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Current Affairs - 19 September 2025

WHAT IS THE PETROLEUM AND NATURAL GAS REGULATORY BOARD



PETROLEUM AND
NATURAL GAS
REGULATORY BOARD
(PNGRB)

(PNGRB)?

- It is a statutory body established under the Petroleum and Natural Gas Regulatory Board Act 2006.
- **Objective:** To protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products, and natural gas and to promote competitive markets and for matters connected therewith or incidental thereto.
- It has also been mandated to regulate the refining, processing, storage, transportation, distribution, marketing, and sale of petroleum, petroleum products, and natural gas, excluding the production of crude oil and natural gas, so as to ensure an uninterrupted and adequate supply of petroleum, petroleum products, and natural gas in all parts of the country.
- PNGRB authorises the CGD networks, natural gas and petroleum product pipelines, determines tariffs, lays down the technical and safety standards,
- **Nodal Ministry:** Ministry of Petroleum and Natural Gas.
- The Board has its seat in Delhi.
- The Board consists of 1 Chairperson, 3 members, and 1 Member (Legal).
- **Powers:**
 - The Board shall have jurisdiction to
 - Adjudicate upon and decide any dispute or matter arising amongst entities or between an entity and any other person on issues relating to refining, processing, storage, transportation, distribution, marketing, and sale of petroleum, petroleum products, and natural gas, unless the parties have agreed for arbitration;
 - Any other provision of this Act or the rules or the regulations or orders made thereunder.



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- While deciding on a complaint, the **Board may pass such orders** and issue such **directions** as it deems fit or refer the matter for investigation.
- **Decisions** of the Board are **binding on parties** of dispute. The Board's orders are **enforceable**, as the powers vested are the same as in a civil court.
- The Board has **powers to review its own decisions** by way of a **Review petition**. The decision can be challenged by way of an appeal in the **Appellate Tribunal**.

WHAT IS REINFORCEMENT LEARNING (RL)?



- It is defined as a **sub-field of machine learning (ML)** that enables AI-based systems to take actions in a dynamic environment through **trial and error methods** to maximize the **collective rewards based on the feedback generated for respective actions**.
- In RL, an **autonomous agent learns to perform a task by trial and error in the absence of any guidance from a human user**.
- RL algorithms use a **reward-and-punishment paradigm** as they process data.
- RL is based on the **hypothesis that all goals can be described by the maximization of expected cumulative reward**.
- The RL agent learns about a problem by **interacting with its environment**. The environment provides **information** on its current state.
- The agent then **uses that information to determine which actions(s) to take**.
- **If that action obtains a reward signal** from the surrounding environment, the **agent is encouraged to take that action again** when in a similar future state.
- This **process repeats for every new state**
- **Over time, the agent learns from rewards and punishments** to take actions within the environment that meet a specified goal.



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- The learning process in RL is **driven by a feedback loop** that consists of four key elements:
 - **Agent:** The learner and decision-maker in the system.
 - **Environment:** The external world the agent interacts with.
 - **Actions:** The choices the agent can make at each step.
 - **Rewards:** The feedback the agent receives after taking an action, indicating the desirability of the outcome.
 - It particularly **addresses sequential decision-making problems in uncertain environments** and shows **promise in artificial intelligence development**.
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NATIONAL MARITIME HERITAGE COMPLEX (NMHC)



- It is a **flagship project of the Govt of India** to piece together the entire **5000 years of India's maritime history** and showcase it under one roof.
- The **Ministry of Ports, Shipping, and Waterways, under its SagarMala Programme, is developing the NMHC at Lothal, Gujarat.**
 - The location 'Lothal' is significant since it is **one of the prominent cities** of the ancient **Indus Valley Civilization (IVC)** dating back to 2400 BC, located 76 km from Ahmedabad in Gujarat.
 - It is the **only port town of the IVC.**
 - Archaeological excavations have discovered the **oldest man-made dockyard, over 5000 years old**, in Lothal.
- The NMHC is envisioned to be **one of the largest maritime complexes in the world.**
- It will be a one of its kind, **digitally enhanced, experiential museum** with the aim of attracting tourists and historians from all over the world, who will get to see and learn about the rich and diverse maritime history of India.



