LevelUp IAS

COMMAND

PRELIMS NOTES

PRELIMS MASTER PROGRAM (PMP) 2026

ENVIRONMENT



PMP 2027 | Batch Starts: 23rd November 2026

Enrollment Open



88264 96658 | www.levelupias.com | 2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005

PMP 2026

ENVIRONMENT-3

IMPORTANT SPECIES

1. TABLE OF CONTENTS

1. Table of Contents 0

2. Asiatic Lion 1

Current Situation: 16th Lion Population Estimation conducted by State of Gujarat 2025: 1
Where are they founD: 1
Barda WLS, Gujarat: 1
Asiatic Lions (Panthera Leo persica) and African Lions (Panthera leo leo) 1
Conservation Status of Asiatic Lion: 2
IUCN's New Green Status Assessment for Lion in Africa and India (March 2025) 2
Change in classification of Lions 2
World Lion Day: Aug 10 3
8 Asiatic Lions testing Positive for COVID-19 in 2021 3
Project Lion 3
Issue of Relocation of Lions 3
Issue of Deaths of Lion - Canine Distemper Virus (CDV) 4

3. Cat Family (Felidae Family) 5

1) Lion and Tiger – already done 5

2) Indian Leopard (Panthera pardus fusca) (IUCN: NT) 5

Population: India's leopard population increased from 12852 in 2018 to 13874 in 2022 – an increase of 8% 6
Other Leopard subSpecies outside India 6

3) Snow Leopard (Panthera Uncia) 6

Status Report of Snow Leopard in India by MOEF&CC 7
Year around Snow Leopard presence and breeding activity confirmed in J&K (Aug 2025) 8
Other Programs by Government of India for Snow Leopard Protection 8
International Efforts 9

4) Clouded Leopard (Neofeli Nebulosa) 9

5) Black Panthers 10

6) Fishing Cat 10

7) Caracal (*Caracal caracal*) 11

Species Recovery Program 11

4. Camels 12

Kharai Camel 13

1) Other camel types not found in India .. 13

5. Gibbon Species 14

1) Understanding Apes 14

2) Gibbons 16

Hoolock Gibbon (Class: Mammalia; Order: Primates; Family: Hylobatidae) 16

3) Railway to build canopy bridges across track in Assam's gibbon habitat - the Hollangapar Gibbon Sanctuary in Assam's Jorhat district (June 2024) 16

6. Other Endangered Mammals 17

1) Pigmy Hog 17

Pigmy Hog Conservation Program (PHCP) 17

2) Kondana Soft Furred Rat (also known as Kondana Rat or large metad) 18

3) Dhole/ Asiatic Wild DOg or Indian Wild Dog (Cuon Alpinus) 18

4) brow-antlered deer/Sangai Deer (Panolia eldil) 19

SANGAI FESTIVAL 19
LokTak Lake 19

5) Gee's Golden Langur (Trachypithecus geei) 21

LevelUp IAS

6) Himalayan White Bellied Musk Deer ...21

7) ALpine Musk Deer (Moschus chryosogaster).....21

8) Kashmir Musk Deer *(Moschus cupreus)* 21

9) Hispid Hare 21

10) hOG dEER 22

11) lION tAILED mACAQUE / wANDEROO (mACACA sILENUS) 22

12) nILGIRI tAHR 22

13) iNDIAN pANGOLIN 23

14) rED pANDA (Ailurus fulgens) (lesser Panda, red bear-cat, and red cat-bear 24

The Padmaja Naidu Himalayan Zoological Park (PNHZP) (Darjeeling Zoo) has started an initiative to release 20 Red Pandas in forests in the next five years. 24

15) Asian Wild Buffaloe.....25

LevelUp IAS

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

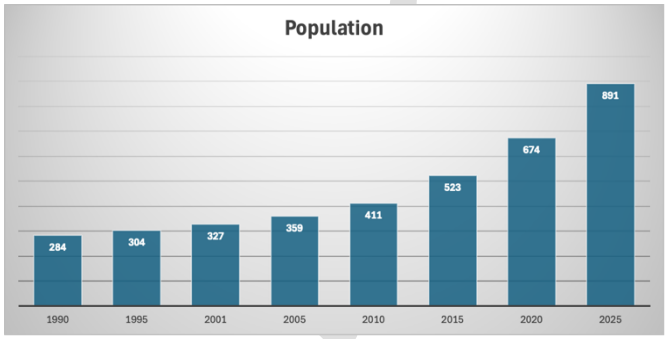
2. ASIATIC LION

Asiatic lions once ranged from Persia to Eastern India but were almost drawn to extinction by indiscriminate hunting and habitat loss.

By 1890s, a **single population of about 50 Lions** remained in the Gir Forests of Gujarat.

CURRENT SITUATION: 16TH LION POPULATION ESTIMATION CONDUCTED BY STATE OF GUJARAT 2025:

- **Population**: 891 in 2025 (up from 674 of 2020)
- **Note**: The census is conducted every five years by the Gujarat Forest Department.



WHERE ARE THEY FOUND:

- **Gir Protected Area Network**: It includes **Gir National Park**, **Gir Sanctuary**, **Pania Sanctuary**, **Mitiyala Sanctuary** adjoining forest reserves, protected forests and unclassed forests.
- **Note**: Lions have been recorded in a total area of more than 30,000 km2 of which, only about 1,650 sq km is in five protected areas. The protected areas carrying capacity seems to be exceeded.
- **Over last several years, the lion population in Gujarat** has been steadily rising.
- Male female ratio: 161:260

BARDA WLS, GUJARAT:

- It has emerged as a thriving second home for Asiatic Lion.
- Initially, in 2023, a single lion had wandered to the sanctuary.
- In Aug 2025, it shelters a total of **17 lions**, including 6 adults and 11 cubs. This has cemented its reputation as the 'second home' of the species.

ASIATIC LIONS (PANTHERA LEO PERSICA) AND AFRICAN LIONS (PANTHERA LEO LEO)

- They are both distinct subspecies of Lion. They are the **second largest cats in the world after tigers**. Male Lions are characterized by thick mane of hairs around their head which is absent in females.

Characteristics	Asiatic Lion	African Lion
Distribution:	Only in Gujarat, India	Several countries across Africa, from the Savannah in east Africa to dry grasslands of South Africa
Physical Appearance	Slightly smaller than African Lion, with a shorter mane and fold of skin on their bellies	African Lions have larger manes.

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

Genetics	The two subspecies have distinct genetic profile. They diverged from the same ancestor around 1,00,000 years ago	
Behaviour	Asiatic Lions are more solitary and live in pairs or small groups of related females and their cubs.	The African Lions are known for their social behaviour and live in large groups called **Prides**, consisting of several females, their cubs, and one or more males.
IUCN Status	~~EN~~ (VU)	VU

CONSERVATION STATUS OF ASIATIC LION:

- **IUCN Red List:** Vulnerable (upgraded from Endangered)
- **IUCN Green Status**: "Largely Depleted" (this shows that while the population is growing, they are not yet fulfilling their full ecological role across their historical range)
- **WPA (**as amended in 2022**):** Scheduled 1 & Schedule 4
- **CITES:** Appendix 1

IUCN'S NEW GREEN STATUS ASSESSMENT FOR LION IN AFRICA AND INDIA (MARCH 2025)

- The IUCN has come out with its first Green Status Assessment for the lion (*Panthera Leo)*.
  - The species has been ranked as '**Largely Depleted**'.
  - The species remain **vulnerable on IUCN red list**.

