



## Shifting Patterns in Stubble Burning | Madhya Pradesh | 06 Nov 2024

### Why in News?

**Madhya Pradesh** has seen a sharp increase in [Stubble burning cases](#), surpassing Punjab with over 10,000 farm fires reported.

### Key Points

- The changing trends in stubble burning have added complexity to the **harvest-season practice**, which heavily contributes to North India's [air pollution](#).
- **Regional Trends:**
  - **Alarming Rise in Madhya Pradesh:** Madhya Pradesh recorded 506 stubble-burning cases surpassing its previous high of 296 cases, indicating a significant rise.
  - **Positive Reduction in Punjab:** Punjab reduced its stubble-burning incidents from 587 to 262, showing a **promising decline in crop residue burning**.
  - **Increases in Uttar Pradesh and Rajasthan:** Uttar Pradesh's cases jumped from 16 to 84 in a day, while Rajasthan's incidents rose from 36 to 98, marking the season's second-highest count.
  - **Progress in Haryana:** Haryana reported a downward trend, with cases dropping from 42 to 13, reflecting **progress in managing stubble burning**.

### Stubble Burning

- **About:**
  - **Stubble (parali) burning** is a method of **removing paddy crop residues** from the field to sow wheat from the **last week of September to November**, coinciding with the withdrawal of [southwest monsoon](#).
  - Stubble burning is a **process of setting on fire the straw stubble**, left after the harvesting of grains, like paddy, wheat, etc. It is usually required in areas that use the combined harvesting method which leaves crop residue behind.
  - It is a common **practice in October and November across North West India**, but primarily in Punjab, Haryana, and Uttar Pradesh.
- **Effects of Stubble Burning:**
  - **Pollution:** Emits large amounts of toxic pollutants in the atmosphere which contain harmful gases like [methane \(CH<sub>4</sub>\)](#), [Carbon Monoxide \(CO\)](#), [Volatile Organic compounds \(VOC\)](#) and carcinogenic polycyclic aromatic hydrocarbons.
    - These pollutants disperse in the surroundings, may undergo a physical and chemical transformation and eventually adversely affect human health by causing a thick blanket of smog.
  - **Soil Fertility:** Burning husk on the ground destroys the nutrients in the soil, making it less fertile.
  - **Heat Penetration:** The heat generated by stubble burning penetrates into the soil, leading to the loss of moisture and useful microbes.
- **Alternatives to Stubble Burning:**
  - **In-Situ Treatment of Stubble:** For example, crop residue management by zero-tiller machine and Use of bio-decomposers.
  - **Ex-Situ (off-site) Treatment:** For example, Use of rice straw as cattle fodder.

- **Use of Technology:** For example **Turbo Happy Seeder (THS) machine**, which can uproot the stubble and also sow seeds in the area cleared. The stubble can then be used as mulch for the field.

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# Air Pollutants

## Sulphur Dioxide (SO<sub>2</sub>)



It comes from the consumption of fossil fuels (oil, coal and natural gas). Reacts with water to form acid rain.

**Impact:** Causes respiratory problems.

## Ozone (O<sub>3</sub>)



Secondary pollutant formed from other pollutants (NO<sub>x</sub> and VOC) under the action of the sun.

**Impact:** Irritation of the eye and respiratory mucous membranes, asthma attacks.

## Nitrogen Dioxide (NO<sub>2</sub>)



Emissions from road transport, industry and energy production sectors. Contributes to Ozone and PM formation.

**Impact:** Chronic lung disease.

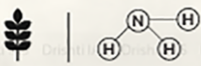
## Carbon Monoxide (CO)



It is a product of the incomplete combustion of carbon-containing compounds.

**Impact:** Fatigue, confusion, and dizziness due to inadequate oxygen delivery to the brain.

## Ammonia (NH<sub>3</sub>)



Produced by the metabolism of amino acids and other compounds which contain nitrogen.

**Impact:** Immediate burning of the eyes, nose, throat and respiratory tract and can result in blindness, lung damage.

## Lead (Pb)



Released as a waste product from extraction of metals such as silver, platinum, and iron from their respective ores.

**Impact:** Anemia, weakness, and kidney and brain damage.

## Particulate Matter (PM)



**PM10:** Inhalable particles, with diameters that are generally 10 micrometers and smaller.

**PM2.5:** Fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

**Source:** Emitted from construction sites, unpaved roads, fields, fires.

**Impact:** Irregular heartbeat, aggravated asthma, decreased lung function.

**Note:** These major air pollutants are included in the Air quality index for which short-term National Ambient Air Quality Standards are prescribed.

