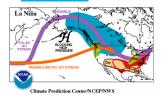




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## **Current Affairs - 11 March 2025**

#### LA NINA



Climate change is intensifying, and the cooling effects of La Niña may weaken in a warmer future, climate scientists warn, citing current heat trends across much of the country.

- La Niña is a climate pattern that describes the **cooling of surface-ocean waters** along the tropical west coast of South America.
- It is considered to be the **counterpart to El Niño**, which is characterized by unusually warm ocean temperatures in the equatorial region of the Pacific Ocean.
- Together, La Niña and El Niño are the "cold" (La Niña) and "warm" (El Niño) phases of the **El Nino-Southern Oscillation (ENSO)**. ENSO is series of linked weather- and ocean-related phenomena.
- La Niña events are indicated by sea-surface temperature decreases of more than 0.5 degrees Celsius (0.9 degrees Fahrenheit) for at least five successive three-month seasons.

#### **Causes:**

- La Niña is caused by a build-up of **cooler-than-normal waters** in the tropical Pacific, the area of the Pacific Ocean between the Tropic of Cancer and the Tropic of Capricorn.
- Unusually strong, eastward-moving trade winds and ocean currents bring this cold water to the surface, a process known as upwelling. Upwelling can cause a drastic drop in seasurface temperature.

#### **Effects:**

- Impact on Air Pressure and Rainfall: La Niña lowers air pressure over the western Pacific, leading to increased rainfall. South Asia experiences stronger summer monsoons, benefiting agriculture in India and Bangladesh.
- Risk of Flooding in Australia: While La Niña supports agriculture in South Asia, strong
  events can cause severe flooding in northern Australia due to excessive rainfall and lowpressure systems.





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- Global Rainfall Patterns: La Niña brings more rain to southeastern Africa and northern Brazil. In contrast, it increases air pressure over the central and eastern Pacific, causing dry conditions.
- **Drier Conditions in Some Regions:** Regions like the west coast of tropical South America, the Gulf Coast of the US, and the pampas of South America experience reduced rainfall and dry spells during La Niña.
- **Boost to the Fishing Industry:** Upwelling caused by La Niña brings cold, nutrient-rich waters to the surface, supporting plankton growth. This benefits fish populations and predators like sea bass.
- **Duration and Seasonal Peak:** La Niña events usually last between one and three years, whereas El Niño typically lasts less than a year. Both tend to peak during the Northern Hemisphere winter.

### **CHANDRAYAAN-3**



New findings based on data from India's Chandrayaan-3 mission suggest that water ice on the Moon may be present beyond its polar regions.

- Chandrayaan-3 was the Indian Space Research Organisation's (ISRO) second attempt, after Chandrayaan-2, to achieve a successful landing and rover operation on the Moon's surface.
- It was launched using ISRO's **LVM3 rocket**, designed to place modules into the Geosynchronous Transfer Orbit (GTO) at a lower cost.
  - LVM3 is a three-stage rocket with two solid strap-on boosters and a core liquid stage.
  - The LVM3 M4 launcher positioned the integrated modules in an elliptical parking orbit of approximately 170 x 36,500 km.





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- **Objectives**: The mission aims to explore the presence of water ice, which could support future lunar habitation and provide fuel for interplanetary missions. Key goals include:
  - o Achieving a safe and soft landing on the Moon.
  - o Conducting rover-based exploration of the lunar surface.
  - o Performing in-situ scientific experiments through the rover.
- Mission Components: Chandrayaan-3 consists of a Lander Module (LM), a Propulsion Module (PM), and a Rover designed to develop and demonstrate interplanetary mission technologies.

### **Chandrayaan-3 Recent Findings:**

- New data from Chandrayaan-3 indicates possible water-ice deposits beyond the Moon's polar regions.
- A study by the Physical Research Laboratory (PRL), Ahmedabad, using data from Chandra's Surface Thermophysical Experiment (ChaSTE) instrument, supports this finding.
- ChaSTE measured a 60°C temperature difference between the lunar surface and 10 cm below it, revealing that the Moon's surface layer is highly non-conductive, providing insights into its composition and thermal properties.

#### **GLOBAL ARMS TRADE**



India was the second-largest arms importer during the period between 2020 and 2024, though the trade figures decreased by 9.3% between 2015-19 and 2020-24, show the recent data from the Stockholm International Peace Research Institute (SIPRI).

• Ukraine became the largest importer of major arms in the world during the period between 2020 and 2024, clocking a nearly 100-fold rise in imports compared with the figures for 2015–2019.





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- o Ukraine received 8% of global arms imports in 2020-24.
- Four countries in Asia and Oceania—India, Pakistan, Japan, and Australia—ranked among the 10 largest arms importers globally in 2020-24.
- India was the second-largest arms importer, though the trade figures decreased by 9.3% between 2015-19 and 2020-24.
  - o The **largest** share of Indian arms imports (36%) came from Russia, a significantly smaller share than in 2015-19 (55%) and 2010-14 (72%).
  - o India was the biggest arms export destination for both Russia and France.
- The S. further increased its share of global arms exports to 43%, while Russia's exports fell by 64%, accounting for 7.8% of global arms exports, falling behind France (9.6%), which emerged as the second largest arms exporter in 2020-24.
- India received by far the largest share of French arms exports (28%)—almost twice the share that went to all European recipients combined (15%).
- Russia delivered major arms to 33 countries in 2020-24, of which two-thirds went to three countries India (38%), China (17%), and Kazakhstan (11%).
- European arms imports overall grew by 155% between the same periods as the continent rearms itself.
- China dropped out of the list of top 10 arms importers for the first time since 1990-94, showcasing its expanding domestic industrial base.