- **Other highlights:**
  - Human impacts are preventing the lion from being fully ecologically functional across its range, as the species declines across large areas and is extinct from North Africa and Southwest Asia.
  - **Conservation has prevented likely extinctions** from West and South Central Africa, South Africa and India.

CHANGE IN CLASSIFICATION OF LIONS

- Lions were **previously described as two subspecies**: the African Lion (*Panthera leo leo*) and the Asiatic Lion (*Panthera leo persica*). However, this has subsequently changed.

- The **IUCN SSC Cat Specialist Group** currently divides lions into:

  - ***Panthera leo leo*** (Northern Lions)

    - (found in Central Africa, West Africa and Asia) and**;**

    - **Note**: Genetically a lion in Senegal is genetically more common with Asiatic Lion then with lions of South Africa.

  - **Panthera leo melanochaita** (Southern Lion)

    - (found in Southern and East Africa)

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

WORLD LION DAY: AUG 10

» TO **raise awareness about lions and to mobilize support** for their protection and conservation.

» The day was co-founded by Dereck and Beverly Joubert, a husband-wife team, in partnership with **National Geographic** and the **Big Cat Initiative**.

» World Lion Day is the brainchild of co-founders Dereck and Beverly Joubert, a husband-and-wife team with a passion for big cats. They began the initiative in 2013, bringing together both **National Geographic and the Big Cat Initiative under a single banner** to protect the remaining big cats living in the wild.

8 ASIATIC LIONS TESTING POSITIVE FOR COVID-19 IN 2021

» **Where?** Nehru Zoological Park, Hyderabad

» This was the first case of the human infecting the feline and making them sick in India.

PROJECT LION

» Announced by PM Modi on 15th Aug 2020.

» It is an ambitious, long-term conservation strategy launched by GoI to protect Asiatic Lion.

» It is modeled on the lines of Project Tiger and Project Elephant.

» **Key focus areas**:

- Landscape ecology based conservation;
- Habitat expansion - creating satellite population to reduce pressure of Gir.
- Fighting diseases - become global hub of knowledge on big cat disease diagnostics and treatment.
- Livelihood generation and participation of local communities.
- Create inclusive biodiversity conservation through project lion initiative.

» In Dec 2022, Project Lion document titled "**Lion@47: Vision for Amrit Kal"** was released

ISSUE OF RELOCATION OF LIONS

- **IUCN** has raised concerns here "The Asiatic Lion currently **exists as a single subpopulation**, and is thus **vulnerable to extinction from unpredictable events**, such as an endemic or large forest fire." The Project Lion document of 2020 also mentions that **babesiosis and CDV** in Gir and that it has resulted in death of at least more than 60 lions in 2018-19.

- **Other Reasons to support translocation:** A large number of lions are **outside the PA**. These places are human dominated and have very little prey population. Thus, they depend on livestock which they kill or livestock carcass which are dumped outside the villages.

- **Wildlife activists** have been demanding transfer of lion to a second home **since 1990s**.

- **Studies** of three potential sites with the historical range of the Asiatic Lion **identified Kuno-Palpur sanctuary** in MP to be the most suitable for introducing the species.

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

LevelUp IAS

- **In 2004**, the Center had written to Gujarat for the first time for this relocation, but Gujarat kept dragging the issue and the matter reached Supreme Court.

- **Supreme Court of India** in April 2013, after several recommendations by various expert groups had ordered translocation of Gujarat Lions to Madhya Pradesh. This was done to ensure a second home for the endangered species and to save it from extinction, due to catastrophe like extinction.
  - The review and curative petitions by Gujarat were rejected by the court in 2014.

- **But the transfer hasn't happened yet**. In 2022, government officials have stated that there are no plans to translocate lions outside Gujarat and they will facilitate natural dispersal of lions within Gujarat.
  - These statements completely disregard 2013 SC verdicts and doesn't make any ecological sense.

- **Reason for non-removal** - it has more to do with **politics** than the effectiveness of translocation.

ISSUE OF DEATHS OF LION - CANINE DISTEMPER VIRUS (CDV)

- **More than two dozen** lions died in 2018 due to outbreak of canine distemper virus (CDV) and babesiosis.
  - **Canine Distemper Virus**
    - Canine distemper is a contagious and serious disease caused by virus that attacks the respiratory, gastrointestinal, and nervous system of puppies and dogs. The virus has also been reported in Lions, tigers and other wild animals.
  - **Babesiosis:**
    - It is caused by microscopic parasites that infect red blood cells and are spread by certain ticks.

- **Incidence of death due to disease in past**
  In 2007, there were evidence of the Peste Des Petits Ruminants virus (PPRV) which had caused some death. PPRV (also known as Goat Plague) is highly contagious and can be deadlier that even CDV that wiped out a third of Africa's lion.

LevelUp IAS

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

3. CAT FAMILY (FELIDAE FAMILY)

1) LION AND TIGER – ALREADY DONE

2) INDIAN LEOPARD (PANTHERA PARDUS FUSCA) (IUCN: NT)

This is a **subspecies of Leopard** (Panthera pardus).

Distribution: India, Nepal, Bhutan, parts of Pakistan and occasional sighting in BD.

It is found in widely distributed and adaptable habitats.

- It is absent only in arid deserts and above timber line in the Himalayas and are found throughout the country. In Himalayas, they are **sympatric with snow leopard (Panthera urcia)**.

Among all sub-species, the Indian leopard retains the largest population size and range outside Africa.

In areas devoid of any other large carnivore, the leopards can act as an **umbrella species** for biodiversity conservation.

Behaviour:

- Leopards are very **solitary** and spend most of their time alone. They each have their own territory, and leave scratches on trees, urine scent marks, and poop to warn other leopards to stay away.
- Males and females will cross territories), but only to mate.
- They are **nocturnal** and venture out at night in search of food. They mostly spend their days resting.
- **No Mating season**: Female leopards give birth anytime of the year.



Protection Status

- IUCN: NT
- WPA: Schedule - 1
- CITES: Appendix-1

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

POPULATION: INDIA'S LEOPARD POPULATION INCREASED FROM 12852 IN 2018 TO 13874 IN 2022 – AN INCREASE OF 8%

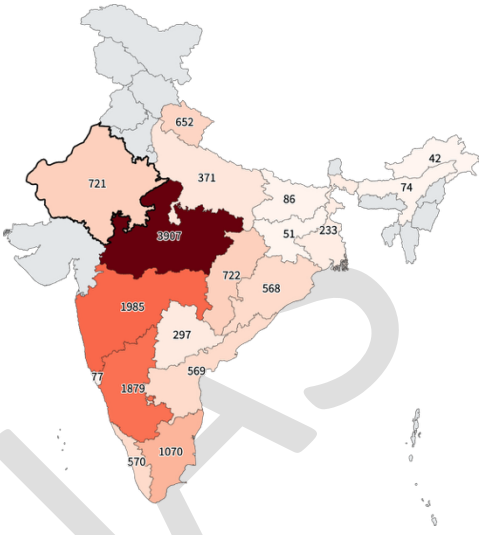
States: Madhya Pradesh (3,907) has the highest population. It is followed by Maharashtra (1985), Kar (1879) and TN (1070).

