

# Initial Environmental and Social Examination Report

**PUBLIC**

Project Number: 57072-001

Draft

May 2024

## India: Engie Solar Power Project

## PART 2: Appendices

Prepared by AECOM India Private Limited and ENREN Energy Private Limited for the Asian Development Bank (ADB).

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## Appendix A Participant List of Stakeholder Consultations

S.No	Stakeholder Type	Name & Address	Date of Consultation
1.	Client Representative	Manmohan Gite- HSE (Construction), Quality , ESG	30 <sup>th</sup> May 2023
2.	Land Aggregator	System Renewable Energy Limited	31 <sup>st</sup> May 2023
3.	Agriculture Labour	Mr. Kalubhai, Dhedhuki Village	30 <sup>th</sup> May 2023
4.	Landowner	Mr. Gopal Shah and Mr. Vipul Shah	30 <sup>th</sup> May 2023
5.	Landowner	Mr. Joru Bhai Bhimbhai	30 <sup>th</sup> May 2023
6.	Revenue Officials	Mr. Y. P Rana, Dy. Mamaldar (Dy.Thasildar)	31 <sup>st</sup> May 2023
7.	Village Representative	Mr. Dinesh, Panchada Gaun, Chotila	31 <sup>st</sup> May 2023
8.	Medical Officer	Dr. Methlo Koniya MBBS	31 <sup>st</sup> May 2023

## Appendix B IBAT Report



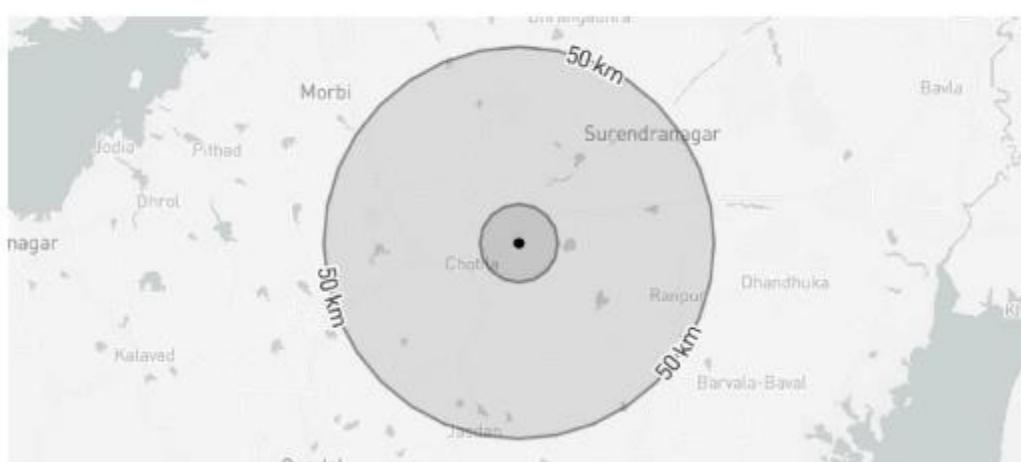
### Integrated Biodiversity Assessment Tool World Bank Group Biodiversity Risk Screen

#### ENGIE SURENDRANAGAR

- **Country:** India
- **Location:** [ 22.5, 71.3 ]
- **IUCN Red List Biomes:** Terrestrial, Freshwater
- **Created by:** Manmohan Gite

##### Overlaps with:

Protected Areas	1 km: 0	10 km: 0	50 km: 0	0
World Heritage (WH)	1 km: 0	10 km: 0	50 km: 0	0
Key Biodiversity Areas	1 km: 0	10 km: 0	50 km: 0	0
Alliance for Zero Extinction (AZE)	1 km: 0	10 km: 0	50 km: 0	0
IUCN Red List				13
Critical Habitat			Unclassified	



Displaying project location and buffers: 1 km, 10 km, 50 km



This report is based on IFC Performance Standard 6 (PS6) but applies to World Bank Environmental and Social Standard 6 (ESS6)



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## About this report

The recommendations stated alongside any Protected Areas and Key Biodiversity Areas identified in this report are determined by the following:

### Protected Areas:

- 'Highest risk. Seek expert help' is stated if the report identifies a designation that includes either 'natural' or 'mixed world heritage site'
- 'Assess for Critical Habitat' is stated if the report identifies a Strict Nature Reserve, Wilderness Area or National Park as coded by IUCN protected area categories Ia, Ib and II.
- 'Assess for biodiversity risk' is stated if the report identifies any other type of protected area.

### Key Biodiversity Areas:

- 'Highest risk. Seek expert help' is stated if the report identifies an Alliance for Zero Extinction site.
- 'Assess for Critical Habitat' is stated if the report identifies Critically Endangered or Endangered species OR species with restricted ranges OR congregatory species as coded in the IUCN Red List of Threatened Species.
- 'Assess for biodiversity risk' is stated if the report identifies any other type of Key Biodiversity Area.

IBAT provides initial screening for Critical Habitat values. Performance Standard 6 (PS6) defines these values for Critical Habitat (PS6: para. 16) and legally protected and internationally recognized areas (PS6: para. 20). PS6 will be triggered when IFC client activities are located in modified habitats containing "significant biodiversity value," natural habitats, Critical Habitats, legally protected areas, or areas that are internationally recognized for biodiversity. References to PS6 and Guidance Note 6 (GN6) are provided to guide further assessment and detailed definitions where necessary. Please see <https://www.ifc.org/ps6> for full details on PS6 and GN6.

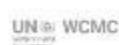
This report identifies restricted range species according to the KBA Standard definition ([hyperlink KBA Standard](https://portals.iucn.org/library/sites/library/files/documents/2016-048.pdf) <https://portals.iucn.org/library/sites/library/files/documents/2016-048.pdf>):

Species having a global range size less than or equal to the 25th percentile of range-size distribution in a taxonomic group within which all species have been mapped globally, up to a maximum of 50,000 km<sup>2</sup>. If all species in a taxonomic group have not been mapped globally, or if the 25th percentile of range-size distribution for a taxonomic group falls below 10,000 km<sup>2</sup>, restricted range should be defined as having a global range size less than or equal to 10,000 km<sup>2</sup>. For coastal, riverine and other species with linear distributions that do not exceed 200 km width at any point, restricted range is defined as having a global range less than or equal to 500 km linear geographic span (i.e. the distance between occupied locations furthest apart).

Note, sites supporting restricted range species can qualify as KBAs under criterion B2. These are sites that hold a significant proportion of the global population size of multiple restricted-range species, and so contribute significantly to the global persistence of biodiversity at the genetic and species level.

The report screens for known risks within a standard 50km buffer of the coordinates used for analysis. This buffer is not intended to indicate the area of impact. The report can be used to:

- Scope risks to include within an assessment of risks and impacts





- Identify gaps within an existing assessment of risks and impacts
- Prioritize between sites in a portfolio for further assessment of risks and impacts
- Inform a preliminary determination of Critical Habitat
- Assess the need for engaging a biodiversity specialist
- Identify additional conservation experts or organizations to inform further assessment or planning

WARNING: IBAT aims to provide the most up to date and accurate information available at the time of analysis. There is however a possibility of incomplete, incorrect or out of date information. All findings in this report must be supported by further desktop review, consultation with experts and/or on the ground field assessment as described in PS6 and GN6. Please consult IBAT for any additional disclaimers or recommendations applicable to the information used to generate this report.

Please note, sensitive species data are currently not included in IBAT reports in line with the [Sensitive Data Access Restrictions Policy for the IUCN Red List](#). This relates to sensitive Threatened species and KBAs triggered by sensitive species.

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### Priority Species

Habitat of significant importance to priority species will trigger Critical Habitat status (See PS6: para 16). IBAT provides a preliminary list of priority species that could occur within the 50km buffer. This list is drawn from the IUCN Red List of Threatened Species (IUCN RL). This list should be used to guide any further assessment, with the aim of confirming known or likely occurrence of these species within the project area. It is also possible that further assessment may confirm occurrence of additional priority species not listed here. It is strongly encouraged that any new species information collected by the project be shared with species experts and/or IUCN wherever possible in order to improve IUCN datasets.

### IUCN Red List of Threatened Species - CR & EN

The following species are potentially found within 50km of the area of interest.  
For the full IUCN Red List please refer to the associated csv in the report folder.

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
<i>Ardeotis nigriceps</i>	Great Indian Bustard	AVES	CR	Decreasing	Terrestrial
<i>Syphocetes indicus</i>	Lesser Florican	AVES	CR	Decreasing	Terrestrial
<i>Vanellus gregarius</i>	Sociable Lapwing	AVES	CR	Decreasing	Terrestrial
<i>Gyps bengalensis</i>	White-rumped Vulture	AVES	CR	Decreasing	Terrestrial
<i>Sarcogyps calvus</i>	Red-headed Vulture	AVES	CR	Decreasing	Terrestrial
<i>Gyps indicus</i>	Indian Vulture	AVES	CR	Decreasing	Terrestrial
<i>Manis crassicaudata</i>	Indian Pangolin	MAMMALIA	EN	Decreasing	Terrestrial
<i>Nilssonia gangetica</i>	Indian Softshell Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater



Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
<i>Sterna acuticauda</i>	Black-bellied Tern	AVES	EN	Decreasing	Terrestrial, Freshwater
<i>Haliaeetus leucoryphus</i>	Pallas's Fish-eagle	AVES	EN	Decreasing	Terrestrial, Freshwater
<i>Neophron percnopterus</i>	Egyptian Vulture	AVES	EN	Decreasing	Terrestrial, Freshwater
<i>Aquila nipalensis</i>	Steppe Eagle	AVES	EN	Decreasing	Terrestrial
<i>Falco cherrug</i>	Saker Falcon	AVES	EN	Decreasing	Terrestrial, Marine, Freshwater

#### Restricted Range Species

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
<i>Salvinia natans</i>	Floating Fern	POLYPODICOPSIDA	LC OR LR/LC	Decreasing	Freshwater
<i>Oryzias carmatus</i>	Spotted Ricefish	ACTINOPTERYGII	LC OR LR/LC	Unknown	Marine, Freshwater
<i>Macrobrachium rosenbergii</i>	Giant River Prawn	MALACOSTRACA	LC OR LR/LC	Unknown	Freshwater



### Biodiversity features which are likely to trigger Critical Habitat

#### Protected Areas

There are no protected areas to show for this report.

#### Key Biodiversity Areas

There are no key biodiversity areas to show for this report.

#### Species with potential to occur

Area Taxonomic group	Total assessed species	Total (CR, EN & VU)	CR	EN	VU	NT	LC	DD
AVES	321	22	6	5	11	23	276	0
MAMMALIA	60	4	0	1	3	3	53	0
REPTILIA	55	4	0	1	3	4	47	0
LILIOPSIDA	48	1	0	0	1	0	45	2
AMPHIBIA	7	0	0	0	0	0	7	0
INSECTA	34	0	0	0	0	0	33	1
MAGNOLIOPSIDA	29	0	0	0	0	0	28	1
AGARICOMYCETES	1	0	0	0	0	0	1	0
ACTINOPTERYGII	61	3	0	0	3	2	53	3
GASTROPODA	19	0	0	0	0	0	19	0
POLYPODIOPSIDA	3	0	0	0	0	0	3	0
BIVALVIA	5	0	0	0	0	0	5	0



Area Taxonomic group	Total assessed species	Total (CR, EN & VU)	CR	EN	VU	NT	LC	DD
MALACOSTRACA	2	0	0	0	0	0	2	0



### Recommended citation

IBAT PS6 & ESS6 Report. Generated under licence 35019-42818 from the Integrated Biodiversity Assessment Tool on 03 May 2023 (GMT). [www.ibat-alliance.org](http://www.ibat-alliance.org)

### Recommended Experts and Organizations

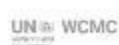
For projects located in Critical Habitat, clients must ensure that external experts with regional expertise are involved in further assessment (GN6, GN22). Clients are encouraged to develop partnerships with recognized and credible conservation organizations and/or academic institutes, especially with respect to potential developments in natural or Critical Habitat (GN6, GN23). Where Critical Habitats are triggered by priority species, species specialists must be involved. IBAT provides data originally collected by a large network of national partners, while species information is sourced via the IUCN Red List and affiliated Species Specialist Groups. These experts and organizations are listed below. Please note that this is not intended as a comprehensive list of organizations and experts. These organizations and experts are under no obligation to support any further assessment and do so entirely at their discretion and under their terms. Any views expressed or recommendations made by these stakeholders should not be attributed to the IFC or IBAT for IFC partners.

#### Birdlife Partners

URL: [https://www.birdlife.org/worldwide/partnership/birdlife\\_partners](https://www.birdlife.org/worldwide/partnership/birdlife_partners)

#### Directory for Species Survival Commission (SSC) Specialist Groups and Red List Authorities

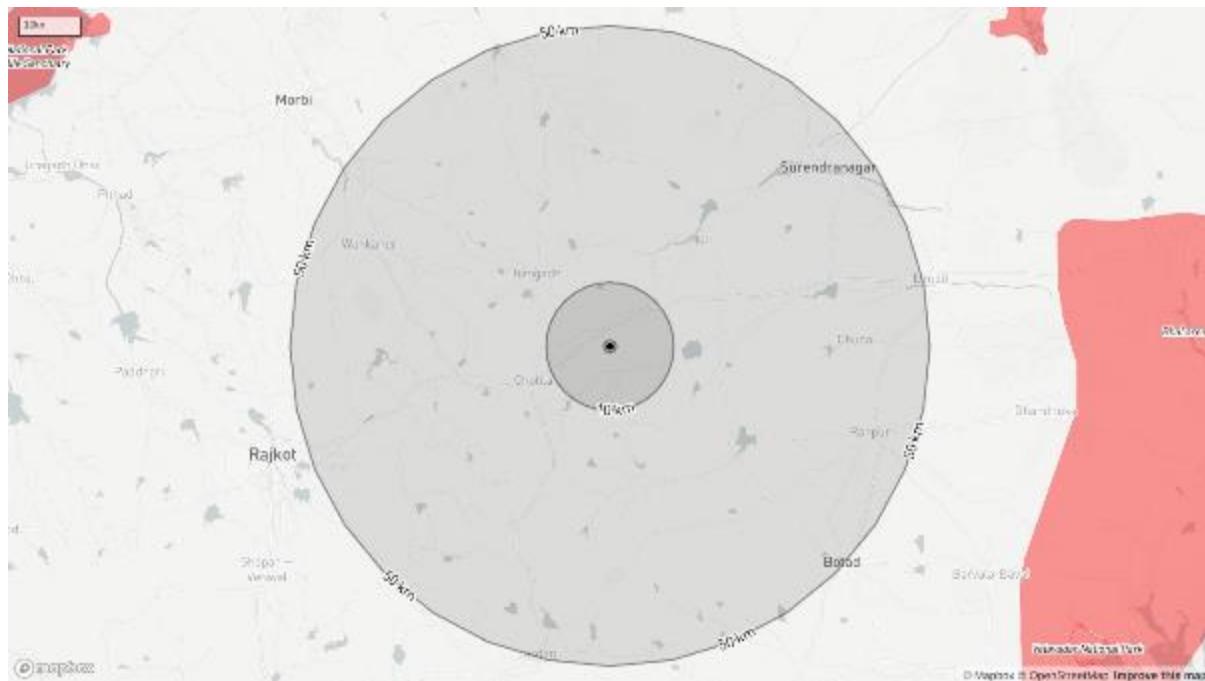
URL: <https://www.iucn.org/commissions/ssc-groups>



