



# Tranquilising Wild Animals

[Source: IE](#)

Recently, a three-year-old tigress, Zeenat, was tranquilised and captured from the forests of **Bankura** in West Bengal and relocated to [Odisha's Simlipal tiger reserve](#).

- **Tranquilization is not only vital for conservation efforts** but also for ensuring the safety of both the animals and human populations.

## What is Wildlife Tranquillisation?

- **About:**
  - Wildlife tranquillisation is the process of **sedating wild animals using specific sedative drugs** to safely capture, handle, or relocate them for various conservation, research, or rescue purposes.
- **Regulation:**
  - The use of tranquilizers is regulated under the [Drugs and Cosmetics Act, 1940](#).
  - In India, **animal tranquilization is overseen by State Forest Departments** under the [Wildlife Protection Act, 1972](#), with support from trained veterinarians and expertise provided by the [Wildlife Institute of India \(WII\)](#).
- **Methods and Tools:**
  - **Tranquilliser Guns and Darts:** The primary tool for wildlife tranquillisation is a **dart gun**, which delivers a **syringe filled with sedative drugs**.
    - The dart is **shot remotely from a distance**, typically using compressed CO<sub>2</sub> gas to propel the dart.
  - The dart is often equipped with a **hypodermic needle** and a **barb** to ensure that the drug is effectively administered under the skin.
    - A **tuft of feathers or other stabilising materials** is attached to the dart to improve accuracy during flight.
- **Types of Drugs:**
  - **Opioids:** Drugs such as **M99 (etorphine)** used for immobilising large mammals like elephants and tigers.
    - In wildlife tranquillisation, [morphine](#) can sometimes be used in combination with other drugs for immobilisation.
    - **Alpha-Adrenergic Tranquilisers:** Drugs like **Xylazine and Ketamine** are commonly used in combination for sedating animals like deer and tigers.
    - **Xylazine** acts as a sedative and muscle relaxant, while **Ketamine** helps to induce dissociation and extend the period of immobility.
    - These drugs allow for more controlled sedations, with the capacity to reverse the effects using antidotes.
  - **Reversal Agents:** Specific antidotes, such as **Naloxone**, are used to reverse the effects of tranquillisation.
- **Applications:**
  - **Conservation and Relocation:** Used to safely **relocate animals from human-wildlife conflict zones** or move endangered species to protected reserves.
  - **Research and Monitoring:** Employed for **capturing animals for health** assessments, tagging, and studying migration patterns.

- **Rescue Operations:** Essential for **rescuing injured or stranded animals**, enabling veterinary care or transport to rehabilitation centers.

# WILDLIFE CONSERVATION INITIATIVES

## Constitutional Provisions for Wildlife

- **42nd Amendment Act, 1976:** Forests & Protection of Wild Animals and Birds (moved from State to Concurrent List)
- **Article 48 A:** State shall endeavor to protect & improve environment and safeguard forests and wildlife of country
- **Article 51 A (g):** Fundamental duty to protect & improve natural environment including forests and Wildlife

## Legal Frameworks

- Wildlife (Protection) Act, 1972
- Biological Diversity Act, 2002

## Major Conservation Initiatives

- **Integrated Development of Wildlife Habitats (IDWH):**
  - ↳ Financial assistance provided to State/UT Governments for protection and conservation of wildlife
  - ↳ A Centrally Sponsored Scheme
- **National Wildlife Action Plan (2017-2031)**
- **Guidelines for Eco-tourism in Protected Areas**
- **Human-Wildlife Conflict Mitigation**
- **Wildlife Crime Control Bureau:** To combat wildlife-related crimes
- **Wildlife Division (MoEFCC):**
  - ↳ Policy and law for conservation of biodiversity and Protected Area network
  - ↳ Technical and financial support to the State/ UTs under IDHW, Central Zoo Authority and Wildlife Institute of India

- **Wildlife Crime Control Bureau (WCCB):** Collection, collation of intelligence & its dissemination, establishment of centralized Wild Life crime databank, coordination etc.
- **Wildlife Crime Control:**
  - ↳ Operation Save Kurma
  - ↳ Operation Thunderbird

## Species-Specific Initiatives

- Protection and conservation of Greater Adjutant in Gangetic riverine tract
- Dolphin Conservation in Non-Protected Area Segment of Ganga River
- Conservation Breeding Centre for Wild water buffalo (2020)
- Recovery programme for Snow leopard (2009)
- Recovery programme for Vultures (2006)
- Project Elephant (1992)
- Project Tiger/National Tiger Conservation Authority (NTCA) (1973)

## India & Collaboration with Global Wildlife Conservation Efforts

- ↳ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- ↳ Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- ↳ Convention on Biological Diversity (CBD)
- ↳ World Heritage Convention
- ↳ Ramsar Convention
- ↳ The Wildlife Trade Monitoring Network (TRAFFIC)
- ↳ United Nations Forum on Forests (UNFF)
- ↳ International Whaling Commission (IWC)
- ↳ International Union for Conservation of Nature (IUCN)
- ↳ Global Tiger Forum (GTF)



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## India's Efforts for Wildlife Conservation

- **Constitutional Provisions for Wildlife:**
  - The [42<sup>nd</sup> Amendment Act](#), 1976, Forests and Protection of Wild Animals and Birds was transferred from **State to Concurrent List**.
  - [Article 51 A \(g\)](#) states that it shall be the **duty** of every citizen to have compassion for living creatures.
  - [Article 48A](#) mandates that the State shall endeavor to protect and improve the environment and to safeguard the **forests and wildlife of the country**.
- **Legal Framework:**
  - [Wildlife \(Protection\) Act, 1972](#)
  - [Environment Protection Act, 1986](#)
  - [The Biological Diversity Act, 2002](#)
- **International Collaboration:**
  - [Convention on International Trade in Endangered Species of Wild Fauna and Flora \(CITES\)](#)
  - [Convention on the Conservation of Migratory Species of Wild Animals \(CMS\)](#)
  - [Convention on Biological Diversity \(CBD\)](#)
  - [The Wildlife Trade Monitoring Network \(TRAFFIC\)](#)
  - [International Union for Conservation of Nature \(IUCN\)](#)
  - [Global Tiger Forum \(GTF\)](#)

### UPSC Civil Services Examination, Previous Year Questions (PYQs)

**Q. If a particular plant species is placed under Schedule VI of the Wildlife Protection Act, 1972, what is the implication? (2020)**

- (a) A licence is required to cultivate that plant.
- (b) Such a plant cannot be cultivated under any circumstances.
- (c) It is a Genetically Modified crop plant.
- (d) Such a plant is invasive and harmful to the ecosystem.

**Ans: (a)**