Note: In Shivalik and Gangetic plains the population has declined.

Landscapes:

- **Central India** (8,820 - rise); Western Ghats (3K+); Shivalik and Indo-Gangetic Planes (1109 - decline); NE landscape (<500)

Note: The survey covered 20 states, and focused on about 70% of animal's expected habitat.



OTHER LEOPARD SUBSPECIES OUTSIDE INDIA

- **Indian Leopard suspected to have decreased by 24.5% over last 3 generations: IUCN (July 2024: DTE)**
  - » Based on all this information - the Indian leopard was **assessed as Near Threatened** (NT)
  - » **Indochinese Leopard** (Panthera pardus delacouri), **Arabian Leopard** (Panthera pardus nimr), and **North China Leopard** (Panthera pardus orientalis) have all been assessed to be **CR.**
  - » **Persian Leopard and Javan Leopard** are **EN**.
  - » **African Leopard and SL Leopard** are **VU**.

3) SNOW LEOPARD (PANTHERA UNCIA)

Distribution:
Globally, snow leopards are found in **12 countries** of **South Asia and Central Asia** - in the mountain ranges of India, Nepal, Bhutan, Pakistan, Afghanistan, China, Mongolia, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.

Habitat: Snow clad mountain ranges

Distribution in India: Upper reaches of Himalayas - in the state of Ladakh, J&K, HP, UK, Sikkim and Arunachal Pradesh.

- **Hemis** (Ladakh) is also known as the snow leopard capital of the world.

- India has identified **three landscapes** namely:
  i. **Hemis-Spiti** across Ladakh and Himachal Pradesh;
  ii. **Nanda Devi - Gangotri** in Uttarakhand



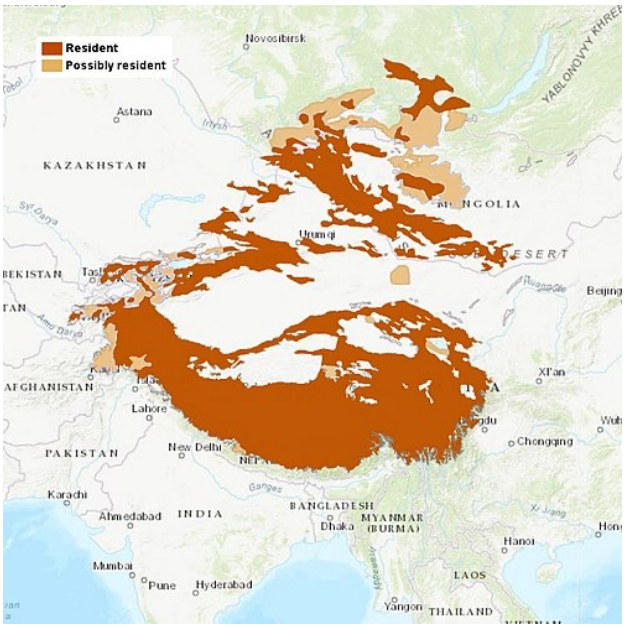
Other Details:

- It is known as the "**ghost of mountain**" and is the **top predator** of the high altitude

Levelup IAS

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

iii. **Khangchendzonga - Tawang** across Sikkim and Arunachal Pradesh.



National Heritage Animal: Snow leopard is national heritage animal of Afghanistan and Pakistan.

Key threats:
Habitat loss
Fragmentation
Human-animal conflict

Hostile habitat -> traditionally lower population

Climate Change -> encroachment by Indian Leopard in the snow leopard region.

Himalayas. It is also a flagship species and indicator species.

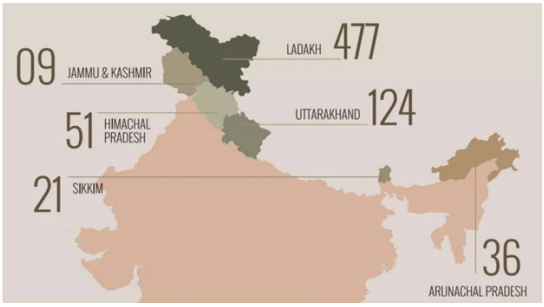
- Reclusive nature of Snow Leopard and difficult terrain have made population estimation difficult.
- **Unlike other Panthera species** (Lion, Tiger, Leopard, Jaguar) snow leopard **can't roar**. They lack specific layer of fibro-elastic tissue in their vocal cords.
- They are the **world's least genetically diverse big cat**.
    - Genetic analysis for 37 snow leopards to come to conclusion.

UT of Ladakh has declared snow leopard as the state animal: Stanford University

Conservation Status
- IUCN: VU
    - Note: IUCN moved it from endangered to vulnerable in 2017
- WPA: Schedule 1
- CITES: Appendix 1
- Convention on Migratory Species (Appendix - 1)

STATUS REPORT OF SNOW LEOPARD IN INDIA BY MOEF&CC

Status Report of Snow leopard in India (Jan 2024)
- Released by the Union Minister of EF&CC during the National Board of Wildlife Meeting in Delhi.
- **The Snow Leopard Population Assessment in India** (SPAI) Program is the **first ever scientific exercise** about snow leopard population in India.
- **The Wildlife Institute of India** (WII) is the National Coordinator for this exercise that was carried out with the support of all snow leopard range states and two



2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

conservation partners, the Nature Conservation Foundation, Mysuru and WWF-India. • The SPAI systematically covered **over 70% of the potential snow leopard range** in the country. It covered the UT of Ladakh, UT of J&K, and states such as Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.	**Key Highlights of the report**: **Total Population**: 718 **Ladakh** (477), UK (124), Himachal (51), Arunachal (36), Sikkim (21), and Jammu and Kashmir (9) The report also mentions the need for establishing a dedicated Snow Leopard Cell at WII under MoEF&CC with primary focus on long-term population monitoring, supported by well-structured study designs and consistent field surveys.

YEAR AROUND SNOW LEOPARD PRESENCE AND BREEDING ACTIVITY CONFIRMED IN J&K (AUG 2025)

- **Study**: It is a landmark 3 year camera trapping study conducted by the **Nature Conservation Foundation (NCF)** and **Wildlife Protection Department of J&K** between 2022 and 2025 in the Kishtawar Himalayas under the nationwide **Snow Leopard Population Assessment in India** (SPAI) protocol.