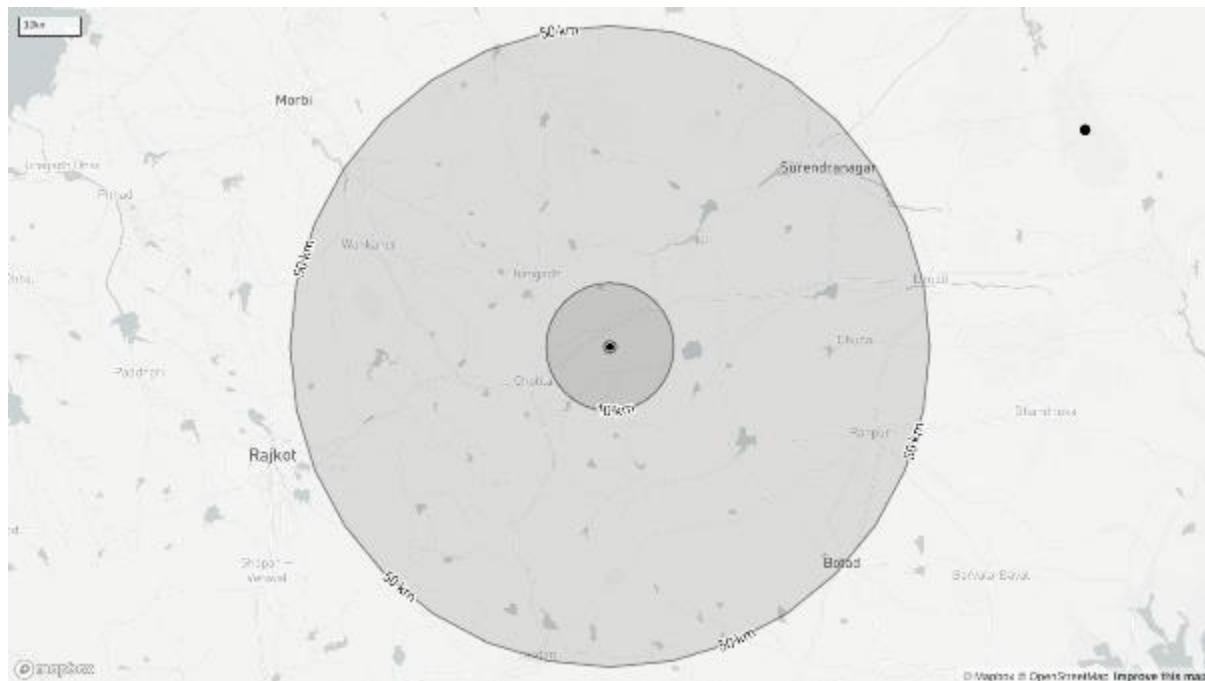
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## B.1 IBAT Output on Designated Areas

IBAT Output on Key Biodiversity Areas situated within 50 km of the Project Site:



IBAT Output on Protected Areas situated within 50km of the Project Site:



## Appendix C Plants recorded in the Study Area

Sr. No.	Scientific Name	Common Name	Habit	IUCN Status
<b>Woody Species</b>				
1	<i>Azadirachta indica</i>	Neem	Tree	Least Concern
2	<i>Balanites aegyptiaca</i>	Desert Date	Tree	Least Concern
3	<i>Calotropis procera</i>	Rubber Bush	Shrub	Not Evaluated
4	<i>Capparis decidua</i>	Bare Caper	Shrub	Least Concern
5	<i>Citrus limon</i>	Lemon	Tree	-
6	<i>Eucalyptus sp.</i>	-	Tree	-
7	<i>Mangifera indica</i>	Mango	Tree	Data Deficient
8	<i>Mimusops elengi</i>	Indian Medlar	Tree	Least Concern
9	<i>Moringa oleifera</i>	Drumstick Tree	Tree	Least Concern
10	<i>Prosopis juliflora</i>	Mesquite	Tree	Not Evaluated
11	<i>Psidium guajava</i>	Guava	Tree	Least Concern
12	<i>Ricinus communis</i>	Castor Bean Plant	Tree	Not Evaluated
13	<i>Salvadora oleoides</i>	Bada Peelu	Tree	Data Deficient
14	<i>Senegalia catechu</i>	Black Cutch	Tree	Least Concern
15	<i>Senna auriculata</i>	-	Shrub	-
16	<i>Thespesia populnea</i>	Portia Tree	Tree	Least Concern
17	<i>Vachellia leucophloea</i>	White Bark Acacia	Tree	Least Concern
18	<i>Vachellia nilotica</i>	Gum Arabic Tree	Tree	Least Concern
<b>Non-woody species</b>				
19	<i>Achyranthes aspera</i>	Prickly Chaff Flower	Herb	Not Evaluated
20	<i>Alternanthera sessilis</i>	Stalkless Joyweed	Herb	Not Evaluated
21	<i>Calligonum polygonoides</i>	Phog	Shrub	Not Evaluated
22	<i>Cucumis melo</i>	Melon	Climber	Not Evaluated
23	<i>Euphorbia nerifolia</i>	-	Tree	Not Evaluated
24	<i>Leptadenia pyrotechnica</i>	Kheenp	Shrub	Least Concern
25	<i>Opuntia sp.</i>	-	Shrub	-
26	<i>Solanum xanthocarpum</i>	Thorny Nightshade	Herb	Not Evaluated
27	<i>Ziziphus nummularia</i>	Jackal Jujube	Shrub	Least Concern

## Appendix D Mammals potentially occurring in the Study Area

SN	Scientific Name	Common Name	IUCN Red List Status*
1	<i>Acinonyx jubatus</i> #	Cheetah	VU
2	<i>Antilope cervicapra</i>	Blackbuck	LC
3	<i>Axis axis</i>	Chital	LC
4	<i>Bandicota bengalensis</i>	Lesser Bandicoot Rat	LC
5	<i>Bandicota indica</i>	Greater Bandicoot Rat	LC
6	<b><i>Boselaphus tragocamelus</i></b>	<b>Nilgai</b>	<b>LC</b>
7	<i>Canis aureus</i>	Golden Jackal	LC
8	<i>Canis lupus</i>	Grey Wolf	LC
9	<i>Caracal caracal</i>	Caracal	LC
10	<i>Cremnomys cutchicus</i>	Cutch Rock-rat	LC
11	<i>Cynopterus sphinx</i>	Greater Shortnosed Fruit Bat	LC
12	<i>Felis chaus</i>	Jungle Cat	LC
13	<i>Felis lybica</i>	Afro-Asiatic Wildcat	LC
14	<i>Funambulus pennantii</i>	Five-striped Palm Squirrel	LC
15	<i>Gazella bennettii</i>	Chinkara	LC
16	<i>Gerbillus nanus</i>	Dwarf Gerbil	LC
17	<i>Golunda ellioti</i>	Indian Bush-rat	LC
18	<i>Hemiechinus collaris</i>	Indian Long-eared Hedgehog	LC
19	<i>Herpestes edwardsii</i>	Indian Grey Mongoose	LC
20	<i>Hipposideros fulvus</i>	Fulvous Leaf-nosed Bat	LC
21	<i>Hyaena hyaena</i>	Striped Hyaena	NT
22	<i>Hystrix indica</i>	Indian Crested Porcupine	LC
23	<i>Lepus nigricollis</i>	Indian Hare	LC
24	<i>Lyroderma lyra</i>	Greater False Vampire	LC
25	<i>Macaca mulatta</i>	Rhesus Monkey	LC
26	<i>Manis crassicaudata</i>	Indian Pangolin	EN
27	<i>Mellivora capensis</i>	Honey Badger	LC
28	<i>Meriones hurrianae</i>	Indian Desert Gerbil	LC
29	<i>Millardia gleadowi</i>	Sand-coloured Metad	LC
30	<i>Millardia meltada</i>	Soft-furred Metad	LC
31	<i>Mus booduga</i>	Little Indian Field Mouse	LC
32	<i>Mus musculus</i>	House Mouse	LC
33	<i>Mus saxicola</i>	Brown Spiny Mouse	LC
34	<i>Mus terricolor</i>	Earth-colored Mouse	LC
35	<i>Panthera pardus</i> #	Leopard	VU
36	<i>Paraechinus micropus</i>	Indian Hedgehog	LC
37	<i>Pipistrellus ceylonicus</i>	Kelaart's Pipistrelle	LC
38	<i>Pipistrellus coromandra</i>	Coromandel Pipistrelle	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
39	<i>Prionailurus rubiginosus</i>	Rusty-spotted Cat	NT
40	<i>Pteropus giganteus</i>	Indian Flying Fox	LC
41	<i>Rattus rattus</i>	House Rat	LC
42	<i>Rhinopoma hardwickii</i>	Lesser Mouse-tailed Bat	LC
43	<i>Rhinopoma microphyllum</i>	Greater Mouse-tailed Bat	LC
44	<i>Rousettus leschenaultii</i>	Leschenault's Rousette	NT
45	<i>Rusa unicolor</i>	Sambar	VU
46	<i>Scotophilus heathii</i>	Greater Asiatic Yellow House Bat	LC
47	<i>Scotophilus kuhlii</i>	Lesser Asiatic Yellow House Bat	LC
48	<i>Scotozous dormeri</i>	Dormer's Pipistrelle	LC
49	<i>Suncus murinus</i>	House Shrew	LC
50	<i>Suncus stoliczkanus</i>	Anderson's Shrew	LC

\*Status assigned by the International Union for Conservation of Nature and Natural Resources, where LC – Least Concern, NT – Near Threatened, CR -Critically Endangered, EN - Endangered and VU - Vulnerable

