

India's First Frozen Zoo

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India's First Frozen Zoo: A New Era in Species Conservation

Padmaja Naidu Himalayan Zoological Park in Darjeeling has established India's first **frozen zoo**, a significant step in wildlife conservation. This facility serves as a **genetic cryobank**, preserving the genetic material of endangered species to prevent their extinction.

What is a Frozen Zoo?

A **frozen zoo** is a facility that stores **DNA, sperm, eggs, and embryos** of endangered animals at ultra-low temperatures. This helps conserve their genetic material for future breeding and research.

- **Collaboration** - Established in partnership with the **Centre for Cellular and Molecular Biology (CCMB), Hyderabad**.
- **Area Coverage** - Spans **67.8 acres**.
- **Altitude** - Located at **2,150 metres (7,050 ft)**, making it India's **highest-altitude zoological park**.

Preservation Process

The frozen zoo follows a structured preservation process:

- **Genetic Sampling** - Requires storage at **-20°C**.
- **Bio-banking** - Uses cryogenic conservation to preserve the DNA of endangered Himalayan species.
- **Long-term Storage** - Genetic material is kept in **liquid nitrogen tanks at -196°C**.

Objective and Conservation Efforts

The primary goal of the frozen zoo is to **prevent the extinction** of species like **red pandas, snow leopards, gorals, and Mishmi takins** by preserving their genetic material.

Padmaja Naidu Himalayan Zoological Park is already known for its **conservation breeding programs** for **red pandas, snow leopards, and Tibetan wolves**. It also works on species like the **Markhor (screw-horned goat), Mishmi takin, and Himalayan black bear**.

Quick Facts

- **Global Presence** - There are **fewer than a dozen frozen zoos worldwide**.
- **First Frozen Zoo** - Established in **1975** by **Kurt Benirschke** at the **Institute for Conservation Research, San Diego**.

This initiative marks a crucial step in **India's wildlife conservation efforts**, ensuring that endangered species continue to exist for future generations.



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