- **Key Findings**:
  - Year long presence of snow leopards (even during winters) in both Paddar (Jammu division) and Zojila (Kashmir division).
    - Note: The presence of snow leopard in J&K was known earlier only. Now year long presence has been confirmed.
  - Identification of at least 12 adult snow leopard, with an estimated presence of upto 20 individuals.
  - The presence of at least **one mother with cubs** indicates the presence of breeding population.
  - Presence of both **snow leopard and common leopard** at the same location.
    - This highlights the adaptability of common leopards and poses a threat to **elusive snow leopard**.
    - This is also seen as the **impact of climate change**.
  - **Other species** captured in camera trap included rare Himalayan brown bear, Himalayan wolf, common leopard, Kashmir Musk deer, stone marten, Asiatic ibex, and red fox.

OTHER PROGRAMS BY GOVERNMENT OF INDIA FOR SNOW LEOPARD PROTECTION

1. **SECURE Himalayas** (launched in Oct 2017)
   - » It is a GEF-UNDP funded project which is focused on conservation of high altitude biodiversity and reducing the dependence on local communities on the natural ecosystem.
     - It is currently operational in four snow leopard ranges - J&K, Himachal, UK and Sikkim.

2. **Project Snow Leopard** (launched by GoI in 2009)
   - » It is an initiative for strengthening wildlife conservation in the Himalayan High altitudes, covering Jammu and Kashmir, Himachal Pradesh, UK, Sikkim and Arunachal Pradesh.
   - » It aims at promoting knowledge-based and adaptive conservation framework that fully involves local communities, who share snow-leopard's range, in conservation efforts.

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

» The project facilitates a landscape level approach to wildlife conservation by developing scientific frameworks for comprehensive surveys, rationalizing the existing protected area network and improving protected area management.

3. **"Himal Sanrakshak"** - Community Volunteer Program
    - Launched in Oct 2020

4. **Note:** Snow Leopard is in the list of **22 critically endangered species for the Species Recovery Program** of the MoEF&CC.
    - Note: Caracal was added in the list in 2021 taking the list to 22.

5. **Snow Leopard Conservation Breeding Program** is being carried out at Padmaja Naidu Himalayan Zoological Park (also called **Darjeeling Zoo)**
    - This program was started in the zoo in 1985. In almost four decades, it now has the world's largest number of snow leopards in captivity - 14 in total - 7 males and 7 females.

6. The UT of Ladakh has adopted Snow Leopard and Black-Necked Crane, as the state animal and state bird (Sep 2021)

INTERNATIONAL EFFORTS

INTERNATIONAL SNOW LEOPARD DAY: 23RD OCTOBER

- It marks the adoption of Bishkek Declaration by 12 countries on the conservation of snow leopard in 2013.
- The **Global Snow Leopard & Ecosystem Protection Program** (GSLEP) was also launched on the same day.

GLOBAL SNOW LEOPARD & ECOSYSTEM PROTECTION PROGRAM (GSLEP)

- The GSLEP is a first-of-its kind intergovernmental alliance for the conservation of the snow leopard and its unique system. It was created in 2013 when officials, and conservationists arrived at a common conservation strategy enshrined in the **Bishkek Declaration (2013)** to cooperate in the conservation of this species and its habitat.
- It is a range wide efforts and unites range country government, NGOs, local communities, and private sector to conserve snow leopard and their ecosystem.
- It is led by environment ministers of 12 countries in Asia which form the home range of snow leopards: Afghanistan, Pakistan, India, Nepal, Bhutan, China, Mongolia, Russia, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.
- The GSLEP secretariat is in Bishkek.
- India is a member of GSLEP since 2013.
    - GoI also hosted 4th Steering Committee of the GSLEP in 2019 which also resulted in the "New Delhi Statement" of strengthening the resolve of the snow leopard range countries towards conservation of the mountain ecosystem of Central and South Asia.

4) CLOUDED LEOPARD (NEOFELI NEBULOSA)

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

The clouded leopard has been named so after the cloud-shaped pattern on its skin. They are considered evolutionary link between big cats and small cats.

Habitations

- They are typically rainforest dwellers, but can also be found in drier forest of South East Asia.

Distribution: Himalayan foot hills to Southeast Asia and China.

- In **India**, they are distributed in Northern West Bengal, Sikkim, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura.



IUCN Status: VU

It is also the **state animal of Meghalaya**

5) BLACK PANTHERS

- It is a melanistic color variant of any big cat species.
  - In Asia and Africa, they are leopards.
  - In Americas they are jaguars.

- **Conservation Status**
  - IUCN/WPA/CITES: VU/Schedule 1/ Appendix 1

- **Distribution in India**
  - Odisha to Kerala



6) FISHING CAT

- Fishing cats are generally twice the size of the household cats. They are generally found on the **Marshy wetlands of northern and eastern India**, and on the mangroves of the east coast.
  - » They are found in **Sundarbans** of India and Bangladesh, **Chilika Lake** and surrounding wetlands in Odisha, **Coringa and Krishna Mangroves** in Andhra Pradesh.
  - » The fishing cat has also been document in Ranthambore Tiger Reserve, Pilibhit, Dudhwa, Valmiki Tiger Reserve, and Sur Sarovar Bird Sanctuary.
  - » They are generally observed while hunting along the edges of water bodies grabbing prey from the water or diving in to catch prey farther from the banks.
- **Other features**



Protection Status

- **IUCN:** VU
- **WPA:** Schedule-1
- **CITES:** APPENDIX-II

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

» They are mostly active at night and adults are solitary in nature - **State Animal**: West Bengal.	

7) CARACAL (*CARACAL CARACAL*)

- **News**: Rare Asiatic Caracal spotted at Ramgarh in Rajasthan's Jaisalmer (Nov 2025)

Distribution: It is a wild cat, native to Africa, Middle east, Central Asia, and arid areas of Pakistan and northwestern **India**.

- In India, viable population of Caracal is found in only two states i.e. **Gujarat and Rajasthan**. Some sightings are reported from **MP also**.
  - They are found in Marshy areas of Kutch district, the higher areas closer to Kalo Dungar with grassy scrubland; and in Rajasthan's Sawai Madhopur, Karoli, and Dholpur district.
- Though they flourish in Africa, their population in India is on decline

Features:
It is characterized by robust build, long legs, a short face, long tufted ears long canine teeth, relatively short tail.
It's coat is uniformly reddish tan or sandy, while the ventral part are lighter with small reddish marking.
It was a **favorite coursing or hunting animal** in medieval India.

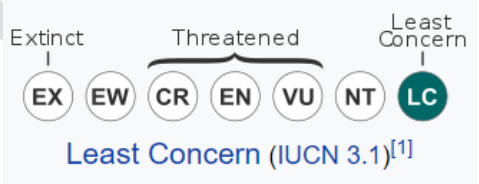
It is a **nocturnal and territorial specie**. They are **carnivores** who typically prey on small mammals, bird and rodents.

Main Threats: Habitat loss due to expansion of agriculture and desertification.

