNA

Asiatic Black Bear *Ursus thibetanus* and Leopard *Panthera pardus* are the major predators on Barking Deer *Muntiacus muntjak*, Musk deer *Moschus chrysogaster* and Goral *Nemorhaedus goral*. Common Langur *Semnopithecus entellus* is common, especially at lower elevations.
Important Bird Areas in India – Himachal Pradesh

LAND USE
- Agriculture
- Human habitation
- Grazing
- Collection of Non Timber Forest Produce

THREATS AND CONSERVATION ISSUES
- Grazing
- Poaching
- Tree felling

Biotic pressure in this IBA is extremely high. There is one village inside the Sanctuary and seven on the periphery, with a total population of more than 5,000. Villagers have rights and leases for grazing, collection of Non-Timber Forest Produce, fuelwood and medicinal plants. Graziers (gujjars) from outside also come to this area. All this puts great pressure on the limited resources of this small sanctuary.

KEY CONTRIBUTOR
IBA Team

KEY REFERENCES
GENERAL DESCRIPTION
This high altitude Sanctuary in Kullu district is adjacent to the Great Himalayan National Park. Part of its originally declared area has now been included in the Great Himalayan National Park. The Sanctuary forms part of the catchment area of the Tirthan river. There are a great variety of forest types due to the variations in altitude.

Forest types include Ban Oak Forest, Moist Deodar Forest, Western Mixed Coniferous forest, Moist Temperate Deciduous Forest, Kharsu Oak Forest and alpine pastures (Singh et al. 1990).

AVIFAUNA
Except for a brief description in Singh et al. (1990), not much information is available in the literature, particularly on the avifauna of this area. Western Tragopan Tragopan melanocephalus and Cheer Pheasant Catreus wallichii, two globally threatened species, are found here (R. Kaul pers. comm. 2002). Other pheasants found are Himalayan or Impeyan Monal Lophophorus impejanus, Koklass Pheasant Pucrasia macrolopha and Red Junglefowl Gallus gallus.

According to the endemic bird areas of the world, described by Stattersfield et al. (1998), Tirthan WLS would come under the Western Himalayas Endemic Bird Areas (EBA). This important EBA of India has 11 Restricted Range (endemic) birds, out which three have been identified from this site. Once we have a detailed bird list, perhaps more restricted range species would be found here.

This site also has biome-restricted species of Biome-7 (Sino-Himalayan Temperate Forest) and Biome-5 (Eurasian High Montane- Alpine and Tibetan). BirdLife International (undated) has listed 112 species in Biome-7. We could find evidence of only two Biome-7 species. As we do not have a good bird list of this site, we do not know how many more birds of this biome are found here. Similarly, data on Biome-5 species are also lacking. Based on the available list of mammals and the extent of forest cover available, it is likely that many restricted range and biome-restricted bird species would be present in this IBA. As it adjoins the Great Himalayan NP, where the bird life is comparatively better known (300 species of birds; Gaston et al. 1994), it is likely that similar number of birds are present in Tirthan also. Nevertheless, presently we are considering this as a Data Deficient site as far as general bird life is considered. We have included Tirthan WLS in the IBA list based on confirmed evidence of two globally threatened and one restricted range species.

OTHER KEY FAUNA
This high altitude sanctuary has records of Snow Leopard Uncia uncia and its wild ungulate prey such as Blue Sheep or Bharal Pseudois nayaur, Musk Deer Moschus chrysogaster and Himalayan Tahr Hemitragus jemlahicus. At lower elevations, Barking Deer Muntiacus muntjak, Ibex Capra sibirica and Serow Nemorhaedus sumatraensis and their predator Leopard Panthera.
pardus have been reported. Other species include Brown Bear Ursus arctos and Asiatic Black Bear Ursus thibetanus. The Common Giant Flying Squirrel Petaurista petaurista albiventer, Kashmir Flying Squirrel Hylomyscus fimbriatus, Stone Marten Martes foina, Himalayan Weasel Mustela sibirica, Golden Jackal Canis aureus and Langur Semnopithecus entellus are some other mammal species recorded.

**LAND USE**
- Nature conservation and research
- Tourism and recreation

**THREATS AND CONSERVATION ISSUES**
- Burning of vegetation
- Grazing
- Firewood collection
- Timber extraction
- Mining

The people living in surrounding areas have rights to grazing, quarrying, agriculture, collection of timber, fuelwood and minor forest produce.

**KEY CONTRIBUTOR**
IBA team

**KEY REFERENCES**