## Appendix E Birds potentially occurring in the Study Area

SN	Scientific Name	Common Name	IUCN Red List Status*
1	<i>Accipiter badius</i>	Shikra	LC
2	<i>Accipiter nisus</i>	Eurasian Sparrowhawk	LC
3	<i>Acridotheres fuscus</i>	Jungle Myna	LC
4	<i>Acridotheres ginginianus</i>	Bank Myna	LC
5	<i>Acridotheres tristis</i>	Common Myna	LC
6	<i>Acrocephalus agricola</i>	Paddyfield Warbler	LC
7	<i>Acrocephalus stentoreus</i>	Clamorous Reed-warbler	LC
8	<i>Actitis hypoleucos</i>	Common Sandpiper	LC
9	<i>Aegithina nigrolutea</i>	Marshall's Iora	LC
10	<i>Aegithina tiphia</i>	Common Iora	LC
11	<i>Aegypius monachus</i>	Cinereous Vulture	NT
12	<i>Alauda gulgula</i>	Oriental Skylark	LC
13	<i>Alaudala raytal</i>	Sand Lark	LC
14	<i>Alcedo atthis</i>	Common Kingfisher	LC
15	<i>Alcippe poioicephala</i>	Brown-cheeked Fulvetta	LC
16	<i>Alexandrinius krameri</i>	Rose-ringed Parakeet	LC
17	<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	LC
18	<i>Ammomanes phoenicura</i>	Rufous-tailed Lark	LC
19	<i>Anas acuta</i>	Northern Pintail	LC
20	<i>Anas crecca</i>	Common Teal	LC
21	<i>Anas platyrhynchos</i>	Mallard	LC
22	<i>Anas poecilorhyncha</i>	Indian Spot-billed Duck	LC
23	<i>Anastomus oscitans</i>	Asian Openbill	LC
24	<i>Anhinga melanogaster</i>	Oriental Darter	NT
25	<i>Anser anser</i>	Greylag Goose	LC
26	<i>Anthropoides virgo</i>	Demoiselle Crane	LC
27	<i>Anthus campestris</i>	Tawny Pipit	LC
28	<i>Anthus godlewskii</i>	Blyth's Pipit	LC
29	<i>Anthus rufulus</i>	Paddyfield Pipit	LC
30	<i>Anthus similis</i>	Long-billed Pipit	LC
31	<i>Anthus trivialis</i>	Tree Pipit	LC
32	<i>Apus affinis</i>	Little Swift	LC
33	<i>Apus pacificus</i>	Pacific Swift	LC
34	<i>Aquila fasciata</i>	Bonelli's Eagle	LC
35	<i>Aquila heliaca</i>	Eastern Imperial Eagle	VU
36	<i>Aquila nipalensis</i>	Steppe Eagle	EN
37	<i>Aquila rapax</i>	Tawny Eagle	VU
38	<i>Ardea alba</i>	Great White Egret	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
39	<i>Ardea cinerea</i>	Grey Heron	LC
40	<i>Ardea intermedia</i>	Intermediate Egret	LC
41	<i>Ardea purpurea</i>	Purple Heron	LC
42	<i>Ardeola grayii</i>	Indian Pond-heron	LC
43	<i>Ardeotis nigriceps</i> #	Great Indian Bustard	CR
44	<i>Arenaria interpres</i>	Ruddy Turnstone	LC
45	<i>Argya caudata</i>	Common Babbler	LC
46	<i>Argya malcolmi</i>	Large Grey Babbler	LC
47	<i>Argya striata</i>	Jungle Babbler	LC
48	<i>Asio flammeus</i>	Short-eared Owl	LC
49	<i>Athene brama</i>	Spotted Owlet	LC
50	<i>Aythya ferina</i>	Common Pochard	VU
51	<i>Aythya fuligula</i>	Tufted Duck	LC
52	<i>Aythya nyroca</i>	Ferruginous Duck	NT
53	<i>Botaurus stellaris</i>	Eurasian Bittern	LC
54	<i>Bubo bengalensis</i>	Rock Eagle-owl	LC
55	<i>Bubo coromandus</i>	Dusky Eagle-owl	LC
56	<b><i>Bubulcus ibis</i></b>	<b>Cattle Egret</b>	<b>LC</b>
57	<i>Burhinus indicus</i>	Indian Thick-knee	LC
58	<i>Butastur teesa</i>	White-eyed Buzzard	LC
59	<i>Buteo rufinus</i>	Long-legged Buzzard	LC
60	<i>Butorides striata</i>	Green-backed Heron	LC
61	<i>Calandrella brachydactyla</i>	Greater Short-toed Lark	LC
62	<i>Calidris alba</i>	Sanderling	LC
63	<i>Calidris alpina</i>	Dunlin	LC
64	<i>Calidris canutus</i>	Red Knot	NT
65	<i>Calidris falcinellus</i>	Broad-billed Sandpiper	LC
66	<i>Calidris ferruginea</i>	Curlew Sandpiper	NT
67	<i>Calidris minuta</i>	Little Stint	LC
68	<i>Calidris pugnax</i>	Ruff	LC
69	<i>Caprimulgus affinis</i>	Savanna Nightjar	LC
70	<i>Caprimulgus asiaticus</i>	Indian Nightjar	LC
71	<i>Caprimulgus mahrattensis</i>	Sykes's Nightjar	LC
72	<i>Carpodacus erythrinus</i>	Common Rosefinch	LC
73	<i>Cecropis daurica</i>	Red-rumped Swallow	LC
74	<b><i>Centropus sinensis</i></b>	<b>Greater Coucal</b>	<b>LC</b>
75	<i>Ceryle rudis</i>	Pied Kingfisher	LC
76	<i>Charadrius alexandrinus</i>	Kentish Plover	LC
77	<i>Charadrius dubius</i>	Little Ringed Plover	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
78	<i>Charadrius leschenaultii</i>	Greater Sandplover	LC
79	<i>Charadrius mongolus</i>	Lesser Sandplover	LC
80	<i>Chlamydotis macqueenii</i>	Asian Houbara	VU
81	<i>Chlidonias hybrida</i>	Whiskered Tern	LC
82	<i>Chlidonias leucopterus</i>	White-winged Tern	LC
83	<i>Chrysomma sinense</i>	Yellow-eyed Babbler	LC
84	<i>Ciconia ciconia</i>	White Stork	LC
85	<i>Ciconia episcopus</i>	Asian Woollyneck	NT
86	<i>Ciconia nigra</i>	Black Stork	LC
87	<b><i>Cinnyris asiaticus</i></b>	<b>Purple Sunbird</b>	LC
88	<i>Circaetus gallicus</i>	Short-toed Snake-eagle	LC
89	<i>Circus aeruginosus</i>	Western Marsh-harrier	LC
90	<i>Circus cyaneus</i>	Hen Harrier	LC
91	<i>Circus macrourus</i>	Pallid Harrier	NT
92	<i>Circus pygargus</i>	Montagu's Harrier	LC
93	<i>Cisticola juncidis</i>	Zitting Cisticola	LC
94	<i>Clamator jacobinus</i>	Jacobin Cuckoo	LC
95	<i>Clanga clanga</i>	Greater Spotted Eagle	VU
96	<i>Clanga hastata</i>	Indian Spotted Eagle	VU
97	<i>Columba eversmanni</i>	Yellow-eyed Pigeon	VU
98	<b><i>Columba livia</i>*</b>	<b>Rock Dove</b>	LC
99	<b><i>Copsychus fulicatus</i></b>	<b>Indian Robin</b>	LC
100	<b><i>Copsychus saularis</i></b>	<b>Oriental Magpie-robin</b>	LC
101	<b><i>Coracias benghalensis</i></b>	<b>Indian Roller</b>	LC
102	<i>Coracina macei</i>	Indian Cuckooshrike	LC
103	<b><i>Corvus splendens</i></b>	<b>House Crow</b>	LC
104	<i>Coturnix coromandelica</i>	Rain Quail	LC
105	<i>Coturnix coturnix</i>	Common Quail	LC
106	<i>Cuculus canorus</i>	Common Cuckoo	LC
107	<i>Culicicapa ceylonensis</i>	Grey-headed Canary-flycatcher	LC
108	<i>Curruca crassirostris</i>	Eastern Orphean Warbler	LC
109	<i>Curruca curruca</i>	Lesser Whitethroat	LC
110	<i>Curruca nana</i>	Asian Desert Warbler	LC
111	<i>Cursorius coromandelicus</i>	Indian Courser	LC
112	<i>Cursorius cursor</i>	Cream-coloured Courser	LC
113	<i>Cyornis tickelliae</i>	Tickell's Blue-flycatcher	LC
114	<b><i>Cypsiurus balasiensis</i></b>	<b>Asian Palm-swift</b>	LC
115	<i>Dendrocitta vagabunda</i>	Rufous Treepie	LC
116	<i>Dendrocygna javanica</i>	Lesser Whistling-duck	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
117	<i>Dicrurus caerulescens</i>	White-bellied Drongo	LC
118	<i>Dicrurus leucophaeus</i>	Ashy Drongo	LC
<b>119</b>	<b><i>Dicrurus macrocercus</i></b>	<b>Black Drongo</b>	<b>LC</b>
120	<i>Dinopium benghalense</i>	Black-rumped Flameback	LC
121	<i>Dumetia hyperythra</i>	Tawny-bellied Babbler	LC
122	<i>Egretta garzetta</i>	Little Egret	LC
<b>123</b>	<b><i>Elanus caeruleus</i></b>	<b>Black-winged Kite</b>	<b>LC</b>
124	<i>Emberiza bruniceps</i>	Red-headed Bunting	LC
125	<i>Emberiza buchanani</i>	Grey-necked Bunting	LC
126	<i>Emberiza lathami</i>	Crested Bunting	LC
127	<i>Emberiza melanocephala</i>	Black-headed Bunting	LC
128	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	NT
<b>129</b>	<b><i>Eremopterix griseus</i></b>	<b>Ashy-crowned Sparrow-lark</b>	<b>LC</b>
130	<i>Eremopterix nigriceps</i>	Black-crowned Sparrow-lark	LC
131	<i>Esacus recurvirostris</i>	Great Thick-knee	NT
<b>132</b>	<b><i>Eudynamys scolopaceus</i></b>	<b>Western Koel</b>	<b>LC</b>
133	<i>Eumyias thalassinus</i>	Verditer Flycatcher	LC
134	<i>Euodice malabarica</i>	Indian Silverbill	LC
135	<i>Falco amurensis</i>	Amur Falcon	LC
136	<i>Falco cherrug</i>	Saker Falcon	EN
137	<i>Falco chicquera</i>	Red-headed Falcon	NT
138	<i>Falco columbarius</i>	Merlin	LC
139	<i>Falco jugger</i>	Laggar Falcon	NT
140	<i>Falco naumanni</i>	Lesser Kestrel	LC
141	<i>Falco peregrinus</i>	Peregrine Falcon	LC
142	<i>Falco tinnunculus</i>	Common Kestrel	LC
143	<i>Ficedula parva</i>	Red-breasted Flycatcher	LC
144	<i>Ficedula ruficauda</i>	Rusty-tailed Flycatcher	LC
145	<i>Francolinus pictus</i>	Painted Francolin	LC
146	<i>Fulica atra</i>	Common Coot	LC
147	<i>Galerida cristata</i>	Crested Lark	LC
148	<i>Galerida deva</i>	Sykes's Lark	LC
149	<i>Gallicrex cinerea</i>	Watercock	LC
150	<i>Gallinago gallinago</i>	Common Snipe	LC
151	<i>Gallinago stenura</i>	Pintail Snipe	LC
152	<i>Gallinula chloropus</i>	Common Moorhen	LC
153	<i>Gelochelidon nilotica</i>	Common Gull-billed Tern	LC
154	<i>Glareola lactea</i>	Little Pratincole	LC
155	<i>Glareola maldivarum</i>	Oriental Pratincole	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
156	<i>Grus antigone</i>	Sarus Crane	VU
157	<i>Grus grus</i>	Common Crane	LC
158	<i>Gymnoris xanthocollis</i>	Chestnut-shouldered Bush-sparrow	LC
159	<i>Gyps bengalensis</i>	White-rumped Vulture	CR
160	<i>Gyps fulvus</i>	Griffon Vulture	LC
161	<i>Gyps himalayensis</i>	Himalayan Griffon	NT
162	<i>Gyps indicus</i>	Indian Vulture	CR
163	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	NT
164	<i>Halcyon smyrnensis</i>	White-breasted Kingfisher	LC
165	<i>Haliaeetus leucoryphus</i>	Pallas's Fish-eagle	EN
166	<i>Haliastur indus</i>	Brahminy Kite	LC
167	<i>Hieraetus pennatus</i>	Booted Eagle	LC
168	<i>Hierococcyx varius</i>	Common Hawk-cuckoo	LC
169	<i>Himalayapsitta cyanocephala</i>	Plum-headed Parakeet	LC
170	<b><i>Himantopus himantopus</i></b>	<b>Black-winged Stilt</b>	<b>LC</b>
171	<i>Hirundo rustica</i>	Barn Swallow	LC
172	<i>Hirundo smithii</i>	Wire-tailed Swallow	LC
173	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	LC
174	<i>Hydroprogne caspia</i>	Caspian Tern	LC
175	<i>Hypothymis azurea</i>	Black-naped Monarch	LC
176	<i>Iduna rama</i>	Sykes's Warbler	LC
177	<i>Jynx torquilla</i>	Eurasian Wryneck	LC
178	<i>Ketupa zeylonensis</i>	Brown Fish-owl	LC
179	<i>Lanius excubitor</i>	Great Grey Shrike	LC
180	<i>Lanius isabellinus</i>	Isabelline Shrike	LC
181	<i>Lanius schach</i>	Long-tailed Shrike	LC
182	<i>Lanius vittatus</i>	Bay-backed Shrike	LC
183	<i>Larus brunnicephalus</i>	Brown-headed Gull	LC
184	<i>Larus fuscus</i>	Lesser Black-backed Gull	LC
185	<i>Larus genei</i>	Slender-billed Gull	LC
186	<i>Larus ichthyaetus</i>	Pallas's Gull	LC
187	<i>Larus ridibundus</i>	Black-headed Gull	LC
188	<i>Leiopicus mahrattensis</i>	Yellow-crowned Woodpecker	LC
189	<i>Limosa lapponica</i>	Bar-tailed Godwit	NT
190	<i>Limosa limosa</i>	Black-tailed Godwit	NT
191	<i>Lonchura malacca</i>	Tricoloured Munia	LC
192	<i>Luscinia svecica</i>	Bluethroat	LC
193	<i>Mareca penelope</i>	Eurasian Wigeon	LC
194	<i>Marmaronetta angustirostris</i>	Marbled Teal	NT