Caracal



Conservation status



Conservation status:
IUCN Red list: LC
CITES: Appendix-II (African Population)
CITES: Appendix-1 (Indian Population)
WPA: Schedule-1

SPECIES RECOVERY PROGRAM

- In Jan 2021, the National Board of Wildlife approved a recovery program for Caracal.
- It has been included in the list of Critically Endangered (note that this is not IUCN status), species for which Species Recovery Program is being run by GoI. With this now we have 22 species on Critically Endangered list.
  - Note: The IUCN status is LC because of its large number in Africa.
- **Significance of inclusion under the Species Recovery Program**
  - This specie will now have a separate conservation program. The MoEF&CC will order a population estimation and then carry out study of the habitat. After this a habitat improvement and breeding program will be taken up, similar to that of the great Indian bustard. It required captive breeding program will also be taken up

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

4. CAMELS

- **News:** UN has declared 2024 as the International Year of Camelids (IYC 2024)
- **Different Types of Camels in India:**

Dromedary (Camelus dromedarius) :	**Double Humped Bactrian Camel (Camelus bactrianus)**
The National Bureau of Animal Genetic Resources (NBAGR) lists nine dromedary (Camelus dromedarius) breeds of camel in India. **Five** (Bikaneri, Jaisalmeri, Jalori, Marwari, and Mewari) originated in Rajasthan **One** - **Mewati** can be seen in both Rajasthan and Haryana. **Two** (Kutchi and Khrai) are Gujarati **One** (Malvi) belongs to Madhya Pradesh. 	India also has **a small population of the double-humped Bactrian Camel *(Camelus bactrianus)***, found mostly in the Nubra valley in Ladakh. 

- **India's total camel population** - all of them descendants of wild dromedary, or Arabian, Camels - decreased by 37% between 2012 and 2019.
  - » Current estimates suggest that there are fewer than 200,000 camels left among the nine breeds, and 80% of these animals live in Rajasthan, where they are bred to provide transport, wool, and milk, as well as plough field.
  - » **Why decrease in Camel population?**
    - Development in Western India -> new roads, vehicles etc. -> reduces the need of camel transportation.
    - Irrigation projects; Solar and Wind Farms etc. have reduced the land available for grazing of camels.
    - Collapsing tourism (COVID-19 pandemic)
    - Ban on export and sale of male camels including blanket ban on the sale of camel meat.
- **Can Camel milk bring a solution ->** With more awareness about the nutrients property of the milk.
  - » Camel milk is touted as the next superfood. It has low amounts of sugar, is rich in vitamins and minerals, such as Vitamin C and potassium, and is alternative for lactose intolerance.
  - » Some studies have also shown that Camel milk may reduce a person's need for Insulin (in case of Type-1 diabetes).
  - » **Hurdles**: Class discussion.

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

KHARAI CAMEL

- **Details**
  - » Kharai Camel are a unique breed of camels found **only in Kutch**. They are known for their ability to **swim in water**. They have webbed feet like that of a frog.
  - » The name is derived from the local world **Khara**i which means Saline. They are also known as **dariyataru** (meaning sea-swimmer).
  - » During the rainy season, they swim along the Gulf Of Kutch, an inlet of the Arabian sea, to small forest islands and graze on mangroves and other saline-loving plants.
  - » **IUCN: EN**
  - » **WPA: Schedule-1**
  - » **Key threats:**
    - Habitat destruction (mangrove forests they feed on are being destroyed)
    - Salt pans have increased in the area, and they have destroyed habitat and blocked to path of travel for the camels.

- **Recognition as separate Breed:**
  - » The Kharai camels were recognized as a separate breed only in 2015.

- **Declining numbers**
  - » In 2010, there were about 10,000 camels in the region, which has now (2020) declined to around 5,000.

- **Key recent efforts**
  - » Amul have started making camel milk products to support camel herders.

- **Altercations between Kharai Camel Owners** (Of Jamnagar and Devbhumi Dwarka) **and Forest Department (Sep 2021) -> Grazing in Marine National Park**

1) OTHER CAMEL TYPES NOT FOUND IN INDIA

Llama: These are tall horse shaped camels, with long ears and slightly curved inward like bananas. There are around 4 million of them (50% in Bolivia)	

LevelUP IAS

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

Alpaca: It is also a south American camel. Today they are found on farms and ranches worldwide – they are popular in North America, Europe and Australia. **Similarity to Llama**: They are visually, genetically similar to, and thus are often confused with Llamas. But they are visibly shorter and are primarily **bred for wool**. **Note**: All four south American camelids are closely related, and they can be inter-bred.	
Guanaco: It is one of the largest terrestrial and wild mammal of South America. They are very fast can run upto 35 miles per hour. It is also **domesticated for fibre**.	
Vicuna (Vicugna): With Guanaco it is one of the two wild south American camelid and live in high alpine areas of andes. They produce small amount of **extremely fine wool**, which is very expensive.	

5. GIBBON SPECIES

- Gibbons are among the fastest of all apes.

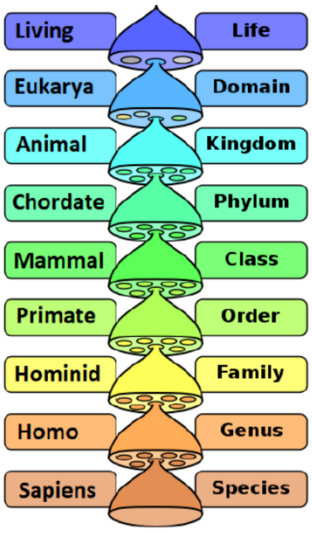
1) UNDERSTANDING APES

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

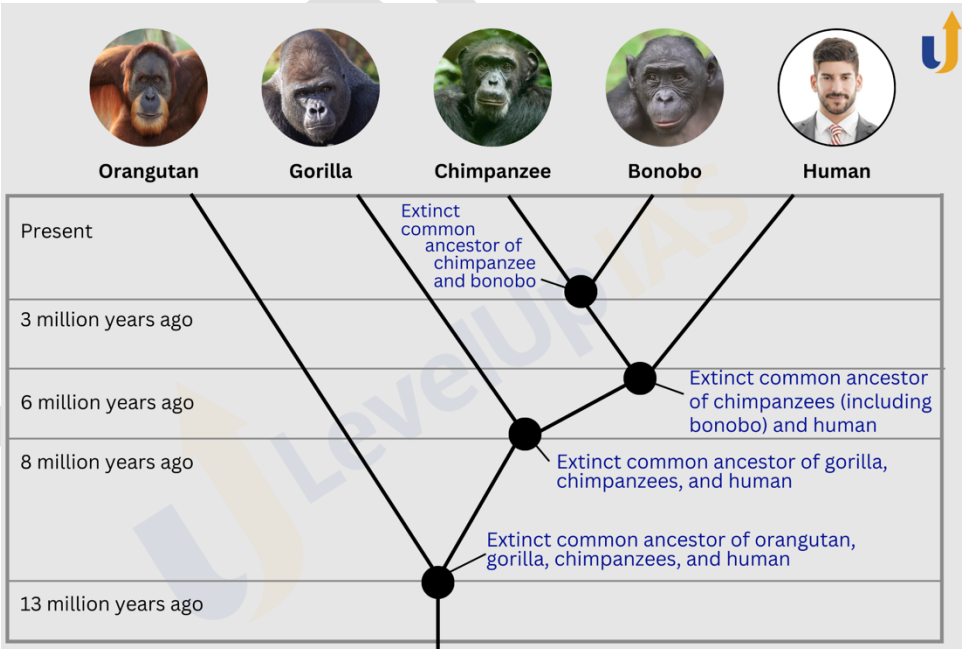
- **Ape**, (Superfamily Hominoidea), include any **tailless primate** of the families **Hylobatidae** (gibbons), and **Hominidae** (Chimpanzees, Bonobos, Orangutans, Gorillas, and Human Beings)

- Apes are distinguished from Monkeys by the complete absence of tail and the presence of appendix and by their more complex brains.

