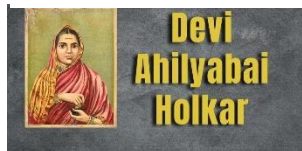


AHILYABAI HOLKAR



- Maharani Ahilyabai Holkar (31 May 1725 – 13 August 1795) was a ruler of the Malwa territory, a part of the Maratha Confederacy, from 1767 to 1795.
- She is known as **Punyashlok** (“One as Pure as the Sacred Chants”).
- **Early Life and Marriage:**
 - She was born on May 31, 1725, in the village of **Chondi in Jamkhed, Ahmednagar** (Maharashtra), and her father **Mankoji Rao Shinde** was the village head.
 - She got married to **Khanderao Holkar** (son of Malhar Rao Holkar) in 1733.
- **Rise to Power:**
 - Ahilyabai's husband Khanderao Holkar was killed in the **battle of Kumbher in 1754**. Her father-in-law, Malhar Rao passed away in 1766, and in the following year, she lost her son, Male Rao.
 - She ascended the throne and **became the ruler of Indore on December 11, 1767**.
- **Key Contributions:**
 - **Temple Construction:** She was instrumental in rebuilding major temples, notably the **Kashi Vishwanath temple** in 1780, and supported infrastructure such as rest houses and public ghats at various pilgrimage sites.
 - **Cultural:** She patronised stalwarts such as **Marathi poet Moropant, Shahir Ananta Gandhi, and Sanskrit scholar Khushali Ram**.
 - **Promotion of craft:** She established a textile industry in **Maheshwar**, which today is very famous for its **Maheshwari sarees**.
 - Understanding the importance of education, she **established many gurukuls and schools**.
 - In a revolutionary move for her time, **she formed a women’s army** and trained them in warfare, self-defense, and administrative security.

INDIA NEPAL BOUNDARY ISSUE AND NEPAL PM'S REMARKS ON BORDER ENCROACHMENT

- India and Nepal share an open international border of nearly 1,850 km stretching across Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim.
- While most of the boundary has been demarcated, a few segments remain disputed.
- **Origins of the Dispute**
 - The roots of the dispute lie in the **Treaty of Sugauli (1816)** signed between the East India Company and Nepal after the Anglo-Nepalese War.
 - The treaty identified the **Kali (Mahakali) River** as the western boundary of Nepal. However, disagreements emerged regarding the exact source of the river, leading to competing territorial claims.
- **Major Disputed Areas**
 - **Kalapani**
 - Kalapani is a strategically important area located near the **India-Nepal-China tri-junction**. India administers the region as part of Uttarakhand, while Nepal claims it as part of its Darchula district.
 - **Lipulekh Pass**
 - Lipulekh is a mountain pass connecting India with Tibet and serves as an important route for the Kailash Mansarovar Yatra and border trade with China. Nepal claims the pass as part of its sovereign territory.
 - **Limpiadhura**
 - Nepal argues that the Kali River originates from Limpiadhura, which would place Kalapani and Lipulekh within Nepalese territory. India disputes this interpretation.

Recent Developments

- In 2020, Nepal issued a new political map incorporating Kalapani, Lipulekh and Limpiadhura within its territory.

- India rejected the move, describing it as a unilateral action inconsistent with historical facts and existing understandings.
- **Mechanisms for Resolution**
 - India and Nepal have generally favoured a peaceful and diplomatic approach to resolving the dispute through:
 - Bilateral dialogue
 - Joint boundary mechanisms
 - Survey and mapping exercises
 - Historical and cartographic examination by experts
- Despite occasional tensions, both countries have consistently reiterated their commitment to resolving the issue through negotiations.

Diplomatic Engagement with India

- The Prime Minister revealed that Nepal had formally sent a diplomatic note to India regarding territories that Kathmandu considers disputed, including Lipulekh.
- According to Shah, India responded positively, and both sides agreed to pursue dialogue-based solutions. He stated that future discussions could involve teams comprising Historians, Surveyors and Boundary experts.
- The objective would be to establish factual clarity and arrive at a mutually acceptable settlement.

Implications for Bilateral Relations

- The remarks come at a sensitive time in India-Nepal relations.
- Earlier, Nepal had objected to the resumption of the **Kailash Mansarovar Yatra route through Lipulekh Pass**, arguing that the area falls within its territory.
- India rejected the objection, describing Nepal's position as a unilateral expansion of territorial claims.
- The latest controversy could influence ongoing diplomatic engagements between the two countries, although both governments continue to publicly support dialogue and peaceful resolution of outstanding boundary disputes.