SN	Scientific Name	Common Name	IUCN Red List Status*
195	<i>Merops orientalis</i>	Asian Green Bee-eater	LC
196	<i>Merops persicus</i>	Blue-cheeked Bee-eater	LC
197	<i>Metopidius indicus</i>	Bronze-winged Jacana	LC
198	<i>Microcarbo niger</i>	Little Cormorant	LC
199	<i>Milvus migrans</i>	Black Kite	LC
200	<i>Mirafra erythroptera</i>	Indian Bushlark	LC
201	<i>Mirafra javanica</i>	Horsfield's Bushlark	LC
202	<i>Monticola solitarius</i>	Blue Rock-thrush	LC
203	<i>Motacilla alba</i>	White Wagtail	LC
204	<i>Motacilla cinerea</i>	Grey Wagtail	LC
205	<i>Motacilla citreola</i>	Citrine Wagtail	LC
206	<i>Motacilla flava</i>	Western Yellow Wagtail	LC
207	<i>Motacilla maderaspatensis</i>	White-browed Wagtail	LC
208	<i>Muscicapa dauurica</i>	Asian Brown Flycatcher	LC
209	<i>Mycteria leucocephala</i>	Painted Stork	NT
210	<i>Neophron percnopterus</i>	Egyptian Vulture	EN
211	<i>Netta rufina</i>	Red-crested Pochard	LC
212	<i>Nettapus coromandelianus</i>	Cotton Pygmy-goose	LC
213	<i>Numenius arquata</i>	Eurasian Curlew	NT
214	<i>Numenius phaeopus</i>	Whimbrel	LC
215	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	LC
216	<i>Ocypteros birostris</i>	Indian Grey Hornbill	LC
217	<i>Oenanthe chrysopygia</i>	Red-tailed Wheatear	LC
218	<i>Oenanthe deserti</i>	Desert Wheatear	LC
219	<i>Oenanthe fusca</i>	Brown Rockchat	LC
220	<i>Oenanthe isabellina</i>	Isabelline Wheatear	LC
221	<i>Oenanthe picata</i>	Variable Wheatear	LC
222	<i>Oriolus xanthornus</i>	Black-hooded Oriole	LC
223	<i>Orthotomus sutorius</i>	Common Tailorbird	LC
224	<i>Ortygornis pondicerianus</i>	Grey Francolin	LC
225	<i>Otus brucei</i>	Pallid Scops-owl	LC
226	<i>Otus sunia</i>	Oriental Scops-owl	LC
227	<i>Pandion haliaetus</i>	Osprey	LC
228	<i>Parus major</i>	Great Tit	LC
229	<i>Passer domesticus</i>	House Sparrow	LC
230	<i>Pastor roseus</i>	Rosy Starling	LC
231	<i>Pavo cristatus</i>	Indian Peafowl	LC
232	<i>Pelecanus crispus</i>	Dalmatian Pelican	NT
233	<i>Pelecanus onocrotalus</i>	Great White Pelican	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
234	<i>Pelecanus philippensis</i>	Spot-billed Pelican	NT
235	<i>Perdicula argoondah</i>	Rock Bush-quail	LC
236	<i>Perdicula asiatica</i>	Jungle Bush-quail	LC
237	<i>Pericrocotus cinnamomeus</i>	Small Minivet	LC
238	<i>Pericrocotus erythropygius</i>	White-bellied Minivet	LC
239	<i>Pericrocotus ethologus</i>	Long-tailed Minivet	LC
240	<i>Pernis ptilorhynchus</i>	Oriental Honey-buzzard	LC
241	<i>Petrochelidon fluvicola</i>	Streak-throated Swallow	LC
242	<i>Phalacrocorax carbo</i>	Great Cormorant	LC
243	<i>Phoeniconaias minor</i>	Lesser Flamingo	NT
244	<i>Phoenicopterus roseus</i>	Greater Flamingo	LC
245	<i>Phoenicurus ochruros</i>	Black Redstart	LC
246	<i>Phylloscopus nitidus</i>	Green Warbler	LC
247	<i>Phylloscopus tristis</i>	Siberian Chiffchaff	LC
248	<i>Phylloscopus trochiloides</i>	Greenish Warbler	LC
249	<i>Picoides nanus</i>	Indian Pygmy Woodpecker	LC
250	<i>Pitta brachyura</i>	Indian Pitta	LC
251	<i>Platalea leucorodia</i>	Eurasian Spoonbill	LC
252	<i>Plegadis falcinellus</i>	Glossy Ibis	LC
253	<i>Ploceus benghalensis</i>	Black-breasted Weaver	LC
254	<b><i>Ploceus philippinus</i></b>	<b>Baya Weaver</b>	<b>LC</b>
255	<i>Pluvialis fulva</i>	Pacific Golden Plover	LC
256	<i>Pluvialis squatarola</i>	Grey Plover	LC
257	<i>Podiceps cristatus</i>	Great Crested Grebe	LC
258	<i>Podiceps nigricollis</i>	Black-necked Grebe	LC
259	<i>Porphyrio porphyrio</i>	Purple Swamphen	LC
260	<i>Porzana porzana</i>	Spotted Crake	LC
261	<i>Prinia buchanani</i>	Rufous-fronted Prinia	LC
262	<i>Prinia gracilis</i>	Graceful Prinia	LC
263	<i>Prinia hodgsonii</i>	Grey-breasted Prinia	LC
264	<i>Prinia inornata</i>	Plain Prinia	LC
265	<i>Prinia socialis</i>	Ashy Prinia	LC
266	<i>Prinia sylvatica</i>	Jungle Prinia	LC
267	<i>Pseudibis papillosa</i>	Red-naped Ibis	LC
268	<i>Psilopogon haemacephalus</i>	Coppersmith Barbet	LC
269	<i>Pterocles exustus</i>	Chestnut-bellied Sandgrouse	LC
270	<i>Pterocles indicus</i>	Painted Sandgrouse	LC
271	<i>Pterocles orientalis</i>	Black-bellied Sandgrouse	LC
272	<i>Pterocles senegallus</i>	Spotted Sandgrouse	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
273	<i>Ptyonoprogne concolor</i>	Dusky Crag Martin	LC
274	<i>Pycnonotus cafer</i>	<b>Red-vented Bulbul</b>	LC
275	<i>Pycnonotus leucotis</i>	White-eared Bulbul	LC
276	<i>Recurvirostra avosetta</i>	Pied Avocet	LC
277	<i>Rhipidura aureola</i>	White-browed Fantail	LC
278	<i>Riparia chinensis</i>	Asian Plain Martin	LC
279	<i>Riparia diluta</i>	Pale Sand Martin	LC
280	<i>Rostratula benghalensis</i>	Greater Painted-snipe	LC
281	<i>Sarcogyps calvus</i>	Red-headed Vulture	CR
282	<i>Sarkidiornis melanotos</i>	African Comb Duck	LC
283	<i>Saxicola caprata</i>	Pied Bushchat	LC
284	<i>Saxicola macrorhynchus</i>	White-browed Bushchat	VU
285	<i>Saxicola torquatus</i>	Common Stonechat	LC
286	<i>Schoenicola striatus</i>	Bristled Grassbird	VU
287	<i>Spatula clypeata</i>	Northern Shoveler	LC
288	<i>Spatula querquedula</i>	Garganey	LC
289	<i>Spilopelia senegalensis</i>	<b>Laughing Dove</b>	LC
290	<i>Spilopelia suratensis</i>	<b>Western Spotted Dove</b>	LC
291	<i>Sterna acuticauda</i>	Black-bellied Tern	EN
292	<i>Sterna aurantia</i>	River Tern	VU
293	<i>Streptopelia decaocto</i>	<b>Eurasian Collared-dove</b>	LC
294	<i>Streptopelia tranquebarica</i>	Red Turtle-dove	LC
295	<i>Sturnia malabarica</i>	Chestnut-tailed Starling	LC
296	<i>Sturnia pagodarum</i>	<b>Brahminy Starling</b>	LC
297	<i>Syphoetides indicus</i>	Lesser Florican	CR
298	<i>Taccocua leschenaultii</i>	Sirkeer Malkoha	LC
299	<i>Tachybaptus ruficollis</i>	Little Grebe	LC
300	<i>Tephrodornis pondicerianus</i>	Common Woodshrike	LC
301	<i>Terpsiphone paradisi</i>	Indian Paradise-flycatcher	LC
302	<i>Threskiornis melanocephalus</i>	Black-headed Ibis	NT
303	<i>Treron phoenicopterus</i>	Yellow-footed Green-pigeon	LC
304	<i>Tringa erythropus</i>	Spotted Redshank	LC
305	<i>Tringa glareola</i>	Wood Sandpiper	LC
306	<i>Tringa nebularia</i>	Common Greenshank	LC
307	<i>Tringa ochropus</i>	Green Sandpiper	LC
308	<i>Tringa stagnatilis</i>	Marsh Sandpiper	LC
309	<i>Tringa totanus</i>	Common Redshank	LC
310	<i>Turnix sylvaticus</i>	Common Buttonquail	LC
311	<i>Turnix tanki</i>	Yellow-legged Buttonquail	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
312	<i>Tyto alba</i>	Common Barn-owl	LC
313	<i>Upupa epops</i>	Common Hoopoe	LC
314	<i>Vanellus gregarius</i>	Sociable Lapwing	CR
<b>315</b>	<b><i>Vanellus indicus</i></b>	<b>Red-wattled Lapwing</b>	<b>LC</b>
316	<i>Vanellus leucurus</i>	White-tailed Lapwing	LC
<b>317</b>	<b><i>Vanellus malabaricus</i></b>	<b>Yellow-wattled Lapwing</b>	<b>LC</b>
318	<i>Vanellus vanellus</i>	Northern Lapwing	NT
319	<i>Zapornia akool</i>	Brown Crake	LC
320	<i>Zapornia pusilla</i>	Baillon's Crake	LC
321	<i>Zosterops palpebrosus</i>	Indian White-eye	LC

\*Status assigned by the International Union for Conservation of Nature and Natural Resources, where LC – Least Concern, NT – Near Threatened, CR -Critically Endangered, EN - Endangered and VU - Vulnerable

## Appendix F Reptiles potentially occurring in the Study Area

SN	Scientific Name	Common Name	IUCN Red List Status*
1	<i>Acanthodactylus cantoris</i>	Indian Fringe-fingered Lizard	LC
2	<i>Ahaetulla nasuta</i>	Long-nosed Tree Snake	LC
3	<i>Amphiesma stolatum</i>	Buff Striped Keelback	LC
4	<i>Argyrogena fasciolata</i>	Banded Racer	LC
5	<i>Boiga forsteni</i>	Reddish Peninsular Cat Snake	LC
6	<i>Boiga trigonata</i>	Indian Gamma Snake	LC
7	<i>Bungarus caeruleus</i>	Common Krait	LC
8	<i>Bungarus sindanus</i>	Sind Krait	LC
9	<i>Calliophis melanurus</i>	Slender Coral Snake	LC
10	<b><i>Calotes minor</i></b>	<b>Hardwicke's Bloodsucker</b>	<b>LC</b>
11	<i>Calotes versicolor</i>	Changeable Lizard	LC
12	<i>Chamaeleo zeylanicus</i>	Asian Chameleon	LC
13	<i>Coelognathus heleneae</i>	Trinket Snake	LC
14	<i>Crocodylus palustris</i>	Mugger	VU
15	<i>Cyrtopodion kachhense</i>	Kachh Gecko	LC
16	<i>Daboia russelii</i>	Western Russel's Viper	LC
17	<i>Dendrelaphis tristis</i>	Daudin's Bronzeback	LC
18	<i>Echis carinatus</i>	Sindh Saw-scaled Viper	LC
19	<i>Elachistodon westermanni</i>	Indian Egg-eater	LC
20	<i>Eryx conicus</i>	Rough-tailed Sand Boa	NT
21	<i>Eryx johnii</i>	Red Sand Boa	NT
22	<i>Eublepharis fuscus</i>	Western Indian Leopard Gecko	LC
23	<i>Eurylepis taeniolatus</i>	Ribbon-sided Skink	LC
24	<i>Eutropis carinata</i>	Keeled Indian Mabuya	LC
25	<i>Eutropis dissimilis</i>	Striped Grass Mabuya	LC
26	<i>Eutropis macularia</i>	Bronze Mabuya	LC
27	<i>Fowlea piscator</i>	Chequered Keelback	LC
28	<i>Geochelone elegans</i>	Indian Star Tortoise	VU
29	<i>Hemidactylus brookii</i>	Brooke's House Gecko	LC
30	<i>Hemidactylus flaviviridis</i>	Yellow-bellied House Gecko	LC
31	<i>Hemidactylus frenatus</i>	Common House Gecko	LC
32	<i>Hemidactylus sahgali</i>	Sahgal's Termite Hill Gecko	LC
33	<i>Indotyphlops braminus</i>	Brahminy Blind Snake	LC
34	<i>Indotyphlops porrectus</i>	Stoliczka's Slender Blind Snake	LC
35	<i>Lissemys punctata</i>	Indian Flapshell Turtle	VU
36	<i>Lycodon aulicus</i>	Common Wolf Snake	LC
37	<i>Lycodon striatus</i>	Barred Wolf Snake	LC
38	<i>Lygosoma lineata</i>	Lined Supple Skink	LC

SN	Scientific Name	Common Name	IUCN Red List Status*
39	<i>Lygosoma punctata</i>	Common Dotted Garden Skink	LC
40	<i>Naja naja</i>	Indian Cobra	LC
41	<i>Nilssonia gangetica</i>	Indian Softshell Turtle	EN
42	<i>Oligodon arnensis</i>	Common Kukri Snake	LC
43	<i>Oligodon taeniatus</i>	Streaked Kukri Snake	LC
44	<i>Ophisops jerdonii</i>	Punjab-snake-eyed Lacerta	LC
45	<i>Ophisops kutchensis</i>	Kutch Small-scaled Snake-eye	LC
46	<i>Psammophis condanarus</i>	Sand Snake	LC
47	<i>Psammophis leithii</i>	Leith's Sand Snake	LC
48	<i>Ptyas mucosa</i>	Oriental Ratsnake	LC
49	<i>Python molurus</i>	Indian Rock Python	NT
50	<i>Sibynophis subpunctatus</i>	Dumeril's Black-headed Snake	LC
51	<i>Sitana spinaecephalus</i>	Spiny-headed Fan-throated Lizard	LC
52	<i>Trapezus agilis</i>	Brilliant Ground Agama	LC
53	<i>Varanus bengalensis</i>	Bengal Monitor Lizard	NT
54	<i>Varanus griseus</i>	Desert Monitor	LC
55	<i>Wallaceophis gujaratensis</i>	Wallace's Striped Snake	LC

\*Status assigned by the International Union for Conservation of Nature and Natural Resources, where LC – Least Concern, NT – Near Threatened, CR -Critically Endangered, EN - Endangered and VU - Vulnerable

## Appendix G Amphibians potentially occurring in the Study Area

SN	Scientific Name	Common Name	IUCN Red List Status*
1	<i>Duttaphrynus melanostictus</i>	Black-spectacled Toad	LC
2	<i>Duttaphrynus stomaticus</i>	Marbled toad	LC
3	<i>Euphlyctis cyanophlyctis</i>		LC
4	<i>Hoplobatrachus tigerinus</i>	Indian Bullfrog	LC
5	<i>Microhyla ornata</i>	Ant Frog	LC
6	<i>Polypedates maculatus</i>	Himalayan Tree Frog	LC
7	<i>Sphaerotheca breviceps</i>		LC

\*Status assigned by the International Union for Conservation of Nature and Natural Resources, where LC – Least Concern, NT – Near Threatened, CR -Critically Endangered, EN - Endangered and VU - Vulnerable

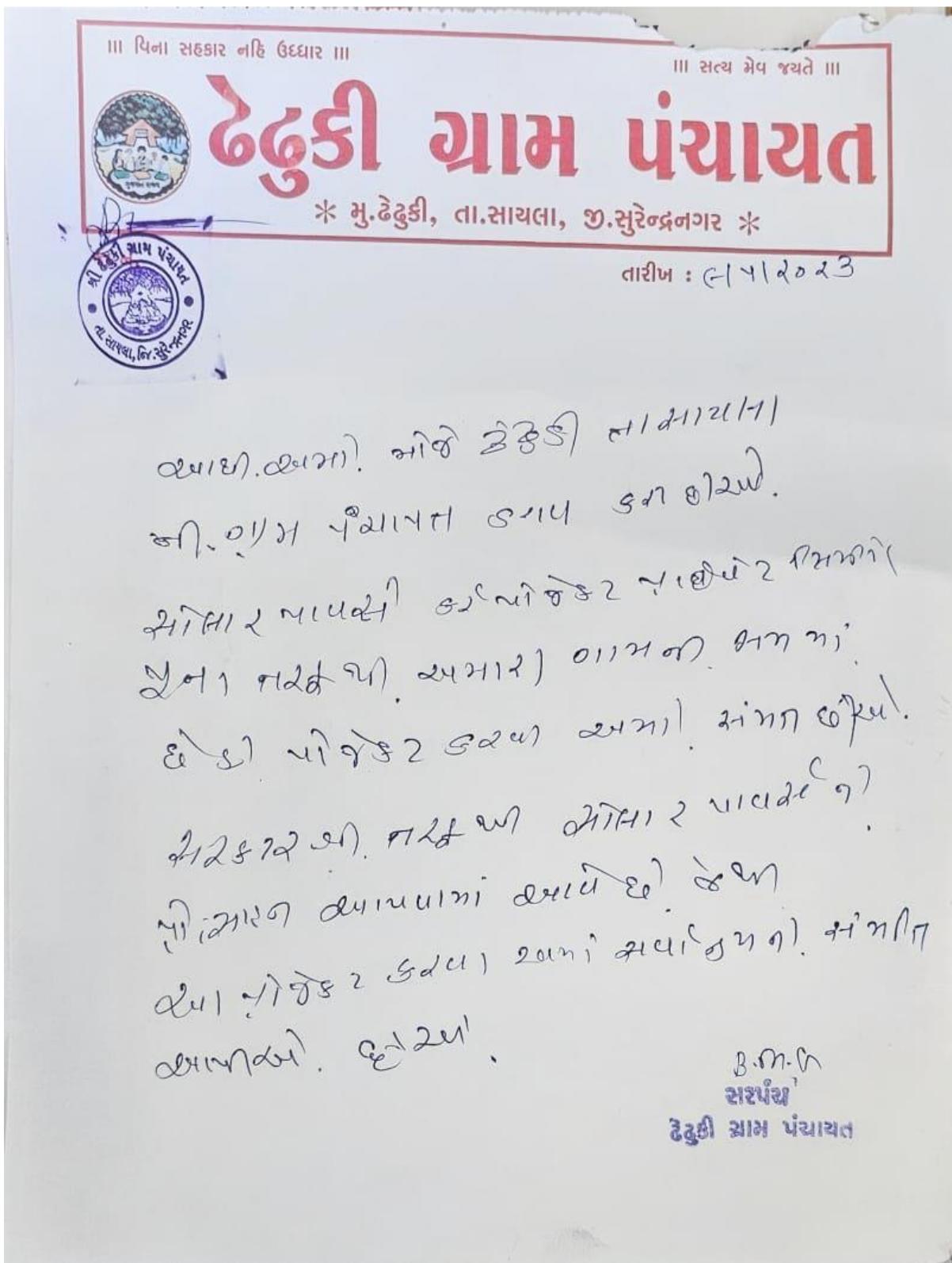
## Appendix H Fishes potentially occurring in the Study Area