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## Elephants Electrocuted in Raipur | Chhattisgarh | 06 Nov 2024

### Why in News?

The Chhattisgarh [High Court](#) has reprimanded the **state energy department officials** for [negligence](#) following the electrocution of three [elephants](#) in Raigarh district of Chhattisgarh.

### Key Points

#### ▪ Court's Decision:

- A division bench directed the energy department to submit affidavits detailing the incident. The officials were asked to provide an account of the circumstances surrounding the elephants' deaths in Raigarh's **Gharghoda Forest Range** and to outline preventive measures to avoid future occurrences.
- Preliminary investigations revealed that **forest department staff had repeatedly warned the local electricity department** about the **dangerously low 11 kV transmission line**.
  - However, no action was taken to address the issue, ultimately leading to the elephants' deaths.

#### ▪ Emphasis on Wildlife Safety:

- Taking up the matter [suo motu](#), the court emphasized the **importance of [wildlife protection and conservation](#)**, underscoring the need for responsible management in areas inhabited by wildlife.

#### ▪ Elephant Fatalities in Chhattisgarh:

- According to the state forest department, Chhattisgarh has reported over **70 elephant deaths in the past six years due to various causes**, with 13 of these due to electrocution in 2024.

# ELEPHANT

## 4 Main Species of Elephant

Species	Found in	IUCN Red List Status	Habitat
Indian	Asia	EN (CITES - Appendix I, WPA - Schedule I)	Subtropical broadleaf forest, tropical broadleaf moist forest, dry forest, grassland
Sumatran	Asia	CR	Broadleaf moist tropical forests
Savanna (Bush)	Africa	EN	All sub-Saharan Africa except for Central Africa's dense tropical forest
Forest	Africa	CR	Dense Tropical Forests

### Indian Elephant (*Elephas maximus*)

Largest Land Mammal on Asian Continent  
National Heritage Animal of India

#### Top 5 Indian States by Maximum Elephant Population: (As per elephant census 2017)

- Karnataka > Assam > Kerala > Tamil Nadu > Odisha

#### Social Structure:

- Female elephants are more social than males; form herd (generally 5-7)
- Led by the oldest female, the 'matriarch'
- Males usually live alone

#### Threats:

- Habitat Fragmentation
- Poaching for Ivory
- Human-Elephant Conflict
- Mistreatment in Captivity

#### Conservation Efforts:

- Gaj Sookhna App (2022)
- Gaj Yatra (2017)
- Hathi Mere Sathi campaign (2011)
- National Elephant Corridor project (2005)
- Monitoring the Illegal Killing of Elephants (MIKE) Programme (2003)
- Project Elephant (1992)

## Demise of Bihar's Folk Icon | Bihar | 06 Nov 2024

### Why in News?

Recently, Bihar's folk music icon **Sharda Sinha** passed away. She was widely celebrated for her soulful **Chhath** songs.

### Key Points

#### About:

- Sharda Sinha, fondly known as '**Bihar Kokila**,' was a celebrated Indian folk singer who made immense contributions to **Bhojpuri, Maithili, and Magahi music**.
- She played a **crucial role in popularizing Bihar's traditional music**, bringing it to a broader audience across India and beyond.

#### Awards:

- Honoring her **significant contributions to Indian folk music**, she was awarded with **Padma Bhushan** in 2018.

### Chhath Puja

- Chhath is **celebrated six days after Diwali** and is native to Bihar, Jharkhand, and Uttar Pradesh.
- It is dedicated to **Sun and Shashti Devi**, often referred to as **Chhathi Maiya**, and it involves religious rituals.



## SC Guidelines to Eliminate Child Marriages | Rajasthan | 06 Nov 2024

### Why in News?

Recently, the [Supreme Court](#) guidelines aiming for the complete eradication of [child marriages](#), have provided a significant boost to [civil society groups](#) in Rajasthan.

