



## Madhya Pradesh to Relocate Tigers | Madhya Pradesh | 30 Dec 2024

### Why in News?

Recently, [the National Tiger Conservation Authority \(NTCA\)](#) has approved the **relocation of 15 tigers** from Madhya Pradesh to the states of Rajasthan, Chhattisgarh and Odisha.

### Key Points

- **Largest Relocation of Tigers:**
  - The initiative will mark the **largest relocation of big cats** from a single state in India.
    - It aims to bolster [tiger conservation](#) efforts across the country.
  - No specific timeline for the relocation has been finalized yet.
  - Tigers will be relocated from three: [Bandhavgarh](#), [Pench](#), and [Kanha Tiger Reserves](#).
  - Out of the total relocated tigers, **twelve will be tigresses**.
- **Destination States and Distribution:**
  - **Rajasthan:** Four tigresses.
  - **Chhattisgarh:** Two tigers and six tigresses.
  - **Odisha:** One male tiger and two tigresses.

### National Tiger Conservation Authority (NTCA)

- It is a **statutory body** under the **Ministry of Environment, Forests and Climate Change**.
- It was **established in 2005** following the recommendations of the Tiger Task Force.
- It was constituted under enabling provisions of the [Wildlife \(Protection\) Act, 1972](#), as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it.

### Bandhavgarh Tiger Reserve

- It is located in the **Umaria district of Madhya Pradesh** and is spread over the [Vindhya hills](#).
  - It holds significant historical importance, evidenced by **the presence of the renowned Bandhavgarh Fort**, along with numerous caves, rock paintings, and carvings throughout the protected area.
- In 1968, it was **designated as a national park** and in **1993 was declared a tiger reserve**.
- It is known for the [Royal Bengal Tigers](#).
  - Other important prey species consist of [chital](#), [sambhar](#), [barking deer](#), [nilgai](#), [chinkara](#), [wild pig](#), [chowsingha](#), [langur](#) and [rhesus macaque](#).
  - Dependent upon them are the major predators like [tiger](#), [leopard](#), [wild dog](#), [wolf](#) and [jackal](#).

### Pench Tiger Reserve (PTR)

- PTR is the **joint pride of both Madhya Pradesh and Maharashtra**.
- The Reserve is located in the **southern reaches of the Satpura hills** in the **Seoni and Chhindwara districts in Madhya Pradesh**, and continues in **Nagpur district in Maharashtra** as a separate Sanctuary.
  - It was declared a [National Park](#) by the Government of Maharashtra in 1975 and the identity of a [tiger reserve](#) was granted to it in the year 1992.
- However, PTR **Madhya Pradesh was granted the same status in 1992-1993**. It is one of

- the **major Protected Areas of [Satpura-Maikal ranges](#) of the [Central Highlands](#).**
- It is among the sites notified as [Important Bird Areas \(IBA\)](#) of India.

## Kanha Tiger Reserve

- It stretches over an area of 940 square km in the **two districts - Mandla and Balaghat - of Madhya Pradesh.**
- The present-day Kanha area **was divided into two sanctuaries, Hallon and Banjar. Kanha National Park was created in 1955 and in 1973** was made the Kanha Tiger Reserve.

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## MP to Dispose Toxic Waste | Madhya Pradesh | 30 Dec 2024

### Why in News?







Recently, the **Madhya Pradesh government** has started disposing of 337 tonnes of [toxic waste](#) from **Union Carbide India Limited (UCIL) in Bhopal**, [40 years after the Bhopal gas tragedy](#). They plan to **transport the waste to Pithampur** in Dhar district.

### Key Points

- **Supervised Packing and Stacking:**
  - The factory administration is packing and stacking the waste under the supervision of [the Central Pollution Control Board \(CPCB\)](#) and **Madhya Pradesh Pollution Control Board (MPPCB).**
  - **Specially trained workers are involved** in the packing and loading process, taking necessary precautions.
  - Twelve specially-designed airtight containers are being used for the waste.
- **Short Worker Shifts:**
  - Workers are operating in 30-45 minute shifts instead of regular 8-9 hour shifts to **minimize exposure to the toxic waste.**
  - A 250-kilometer [green corridor](#) has been prepared **to facilitate the safe transportation of waste** from Bhopal to Pithampur.
- **Trial Run and Safety Assurances:**
  - **In 2015**, 10 tonnes of the **waste were incinerated in Pithampur under scientific supervision**, with results submitted to the [High Court](#) showing no harmful effects.
  - **Safety measures include** landfill sites with two-layer membranes to prevent contamination and a four-layer air filtration system.

### The Bhopal Gas Tragedy

- The Bhopal gas tragedy occurred on 2-3 December 1984, when [methyl isocyanate gas](#) leaked, **killing 5,479 people.**
- **More than five lakh people suffered long-term health impacts**, and multiple cases related to the tragedy are still pending in courts.