SN	Scientific Name	Common Name	IUCN Red List Status*
1	<i>Ambassis urotaenia</i>	Bleeker's Glass Perchlet	LC
2	<i>Anabas testudineus</i>	Climbing Perch	LC
3	<i>Anguilla bicolor</i>	Shortfin Eel	NT
4	<i>Aplocheilus blockii</i>	Green Panchax	LC
5	<i>Aplocheilus panchax</i>	Blue Panchax	LC
6	<i>Aplocheilus parvus</i>	Dwarf panchax	LC
7	<i>Aurigequula fasciata</i>	Threadfin Ponyfish	LC
8	<i>Bagarius bagarius</i>		VU
9	<i>Channa gachua</i>	Dwarf Snakehead	LC
10	<i>Channa marulius</i>		LC
11	<i>Channa punctata</i>	Spotted Snakehead	LC
12	<i>Channa striata</i>	Snakehead Murrel	LC
13	<i>Chelon melinopterus</i>	Otomebora Mullet	LC
14	<i>Cirrhinus mrigala</i>	Mrigal	LC
15	<i>Crenimugil seheli</i>	Bluespot Mullet	LC
16	<i>Esomus danrica</i>	Flying barb	LC
17	<i>Eubleekeria splendens</i>	Splendid Ponyfish	LC
18	<i>Gazza minuta</i>	Toothed Ponyfish	LC
19	<i>Gymnostomus ariza</i>	Ariza Labeo	LC
20	<i>Hippichthys penicillatus</i>	Beady Pipefish	LC
21	<i>Labeo bata</i>	Minor Carp	LC
22	<i>Labeo boggut</i>	Boggut labeo	LC
23	<i>Labeo catla</i>	Catla	LC
24	<i>Leiognathus equulus</i>	Common Ponyfish	LC
25	<i>Lepidocephalichthys guntea</i>		LC
26	<i>Mastacembelus armatus</i>	Spiny Eel	LC
27	<i>Microphis brachyurus</i>	Opossum Pipefish	LC
28	<i>Monopterus albus</i>	Rice Swampeel	LC
29	<i>Monopterus javanensis</i>	Oriental Swamp Eel	LC
30	<i>Morone saxatilis</i>	Striped Bass	LC
31	<i>Mystus gulio</i>		LC
32	<i>Nandus nandus</i>		LC
33	<i>Neopomacentrus taeniurus</i>	Freshwater Damsel	DD
34	<i>Notopterus notopterus</i>		LC
35	<i>Oligolepis acutipennis</i>	Paintedfin Goby	LC
36	<i>Ompok bimaculatus</i>		NT
37	<i>Ophiocara porocephala</i>	Spangled Gudgeon	LC
38	<i>Oryzias carinatus</i>	Spotted Ricefish	LC

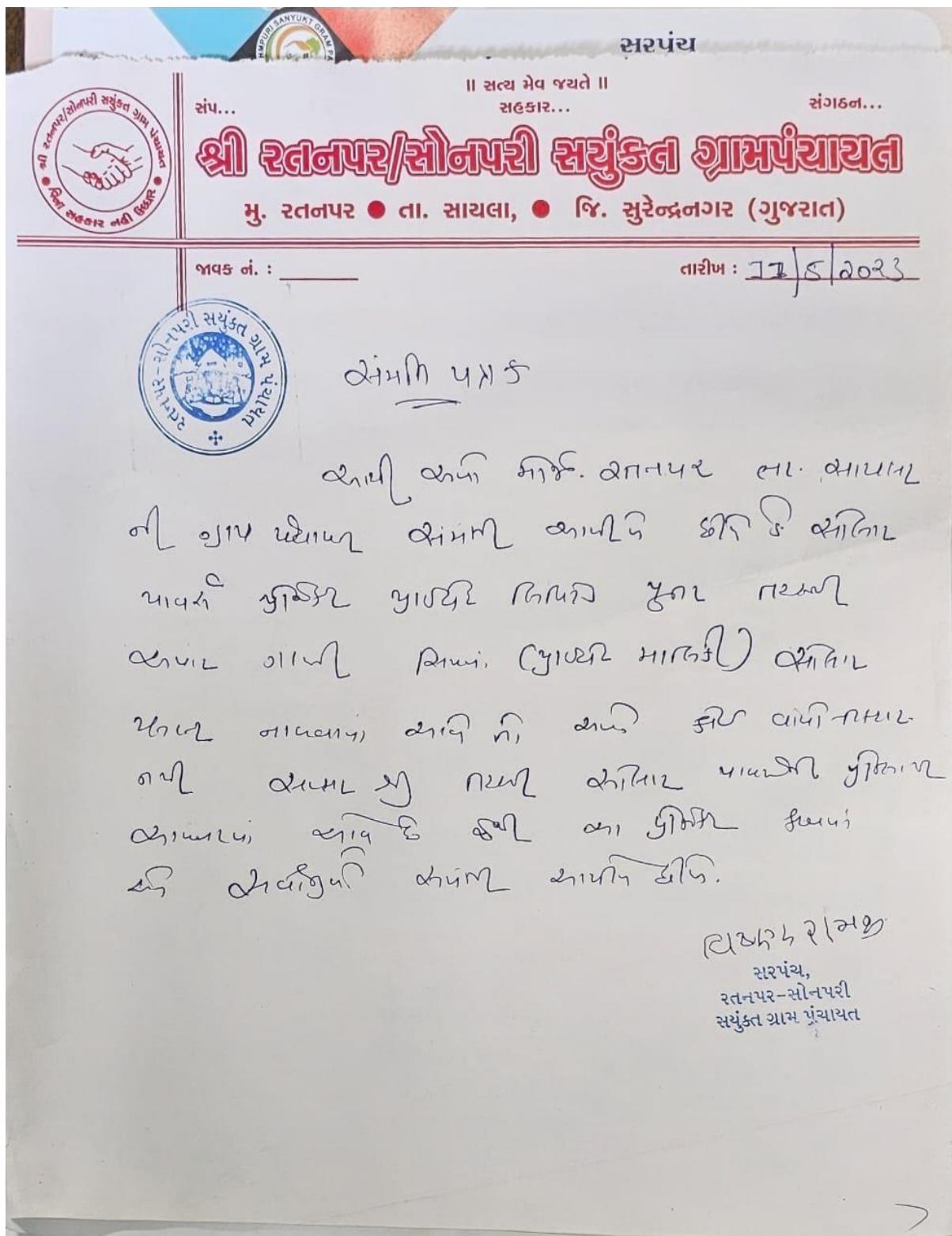
SN	Scientific Name	Common Name	IUCN Red List Status*
39	<i>Pachypterus atherinoides</i>	Indian Potasi	LC
40	<i>Parachiloglanis hodgarti</i>	Torrent Catfish	LC
41	<i>Pisodonophis boro</i>		LC
42	<i>Planiliza macrolepis</i>	Largescale Mullet	LC
43	<i>Planiliza planiceps</i>	Tade Gray Mullet	LC
44	<i>Platycephalus indicus</i>	Bartail Flathead	DD
45	<i>Plectorhinchus gibbosus</i>	Brown Sweetlips	LC
46	<i>Plicofollis dussumieri</i>	Blacktip Sea Catfish	LC
47	<i>Polynemus paradiseus</i>		LC
48	<i>Pomadasys argenteus</i>	Silver Javelin	LC
49	<i>Pseudapocryptes elongatus</i>		LC
50	<i>Puntius vittatus</i>		LC
51	<i>Rasbora daniconius</i>	Slender Barb	LC
52	<i>Rasbora microcephalus</i>		LC
53	<i>Scatophagus argus</i>	Spotted Scat	LC
54	<i>Schizothorax plagiostomus</i>	Snow Trout	VU
55	<i>Silonia silondia</i>	Silong Catfish	LC
56	<i>Sperata aor</i>	Long-whiskered Catfish	LC
57	<i>Taenioides cirratus</i>	Whiskered Eel Goby	DD
58	<i>Tenualosa ilisha</i>	Hilsa	LC
59	<i>Terapon jarbua</i>	Tiger Perch	LC
60	<i>Terapon theraps</i>	Largescaled Terapon	LC
61	<i>Wallago attu</i>		VU

\*Status assigned by the International Union for Conservation of Nature and Natural Resources, where LC – Least Concern, NT – Near Threatened, CR -Critically Endangered, EN - Endangered and VU - Vulnerable

## Appendix I Gram Panchayat NOCs



Dhedhuki Panchayat NOC



Ratanpar Panchayat NOC



સરપંચ  
શ્રી સરૈયા બોટાનાઈ કુકાભાઈ

## સાપર-બ્રહ્મપુરી સંયુક્ત ગ્રામ પંચાયત

મુ. સાપર, તા. સાયલા, જી. સુરેણ્દ્રાંગર-363 520 (ગુજરાત)

Mob. 99741 79999, 99787 62777



તારીખ : 12/05/2023

સામાજિક સંખ્યા 12/05/23

સિમાચ! ૧૦૧૦૦ ૩૮૧૯

જુદાનાં - ૧ મોને શાન્દુર ૦૧૮. માં પાઠ્યો જ્ઞાયારૂપુર  
સ્કૉલાર પાઠ્યો જ્ઞાયારી માં એન્જુફી વાયન.

દર્શાવી - ૧. સ્કૉલાર વ્યાયની આમાંદરાની  
દર્શાવકર્તાની સાથે છે. મોને દેખસર હો શાન્દુર  
ગીતાની લાભમાં શુરૂઆતે મંડિરની જ્ઞાયા તોનજ  
શાન્દુર ગીતાની પ્રાથ્મે જ્ઞાયામાં એન. જી. સ્કૉલાર પાઠ્યો  
પુના.. લાઘવી. સ્કૉલાર પ્રોફેસર જ્ઞાયારી માં  
નાચાયા રે. દાંડો રે ૧૪૨૧૨ નાની. સાર્વભૂતિક  
લાઘવી સ્કૉલાર પાઠ્યોને પ્રોત્સાહન રાખવાની જ્ઞાયા.  
આ પ્રોક્રીક્ટને પ્રચારાત છારી સાફટ્ટુન્ટો નાની દર્શાવ્યા।  
તો શાંતે છે.

સરપંચ  
શાપર/બ્રહ્મપુરી ગ્રામ પંચાયત  
નો ૧૨/૦૫/૨૩

દર્શાવાયા જ્ઞાયા  
સાર્વભૂતિક નાની જ્ઞાયા

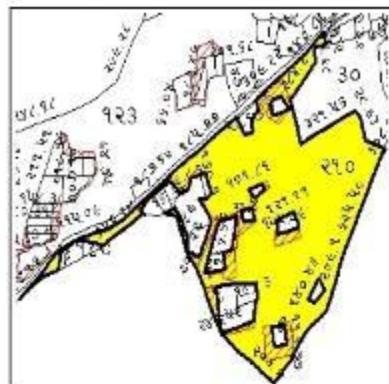


## Appendix J Sample Land Record

ગામ નમ્રણ નંબર ૭

(પ્રમાણેશન નોંધ નં. ૮૪૮ તા. ૨૬/૦૮/૨૦૧૯)

ચિહ્નાં:	મુદ્દેનગર
તાલુકા:	સાયલા
જામની મોદી:	શાપર
બ્લોક/ સરવે નંબર:	૨૧૦
સત્તા પદ્ધતિ:	સરકારી પડનર
જમીનનો ઉપગોક્ષ:	સરકારી પડનર
પેટરનનું નામ:	
અન્ય વિગતો:	
જુનો બ્લોક/ સરવે નંબર:	૬૦૦૫



લાયક જમીન	ક્ષેત્રફળ	પાતા નંબર ક્ષેત્રફળ ખાડાર	નોંધ નંબરો અને કલેડારો ના નામ
	ક્રી. એકર. મો.ગ્ર.	ક્રી. એકર. મો.ગ્ર.	
પા.એ. એ	૧૩૦.૫૩.૨૫		૮૪૮,
કુલ ક્ષેત્રફળ	૧૩૦.૫૩.૨૫	૧૧૫   ૧૩૦.૫૩.૨૫   ૦.૦૦	શ્રી સરકાર(૧૪૩)
અધિકાર રૂ.	૦.૦૦		
જુડી તથા વિશેષધારો રૂ	૦.૦૦		
પાણીભાગ રૂ.	૦.૦૦		
બાળોનિયાની વિગતો	બીજા હકી અને બોજાની વિગતો		
	C8C,		



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DS REVENUE DEPARTMENT  
GOVERNMENT OF GUJARAT  
Date: 28-03-2023 13:57:30 IST  
MAMLATDAR OFFICE, SAYALA



#-નામનંબર ૮-તાલુકાની ૧-૨૬  
ઉત્તી નોંધની અસર આપ્યા તા. ૦૫/૧૧/૨૦૧૭ ૧૧:૪૪:૩૧ ની સ્થિતિએ  
સૌઝન્ય : રાષ્ટ્રીય સુધીના-વિકાસ કેન્દ્ર, ગુજરાત, રાષ્ટ્ર

વેરાણી નકલ/ Chargable Copy એક રૂ. ૫.૦૦/- (દુપીયા પાચ પુસ્તક).