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- The Ministry of Ports, Shipping, and Waterways has appointed the Indian Ports Association as the nodal agency, while Indian Port Rail Corporation Ltd. (IPRCL) is the executing agency of the project.
- It is being developed in an area of about 400 acres with an estimated cost of Rs. 4500 crore.
- **Funding:**
 - The NMHC project shall be funded by the Ministry of Shipping and Ministry of Culture through National Culture Fund by way of grant.
 - In the future, other Central Line Ministries, Coastal States & UTs, other government institutions, private organizations, and the public shall be approached for contributions either from their CSR funds or otherwise to the bank account of IPRCL-NMHC vertical.

TECHNOLOGY AS THE GRAMMAR OF GOVERNANCE

- Over the past two decades, **technology** has emerged as the **biggest equalizer** in India's governance.
 - **Jan Dhan Accounts:** It brought over 53 crore people into the banking system, bringing the financially excluded into the formal economy for the first time.
 - **Aadhaar:**
 - It gave the citizens a **digital identity with 142 crore registrations** done so far, making government services more accessible.
 - **Mobile (UPI):** Over 55 crore users have transacted since its launch. For example, over 20 billion transactions worth Rs 24.85 lakh crore took place in August 2025 alone.
 - **Direct Benefit Transfer (DBT):** It has eliminated middlemen and reduced leakages, resulting in **savings of over Rs 4.3 lakh crore so far**. This has been diverted to building more schools, hospitals, and infrastructure projects.



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PRAGATI platform:

- Monthly PM-led project monitoring through video conferences.
- Ensured **real-time accountability** in governance.

Technology in Key Sectors:

- **Agriculture and healthcare:**
 - **AI apps for farmers**, real-time weather and soil data.
 - **PM-KISAN**: The scheme delivers direct income support to 11 crore farmers digitally.
 - **DigiLocker**: It now has over 57 crore users, with 967 crore documents stored digitally.
- **Space achievements:**
 - **Mars Orbiter Mission**: It reached Mars on the first attempt and that too with a budget (₹450 crore) smaller than a Hollywood movie.
 - **Chandrayaan-3**: It made India the fourth country to achieve a soft lunar landing and the first to land on the Moon's South Pole.
 - **Other achievements:**
 - ISRO launched **104 satellites** in a single mission, setting a world record.
 - The **Gaganyaan** mission will make India the fourth nation to send humans to space using indigenous technology.
- **COVID-19 response**: Built in record time, it is a comprehensive digital solution for the world's largest vaccination drive. The platform managed **200 crore vaccine doses** with digital precision (preventing black-marketing and wastage).

Conclusion:

- **Technology** as the **grammar of governance** is India's defining **21st-century shift**.
 - The current government's vision demonstrates that when **technology meets humanity**, nations can leapfrog development stages and provide inclusive, transparent, and efficient governance.
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SC PRECEDENTS VS GAG ORDER IN ADANI CASE

Recently, a lower court issued a sweeping **ex-parte gag order** restraining several journalists, including Paranjoy Guha Thakurta, from publishing allegedly defamatory content against Adani Enterprises Limited (AEL). The order also directed removal of numerous articles and social media posts.

The September 6 Adani Gag Order

- A Delhi court issued a **blanket gag order** restraining Paranjoy Guha Thakurta and others from publishing content about Adani Enterprises Limited (AEL), while also authorising takedown of existing material within 36 hours.
- This judgement had serious lacunas:
 - No judicial examination of the allegedly defamatory content was carried out.
 - The order effectively allowed AEL to curate public information about itself.
 - Journalists were restrained from publishing “unverified or defamatory” reports, amounting to **prior restraint** — unconstitutional under Article 19(1)(a).
- **Why Prior Restraint is Problematic?**
 - Restrictions on speech are valid only under Article 19(2), covering grounds like sovereignty, security, public order, morality, and defamation.
 - But prior restraint carries a **heavy burden of proof** and is rarely justified.
 - Journalists must be heard since **truth and fair comment** are lawful defences in defamation cases.

Key Highlights of the Judgement

- The gag order was quashed for being **ex-parte and unsustainable**.
 - An **ex parte order** is a court ruling made at the request of one party **without the other being present or notified**.
 - It is granted only in urgent situations for temporary relief, such as restraining orders, to prevent harm until a full hearing with both parties ensures fairness and due process.