IMPACT OF GAS EXPOSURE		Key Demands
<p>➤ Younger population born after gas leak equally vulnerable</p> 	<p>Those under 40 years of age and exposed to gas leak, were diagnosed with twice as many illness as the non-gas leak exposed</p>	<p>➤ To set up a system of registration of deaths of people with direct or indirect exposure</p> <p>➤ Over 5,000 gas victims are cancer patients. Review of the work of the Population Based Cancer Registry in Bhopal that claims that there is no association between gas exposure and cancer</p> <p>➤ Review the system of health-care in place for gas victims</p> <p>➤ Urgently review drug utilization in the care of gas exposed persons to avoid kidney damage</p> 
<p>➤ Those between 31 and 60 (which includes those born after the gas leak of 1984) account for 80% of the suffering</p> 	<p>• Illness includes cardiac, cancer, respiratory, kidney, TB, typhoid and among others</p> 	
<p>➤ Gas affected women suffered illnesses</p> <p>59%</p> 	<p>• Twice as many 'gas affected' are dying of cancers, respiratory illnesses -- compared with normal population</p>  <p>• Kidney failure rate is 3 times, compared with non-gas affected</p>	

## Fishing Cat Collaring Project | Uttarakhand | 30 Dec 2024

### Why in News?

- [The Wildlife Institute of India-Dehradun](#) is set to launch India's first **Fishing Cat Collaring Project** at [Coringa Wildlife Sanctuary](#).

### Key Points

- **Coringa Wildlife Sanctuary:**
  - Spanning 235 square kilometres, Coringa Wildlife Sanctuary (CWS) is **India's second-largest mangrove habitat**.
  - It is **home to the endangered fishing cat**.
  - Located in the [Godavari](#) estuary, the sanctuary lies at the confluence of the Coringa River and the [Bay of Bengal](#) in Kakinada, Andhra Pradesh.
  - [Krishna Wildlife Sanctuary](#) in the Krishna estuarine forest area is **another habitat** for the fishing cat.
- **Fishing Cat Population Trends:**
  - The [first fishing cat survey](#) in 2018 recorded a population of 115 individuals.
  - Sightings have **increased significantly over the past five years**, suggesting population growth in and around the sanctuary.
- **Mangrove Conservation and Community Role:**
  - Local communities, through **the Environment Development Committees (EDCs)**, actively conserve the mangrove ecosystem.
  - A total of 420 locals are part of the EDCs, which also manage [Community-Based Eco-Tourism \(CBET\)](#) for alternative livelihoods.
- **India's First Fishing Cat Collaring Project:**
  - The Wildlife Institute of India-Dehradun is **executing India's first Fishing Cat Collaring Project as part of the second fishing cat census**.
  - This three-year project **aims to study the species' home range, behaviour, habitat ecology, feeding habits, and space use**.

- The project plans to **collar 10 fishing cats with lightweight GIS-equipped devices.**
- The collaring is expected to be completed by March or April 2025.
- **Ramsar Convention Site Proposal:**
  - The Andhra Pradesh Forest Department is striving to secure **Ramsar Convention Site** status for Coringa Wildlife Sanctuary due to its rich biodiversity and ecological significance.

## Wildlife Institute of India

- It is an autonomous institution **under the Ministry of Environment, Forest and Climate Change.**
- It was **established in 1982.**
- It is based in **Dehradun, Uttarakhand.**
- It offers training programs, academic courses, and advisory in wildlife research and management.

## Fishing Cats



- **Scientific Name:** *Prionailurus viverrinus*.
- **Description:**
  - It is twice the size of a house cat.
  - The fishing cat is **nocturnal (active at night)** and apart from fish **also preys on frogs, crustaceans, snakes, birds, and scavenges on carcasses of larger animals.**
  - The species **breed all year round.**
  - They spend most of their lives in areas of dense vegetation close to water bodies and are excellent swimmers.
- **Habitat:**
  - Fishing cats have a patchy distribution along **the Eastern Ghats.** They abound in estuarine floodplains, tidal **mangrove forests** and also inland freshwater habitats.
  - Apart from Sundarbans in West Bengal and Bangladesh, fishing cats inhabit the **Chilika lagoon** and surrounding **wetlands in Odisha, Coringa and Krishna mangroves in Andhra Pradesh.**
- **Threats:**
  - A major threat for fishing cats is the **destruction of wetlands,** their preferred habitat.
  - **Shrimp farming** is another growing threat to **mangrove habitats** of the Fishing Cat.
  - This unique cat also faces threats from **hunting for meat and skin.**
  - Tribal hunters indulge in **ritual hunting practices** throughout the year.
  - It is also occasionally **poached for its skin.**

- **Protection Status:**
  - [IUCN Red List](#): Vulnerable
  - [CITES](#): Appendix II
  - [Indian Wildlife Protection Act, 1972](#): Schedule I

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## Harappan-Era Water Management Techniques | Haryana | 30 Dec 2024

### Why in News?

The ongoing **excavation at the Harappan-era site in Rakhigarhi** has revealed significant **evidence of water management**, including the discovery of a water body between mounds one and two in Rakhigarhi village, Hisar district.