ARAVALLI RANGE — INDIA'S WEAKENING DUST SHIELD

A massive dust storm in Churu, Rajasthan recently — affecting districts including Hanumangarh, Sri Ganganagar, Bikaner, Nagaur, Alwar, and Sikar — went viral on social media.

This drew attention to a critical but underappreciated ecological reality: the **Aravalli range** serves as India's natural shield protecting the densely populated Indo-Gangetic plains from Thar Desert dust storms.

However, this shield is rapidly weakening due to mining, deforestation, and urbanisation.

The Aravalli Range — India's Natural Dust Shield

- The Aravalli range stands physically between the **Thar Desert and the Indo-Gangetic plains** — one of the world's most densely populated regions.
- When dust-laden winds blow in from the Middle East and the Thar Desert during the pre-monsoon months of April to June, they run into the Aravallis, lose speed, and drop their load of sand — preventing it from reaching Delhi, Punjab, Haryana, and Uttar Pradesh.
- This **natural filtering process** is visually evidenced by "**obstacle dunes**" — large sand deposits found on the western slopes of the Aravallis, directly exposed to hot winds from the west.
- The vegetation growing on these dunes resembles desert flora. Where additional tree cover exists, winds must pass through it — creating a "natural scrubbing effect" that reduces the movement of sand and dust.
- As per the environmental researchers, these dunes are visual proof of the protective role the Aravalli range plays in interception of dust.

State of the Aravalli Range — Alarming Degradation

- A Forest Survey of India (FSI) assessment of 2018 found that **31 of the 128 Aravalli hills** in Rajasthan had **completely disappeared** due to anthropogenic (human-caused) pressures.

- There has also been a **significant loss of hills** with 200-600 metres elevation in areas like Naraina, Kalwar, Kotputli, Jhalana, and Sariska.
- The Environment Ministry's Aravalli Restoration Framework flagged multiple causes behind the degradation:
 - Mining of red silica, granite, and other minor minerals
 - Deforestation and loss of vegetation cover
 - Urbanisation and construction activities
 - Land-use change and encroachments
 - Pastoral activities (overgrazing)
- A 2009 Wildlife Institute of India (WII) study identified 12 gaps in the Aravalli range that have expanded further due to forest degradation and inadequate vegetation cover.

Consequences of Aravalli Degradation

- The weakening of the Aravalli shield has multiple cascading consequences:
 - **Increased Dust Storm Frequency** — Growing gaps in the range threaten to increase the frequency of sand and dust storms in Delhi, Punjab, and Uttar Pradesh.
 - **Worsening Delhi's Air Quality** — Regular dust-laden winds contribute to particulate matter pollution — directly degrading air quality in the national capital region.
 - **Impact on Rainfall** — The range's degradation can affect rainfall patterns in surrounding regions — as mountains and forests influence precipitation.
 - **Alteration of Solar Radiation** — Dust can affect the scattering of sunlight, temporarily altering surface temperatures over large areas — with implications for agriculture, human health, and regional climate.
- Scientists have underscored the need for "long-term investigation and analysis on dust frequency and load over northern India" — indicating that the full consequences of Aravalli degradation are still being understood.

TOWARDS A DIALOGUE ON ADOLESCENT SEXUALITY

- The Supreme Court's decision to permit the medical termination of pregnancy at 28 weeks in the case of an unwed minor has reignited debates surrounding reproductive autonomy, fetal viability, medical ethics, and adolescent sexuality.
- While the Court prioritised the **mental and physical well-being** of the minor, the case also highlighted complex ethical dilemmas for healthcare professionals and exposed deeper shortcomings in India's approach to adolescent sexual health.
- The issue extends beyond abortion law and underscores the need for a more informed and balanced policy framework.

Ethical Dimensions of Late-Term Pregnancy Termination

- **Balancing Reproductive Rights and Fetal Viability**
 - At 28 weeks of gestation, a fetus has crossed the threshold of viability, meaning it has a significant chance of surviving outside the womb with medical support.
 - Medical experts expressed concerns that terminating the pregnancy at this stage could result in the delivery of a living child facing severe **medical complications**, long-term disabilities, and prolonged dependence on neonatal care.