Page 1 of 1

## Appendix K Screening Details of the Critical Habitat Candidates

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	EEO (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
1	<i>Ardeotis nigriceps</i> <sup>44</sup> , Great Indian Bustard or GIB, CR, (i)	(50-249)	1	125000 00	0-?	G, A	<ul style="list-style-type: none"> <li>As per IUCN Red List, deemed Possibly Extinct in the EAAA.</li> <li>As per WII Report (dated 2020)<sup>45</sup>, nearest known GIB population consists of &lt;10 individuals occupying the area in &amp; around Lala-Naliya Sanctuary, Kutch (~ 250 km NW of EAAA), while nearest potential GIB habitat is situated (~ 200 km NW of EAAA).</li> <li>Nearest eBird records of GIB are from Velavadar and Mevasa (~ 86 km SE of EAAA)<sup>46</sup></li> </ul>	Unlikely to trigger CH
2	<i>Gyps bengalensis</i> <sup>47</sup> , White-rumped Vulture, CR, (i), (iii)	6,000-9,000	30	737000 0	0-1500	F, S, Sh, G, U	<ul style="list-style-type: none"> <li>~12% of the EAAA contains suitable habitat types.</li> <li>No roosts or congregation sites of the species are reported in or near the EAAA.</li> <li>As per inputs received from local birdwatchers, the nearest reported regular congregation sites of the species are situated in the 'Panjrapols' or local abattoirs of Viramgam &amp; Sanand, both situated &gt;100 km from the EAAA.</li> <li>Nearest eBird records (dated 1996 &amp; 1990, i.e. &gt; 25-30 years before the present) of the species with respect to the EAAA are from Rajkot and Hingolgadh (~ 35 km from the EAAA)<sup>48</sup>.</li> <li>As per a research paper (dated 2018), 458 individuals of the species were recorded during the previous statewide Vulture Census from Gujarat State, of which the EAAA represents &lt;0.005%.</li> <li>As per a study (dated 2016<sup>49</sup>) 84 individuals were recorded in Surendranagar District of which the EAAA represents &lt;1%.</li> </ul>	Unlikely to trigger CH

<sup>44</sup> BirdLife International. 2018. *Ardeotis nigriceps*. The IUCN Red List of Threatened Species 2018: e.T22691932A134188105. <https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22691932A134188105.en>. Accessed on 15 June 2023.

<sup>45</sup> Jhala, Y. V., Dutta, S., Karkarya, T., Awasthi, A. Bipin, C.M. et al. 2020. Habitat improvement and conservation breeding of the Great Indian bustard: an integrated approach. Progress Report April 2018-March 2020. Wildlife Institute of India, Dehradun 248001, India. | TR/2020/03

<sup>46</sup> <https://ebird.org/species/indbus1>

<sup>47</sup> BirdLife International. 2021. *Gyps bengalensis*. The IUCN Red List of Threatened Species 2021: e.T22695194A204618615. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22695194A204618615.en>. Accessed on 15 June 2023.

<sup>48</sup> <https://ebird.org/species/whrvul1>

<sup>49</sup> Kamboj, R. D., K. Tatu and S. B. Munjpara (2016). Status of Vultures in Gujarat – 2016. Gujarat Ecological Education and Research (GEER) Foundation, Gandhinagar.

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	E0O (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
							<ul style="list-style-type: none"> <li>Media articles (dated 2021-23) indicate significant declines in Vulture populations across Gujarat State since 2016.</li> <li>Based on the available data, it is unlikely that the minimum CH-triggering number of individuals, i.e. 30, occur regularly or cyclically in the EAAA.</li> </ul>	
3	<i>Gyps indicus</i> <sup>50</sup> , Indian Vulture, CR, (i), (iii)	(5000-15000)	25	2150000	0-2000	F, S, Sh, G, R, PL, U	<ul style="list-style-type: none"> <li>~12% Of the EAAA contains suitable habitat types.</li> <li>As per a study (dated 2016<sup>49</sup>) the species was not recorded in Surendranagar District.</li> <li>Nearest eBird records (dated 1996 &amp; 1990 i.e. &gt; 25-30 years before the present) are from Rajkot and Hingolgadh (~ 35 km from EAAA)<sup>51</sup>.</li> </ul>	Unlikely to trigger CH
4	<i>Sarcogyps calvus</i> <sup>52</sup> , Red-headed Vulture, CR, (i), (iii)	3,500-15,000	18	5230000	0-2500	F, S, Sh, G, U	<ul style="list-style-type: none"> <li>~12% Of the EAAA contains suitable habitat types.</li> <li>As per a study (dated 2016<sup>49</sup>) 1 individual was recorded in Surendranagar District.</li> <li>Nearest eBird records are from near Bhuj (185 km NW) and Amreli (95 km S)<sup>53</sup> of EAAA.</li> </ul>	Unlikely to trigger CH
5	<i>Syphocotides indicus</i> <sup>54</sup> , Lesser Florican, CR, (i), (iii)	(356-1228)	2	520000	-	G, A	<ul style="list-style-type: none"> <li>~87% Of the EAAA contains suitable habitat types.</li> <li>As per a Status Report (dated 2018) 96-115 displaying males Are reported from Velavadar, (~ 86 km from EAAA). Nearest eBird records are from Lakhatar (60 km northeast), Gondal (80 km southwest), Nal Sarovar (80 km east) and Bagodara (90 km east)<sup>55</sup></li> <li>Breeding records in Surendranagar are reported from Kherva and Gediya (70 km NE of EAAA)</li> </ul>	Likely CH Trigger
6	<i>Vanellus gregarius</i> <sup>56</sup> , Sociable Lapwing, CR, (i), (iii)	16,000-17,000	80	1620000	0-300	G, D, A, W	<ul style="list-style-type: none"> <li>~82% Of the EAAA contains suitable habitat types.</li> <li>As per a study (dated 2005, &gt;18 years before the present) by Gujarat Ecology Society<sup>57</sup> the species was reported from</li> </ul>	Unlikely to trigger CH

<sup>50</sup> BirdLife International. 2021. *Gyps indicus*. The IUCN Red List of Threatened Species 2021: e.T22729731A204672586. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22729731A204672586.en>. Accessed on 15 June 2023.

<sup>51</sup> <https://ebird.org/species/whrvul1>

<sup>52</sup> BirdLife International. 2021. *Sarcogyps calvus*. The IUCN Red List of Threatened Species 2021: e.T22695254A205031246. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22695254A205031246.en>. Accessed on 15 June 2023.

<sup>53</sup> <https://ebird.org/species/rehvul1>

<sup>54</sup> BirdLife International. 2021. *Syphocotides indicus*. The IUCN Red List of Threatened Species 2021: e.T22692024A199959007. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22692024A199959007.en>. Accessed on 15 June 2023.

<sup>55</sup> <https://ebird.org/species/lesflo2>

<sup>56</sup> BirdLife International. 2019. *Vanellus gregarius* (amended version of 2018 assessment). The IUCN Red List of Threatened Species 2019: e.T22694053A155545788. <https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T22694053A155545788.en>. Accessed on 15 June 2023.

<sup>57</sup> Sharma, D., D. Gavali, J. Lakhmapurkar (2005). Status survey of the critically endangered Sociable Lapwing *Vanellus gregarius* (Pallas) in Saurashtra and North Gujarat. Gujarat Ecology Society, Vadodara.

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	E0O (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
							Gadara (20 km northeast) and Sayla (14 km northeast) in Surendranagar. • Currently considered a rare winter migrant to Gujarat. • Wintering flock size is reported to be typically 10-12 individuals. • Nearest recent eBird records (dated 2020) are from Nalsarovar (75 km E), Dhrangadhra (55km N) & Jamnagar (125 km W) <sup>58</sup> • EAAA unlikely to support the minimum CH trigger number.	
7	<i>Aquila nipalensis</i> <sup>59</sup> , Steppe Eagle, EN, (i), (iii)	78,042-110,193	391	12600000	0-3000	F, S, G, R, D	• ~12% Of the EAAA contains suitable habitat types. • Nearest eBird records are from Rampara Wildlife Sanctuary (33 km northwest) and near Surendranagar (35 km northeast) <sup>60</sup> • EAAA unlikely to support the minimum CH trigger number.	Unlikely to trigger CH
8	<i>Falco cherrug</i> <sup>61</sup> , Saker Falcon, EN, (i), (iii)	(12200-29800)	61	19100000	0-4700	F, Sh, G, A, PL, U, W,	• ~85% Of the EAAA contains suitable habitat types. • Nearest eBird records from Nalsarovar (75 km east) <sup>62</sup> • EAAA unlikely to support the minimum CH trigger number.	Unlikely to trigger CH
9	<i>Haliaeetus leucoryphus</i> <sup>63</sup> , Pallas's Fish-eagle, EN, (i), (iii)	(1000-2499)	5	1740000	?-5000	W	• ~5% Of the EAAA contains suitable habitat types. • No nearby records	Unlikely to trigger CH
10	<i>Manis crassicaudata</i> <sup>64</sup> , Indian Pangolin, EN, (i)	-	-	-	0-1850	F, S, Sh, G, P, DF	• ~14% Of the EAAA contains suitable habitat types. • No nearby records	Unlikely to trigger CH
11	<i>Neophron percnopterus</i> <sup>65</sup> , Egyptian Vulture, EN, (i), (iii)	18,600-54,000	93	50100000	0-4500	S, Sh, G, R, D, A, PL, U, W	• ~92% Of the EAAA contains suitable habitat types. • A study conducted in 2016 <sup>49</sup> reports presence of 1 individual in Surendranagar District. • eBird records from Mitana (55km northwest) <sup>66</sup> • EAAA unlikely to support the minimum CH trigger number.	Unlikely to trigger CH

<sup>58</sup> <https://ebird.org/species/soclap1>

<sup>59</sup> BirdLife International. 2021. *Aquila nipalensis*. The IUCN Red List of Threatened Species 2021: e.T22696038A205452572. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22696038A205452572.en>. Accessed on 15 June 2023.

<sup>60</sup> <https://ebird.org/species/steeag1>

<sup>61</sup> BirdLife International. 2021. *Falco cherrug*. The IUCN Red List of Threatened Species 2021: e.T22696495A204182473. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22696495A204182473.en>. Accessed on 15 June 2023.

<sup>62</sup> <https://ebird.org/species/sakfal1>

<sup>63</sup> BirdLife International. 2021. *Haliaeetus leucoryphus*. The IUCN Red List of Threatened Species 2021: e.T22695130A199521572. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22695130A199521572.en>. Accessed on 15 June 2023.

<sup>64</sup> Mahmood, T., Challender, D., Khatiwada, A., Andleeb, S., Perera, P., Trageser, S., Ghose, A. & Mohapatra, R. 2019. *Manis crassicaudata*. The IUCN Red List of Threatened Species 2019: e.T12761A123583998. <https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T12761A123583998.en>. Accessed on 15 June 2023.

<sup>65</sup> BirdLife International. 2021. *Neophron percnopterus*. The IUCN Red List of Threatened Species 2021: e.T22695180A205187871. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22695180A205187871.en>. Accessed on 15 June 2023.

<sup>66</sup> <https://ebird.org/species/egyvul1>

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	E0O (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
12	<i>Nilssonia gangetica</i> <sup>67</sup> , Indian Softshell Turtle, EN, (i)	-	-	-	20-1000	W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types</li> <li>Present in Saurashtra region as per Patel and Vyas 2019<sup>68</sup></li> <li>Nearest records from Kheda (140 km east) near Ahmedabad as per iNaturalist<sup>69</sup></li> </ul>	Unlikely to trigger CH
13	<i>Sterna acuticauda</i> <sup>70</sup> , Black-bellied Tern, EN, (i), (iii)	(900-1100)	5	481000 0	0-700	W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types.</li> <li>Nearest eBird records from Nalsarovar (75 km east)<sup>71</sup></li> </ul>	Unlikely to trigger CH
14	<i>Aquila heliaca</i> <sup>72</sup> , Eastern Imperial Eagle, VU, (i), (iii)	3,500-15,000	18	149000 00	0-1600	F, Sh, G, W	<ul style="list-style-type: none"> <li>~8% Of the EAAA contains suitable habitat types.</li> <li>Nearest eBird records from Mesvada (31 km southwest) and Hingolgarh (33 km south)<sup>73</sup></li> </ul>	Unlikely to trigger CH
15	<i>Aquila rapax</i> <sup>74</sup> , Tawny Eagle, VU, (i), (iii)	(100000-499999)	500	527000 00	0-3000	F, S, Sh, G, A, PL	<ul style="list-style-type: none"> <li>~90% Of the EAAA contains suitable habitat types.</li> <li>eBird records from Velavadar (85 km southeast) and Nalsarovar (75 km east)<sup>75</sup></li> </ul>	Unlikely to trigger CH
16	<i>Aythya ferina</i> <sup>76</sup> , Common Pochard, VU, (i), (iii)	1140000-1180000	5700	548000	0-2690	W, M	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types.</li> <li>eBird records from various waterbodies near Rajkot and Chotila, especially notable numbers, as many as 300 individuals, in Randarda Lake (50 km west) and Lalpari Lake (50 km west)<sup>77</sup></li> </ul>	Unlikely to trigger CH
17	<i>Bagarius bagarius</i> <sup>78</sup> , VU, 1b	-	-	388300 0	-	W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types.</li> <li>No nearby records</li> </ul>	Unlikely to trigger CH

<sup>67</sup> Ahmed, M.F., Choudhury, B.C., Das, I. & Singh, S. 2021. *Nilssonia gangetica*. The IUCN Red List of Threatened Species 2021: e.T39618A2930943. <https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T39618A2930943.en>. Accessed on 15 June 2023.

<sup>68</sup> Patel, H., R. Vyas (2019). Reptiles of Gujarat: Updated Checklist, Distribution, and Conservation Status. Herpetology Notes, Vol 12, pp 765-777

<sup>69</sup> <https://www.inaturalist.org/>

<sup>70</sup> BirdLife International. 2022. *Sterna acuticauda*. The IUCN Red List of Threatened Species 2022: e.T22694711A207933556. Accessed on 15 June 2023.

<sup>71</sup> <https://ebird.org/species/blbter1>

<sup>72</sup> BirdLife International. 2019. *Aquila heliaca* (amended version of 2017 assessment). The IUCN Red List of Threatened Species 2019: e.T22696048A155464885. <https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T22696048A155464885.en>. Accessed on 15 June 2023.

<sup>73</sup> <https://ebird.org/species/impeag1>

<sup>74</sup> BirdLife International. 2021. *Aquila rapax*. The IUCN Red List of Threatened Species 2021: e.T22696033A203852137. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22696033A203852137.en>. Accessed on 15 June 2023.

<sup>75</sup> <https://ebird.org/species/taweag1>

<sup>76</sup> BirdLife International. 2021. *Aythya ferina*. The IUCN Red List of Threatened Species 2021: e.T22680358A205288455. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22680358A205288455.en>. Accessed on 15 June 2023.

<sup>77</sup> <https://ebird.org/species/compoc>

<sup>78</sup> Ng, H.H. 2022. *Bagarius bagarius*. The IUCN Red List of Threatened Species 2022: e.T213648894A213648930. <https://dx.doi.org/10.2305/IUCN.UK.2022-1.RLTS.T213648894A213648930.en>. Accessed on 15 June 2023.

