



PRELIMS EDGE 2025

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INDUS WATER TREATY

Context: An article published in the Indian Express analyzes India-Pak ties via the evolution of the Indus Water Treaty since the 1960s.

- Sutlej, Beas, Ravi, Jhelum, and Chenab (and all its tributaries)

- This exclusivity restricts what hydro projects India can make (**run of the river projects only**).

Water Sharing under the IWT:

- IWT allocated three western rivers (**Indus, Chenab and Jhelum**) to **Pakistan** for unrestricted use (but allows agricultural and domestic uses by India).
- The three Eastern rivers - Ravi, Beas and Sutlej - were allocated to India for unrestricted usage.
- This meant that **80% of the share of water went to Pakistan**, while leaving 20% of water for use by India.

Permanent Indus Commission:

- The IWT created a **Permanent Indus Commission** constituted by permanent commissioners on both sides. It is required to **meet at least once a year**.
- Permanent Indus Commission meetings have been put on hold until India and Pakistan discuss about India's demand to update the IWT. Its **last meeting was held in May 2022**.

Dispute Resolution Mechanism:

- The IWT creates a **3-step graded dispute resolution mechanism** under Article IX.



About Indus Water Treaty (IWT):

- It was signed in Sept., 1960 after nine years of negotiations, with **World Bank being a signatory** to the pact.
- It sets out a mechanism for mutual cooperation as well as information exchange on the use of water of Indus River and its five tributaries.

- Questions on both sides can be resolved at **Permanent Commission or inter-government level.**
- In case of unresolved questions -both sides can approach the **World Bank to appoint a Neutral Expert (NE).**
- Appeals against the NE's decision or disputes with regards to interpretation and extent of the IWT itself will be referred to a **Court of Arbitration.**

Why is India rethinking the IWT ?

- **IWT mostly favours Pakistan:** 80.52% of water flow in the Indus system is allotted to Pakistan.
- **Reclaiming riparian rights:** India conceded upper riparian position on western rivers for complete rights on eastern rivers.
- **Blow against terrorism:** PM Modi stated that "Blood and waters cannot flow together".
- **Changed Demographics:** A major increase in its population in the Punjab-Haryana region necessitate a reassessment of the IWT.
- **Clean Energy:** India needs to accelerate clean energy (hydropower) to meet national emission targets.
- **Security Issues:** Cross-border terrorism has undermined India's ability to utilize its rights fully.
- **Water Scarcity:** Declining ground water tables in the Punjab-Haryana region increase dependence on the river systems covered in the IWT.
- **Economic Development:** A new IWT would allow India to expand its hydroelectric power projects.



In Sept 2024, India served formal notice to Pakistan - seeking "review and modification" of the IWT. In April 2025, India suspended the IWT in response to the Pahalgam attack.

Source: Looking at India-Pak ties through prism of Indus Treaty: insights from a new book (The Indian Express)

SOLAR POWER IN INDIA

Context: Union Minister for New & Renewable Energy announced that India aims for a 100% indigenous solar manufacturing ecosystem by 2028, covering solar photovoltaic modules, cells, and wafers.



Status of Solar Power in India

- India is the **3rd largest solar power producer** in the world – with installed capacity of **>100 GW** (Feb 2025).
 - **Rajasthan is 1st with 18.7 GW.** Gujarat is 2nd with 10.5 GW.
 - This accounts for **>20% of total installed energy capacity** and **>50% total renewable energy installed capacity.**
- **Total rooftop solar installed capacity is around 11.08 GW** as of Dec 2024.
 - **Gujarat is 1st with 2.8 GW,** followed by Maharashtra by 1.7 GW.

- As per **Panchamrit goals** presented at UNFCCC COP 26, India has a target of **500 GW installed capacity** of renewable energy by 2030 – this includes **280 GW from solar power**.
- Achieving target of 500 GW will necessitate **deploying 40 GW of solar power annually from 2024 till 2030**.
- India also aims to achieve a total of **40 GW of rooftop solar capacity by March 2026**.
- The govt. aims to make India a **net exporter of solar modules by 2026** and manufacture solar modules worth **100 GW annually** by 2026.

