



Snow Leopard

For Prelims: Snow Leopard

For Mains: Conservation

Why in News?

Recently, a study conducted by [Zoological Survey of India \(ZSI\)](#) under **National Mission on Himalayan Studies** highlighted relation between habitat uses by [Snow Leopard](#), Siberian ibex and blue sheep.

- It aimed at **examining how the predator used habitat in presence or absence of its prey species and vice-versa.**

What is National Mission on Himalayan Studies?

- It's a **Central Sector Grant-in-aid Scheme**, therefore, targets to provide much-needed focus, through a **holistic understanding of the system's components and their linkages**, in addressing the key issues relating to **conservation and sustainable management of natural resources in India Himalayan Region (IHR).**
- The ultimate goal is to **improve the quality of life and maintain ecosystem health** of the region to ensure long- term ecological security to the country.
- As the Mission specifically targets the Indian Himalayan Region (IHR), the jurisdiction of **NMHS includes 10 Himalayan states** fully (i.e., Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand) and two states partially (i.e., hill districts of Assam and West Bengal).
- **Goals include:**
 - Foster conservation and sustainable management of natural resources;
 - Enhance supplementary and/or alternative livelihoods and overall economic well-being of the region;
 - Control and prevent pollution in the region;
 - Foster increased/augmented human and institutional capacities and the knowledge and policy environment in the region; and
 - Strengthen, greening, and fostering development of climate-resilient core infrastructure and basic services assets.

What were Key Highlights of the Study?

- It was found that, the **likelihood of detecting a snow leopard** was increased if the place was **utilised by its prey species, ibex and blue sheep.**
- In the case of prey species, the probability of detection was low when the predator (snow leopard)

was present and observed.

- Further both species were less likely to detect together than expected.
- According to the study, **habitat variables such barren area, grassland, aspect, slope, and distance to water** were **major drivers of habitat use** for both the snow leopard and its prey species.
- Predators such as snow **leopards regulated the populations of herbivores** such as blue sheep and Siberian ibex in the mountains, protecting the health of grasslands.
 - A long-term absence of snow leopards could cause trophic cascades as unregulated populations would likely increase, depleting vegetation cover.
- Knowledge of the **species' interactions** will be beneficial in **building better conservation and management plans for the long-term sustainability** of the snow leopard and its prey species in the Spiti Valley ecosystem.



What is Snow Leopard?

- **About:**
 - **Scientific Name:** Panthera uncia
 - **Top Predator:** Snow leopards act as an indicator of the health of the mountain ecosystem in which they live, due to their position as the top predator in the food web.
- **Protection Status:**
 - [IUCN List of Threatened Species](#): **Vulnerable.**
 - [CITES](#): **Appendix I.**
 - [Indian Wildlife \(Protection\) Act, 1972](#): **Schedule-I.**
- **Habitat:**
 - They have a vast but **fragmented distribution across the mountainous landscape of central Asia**, which covers different parts of the Himalayas such as Ladakh, Himachal Pradesh, Uttarakhand, and Sikkim.
- **Threat:**
 - Largely threatened because of the loss of natural prey species, retaliatory killing due to conflict with humans and illegal trade of its fur and bones.

What are the Indian Initiatives?

- The Government of India has identified the snow leopard as a **flagship species** for the high-altitude Himalayas.
- India is also party to the **Global Snow Leopard and Ecosystem Protection (GSLEP) Programme since 2013.**
- **HimalSanrakshak:** It is a community volunteer programme, to protect snow leopards, launched in October 2020.
- In 2019, **First National Protocol** was also launched on Snow Leopard Population Assessment which has been very useful for monitoring populations.
- **SECURE Himalaya: Global Environment Facility (GEF)-United Nations Development Programme (UNDP)** funded the project on conservation of high altitude biodiversity and reducing the dependency of local communities on the natural ecosystem.
- **Project Snow Leopard (PSL):** It was launched in 2009 to promote an inclusive and participatory approach to conserve snow leopards and their habitat.
- Snow Leopard is on the list of **21 critically endangered species for the recovery programme** of the Ministry of Environment Forest & Climate Change.
- Snow Leopard conservation breeding programme is undertaken at **Padmaja Naidu Himalayan Zoological Park, Darjeeling, West Bengal.**

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. Consider the following: (2012)

1. Black-necked crane
2. Cheetah
3. Flying squirrel
4. Snow leopard

Which of the above are naturally found in India?

- (a) 1, 2 and 3 only
 (b) 1, 3 and 4 only
 (c) 2 and 4 only
 (d) 1, 2, 3 and 4

Ans: (b)

Exp:

- Black-necked crane is commonly found in Tibetan and trans-Himalayan region. In winters they migrate to less colder regions of Indian Himalayas. It has been evaluated as Near Threatened in IUCN list. Hence, 1 is correct.
- Cheetah is an extinct species in India. They have gone extinct during the pre-independence era mainly due to hunting. By the beginning of the twentieth century, the species was already heading for extinction in many areas. The last physical evidence of the Asiatic cheetah in India was in 1947, in Eastern Madhya Pradesh or Northern Chhattisgarh. It has been evaluated as vulnerable in IUCN list. Hence, 2 is not correct.
- Flying Squirrels are found in Western Ghats, Northeast and other Indian forests. It has been evaluated as least concern in IUCN list. Hence, 3 is correct.
- Snow leopard, listed as vulnerable in IUCN list, is found in the Himalayan ranges. Hence, 4 is correct. **Therefore, option (b) is the correct answer.**

Source: TH