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SAUDI ARABIA-PAKISTAN DEFENCE PACT

- During Prime Minister Shehbaz Sharif's visit to Riyadh, Pakistan and Saudi Arabia signed a mutual defence pact declaring that "any aggression against either country shall be considered an aggression against both."
- The agreement builds on nearly eight decades of partnership, rooted in brotherhood, Islamic solidarity, and strategic defence cooperation.
- It aims to strengthen deterrence and promote regional and global security.
- The defence pact signals a strategic shift, particularly as Saudi Arabia balances its close ties with both Pakistan and India.
- It highlights the evolving security and diplomatic landscape in the region.
- **India's Cautious Response to Saudi-Pakistan Defence Pact**
 - India reacted carefully to the Saudi Arabia-Pakistan mutual defence agreement, with MEA spokesperson noting that the government was aware of the long-standing arrangement.
 - The Ministry of External Affairs said it will study its implications for national security and regional stability, reaffirming India's commitment to protecting its interests.

Saudi Arabia's Strategic Ties with India

- **Economic Partnership**
 - Saudi Arabia is India's fifth-largest trading partner, while India is its second-largest.
- **Political and Strategic Milestones**
 - Relations deepened with King Abdullah's 2006 visit, leading to the Delhi Declaration, followed by the Riyadh Declaration in 2010 that elevated ties to a Strategic Partnership.
 - In 2016, PM Narendra Modi's visit saw him receive Saudi Arabia's highest civilian honour, the 'King Abdulaziz Sash'.



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- **Recent Engagements and Crisis Diplomacy**
 - High-level exchanges have since continued. During PM Modi's April 2025 visit, Saudi Arabia swiftly condemned the Pahalgam terror attack.
 - Its Minister of State for Foreign Affairs also visited during Operation Sindoor.
- **Balanced Approach on Sensitive Issues**
 - Saudi Arabia has maintained measured positions during India-Pakistan tensions — condemning terror attacks like Pulwama, but refraining from criticising India's Article 370 abrogation or the Balakot strikes.
 - It has often positioned itself as a mediator, engaging with both neighbours.

MACHU PICCHU



Machu Picchu

- It is a 15th-century **Inca civilization site of Peru**.
- **Location:** It is located 80 km northwest of Cuzco, Peru, in the **Cordillera de Vilcabamba of the Andes Mountains**.
- It is saddled between two peaks—**Machu Picchu** (“Old Peak”) and **Huayna Picchu** (“New Peak”)—at an elevation of 7,710 feet.
- It is believed to have been **built by Pachacuti Inca Yupanqui**, the ninth ruler of the Inca, in the mid-1400s.
- **Monuments:** This citadel is made up of **temples, palaces, terraces, monuments, complexes and walls**; in addition to water channels, built with large **blocks of stone, without any amalgam**, proof of the great wisdom of the Inca civilization.
- Machu Picchu was rediscovered in 1911 by the **American explorer Hiram Bingham**.
- It was designated a **UNESCO World Heritage site in 1983**.

Key facts about Inca Civilization

- **Time Line:** It flourished in ancient **Peru between c. 1400 and 1533 CE**.
- It is the largest empire ever **seen in the Americas** and largest in the world at that time.
- **Society:** Inca society was highly stratified. The emperor ruled with the aid of an aristocratic bureaucracy.



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- **Architecture and Technology:** Inca technology and architecture were highly developed.
- **Religious belief:** The Inca religion combined features of **animism, fetishism,** and the worship of nature gods.

PERIYAR TIGER RESERVE



- **Location:** It is named after the **Periyar River**, is located in the **Idukki district of Kerala**.
- It is set high at **Cardamom Hills and Pandalam Hills** of the Western Ghats, adjacent to the border with Tamil Nadu.
- It surrounds the **Periyar Lake**, which was created in 1895 by building a dam across the Periyar River.
- **Terrain:** The terrain is hilly and undulating with a maximum altitude of 2016 m. The highest peak is **Kottamala (2016 m)**.
- **Rivers:** Two major rivers namely **Periyar and Pamba** drain the area.
- **Dams:** **Mullaperiyar Dam** is located within the PTR.
- **Tribes:** It is home to many tribal communities, including the **Mannans and the Palians**.
- **Vegetation:** It comprises **tropical evergreen forests**, semi- evergreen forests, moist deciduous forests, transitional fringe evergreen forests, grasslands, and **eucalyptus plantations**.
- **Flora:** Important flora includes teak, mangoes, rosewood, jamun, jacarandas, terminalias, tamarind, royal ponciana, bamboo, etc.
- **Fauna:** Elephants, Wild Pigs, Sambar, Gaur, Mouse Deer, Dole or Barking Deer, Indian Wild Dog, and Tiger.
- The major four species of primates are also found at Periyar – the **rare lion-tailed macaque**, the **Nilgiri Langur**, Gee's Golden Langur, Common Langur, and Bonnet Macaque.
- It is also being considered as the habitat of the **Nilgiri Tahr**.