Import Dependency for Solar Power

- Almost **100% of silicon wafers and 80% of solar photovoltaic (PV) cells** used in India are imported, with the majority of this coming from China.
- India does not have enough **manufacturing capacity – it is limited to 15 GW per year**.
- Out of this 15 GW manufacturing capacity, **only 3-4 GW are worthy of deployment in grid-based projects**.
- Indian industry is tuned to **production of M2 wafer size**, while **global industry is moving towards M10 and M12 sizes** (bigger sizes).

Govt. Initiatives for Solar Power:

- ✓ **National Solar Mission** launched in 2010 under the National Action Plan on Climate Change (NAPCC).
- ✓ **PM KUSUM**: Aims to replace use of diesel in farms with solar energy, especially in irrigation pumps.

- ✓ **Solar Charkha Mission**: Sets up 'Solar Charkha Clusters' which are operated using solar power and generate sustainable employment.
- ✓ **PLI scheme for manufacturing of high efficiency solar PV modules**.
- ✓ **National Wind-Solar Hybrid Policy, 2018**: Provides a framework for promotion of large grid-linked wind-solar hybrid systems.
- ✓ **PM Surya Ghar Muft Bijli Yojana**: Aims to install rooftop solar on 1 crore residential rooftops.
- ✓ **Approved Models and Manufacturers of Solar PV Modules Order, 2019**: Manufacturers must submit to an inspection of their facilities. Being on the list as an 'approved' manufacturing facility certifies a company as not importing solar PV modules.

International Solar Alliance (ISA):

- ✓ **Formation**: Launched in 2015 by India and France at the United Nations Climate Change Conference (COP21) in Paris to promote solar energy globally.
- ✓ **Objective**: Aims to mobilize over \$1 trillion in solar investments by 2030 to reduce reliance on fossil fuels and boost clean energy capacity worldwide.
- ✓ **Membership**: Open to all UN member countries, with a special focus on solar-rich countries located between the Tropics of Cancer and Capricorn. Over 100 countries have signed up as of now.

Major Initiatives under the ISA:

Global Solar Facility

- ✓ Aims to mobilize funding and investment for solar energy projects in developing countries.

Global Solar Atlas

- ✓ Created by the World Bank, it provides high-resolution maps of solar resources around the world.

One Sun One World One Grid (OSOWOG)

- ✓ Aims to connect countries with varying solar exposure and reduce dependency on fossil fuels through a transnational electricity grid.

Solar Technology Application Resource Centre (STAR-C)

- ✓ Establishes regional centres to provide training, research, and development in solar technology.

Source: India targets 2028 for Swadeshi solar cells, expands into wafers and ingots (Down to Earth)

INFLATION TARGETING

Context: India's retail inflation increased to 2.1% in August 2025, ending a 9-month streak of regular decline in inflation rates.



About Inflation Targeting in India:

- Inflation targeting is a monetary policy in which a **central bank sets an explicit target for rate of inflation** and adjusts its policy instruments, such as interest rates, to achieve it.
- **New Zealand pioneered** inflation targeting in 1990, and it has since become widely adopted worldwide.
- In India, **Flexible Inflation Target (FIT)** framework was adopted in 2016.
- RBI has set an **inflation target of 4% with a tolerance band of +/- 2%** with regards to the Consumer Price Index (CPI). This means that RBI aims to keep inflation at 4% but will tolerate inflation between 2% to 6%.