### Key Points

- **Prevalence of Child Marriages in Rajasthan:**
  - According to the [National Family Health Survey-5](#), 25.4% of women aged 20-24 in Rajasthan were married before reaching the legal age of 18.
- **Collective Effort to Eradicate Child Marriages by 2030:**
  - The **Just Rights for Children Alliance (JRCA)**, a [non-governmental organization](#), emboldened by the SC new guidelines, has pledged to intensify efforts on the ground.
  - They **aim to eradicate child marriages in Rajasthan by 2030** through collective action, including raising awareness in villages.
- **Supreme Court's Guidelines:**
  - The Supreme Court's guidelines place accountability on **village panchayats, school authorities, and child protection officers** for preventing child marriages.
  - The Court advised adopting a **“prevention, protection, and prosecution” model** to implement the [Prohibition of Child Marriage Act, 2006](#) effectively.
  - In 2024, the Rajasthan High Court mandated that village sarpanches, under the **Rajasthan Panchayati Raj Rules, 1996**, are responsible for restraining child marriages.
    - The court directed the **State government to inform and sensitise village leaders**, emphasizing their accountability if they fail to prevent child marriages in their communities.

## Prohibition of Child Marriage Act 2006

- The law seeks to prevent child marriages by making certain actions punishable and by appointing certain authorities responsible for the prevention and prohibition of child marriages.
- **Definitions under the Act:**
  - **“Child”** means a person who, if a **male, has not completed twenty-one years** of age, and if a **female, has not completed eighteen years of age**.
  - **“Child marriage”** means a marriage to which either of the contracting parties is a child.
  - **“Minor”** means a person who has not **attained his majority** under the provisions of the Majority Act, 1875. As per the Majority Act, 1875, **every person domiciled in India** attain the age of majority on his **completing the age of eighteen years**.
- Child marriage is an offence punishable with **rigorous imprisonment**, which may extend to 2 years, or with fine up to Rs.1 Lakh, or both. The offences under the Act are **cognisable and non-bailable**.
- **Persons who can be punished under the Law include:**
  - Whoever performs, conducts or directs or abets any child marriage.
  - A male adult above 18 years marrying a child (Section 9).
  - Any person having charge of the child, including parent or guardian, any member of an organisation or association, promoting, permitting, participating in a child marriage.

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## SC Upholds Uttar Pradesh Madrasa Education Board Act, 2004 | Uttar Pradesh | 06 Nov 2024

### Why in News?

Recently, the [Supreme Court](#) partially upheld the constitutional validity of the [Uttar Pradesh Madrasa Education Board Act, 2004](#), affirming that the state has the **authority to regulate madrasa education** to maintain standards of excellence.

### Key Points

- **Supreme Court's Judgment:**
  - The Court declared that **provisions concerning higher education**, specifically at the **Fazil (undergraduate)** and **Kamil (postgraduate)** levels, were **unconstitutional**.
    - These provisions conflicted with the [University Grants Commission Act, 1956](#) falling under the Centre's exclusive jurisdiction as per Entry 66 of [the Union List](#) in the [Seventh Schedule of the Constitution](#).
  - The judgment stated that the **Act was consistent with the state's duty to ensure that students** in recognised madrasas **acquire a minimum level of competency**. This ensures they can participate effectively in society and earn a living.
  - The Court emphasized that while **minorities have the right under Article 30** of the Constitution to **establish and manage their educational institutions**, this **right is not absolute**.
    - The state has a legitimate interest in maintaining educational standards in minority institutions and can impose regulatory conditions for aid and recognition.
  - The Court interpreted **'education' in Entry 25 of the Concurrent List** broadly, stating that while madrasas impart religious education, their **primary purpose is educational, bringing them within the ambit of this entry**.
    - The Madrasa Board conducts exams and issues certificates to students, further aligning with the educational framework.

- The Supreme Court set aside the Allahabad High Court's ruling, which had stated that the 2004 Act violated [Article 21A \(Right to Education\)](#) and the [secularism](#) principle of the Constitution.
  - The Court clarified that Article 21A should be interpreted alongside the **rights of religious and linguistic minorities** to establish educational institutions.
- Referring to [Article 28\(3\)](#) of the Constitution, the Court added that students attending a State-recognised minority institution **should not be compelled to take part in religious instruction or worship**, ensuring their [right to freedom of religion](#).

### Uttar Pradesh Board of Madarsa Education Act, 2004

- The Act aimed to regulate and govern the functioning of **madrasas (Islamic educational institutions)** in the state of Uttar Pradesh.
  - It provided a framework for the establishment, recognition, curriculum, and administration of madrasas across Uttar Pradesh.
  - Under this Act, the **Uttar Pradesh Board of Madarsa Education** was established to oversee and supervise the activities of madrasas in the state.

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PDF Reference URL: <https://www.drishtiias.com/statepcs/06-11-2024/print>