### Key Points

- **Discovery of Water Storage Area:**
  - Excavation revealed a **water storage area with a depth of 3.5 to 4 feet**, highlighting advanced water management techniques from 5,000 years ago.
  - [The Archaeological Survey of India \(ASI\)](#), described this as **evidence of sophisticated engineering** by the Harappan people.
- **Elite Habitation Zone Identified:**
  - Mounds one, two, and three were identified as an “elite zone,” **likely inhabited by the upper class of the Harappan civilisation**.
  - Massive structures found in this area indicate its importance as a habitation site for elites.
- **Presence of the Drishavati River:**
  - A **dried-up riverbed**, identified as the **Chautang or Drishavati river**, was located about 300 metres from the site.
    - The river likely **served as a lifeline for the region**, with archaeological evidence suggesting the Harappans stored water from this river as their primary water source.
  - Core drilling at the site, conducted by [the Zoological Survey of India](#), confirmed the presence of the Drishavati riverbed.
- **Impact of River Drying on Civilisation:**
  - Archaeologists believe the **Drishavati river began drying up around 5,000 years ago**, leading to a water crisis in cities like Rakhigarhi.
  - The **gradual disappearance of the Drishavati and Sarasvati rivers** likely **contributed to the decline** of the Harappan civilisation in this region.
- **Legacy of Harappan Engineering:**
  - The findings demonstrate the **advanced techniques of water storage and conservation** employed by the Harappan people, underscoring their ingenuity in managing natural resources.

### Harappan Civilization

- The **Harappan Civilization**, also known as the **Indus Valley Civilization (IVC)**, flourished around **2500 BCE** along [the Indus River](#).
- It was the **largest of the four ancient urban civilizations** alongside **Egypt, Mesopotamia, and China**.
- The IVC is classified as a **Bronze-age civilization** due to the discovery of numerous artefacts

made from **copper-based alloys**.

- **Daya Ram Sahni** first excavated **Harappa in 1921-22**, and **Rakhal Das Banerji** began excavating **Mohenjo-daro in 1922**.
  - **Sir John Marshall, DG of ASI**, was responsible for the excavations that led to the discovery of **Harappa and Mohenjo-Daro sites** of IVC.

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## Western Disturbance Across Northern India | Jammu & Kashmir | 30 Dec 2024

### Why in News?

Due to a **western disturbance**, northern India experienced **fresh snowfall in Kashmir** and widespread **rain in Delhi, Rajasthan, Punjab, and Haryana**.

### Key Points

- **Kashmir's First Snowfall of the Season:**
  - Popular tourist destinations like **Gulmarg, Sonamarg, and Pahalgam**, as well as districts like Bandipora, Baramulla, and Kupwara, reported fresh snowfall.
  - The **India Meteorological Department (IMD)** predicted isolated light rain and snowfall in Jammu and Kashmir.
- **Rain and Cold Conditions:**
  - **Incessant rains continued in Delhi** marking the highest December rainfall in 15 years.
  - **Light to moderate rainfall** was forecast for **parts of Haryana, Uttar Pradesh, and Rajasthan**.
    - **Dense fog and rain** in Rajasthan worsened cold conditions and visibility.

### Western Disturbances

- Western disturbances are **storms that originate in the Caspian or Mediterranean Sea, and bring non-monsoonal rainfall to northwest India**, according to the **India Meteorological Department (IMD)**.
- They are labelled as an **extra-tropical storm** originating in the Mediterranean, is an area of low pressure that brings sudden showers, snow and fog in northwest India.
- The meaning of WD lies in its name.
  - The disturbance travels from **the "western" to the eastern direction**.
    - These travel eastwards on high-altitude **westerly jet streams** - massive ribbons of fast winds traversing the earth from west to east.
  - Disturbance means an **area of "disturbed" or reduced air pressure**.
    - Equilibrium exists in nature due to which the air in a region tries to normalise its pressure.

### India Meteorological Department (IMD)

- IMD was **established in 1875**. It is the **National Meteorological Service of the country** and the principal government agency in all matters relating to meteorology and allied subjects.
- It works as an agency of **the Ministry of Earth Sciences**.
- It is **headquartered in New Delhi**.
- IMD is also one of the **six Regional Specialized Meteorological Centres of the World Meteorological Organization**.