Monetary Policy Committee (MPC):

- It was set up consequent to **Monetary Policy Framework Agreement (2015)** between Union Govt and RBI to task RBI with the responsibility for price stability and inflation targeting.
- **RBI Act, 1934 was amended and by virtue of Section 45ZB**, Union Govt constitutes a six-member MPC. Thus, the MPC is a statutory body.
- Union Govt determines the inflation target **in terms of Consumer Price Index, once in every five years** in consultation with the RBI.
- Composition: Section 45ZB says the MPC shall consist of **6 members**:
 - RBI Governor as its ex officio chairperson,
 - Deputy Governor in charge of monetary policy
 - An officer of RBI
 - 3 persons appointed by Govt.

- Members of MPC **hold office for a period of four years and are not eligible for re-appointment.** The MPC is required to meet at least four times in a year, although in practice, they meet six times a year.

Wholesale Price Index (WPI)

- ✓ It measures changes in **prices of goods sold and traded in bulk** by wholesale businesses to other businesses.
- ✓ Released by Office of Economic Adviser, **Ministry of Commerce & Industry** on a monthly basis.
- ✓ Base year: 2011-12

Consumer Price Index (CPI)

- ✓ Measures price change from point of view of a retail buyer. It is released by **National Statistical Office (NSO)**.
- ✓ Calculates price change of **services and commodities** such as food, medical care, education, housing, fuel, etc.
- ✓ Has several sub-groups including food and beverages, fuel and light, housing and clothing, bedding and footwear.
- ✓ Four types of CPI are as follows:
 - CPI for Industrial Workers
 - CPI for Agricultural Labourer
 - CPI for Rural Labourer
 - CPI (Rural/Urban/Combined)
- ✓ Of these, first 3 are compiled by Labour Bureau. Fourth is compiled by NSO.
- ✓ Base Year for CPI is 2016.

Source: Retail inflation quickens to 2.1%, ending nine-month drop (The Hindu)

NATIONAL MISSION FOR MANUSCRIPTS (NMM)

Context: PM Modi recently highlighted the importance of digitizing India's large collection of manuscripts and written works.



National Mission for Manuscripts

About National Mission for Manuscripts (NMM):

- It is an initiative of the **Ministry of Culture** to preserve and document India's vast collection of manuscripts.
- It was **launched in 2003** to document, conserve, and make accessible India's manuscript heritage.
- The **Indira Gandhi National Centre for the Arts (IGNCA)** serves as nodal agency for implementation of NMM.
- It is dedicated to conserving manuscripts and disseminating the knowledge contained in them, working toward its motto "conserving the past for the future."
- Scope and Collection:** India possesses an estimate of **5 million manuscripts**, the largest collection in the world. **70% of these are in Sanskrit.**
- Achievements of NMM:** Between 2003-24, metadata of 52 lakh manuscripts have been

prepared, over 3 lakh titles have been digitized and 1/3 of them have been uploaded.


- **Concerns:** Only about 70,000 of the 1.3 lakh uploaded manuscripts are accessible. A significant portion of manuscripts is privately owned, with limited incentive for owners to make them publicly accessible.

Revived NMM (2025 Budget):

- **National Manuscripts Authority:** The Union Ministry of Culture plans to form an autonomous body named National Manuscripts Authority. This will take NMM away from the IGNC.
- **Future Roadmap:**
 - Establish **university chairs abroad in departments** that focus on ancient Indian studies.
 - **Involving IPR (intellectual property rights) and legal experts to address issues** related to sale of manuscripts abroad and private ownership.
 - Preserving **non-Brahmi and lesser-known scripts.**

Gyan Bharatam Mission (2025 Budget):

- It was **launched under NMM** to survey, document, and conserve India's vast manuscript heritage.
- It seeks to **conserve over one crore manuscripts** housed in academic institutions, museums, libraries, and private collections.
- To accommodate this initiative, the **budgetary allocation** for NMM has increased from **3.5 crore to 60 crore.**

 The NMM defines a manuscript as a handwritten work created on

materials such as paper, bark, cloth, metal, or palm leaf, and it must be at least 75 years old. Lithographs (rocks) and printed volumes are not manuscripts.