The Structural Challenge of Adolescent Sexuality

- **Criminalisation and Social Reality**
 - The pregnancy reportedly resulted from a de-facto consensual relationship between a 15-year-old girl and her 17-year-old partner.
 - However, under the Protection of Children from Sexual Offences Act (POCSO), all sexual activity involving minors is criminalized irrespective of consent.
 - This blanket approach fails to distinguish between **sexual exploitation** and consensual adolescent relationships.
 - Studies have consistently shown that a substantial proportion of POCSO cases arise from consensual interactions among adolescents rather than coercive or exploitative situations.

Inadequate Sexual Health Education

- **Absence of Comprehensive Sex Education**
 - Many young people receive little information about **safe sex, contraception, menstruation, pregnancy, and sexually transmitted diseases.**
 - Discussions on sexuality often remain stigmatized, while public policies and social attitudes discourage open engagement with these issues.

The Way Forward

- **Adopting a Nuanced Approach**
 - A more balanced framework should distinguish **consensual adolescent relationships** from cases of abuse and exploitation.
 - Strong legal safeguards against child sexual abuse must continue, but they should not obscure the realities of adolescent behaviour.
- **Promoting Awareness and Education**
 - Greater emphasis on sexual health awareness, **reproductive health education,** and responsible decision-making is essential.
 - Schools, families, healthcare institutions, and policymakers must work together to provide accurate information and encourage informed choices.
- **Focusing on Long-Term Reform**
 - Addressing adolescent well-being requires sustained investment in education, counselling, healthcare access, and awareness campaigns.
 - Such measures may not produce immediate political gains, but they offer a more effective and humane solution than reliance on criminalisation alone.

Conclusion

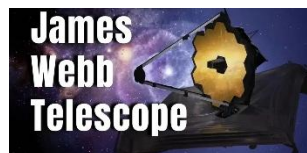
- The Supreme Court's decision highlights the complex intersection of **reproductive rights,** fetal interests, medical ethics, and adolescent welfare.
- While the judgment sought to protect a vulnerable minor, it also exposed broader structural deficiencies in India's treatment of adolescent sexuality.

DESIGN LINKED INCENTIVE SCHEME



- It is a key instrument in advancing India's ambition to develop a strong **fabless capability**.
- **Aim:** The scheme aims to **reduce import dependence**, strengthen supply chain resilience, and enhance domestic value addition.
- **Eligibility: Start-ups and MSMEs** are eligible for financial incentives and design infrastructure support for semiconductor product design & deployment.
 - Other domestic companies are eligible for financial incentives for deploying semiconductor designs.
- **The DLI Scheme supports:** Semiconductor design across the full lifecycle—from design and development to deployment—covering Integrated Circuits (ICs), chipsets, Systems-on-Chip (SoCs), systems and IP cores.
- It is implemented by the **Ministry of Electronics and Information Technology (MeitY)** under the **Semicon India Programme**.
- **Nodal Agency:** C-DAC (Centre for Development of Advanced Computing).
- **Financial Incentives:**
- **Product Design Linked Incentive:**
 - Reimbursement of up to **50% of eligible expenditure**.
 - The reimbursement is **capped at ₹15 crore per application**.
 - The support is available to entities involved in semiconductor design for: Integrated Circuits (ICs) Chipsets Systems on Chips (SoCs) Systems & IP Cores Semiconductor-linked designs.
- **Deployment Linked Incentive:**
 - Incentives of **6% to 4%** of net sales turnover are provided **for five years**.
 - The incentive is **capped at ₹30 crore per application**.
 - The minimum cumulative net sales required over Years 1–5 is 1 crore for startups/ ₹ MSMEs and 5 crore for other domestic companies.

JAMES WEBB SPACE TELESCOPE



- It was **launched in December 2021**.
- It is the largest and **most powerful space observatory** built through collaboration between **NASA, European Space Agency (ESA), and Canadian Space Agency (CSA)**.
- JWST orbits the **L2 Lagrange Point**, about 1.5 million km beyond Earth, enabling a stable position for deep-space observation.
- The telescope **operates primarily in the infrared spectrum** and is equipped with components such as:
 - **Optical Telescope Element (OTE)**: It collects light from distant objects.
 - **Integrated Science Instrument Module (ISIM)**: It houses all cameras and instruments.
 - **Sunshield**: It protects sensitive instruments from solar radiation.
 - **Spacecraft Bus**: It provides necessary operational support.
- **Objectives of James Webb Space Telescope:**
 - To **look for galaxies** that formed just after the Big Bang.
 - To **determine the evolution of galaxies** from their creation to the present.
 - To **examine the stages of star creation** till the formation of planetary systems.
 - To investigate the **potential for life in planetary systems** by measuring their physical and chemical features.