    - **Gibbons** are referred as lesser apes.
    - The **Gorilla, chimpanzees, bonobo, and orangutans** are called **Great Apes** in recognition of their comparatively large size and humanlike features.
    - **Distribution:**
        - » **Gorillas** are herbivorous, predominantly ground dwelling great apes that inhabit the forest of equatorial Africa. The genus gorilla is divided into two species - the Eastern Gorilla and the Western Gorilla.
        - » **Chimpanzees** are native to forests and Savannahs of tropical Africa.
        - » **Bonobo** (also historically called pygmy Chimpanzee) is an **Endangered (IUCN) great ape**, found within the Congo basin of DRC, Central Africa.
            - **Note**: Chimpanzee and Bonobo are the only two species of genus ***Pan***.



        - » **Orangutans** are the ape's native to the rainforests of **Indonesia and Malaysia**. They are now naturally found only in parts of Borneo and Sumatra.
            - Genus: Pongo; two species - Bornean Orangutan and Sumatran Orangutan.



            - **Note**: There are no apes (except humans) naturally found in the new world (Americas).
                - The new world monkeys reached Americas around 30 million years ago, probably carried across from Africa on a raft of fallen trees (Atlantic was much narrower then).

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

- Apes evolved in around 20-15 million years ago in Africa, by this time Atlantic was very wide for any migration to happen between new world and old world.

2) GIBBONS

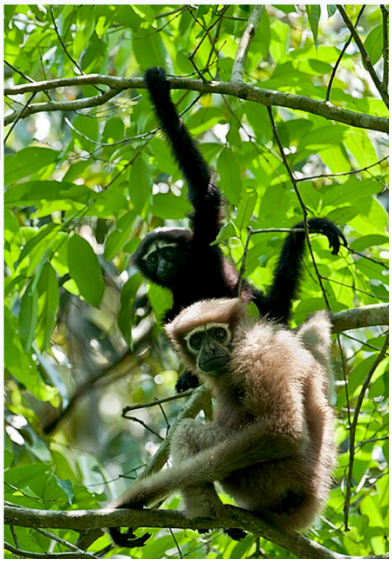
- **Distribution**: They live in tropical and sub-tropical forests in the south-eastern part of Asia.
- **20 species** of Gibbons are found on earth and all of them are threatened by extinction.

HOOLOCK GIBBON (CLASS: MAMMALIA; ORDER: PRIMATES; FAMILY: HYLOBATIDAE)

- It is a species of gibbon found in tropical forests of southeastern Asia. It is also found in India's north-east. It is one of the 20 species of gibbons found in the world and is the **only ape found in India**.

- **Estimated population** of the hoolock gibbons is 12,000.
- **Features**: Like other apes, they are intelligent, have distinct personalities, strong family bonds etc.
- They are also **characterized by their vigorous vocal displays** and thus are also known as **Singing Gibbons**.

Western hoolock gibbon



3) RAILWAY TO BUILD CANOPY BRIDGES ACROSS TRACK IN ASSAM'S GIBBON HABITAT - THE HOLLANGAPAR GIBBON SANCTUARY IN ASSAM'S JORHAT DISTRICT (JUNE 2024)



2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

6. OTHER ENDANGERED MAMMALS

1) PIGMY HOG



- **Geographical Range**
  - » It is only known from India.
  - » Its presence is uncertain in Bhutan and is extinct from Nepal and Bangladesh.



- **More Details about Pigmy Hog**
  - » World's smallest wild pig, with adults weighing only 8 kg.
  - » **Habitat: Grassland** - Found in relatively undistributed **tall Tarai grasslands**
  - » **Distribution:** Formerly, the species was more widely distributed along the southern Himalayan foothills but now is restricted to only a single remnant population in **Manas national park** and its **buffer reserves**.
  - » **Threats:** The main threats are the loss and **degradation of grasslands, dry season burning, livestock grazing and afforestation of grasslands**. Hunting is also a threat to the remnant population.
  - » It is one of the most useful **indicators** of the management status of the grass land habitats. The grassland where the pigmy hog resides are crucial for the survival of another endangered species such as Indian Rhinoceros, Swamp Deer, Wild Buffalo, Hispid Hare, Bengal Florican and Swamp Francolin.
  - » In 1996, a captive breeding program was initiated in Assam, and some hogs were reintroduced in Sonai Rupai area in 2009.

- **Conservation Status**
  - » IUCN - EN
  - » WPA (as amended in 2022) - Schedule-1

- **Pygmy Hog Sucking Louse**, a parasite that feeds only on Pygmy Hogs will also fall in the same risk category of **EN** as its survival is linked to that of the host species.

PIGMY HOG CONSERVATION PROGRAM (PHCP)

- The Pygmy Hog Conservation Program (PHCP) is a collaboration among **Durrell Wildlife Conservation Trust of UK**, Assam Forest Department, Wild Pig Specialist Group of International Union for Conservation of Nature and **MoEF&CC**.
- It is currently being implemented by **NGOs Aaranyak and EcoSystems** India.
- Under this initiative **six Hogs** (two males and 4 females) were captured from the Bansbari range of Manas National Park in 1996 for starting the breeding program.
  - **The reintroduction** began in **2008** with Sonai Rupai WLS (35 Hogs), **Orang National Park** (59) and Barnadi WLS (22).

LevelUp

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

- **UPDATES**: In Oct 2024, **9 captive-bred pygmy hogs** were released in Western Assam's Manas National Park. This was the fifth such exercise by PHCP since 2020. **27 individuals** of the endangered species have been released at the Kanchanbari grassland of the National Park so far. A 2023 camera trap study at the release site also shows that the hogs are exploring and breeding in the area.
    - So far, **179 pigmy hogs** have been released in protected areas of Assam.

- Conservation of Pygmy Hog was initiated by noted naturalist Gerald Durrell and his trust in 1971. Pygmy Hog was brought back from near extinction by the partnership effort, and the efforts are being made towards establishment of a population across the entire range.
- **By 2025**, the PHCP plans to release 60 Pygmy Hogs in Manas

2) KONDANA SOFT FURRED RAT (ALSO KNOWN AS KONDANA RAT OR LARGE METAD)

- Nocturnal burrowing rodent that is **found only in India**. It is sometimes known to build nests.

- **Habitat:** Its natural habitat are **subtropical and tropical dry forests, subtropical or tropical dry lowland grassland, and urban areas**.

- **Distribution:** Known only from the small **Sinhagarh Plateau (about 1 km^2), near Pune in Maharashtra**.

- **Threats:** Major threats are habitat loss, overgrazing of vegetation, and disturbance from tourism.