Source: India's manuscripts reflect the journey of humanity, says Modi (The Hindu)

TERMS IN NEWS

Expedition 'Samudra Pradakshina'



- It is the **first-ever all-women tri-service circumnavigation sailing expedition** in the world.
- The crew consists of ten women officers from the Army, Navy, and Air Force, led by Lt. Col. Anuja Varudkar.
- It will use the **Indian Army Sailing Vessel (IASV) Triveni**, a 50-foot yacht built indigenously in Puducherry.
- The journey will last for **9 months**, covering 26,000 nautical miles, crossing the Equator twice, and rounding Capes Leeuwin, Horn, and Good Hope.
- **Mission Objectives:** Showcase Nari Shakti, promote joint military cooperation, advance Atmanirbhar Bharat, strengthen maritime diplomacy, and conduct ocean research with the National Institute of Oceanography.

PLACES IN NEWS

Mhadei Wildlife Sanctuary



- There has recently been a controversy regarding the proposed construction of railway lines near the Mhadei Wildlife Sanctuary (WLS).
- Mhadei WLS is located near the **Chorla Ghat, situated between North Goa and Belagavi**. It borders both Maharashtra and Karnataka.
- The **Mhadei River** flows through this sanctuary.
- Mhadei WLS, along with other protected areas in Goa like Mollem National Park, forms **part of the Western Ghats**.
- The sanctuary plays a vital role in a network of wildlife corridors that **connect tiger populations across the Sahyadri (Maharashtra) and the Kali Tiger Reserves (Karnataka)**.
- Mhadei WLS serves as a nesting ground for the **critically endangered Indian Vulture**, underscoring the sanctuary's importance for avian conservation.

- The National Tiger Conservation Authority (NTCA) has **recommended the designation of Mhadei WLS as a tiger reserve** under the Wildlife Protection Act, 1972.

PRACTICE QUESTIONS

Q1. Consider the following statements regarding the Indus Water Treaty (IWT) of 1960:

1. Under the IWT, the waters of Indus, Chenab and Jhelum rivers are allotted to Pakistan.
2. The IWT creates a 3-step graded dispute resolution mechanism under Article IX of the Treaty.
3. The World Bank is a signatory to the IWT, and plays a role in dispute resolution under the IWT.

How many of the afore mentioned statements are **INCORRECT** ?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q2. This protected area lies within the Western Ghats. It is a nesting ground of the critically endangered Indian Vulture. It helps to connect tiger populations across the Sahyadri and the Kali Tiger Reserves. The National Tiger Conservation Authority recently recommended that this protected area be notified as a Tiger Reserve.

Identify the protected area described above.

- (a) Kudremukh National Park
- (b) Mhadei Wildlife Sanctuary
- (c) Eturnagaram Wildlife Sanctuary

(d) Blackbuck National Park

Q3. Consider the following statements regarding the National Mission for Manuscripts (NMM):

1. The NMM defines a manuscript as a handwritten work that is at least 100 years old.
2. Printed works are not eligible for classification as manuscripts under the NMM.
3. The Archaeological Survey of India is the nodal agency for implementing the NMM.

How many of the afore mentioned statements are correct ?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q4. Consider the following statements regarding inflation targeting in India:

1. The Monetary Policy Committee, which sets policy rates in India, is a statutory body under the RBI Act.
2. Services are considered for calculating inflation under both Consumer Price Index (CPI) and Wholesale Price Index (WPI).
3. As per the RBI Act, the inflation target will be determined by Union Govt and RBI once every five years.

Which of the afore mentioned statements are correct ?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1, 2 and 3

Q5. Consider the following statements regarding the status of solar power sector in India:

1. India has the third largest producer of solar power in the world.
2. India aims to achieve a rooftop solar power installed capacity of 40 GW by 2026.
3. Rajasthan accounts for the highest share of solar power installed capacity in India.
4. Gujarat accounts for the highest share of rooftop solar power installed capacity in India.

How many of the afore mentioned statements are correct ?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Answers

1. D
2. B
3. A
4. C
5. D