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	E0O (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
18	<i>Chlamydotis macqueenii</i> <sup>79</sup> , Asian Houbara, VU, 1b, (iii)	50,000-99,999	250	132000 00	-	G, D, PL	<ul style="list-style-type: none"> <li>The EAAA does not contain habitats suitable to the species</li> <li>Common in Kutch, rare in Saurashtra as per Mori and Joshi 2021<sup>80</sup></li> <li>Nearest eBird record from Khambala Vidhi near Rajkot (63 km west)<sup>81</sup></li> </ul>	Unlikely to trigger CH
19	<i>Clanga clanga</i> <sup>82</sup> , Greater Spotted Eagle, VU, 1b, (iii)	(3900-10000)	20	153000 00	0-1400	F, Sh, G, A, W, M	<ul style="list-style-type: none"> <li>~85% Of the EAAA contains suitable habitat types</li> <li>iNaturalist record from Rajkot (50 km west)<sup>69</sup></li> <li>eBird records from Rajkot and Hingolgarh (33km south)<sup>83</sup></li> </ul>	Unlikely to trigger CH
20	<i>Clanga hastata</i> <sup>84</sup> , Indian Spotted Eagle, VU, 1b	3,500-15,000	18	656000 0	?-1000	F, A, P, W	<ul style="list-style-type: none"> <li>~85% Of the EAAA contains suitable habitat types</li> <li>Nearest eBird records from Amreli (95 km south), Khijadiya, Jamnagar (115 km west)<sup>85</sup></li> </ul>	Unlikely to trigger CH
21	<i>Columba eversmanni</i> <sup>86</sup> , Yellow-eyed Pigeon, VU, 1b, (iii)	15,000-29,999	75	308000 0	0-2000	Sh, C, D, A, W	<ul style="list-style-type: none"> <li>~82% Of the EAAA contains suitable habitat types</li> <li>Only eBird record in Gujarat from Zainabad, Little Rann of Kutch (95 km north)<sup>87</sup></li> </ul>	Unlikely to trigger CH
22	<i>Crocodylus palustris</i> <sup>88</sup> , Mugger, VU, 1b	(5700-8700)	29	-	?-420	W, M	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types</li> <li>iNaturalist records near Junagadh (135 km southwest)<sup>69</sup></li> </ul>	Unlikely to trigger CH
23	<i>Grus antigone</i> <sup>89</sup> , Sarus Crane, VU, 1b, (iii)	19,000-21,800	95	138000 00	-	G, A, PL, W	<ul style="list-style-type: none"> <li>~82% Of the EAAA contains suitable habitat types</li> <li>Nearest eBird record from Mesvada (dated 2000, 31 km southwest) and Wadhwani (dated 2020, 40 km northeast)<sup>90</sup></li> </ul>	Unlikely to trigger CH

<sup>79</sup> BirdLife International. 2021. Chlamydotis macqueenii. The IUCN Red List of Threatened Species 2021: e.T22733562A205364424. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22733562A205364424.en>. Accessed on 15 June 2023.

<sup>80</sup> Mori, D., V. Joshi (2021). Notes on the Macqueen's Bustard Chlamydotis macqueeni in Gujarat. Flamingo Vol XIX-2

<sup>81</sup> <https://ebird.org/species/macbus1>

<sup>82</sup> BirdLife International. 2021. Clanga clanga. The IUCN Red List of Threatened Species 2021: e.T22696027A203868747. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22696027A203868747.en>. Accessed on 15 June 2023.

<sup>83</sup> <https://ebird.org/species/grseag1>

<sup>84</sup> BirdLife International. 2016. Clanga hastata. The IUCN Red List of Threatened Species 2016: e.T22729779A95021573. <https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22729779A95021573.en>. Accessed on 15 June 2023.

<sup>85</sup> <https://ebird.org/species/inseag1>

<sup>86</sup> BirdLife International. 2022. Columba eversmanni. The IUCN Red List of Threatened Species 2022: e.T22690097A217014626. Accessed on 15 June 2023.

<sup>87</sup> <https://ebird.org/species/pabpig1>

<sup>88</sup> Choudhury, B.C. & de Silva, A. 2013. Crocodylus palustris. The IUCN Red List of Threatened Species 2013: e.T5667A3046723. <https://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T5667A3046723.en>. Accessed on 15 June 2023.

<sup>89</sup> BirdLife International. 2016. Antigone antigone. The IUCN Red List of Threatened Species 2016: e.T22692064A93335364. <https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22692064A93335364.en>. Accessed on 15 June 2023.

<sup>90</sup> <https://ebird.org/species/sarcra1>

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	E0O (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
24	<i>Lissemys punctata</i> <sup>91</sup> , Indian Flapshell Turtle, VU, 1b	-	-	-	0-500	W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types</li> <li>Present in Saurashtra region as per Patel and Vyas 2019<sup>68</sup></li> <li>iNaturalist record near Kalipat near Rajkot (50 km southwest)<sup>69</sup></li> </ul>	Unlikely to trigger CH
25	<i>Rusa unicolor</i> <sup>92</sup> , Sambar, VU, 1b	-	-	-	0-3900	F, S, Sh, G, P, DF, W	<ul style="list-style-type: none"> <li>~19% Of the EAAA contains suitable habitat types</li> <li>iNaturalist record near Rajkot<sup>69</sup></li> </ul>	Unlikely to trigger CH
26	<i>Saxicola macrorhynchus</i> <sup>93</sup> , White-browed Bushchat, VU, 1b	3,500-15,000	18	97400		Sh, G, D	<ul style="list-style-type: none"> <li>The EAAA does not contain habitats suitable to the species</li> <li>Nearest location as per eBird is in Rajkot (50 km west)<sup>94</sup></li> </ul>	Unlikely to trigger CH
27	<i>Schoenicola striatus</i> <sup>95</sup> , Bristled Grassbird, VU, 1b, (iii)	3,500-15,000	18	1270000	?-460	Sh, G, W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types</li> <li>Nearest eBird record from Velavadar (85 km southeast)<sup>96</sup></li> </ul>	Unlikely to trigger CH
28	<i>Sterna aurantia</i> <sup>97</sup> , River Tern, VU, 1b, (iii)	30,000-100,000	150	9330000	?-600	W, M	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types</li> <li>Multiple records from different waterbodies near Rajkot (50 km west) and Chotila (10 km west)<sup>98</sup></li> </ul>	Unlikely to trigger CH
29	<i>Wallago attu</i> <sup>99</sup> , VU, 1b, (iii)	-	-	10446620	-	W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types.</li> <li>No records nearby</li> </ul>	Unlikely to trigger CH
30	<i>Oenanthe javanica</i> <sup>100</sup> , Water Dropwort, LC, 2a	-	-	4000	600-?	W	<ul style="list-style-type: none"> <li>~5% Of the EAAA contains suitable habitat types.</li> <li>No records nearby</li> </ul>	Unlikely to trigger CH

<sup>91</sup> Rahman, S., Ahmed, M.F., Choudhury, B.C., Praschag, P. & Singh, S. 2021. *Lissemys punctata*. The IUCN Red List of Threatened Species 2021: e.T123802477A3008930. <https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T123802477A3008930.en>. Accessed on 15 June 2023.

<sup>92</sup> Timmins, R., Kawanishi, K., Gimarc, B., Lynam, A., Chan, B., Steinmetz, R., Sagar Baral, H. & Samba Kumar, N. 2015. *Rusa unicolor* (errata version published in 2015). The IUCN Red List of Threatened Species 2015: e.T41790A85628124. <https://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T41790A22156247.en>. Accessed on 15 June 2023.

<sup>93</sup> BirdLife International. 2017. *Saxicola macrorhynchus* (amended version of 2016 assessment). The IUCN Red List of Threatened Species 2017: e.T22710160A110578039. <https://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22710160A110578039.en>. Accessed on 15 June 2023.

<sup>94</sup> <https://ebird.org/species/whbbus4>

<sup>95</sup> BirdLife International. 2017. *Chaetornis striata* (amended version of 2016 assessment). The IUCN Red List of Threatened Species 2017: e.T22715559A111102835. <https://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22715559A111102835.en>. Accessed on 15 June 2023.

<sup>96</sup> <https://ebird.org/species/brigra2>

<sup>97</sup> BirdLife International. 2020. *Sterna aurantia*. The IUCN Red List of Threatened Species 2020: e.T22694537A180171504. <https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T22694537A180171504.en>. Accessed on 15 June 2023.

<sup>98</sup> <https://ebird.org/species/rivter1>

<sup>99</sup> Ng, H.H., de Alwis Goonatilake, S., Fernando, M. & Kotagama, O. 2019. *Wallago attu* (errata version published in 2020). The IUCN Red List of Threatened Species 2019: e.T166468A174784999. <https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T166468A174784999.en>. Accessed on 15 June 2023.

<sup>100</sup> Zhuang, X. & Lansdown, R.V. 2011. *Oenanthe javanica*. The IUCN Red List of Threatened Species 2011: e.T168749A6532868. <https://dx.doi.org/10.2305/IUCN.UK.2011-2.RLTS.T168749A6532868.en>. Accessed on 15 June 2023.

SN	Scientific Name, Common Name, IUCN Status, Applicable CH Criteria	Global Popn. (Mature)	Min. CH Trigger No.	E0O (km2)	Alt. Range (m)	Suitable Habitat Types*	Screening Rationale	Screening Outcome
31	<i>Ophisops kutchensis</i> <sup>101</sup> , Kutch Small-scaled Snake-eye, LC, 2a	-	-	31981.96	55-195	Sh, G	<ul style="list-style-type: none"> <li>~9% of the Of the EAAA contains suitable habitat types.</li> <li>Nearest iNaturalist records are from Bhuj-Dholavira (185 km north), Nakhatrana (225 km northwest); Saldi, Amreli (100 km south)<sup>69</sup></li> </ul>	Likely to trigger CH

\*Suitable Habitat types where, F – Forest, S – Savanna, Sh – Shrubland, G – Grassland, R – Rocky Areas, D – Desert, A – Arable Land, P – Plantation, PL – Pastureland, RG – Rural Gardens, U – Urban Areas, W - Wetland, M – Marine, AA – Artificial Aquatic Habitats

Source: <https://ebird.org>, IUCN 2023. The IUCN Red List of Threatened Species. Version 2022-2, <https://www.inaturalist.org/>, <https://www.gbif.org/>

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<sup>101</sup> Vyas, R. 2021. *Ophisops kutchensis*. The IUCN Red List of Threatened Species 2021: e.T149403786A149403868. <https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T149403786A149403868.en>. Accessed on 15 June 2023.

## Appendix L Migratory and/or Congregatory Species potentially occurring in the EAAA, but screened out from the Critical Habitat Assessment

The following is a list of species which were screened against Critical Habitat criteria related to migratory and congregatory species, but clearly did not qualify owing to their widespread distributions or large populations in relation to the size of the EAAA. Migratory/congregatory species with potential to qualify the EAAA as Critical Habitat are assessed in Appendix K.

SN	Scientific Name	Common Name	IUCN Red List Status
1	<i>Accipiter badius</i>	Shikra	LC
2	<i>Accipiter nisus</i>	Eurasian Sparrowhawk	LC
3	<i>Acrocephalus agricola</i>	Paddyfield Warbler	LC
4	<i>Acrocephalus stentoreus</i>	Clamorous Reed-warbler	LC
5	<i>Actitis hypoleucos</i>	Common Sandpiper	LC
6	<i>Aegypius monachus</i>	Cinereous Vulture	NT
7	<i>Agriocnemis pygmaea</i>	Wandering Midget	LC
8	<i>Alauda gulgula</i>	Oriental Skylark	LC
9	<i>Alcedo atthis</i>	Common Kingfisher	LC
10	<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	LC
11	<i>Anabas testudineus</i>	Climbing Perch	LC
12	<i>Anas acuta</i>	Northern Pintail	LC
13	<i>Anas crecca</i>	Common Teal	LC
14	<i>Anas platyrhynchos</i>	Mallard	LC
15	<i>Anas poecilorhyncha</i>	Indian Spot-billed Duck	LC
16	<i>Anax ephippiger</i>	Vagrant Emperor	LC
17	<i>Anguilla bicolor</i>	Shortfin Eel	NT
18	<i>Anser anser</i>	Greylag Goose	LC
19	<i>Anthropoides virgo</i>	Demoiselle Crane	LC
20	<i>Anthus campestris</i>	Tawny Pipit	LC
21	<i>Anthus godlewskii</i>	Blyth's Pipit	LC
22	<i>Anthus trivialis</i>	Tree Pipit	LC
23	<i>Apus affinis</i>	Little Swift	LC
24	<i>Apus pacificus</i>	Pacific Swift	LC
25	<i>Ardea alba</i>	Great White Egret	LC
26	<i>Ardea cinerea</i>	Grey Heron	LC
27	<i>Ardea intermedia</i>	Intermediate Egret	LC
28	<i>Ardea purpurea</i>	Purple Heron	LC
29	<i>Arenaria interpres</i>	Ruddy Turnstone	LC
30	<i>Asio flammeus</i>	Short-eared Owl	LC
31	<i>Aythya fuligula</i>	Tufted Duck	LC

32	<i>Aythya nyroca</i>	Ferruginous Duck	NT
33	<i>Botaurus stellaris</i>	Eurasian Bittern	LC
34	<i>Bubulcus ibis</i>	Cattle Egret	LC
35	<i>Burhinus indicus</i>	Indian Thick-knee	LC
36	<i>Buteo rufinus</i>	Long-legged Buzzard	LC
37	<i>Butorides striata</i>	Green-backed Heron	LC
38	<i>Calandrella brachydactyla</i>	Greater Short-toed Lark	LC
39	<i>Calidris alba</i>	Sanderling	LC
40	<i>Calidris alpina</i>	Dunlin	LC
41	<i>Calidris canutus</i>	Red Knot	NT
42	<i>Calidris falcinellus</i>	Broad-billed Sandpiper	LC
43	<i>Calidris ferruginea</i>	Curlew Sandpiper	NT
44	<i>Calidris minuta</i>	Little Stint	LC
45	<i>Caprimulgus mahrattensis</i>	Sykes's Nightjar	LC
46	<i>Carpodacus erythrinus</i>	Common Rosefinch	LC
47	<i>Cecropis daurica</i>	Red-rumped Swallow	LC
48	<i>Channa gachua</i>	Dwarf Snakehead	LC
49	<i>Charadrius alexandrinus</i>	Kentish Plover	LC
50	<i>Charadrius dubius</i>	Little Ringed Plover	LC
51	<i>Charadrius leschenaultii</i>	Greater Sandplover	LC
52	<i>Charadrius mongolus</i>	Lesser Sandplover	LC
53	<i>Chlidonias hybrida</i>	Whiskered Tern	LC
54	<i>Chlidonias leucopterus</i>	White-winged Tern	LC
55	<i>Ciconia ciconia</i>	White Stork	LC
56	<i>Ciconia nigra</i>	Black Stork	LC
57	<i>Circaetus gallicus</i>	Short-toed Snake-eagle	LC
58	<i>Circus aeruginosus</i>	Western Marsh-harrier	LC
59	<i>Circus cyaneus</i>	Hen Harrier	LC
60	<i>Circus macrourus</i>	Pallid Harrier	NT
61	<i>Circus pygargus</i>	Montagu's Harrier	LC
62	<i>Clamator jacobinus</i>	Jacobin Cuckoo	LC
63	<i>Coturnix coturnix</i>	Common Quail	LC
64	<i>Cuculus canorus</i>	Common Cuckoo	LC
65	<i>Curruca crassirostris</i>	Eastern Orphean Warbler	LC
66	<i>Curruca curruca</i>	Lesser Whitethroat	LC
67	<i>Curruca nana</i>	Asian Desert Warbler	LC
68	<i>Cursorius cursor</i>	Cream-coloured Courser	LC
69	<i>Dicrurus leucophaeus</i>	Ashy Drongo	LC
70	<i>Dicrurus macrocercus</i>	Black Drongo	LC
71	<i>Egretta garzetta</i>	Little Egret	LC