3) DHOLE/ ASIATIC WILD DOG OR INDIAN WILD DOG (CUON ALPINUS)

- **Other Names:** Indian wild dog, whistling dog, Chennai dog, Asiatic Wild Dog, red wolf etc.

- **Distribution:** Native to central Asia, South-East Asia.
    - » In India there are few remaining adults in the wild. They can be seen in protected areas of Karnataka, Maharashtra, and Kerala.
    - » News: Returns to Kaziranga landscape (2025 news)

- **Population**: With less than 2,500 individuals surviving in the wild globally, the dhole is already extinct in about 10 Asian countries.

- **Very efficient predators:** They are so efficient as predators that there have been reports of them even attacking tigers.
- **Threat**
    - » Habitat loss
    - » Loss of prey
    - » Competition with other species
    - » Persecution
    - » Possibly diseases transfer from other dogs (domestic and feral dogs).



2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

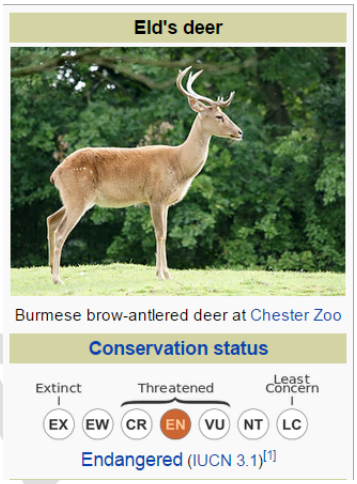
4) BROW-ANTLERED DEER/SANGAI DEER (PANOLIA ELDII)

Specific Habitat requirements: They inhabit the floating biomass in Loktak Lake Manipur.

Key threats: Hunted for their bow-shaped antlers.

Note: Sangai Deer (EN) is an endemic and endangered subspecies of brow-antlered deer found only in Manipur, India.

- It's original habitat is the **floating marshy grasslands of the Keibul Lamjao National Park**, located in the southern part of the **Loktak lake**, which is the largest freshwater lake in eastern India.
- **State animal of Manipur**.
- They are also known as **dancing dear**. This is because while walking on the floating island it often balances itself and appear to be dancing.



SANGAI FESTIVAL

- It is a **10-day annual cultural festival** organized by Manipur Tourism department every year from Nov 21 to 30.
- It was first celebrated in 2010. It was earlier called tourism festival which has been renamed to **Sangai festival** to promote the uniqueness of brow-antler deer.
- The festival also promotes Manipur's unique art, handicraft, sports, cuisine.
- Some **folk dances** of Manipur like **Kabui Naga Dance**, **Bamboo Dance**, **Maibi Dance**, **Lai Haraoba Dance**, **Khamba Thoibi Dance** etc could be seen here.
- **Manipur's martial art** form **Thang Ta** can also be seen here.
- **Some games** include:
  - **Yubi-Lakpi,** which is a game played like a rugby with greased coconut;
  - **Mukna Kangjei**, a game combining hockey and wrestling.
  - **Sangol Kangjei**, or Polo - It is believed that modern polo came from Manipur Polo, Sagol Kangjei.
- **Manipur cuisines** such as **Nga-thongba** (fish curry), and the popular **Eromba** (a mixture of boiled veggies with fermented fish) are also available at the festival.

LOKTAK LAKE

About the Lake

- It is one of the largest freshwater lakes in India. It is **pulsating lake** with surface area varying from 250 sq km to 500 sq km during the rainy season with a typical area of **287 sq km**.
- It is lake in Manipur, which is located 40 kms south of Imphal.
- **The town of Moirang**, on its bank, was the headquarter of the Indian National Army where they established a



2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

provisional independent government after defeating the British.

- **The lake** covers 61% of the total identified wetlands of the state. It plays a significant role in socio-economic and cultural life of Manipuris.

- It is famous for **Phumdis** (soil and organic matter at various stages of decomposition) floating over it. The largest of all the phumdis covers an area of 40 km2 and is situated on the southeastern shore of the lake. Located, on this Phumdi, **Keibul Lamjao National Park** is the only floating national park in the world. The park is the last natural refuge of the endangered Sangai (state animal).

- Once considered extinct, the **population of brow-antlered deer found only on Keibul Lamjao National Park**.
- Loktak lake is also one of the Ramsar sites in India.
    - It is also in Montreux Record and government is taking a lot of steps to get it delisted.

Key threats:

- **Human Pressure -** Floating houses and fishing structures.
- **Ithai Barrage** - brought about drastic changes in the characteristics of the wetlands.
- **Pollution**: Moreover, River Nambul that flows from Imphal into the lake, dumps in the untreated sewage of the entire city.

About Ithai Barrage

In 1983, NHPC constructed a barrage at the confluence of the **Manipur and Khuga river** - two of the five major rivers that drain into Loktak lake.

This barrage has provided electricity and irrigation water to the region, but has created a number of problems for Loktak lake.

- Now even during dry season water level is high in Loktak lake and the Phumdis are not able to reach ground and absorb nutrition from there.
- Further, the dead biomass remains in the Lake only as the outflow has been blocked due to the barrage.
- The barrage has also blocked the route of migratory fish coming into the lake from Myanmar and so Loktak can no longer meet the demand of the entire state.

LevelUP IAS

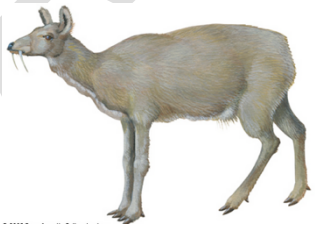
2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

5) GEE'S GOLDEN LANGUR (TRACHYPITHECUS GEEI)



- **Distribution:** Golden langur is an old-world monkey, found in small regions of **western Assam, India and neighboring foothills of the Black Mountains of Bhutan**.
  - Manas National Park provides good sighting of this animal.
- **Status:** Endangered. One of the most endangered primate species of India.
- They have been named for their luscious coats and are considered sacred by Himalayan people.

6) HIMALAYAN WHITE BELLIED MUSK DEER



- **Habitat/Distribution:** Kashmir, Kumaon, Sikkim in India. Himalayas of Nepal and China.
- **Threats**: **Poaching and illegal trade for its musk**
- **Musk:** is a substance with a persistent odor obtained from a gland of the male musk deer (only male produces the musk). The substance has been used as perfume fixative, incense material and medicine.

7) ALPINE MUSK DEER (MOSCHUS CHRYOSOGASTER)

- Alpine musk deer is a musk deer species native to the eastern Himalayas in **Nepal, Bhutan and India** to the highlands of Tibet.
- It is now considered a separate species, to Himalayan Musk Deer. It is the **state Animal of Uttarakhand**.
- IUCN Status: EN

8) KASHMIR MUSK DEER *(MOSCHUS CUPREUS)*

- It is an endangered species of musk deer native to Afghanistan, India, Pakistan and Nepal.
- **In the past**, the species was described as a subspecies to the alpine musk deer, but is now classified as a separate species.
- **IUCN: EN**

9) HISPID HARE



- **Details:** The Hispid hare, also called Assam rabbit, is a leporid, native to South Asia.
- **Habitat/Distribution:**
  - **Historically** it had wider range in southern Himalayan foothills, now distributed only patchily in India, Bangladesh, Nepal and Possibly Bhutan.

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

- A significant population is found in **Shuklaphanta National Park in Nepal**, elsewhere it only occurs sporadically.

- Habitat is highly fragmented due to increasing agriculture, flood control, and human development.

10) HOG DEER



- **Habitat/Distribution:** Habitat ranges from Pakistan, through northern India, to mainland southeast Asia.
    - But it has lost ground in most of its range.
    - **Two sub species** of hog deer have been reported from its range
        - **The western race** is distributed from Pakistan and Terai Grassland (along the Himalayan foothills), from Punjab to Arunachal Pradesh.
        - **The Eastern Race** of hog deer is found in Thailand, Indo-China, Laos, Cambodia, and Vietnam.
- **Name:** The hog deer runs through the forests with its head hung low (hog-like manner) so that it ducks under obstacles instead of leaping over them like most other deer do.
- **Eastern Hog Deer (Axis Porcinus annamiticus) - A rare subspecies of hog deer found in Keibul Lamjao National** Park
    - The sub-species was earlier believed to be confined to the eastern part of Thailand.
    - **Genetic Study** by researchers at WII, Dehradun have reported presence of small population of Hog Deer at Keibul Lamjao National Park in Manipur.

11) LION TAILED MACAQUE / WANDEROO (MACACA SILENUS)

- **Details:** It's an old-world monkey, **endemic to the Western Ghats of South India**. They avoid human presence and they do not live, feed or travel through plantations.



- **Habitat:** They live in Southwest India in pockets of evergreen forests, called **Sholas**, in the Western Ghats range. Today, they only live-in mountain forests scattered across three Indian states: Karnataka, Kerala and Tamil Nadu.
- **Threat**: **Habit Fragmentation:** Due to spread of agriculture and tea, coffee, teak, and Cinchona, construction of water reservoirs and human settlements to support such activities.
- **Conservation Efforts**: **Captive Breeding:** Aringnar Anna Zoological Park, Chennai and in Mysore Zoo.

12) NILGIRI TAHR

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

It is the only mountain ungulate in southern India amongst the 12 species present in India. It is also the **state animal of Tamil Nadu**. It is a sure-footed ungulate that inhabits the open montane grasslands habitats at elevations from 1200 m to 2600 m of the **Southwestern ghats**.

Distribution:

- Earlier, it was found throughout western ghats.
- But, today, it is distributed along a narrow stretch of 400 km between Nilgiris in the north and Kanyakumari in South. It has become locally extinct in around 14% of its traditional shola forests -grassland habitats.
- There are smaller populations found in the **Palani Hills**, **Srivilliputtur**, and the Meghamalai and Agasthiyar ranges, only **two well protected large population** is documented - one from th**e Nilgiris** and the other from the **Anamalais, i**ncluding the high range of Kerala.
    - The **Eravikulam National Park** in Anamalai hills, Kerala, is home to the largest population of Nilgiri Tahr, with more than 700 individuals.
    - **Mukurthi National Park (TN)**, was created to protect this endangered species

Conservation Status

- IUCN/WPA/CITES: EN/Schedule-1/Appendix 1

Threats

- Habitat loss, overgrazing, illegal hunting.

Historical references:

- Referred in Tamil Sangam literature 2,000 years back.
- Late Mesolithic paintings (10000-4000 BCE) also highlight significance of Tahr in the folklore, culture and life.

Nilgiri tahr



Conservation status



Endangered (IUCN 3.1)[1]

13) INDIAN PANGOLIN

- **About Indian Pangolin**
    - The Indian Pangolin, thick tailed pangolin, or scaly pangolin is a pangolin found in the **plains and hills of India, Sri Lanka, Nepal, and Bhutan**.
    - It is an **insectivore** that feeds on ants and termites, digging them out of mounds and logs using its long claws, which are as long as its fore limbs. It is a solitary, shy, slow moving, nocturnal mammal.

- Main Threats
    - Hunting for its meat and scale
    - Various body parts used in traditional medicines

- Conservation Status
    i. IUCN: Endangered
    ii. WPA: Scheduled 1
    iii. CITES: Appendix 1 (reclassified in 2016 from Appendix 2 to Appendix 1)

- Pangolins and India

Indian pangolin



Specimen in Sri Lanka

Conservation status



Endangered (IUCN 3.1)[1]

LevelUp IAS

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

i. Among 8 species of Pangolin found globally, four each are found in Asia and Africa. **India is home to two species - the Chinese Pangolin and the Indian Pangolin**.

- Recently, CITES COP19 has urged member countries to remove references to Pangolins from Pharmacopoeia – an official collection of approved pharmaceutical standards.

14) RED PANDA (AILURUS FULGENS) (LESSER PANDA, RED BEAR-CAT, AND RED CAT-BEAR

It is a small arboreal mammal native to **eastern Himalayas** and **south-western China**.
Habitat/ Distribution: Sikkim, Assam, Meghalaya, Northern Arunachal Pradesh and Darjeeling. Almost 50% of the Red Pandas inhabit eastern Himalayas.



It is from **Ailuridae family** – in the mammal order of Carnivora: The family consists of red panda (the sole living representative) and its extinct relatives.



Physical features: It has reddish brown fur and a long shaggy tail.
Diet: Omnivorous (mainly on bamboo)
Conservation Status

- IUCN/WPA/CITES: EN/Schedule 1/ Appendix 1

Threats: Habitat loss and fragmentation; Poaching for Furs; Inbreeding Individuals;

THE PADMAJA NAIDU HIMALAYAN ZOOLOGICAL PARK (PNHZP) (DARJEELING ZOO) HAS STARTED AN INITIATIVE TO RELEASE 20 RED PANDAS IN FORESTS IN THE NEXT FIVE YEARS.

- **About the Zoo:**
  - It is a zoological park located in Darjeeling. It is named after Padmaja Naidu, the former Governor of West Bengal, India. She is also the daughter of Indian Independence leader Sarojini Naidu.
  - It is a park situated 2,000 meters above the sea level. It was established in 1958 and is the largest high-altitude zoo in India.
  - It has been quite successful in captive breeding of **the Red Panda**. As of July 2022, there are 27 Red Pandas in the zoo.

- **Release of Red Pandas in Wild**:
  - In the first re-wilding program of red Pandas in India, the PNHZP has started an ambitious program to release 20 of these mammals in about five years to the forests. They will be released in Singalila National Park.
  - In the past, two pairs of Red Pandas were released in 2021. Two animals managed to survive.

Level Up IAS

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com

15) ASIAN WILD BUFFALOE

- It is the large bovine native to the Indian subcontinent and Southeast Asia.
- It has been listed as endangered since 1986 and remaining population totals less than 4,000. More than 90% of its population is found in India, mostly in Assam.



LevelUp

2nd Floor, 45 Pusa Road, Opp. Metro Pillar 128, Karol Bagh, New Delhi-110005
Ph: 8826496658 | Email: students@levelupias.com