72	<i>Emberiza bruniceps</i>	Red-headed Bunting	LC
73	<i>Emberiza buchanani</i>	Grey-necked Bunting	LC
74	<i>Emberiza lathami</i>	Crested Bunting	LC
75	<i>Emberiza melanocephala</i>	Black-headed Bunting	LC
76	<i>Eremopterix nigriceps</i>	Black-crowned Sparrow-lark	LC
77	<i>Eudynamys scolopaceus</i>	Western Koel	LC
78	<i>Eumyias thalassinus</i>	Verditer Flycatcher	LC
79	<i>Falco amurensis</i>	Amur Falcon	LC
80	<i>Falco columbarius</i>	Merlin	LC
81	<i>Falco naumanni</i>	Lesser Kestrel	LC
82	<i>Falco peregrinus</i>	Peregrine Falcon	LC
83	<i>Falco tinnunculus</i>	Common Kestrel	LC
84	<i>Ficedula parva</i>	Red-breasted Flycatcher	LC
85	<i>Ficedula ruficauda</i>	Rusty-tailed Flycatcher	LC
86	<i>Fulica atra</i>	Common Coot	LC
87	<i>Galerida cristata</i>	Crested Lark	LC
88	<i>Gallicrex cinerea</i>	Watercock	LC
89	<i>Gallinago gallinago</i>	Common Snipe	LC
90	<i>Gallinago stenura</i>	Pintail Snipe	LC
91	<i>Gallinula chloropus</i>	Common Moorhen	LC
92	<i>Glareola lactea</i>	Little Pratincole	LC
93	<i>Glareola maldivarum</i>	Oriental Pratincole	LC
94	<i>Grus grus</i>	Common Crane	LC
95	<i>Gyps fulvus</i>	Griffon Vulture	LC
96	<i>Gyps himalayensis</i>	Himalayan Griffon	NT
97	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	NT
98	<i>Hieraetus pennatus</i>	Booted Eagle	LC
99	<i>Hierococcyx varius</i>	Common Hawk-cuckoo	LC
100	<i>Himantopus himantopus</i>	Black-winged Stilt	LC
101	<i>Hirundo rustica</i>	Barn Swallow	LC
102	<i>Hirundo smithii</i>	Wire-tailed Swallow	LC
103	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	LC
104	<i>Hydroprogne caspia</i>	Caspian Tern	LC
105	<i>Hypothymis azurea</i>	Black-naped Monarch	LC
106	<i>Iduna rama</i>	Sykes's Warbler	LC
107	<i>Ischnura senegalensis</i>	Tropical Bluetail	LC
108	<i>Jynx torquilla</i>	Eurasian Wryneck	LC
109	<i>Labeo bata</i>	Minor Carp	LC
110	<i>Lanius excubitor</i>	Great Grey Shrike	LC
111	<i>Lanius isabellinus</i>	Isabelline Shrike	LC

112	<i>Lanius schach</i>	Long-tailed Shrike	LC
113	<i>Lanius vittatus</i>	Bay-backed Shrike	LC
114	<i>Larus brunnicephalus</i>	Brown-headed Gull	LC
115	<i>Larus fuscus</i>	Lesser Black-backed Gull	LC
116	<i>Larus genei</i>	Slender-billed Gull	LC
117	<i>Larus ichthyaetus</i>	Pallas's Gull	LC
118	<i>Larus ridibundus</i>	Black-headed Gull	LC
119	<i>Limosa lapponica</i>	Bar-tailed Godwit	NT
120	<i>Limosa limosa</i>	Black-tailed Godwit	NT
121	<i>Luscinia svecica</i>	Bluethroat	LC
122	<i>Macrobrachium rosenbergii</i>	Giant River Prawn	LC
123	<i>Mareca penelope</i>	Eurasian Wigeon	LC
124	<i>Marmaronetta angustirostris</i>	Marbled Teal	NT
125	<i>Merops orientalis</i>	Asian Green Bee-eater	LC
126	<i>Merops persicus</i>	Blue-cheeked Bee-eater	LC
127	<i>Microphis brachyurus</i>	Opossum Pipefish	LC
128	<i>Milvus migrans</i>	Black Kite	LC
129	<i>Mirafra javanica</i>	Horsfield's Bushlark	LC
130	<i>Monticola solitarius</i>	Blue Rock-thrush	LC
131	<i>Morone saxatilis</i>	Striped Bass	LC
132	<i>Motacilla alba</i>	White Wagtail	LC
133	<i>Motacilla cinerea</i>	Grey Wagtail	LC
134	<i>Motacilla citreola</i>	Citrine Wagtail	LC
135	<i>Motacilla flava</i>	Western Yellow Wagtail	LC
136	<i>Muscicapa dauurica</i>	Asian Brown Flycatcher	LC
137	<i>Mystus gulio</i>	-	LC
138	<i>Netta rufina</i>	Red-crested Pochard	LC
139	<i>Nettapus coromandelianus</i>	Cotton Pygmy-goose	LC
140	<i>Notopterus notopterus</i>	-	LC
141	<i>Numenius arquata</i>	Eurasian Curlew	NT
142	<i>Numenius phaeopus</i>	Whimbrel	LC
143	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	LC
144	<i>Oenanthe chrysopygia</i>	Red-tailed Wheatear	LC
145	<i>Oenanthe deserti</i>	Desert Wheatear	LC
146	<i>Oenanthe isabellina</i>	Isabelline Wheatear	LC
147	<i>Oenanthe picata</i>	Variable Wheatear	LC
148	<i>Oligolepis acutipennis</i>	Paintedfin Goby	LC
149	<i>Ompok bimaculatus</i>	-	NT
150	<i>Ophiocara porocephala</i>	Spangled Gudgeon	LC
151	<i>Otus brucei</i>	Pallid Scops-owl	LC

152	<i>Pandion haliaetus</i>	Osprey	LC
153	<i>Pantala flavescens</i>	Wandering Glider	LC
154	<i>Parreysia corrugata</i>	-	LC
155	<i>Parreysia rajahensis</i>	-	LC
156	<i>Pastor roseus</i>	Rosy Starling	LC
157	<i>Pelecanus crispus</i>	Dalmatian Pelican	NT
158	<i>Pelecanus onocrotalus</i>	Great White Pelican	LC
159	<i>Pelecanus philippensis</i>	Spot-billed Pelican	NT
160	<i>Pericrocotus ethologus</i>	Long-tailed Minivet	LC
161	<i>Pernis ptilorhynchus</i>	Oriental Honey-buzzard	LC
162	<i>Petrochelidon fluvicola</i>	Streak-throated Swallow	LC
163	<i>Phalacrocorax carbo</i>	Great Cormorant	LC
164	<i>Phoeniconaias minor</i>	Lesser Flamingo	NT
165	<i>Phoenicopterus roseus</i>	Greater Flamingo	LC
166	<i>Phoenicurus ochruros</i>	Black Redstart	LC
167	<i>Phylloscopus nitidus</i>	Green Warbler	LC
168	<i>Phylloscopus tristis</i>	Siberian Chiffchaff	LC
169	<i>Phylloscopus trochiloides</i>	Greenish Warbler	LC
170	<i>Pitta brachyura</i>	Indian Pitta	LC
171	<i>Platalea leucorodia</i>	Eurasian Spoonbill	LC
172	<i>Plegadis falcinellus</i>	Glossy Ibis	LC
173	<i>Pluvialis fulva</i>	Pacific Golden Plover	LC
174	<i>Pluvialis squatarola</i>	Grey Plover	LC
175	<i>Podiceps cristatus</i>	Great Crested Grebe	LC
176	<i>Podiceps nigricollis</i>	Black-necked Grebe	LC
177	<i>Porzana porzana</i>	Spotted Crake	LC
178	<i>Prinia hodgsonii</i>	Grey-breasted Prinia	LC
179	<i>Prinia inornata</i>	Plain Prinia	LC
180	<i>Pseudapocryptes elongatus</i>	-	LC
181	<i>Pterocles orientalis</i>	Black-bellied Sandgrouse	LC
182	<i>Pterocles senegallus</i>	Spotted Sandgrouse	LC
183	<i>Rasbora daniconius</i>	Slender Barb	LC
184	<i>Recurvirostra avosetta</i>	Pied Avocet	LC
185	<i>Rhinopoma microphyllum</i>	Greater Mouse-tailed Bat	LC
186	<i>Riparia chinensis</i>	Asian Plain Martin	LC
187	<i>Riparia diluta</i>	Pale Sand Martin	LC
188	<i>Sarkidiornis melanotos</i>	African Comb Duck	LC
189	<i>Saxicola caprata</i>	Pied Bushchat	LC
190	<i>Silonia silondia</i>	Silong Catfish	LC
191	<i>Spatula clypeata</i>	Northern Shoveler	LC

192	<i>Spatula querquedula</i>	Garganey	LC
193	<i>Sperata aor</i>	Long-whiskered Catfish	LC
194	<i>Spilopelia senegalensis</i>	Laughing Dove	LC
195	<i>Spilopelia suratensis</i>	Western Spotted Dove	LC
196	<i>Streptopelia tranquebarica</i>	Red Turtle-dove	LC
197	<i>Sturnia pagodarum</i>	Brahminy Starling	LC
198	<i>Tachybaptus ruficollis</i>	Little Grebe	LC
199	<i>Taphozous nudiventris</i>	Naked-rumped Tomb Bat	LC
200	<i>Terpsiphone paradisi</i>	Indian Paradise-flycatcher	LC
201	<i>Tholymis tillarga</i>	Old World Twister	LC
202	<i>Threskiornis melanocephalus</i>	Black-headed Ibis	NT
203	<i>Tramea basilaris</i>	Keyhole Glider	LC
204	<i>Tramea limbata</i>	Ferruginous Glider	LC
205	<i>Tringa erythropus</i>	Spotted Redshank	LC
206	<i>Tringa glareola</i>	Wood Sandpiper	LC
207	<i>Tringa nebularia</i>	Common Greenshank	LC
208	<i>Tringa ochropus</i>	Green Sandpiper	LC
209	<i>Tringa stagnatilis</i>	Marsh Sandpiper	LC
210	<i>Tringa totanus</i>	Common Redshank	LC
211	<i>Trithemis kirbyi</i>	Orange-winged Dropwing	LC
212	<i>Turnix tanki</i>	Yellow-legged Buttonquail	LC
213	<i>Upupa epops</i>	Common Hoopoe	LC
214	<i>Vanellus leucurus</i>	White-tailed Lapwing	LC
215	<i>Vanellus vanellus</i>	Northern Lapwing	NT
216	<i>Vanessa cardui</i>	Painted Lady	LC
217	<i>Zapornia akool</i>	Brown Crake	LC
218	<i>Zapornia pusilla</i>	Baillon's Crake	LC
219	<i>Zygonyx torridus</i>	Ringed Cascader	LC

Source: <https://ebird.org>, IUCN 2023. The IUCN Red List of Threatened Species. Version 2022-2,  
<https://www.inaturalist.org/>, <https://www.gbif.org/>

## Appendix M : Detailed Project Timeline

<b>14 Project Construction</b>	<b>316 days</b>
<b>14.1 PV Plant</b>	<b>316 days</b>
14.1.1 WMS	5 days
14.1.2 Road	140 days
14.1.3 Pile Marking	105 days
14.1.4 Boring	104 days
14.1.5 Casting	104 days
14.1.6 DC Cabling	79 days
14.1.7 AC Cabling	39 days
14.1.8 Tracker installation	62 days
<b>14.1.9 Module Installation</b>	<b>81 days</b>
14.1.9.1 100 MW (1)	15 days
14.1.9.2 100 MW (2)	15 days
14.1.9.3 100 MW (3)	10 days
14.1.9.4 100 MW (4)	15 days
14.1.10 Earthing	50 days
14.1.11 Module Cleaning System	45 days
14.1.12 Drain	100 days
14.1.13 Security Tower	150 days
14.1.14 Street/Periphery lighting	133 days
<b>14.2 Transformer Station</b>	<b>175 days</b>
14.2.1 Civil Foundation	90 days
14.2.2 AC Cabling/OH Line works	90 days
14.2.3 Placement of Inverter	10 days
14.2.4 Installation of IDT	10 days

14.2.5 HT Panel (ICOG/RMU) Installation	10 days
14.2.6 Cable termination	10 days
<b>14.3 33/220 KV Substation</b>	<b>207 days</b>
<b>14.3.1 Substation BOP Readiness</b>	<b>150 days</b>
14.3.1.1 Civil Construction	80 days
14.3.1.2 Installation of 33 KV Equipment	10 days
14.3.1.3 Installation of 220 KV equipment	3 days
14.3.1.4 Gantry Tower	5 days
14.3.1.5 MCR Construction	40 days
14.3.1.6 Installation of CRP	5 days
14.3.1.7 HT Cabling	3 days
14.3.1.8 SCADA installation (SCADA & PPC Panel)	3 days
14.3.1.9 SAS	2 days
14.3.1.10 Capacitor Bank for Reactive Power Compensation	2 days
Task Name	Duration
14.3.2 READINESS OF 100 MW CAPACITY: Installation of 33/220 KV transformer (1 no)	5 days
14.3.3 READINESS OF 100 MW CAPACITY: Installation of 33/220 KV transformer (1 no)	5 days
14.3.4 READINESS OF 100 MW CAPACITY: Installation of 33/220 KV transformer (1 no)	5 days
14.3.5 READINESS OF 100 MW CAPACITY: Installation of 33/220 KV transformer (1 no)	5 days
14.4 220 KV Bay extension (GETCO /ENGIE Scope: to be discussed)	90 days
14.5 Termination of 220 KV line/Cable at GETCO 220 KV Bay (GIS)	90 days
<b>15 Regulatory &amp; Permissions</b>	<b>300 days</b>
<b>16 Testing &amp; Commissioning</b>	<b>87 days</b>