Arms imports by Pakistan grew by 61% between 2015-19 and 2020-24.

o China became even more dominant as its supplier, accounting for 81% of Pakistan's arms imports in 2020-24, compared with 74% in 2015–19.

Global transfer volume: The overall volume of arms transfers globally remained at roughly the same level as in 2015-19 and 2010-14 (but was 18% higher than in 2005–2009), as increasing imports in Europe and the Americas were offset by decreases in other regions.





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### **KISAN CREDIT CARD**



In a sign of stress in the agriculture sector, scheduled commercial banks, excluding regional rural banks (RRBs), have seen a sharp increase of 42 per cent in bad loans Kisan Credit Card (KCC) accounts.

- The Kisan Credit Card (KCC) scheme was introduced in 1998 for issue of Kisan Credit
  Cards to farmers on the basis of their holdings for uniform adoption by the banks so that
  farmers may use them to readily purchase agriculture inputs such as seeds, fertilizers,
  pesticides etc. and draw cash for their production needs.
  - o The scheme was extended in 2004 to cover farmers' investment credit needs for allied and non-farm activities.
  - In Budget 2018-19, the government extended the Kisan Credit Card (KCC) facility to fisheries and animal husbandry farmers for meeting working capital needs.
- Implementation: The Kisan Credit Card Scheme is implemented by Scheduled Commercial Banks, RRBs, Small Finance Banks and Cooperatives.
- **Objective:** The Kisan Credit Card scheme aims at providing adequate and timely credit support from the banking system under a single window with flexible and simplified procedure to the farmers for their cultivation and other needs as indicated below:
  - o To meet the short term credit requirements for cultivation of crops;
  - Post-harvest expenses;
  - Produce marketing loan;
  - o Consumption requirements of farmer household;
  - Working capital for maintenance of farm assets and activities allied to agriculture;
  - o Investment credit requirement for agriculture and allied activities.

### • Eligibility:

o Farmers - individual/joint borrowers who are owner cultivators;





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- Tenant farmers, oral lessees & share croppers;
- Self Help Groups (SHGs) or Joint Liability Groups (JLGs) of farmers including tenant farmers, share croppers etc.

### **Kisan Rin Portal:**

- The portal helps farmers avail subsidised loans under the Kisan Credit Card (KCC).
- It was developed in collaboration with multiple government departments.
- It offers a comprehensive view of farmer data, loan disbursement specifics, interest subvention claims, and scheme utilisation progress.
- It fosters seamless integration with banks for more focused and efficient agriculture credit.

### LARGE PHASED ARRAY RADAR (LPAR)



- It has been established by **China in Yunnan province**, near the **China-Myanmar border**.
- It boasts a **surveillance range exceeding 5,000 kilometers**, allowing China to monitor extensive areas of the Indian Ocean and deep into Indian Territory.
- It possesses the capability to detect and track ballistic missile launches in real time.
- Unlike traditional radars, which rely on mechanical rotation, LPARs use electronically controlled antennas to scan vast areas almost instantly.
  - This allows them to track multiple targets, including ballistic missiles, with high precision.
  - Such radars play a critical role in early warning systems and air defence networks.

### How does China's LPAR compare to the world?

• Besides China, only the US and Russia have the LPAR





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- The capabilities of China's LPAR are being compared to the US PAVE PAWS (Precision Acquisition Vehicle Entry Phased Array Warning System), a Cold War-era radar designed to detect long-range missile launches.
- The **American system** has a **detection range of** approximately **5,600 km** and can track multiple projectiles, including submarine-launched ballistic missiles.

#### • Concerns for India:

- The Yunnan-based LPAR can monitor deep into Indian territory and track missile tests conducted from Dr APJ Abdul Kalam Island off India's eastern coast.
- This **site** is **crucial for testing strategic weapons** like the Agni-V intercontinental ballistic missile and the K-4 submarine-launched missile.
- By capturing vital data on missile trajectories, speeds, and distances, China gains a strategic advantage, enabling it to analyse and develop countermeasures.

### TRADE-TO-TRADE (T2T) SEGMENT IN STOCK MARKETS



The Securities and Exchange Board of India (SEBI) is considering a major revamp of short-selling regulations, potentially allowing it for all stocks excluding those in the trade-to-trade (T2T) segment.

- T2T stocks or Trade-to-Trade stock means stocks that must be delivered in order to be traded (T+2 settlement).
- This implies that such equities **cannot be traded intraday** or, in the case of Buy Today Sell Tomorrow, on a daily basis.
- This means if you acquire T2T stocks today, you won't be able to sell them until the settlement takes place.
  - Your order will be refused if you try to sell these shares the same day or before they are in the Demat account.





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- Stocks are put under the T2T segment by the exchanges based on criteria such as their price-earnings ratio, price variations, market capitalisation, etc.
- Stocks that are very volatile or have irregular price movements are monitored by exchanges in cooperation with the market regulator, SEBI.
- They **put stocks in the T2T section to shield regular investors from** being caught up in the **volatility** and to **limit unwarranted speculation** on such equities.
- On a bi-weekly basis, exchanges relocate stocks to the T2T section, and they are shifted in and out of the segment depending on quarterly evaluations.
- Also evaluated for transfer to the T2T sector are stocks that are not available for trade in the Futures & Options section.

**How to identify stocks in the T2T segment?** Stocks in the T2T segment can be identified by changes in their scrip names:

- National Stock Exchange (NSE): The addition of the word "BE" to the scrip name. For example, "ADANIPOWER" becomes "ADANIPOWER BE" in the T2T segment and reverts to "ADANIPOWER" after normal trading is allowed.
- Bombay Stock Exchange (BSE): The addition of the letter "T" to the scrip name. For instance, "ADANIPOWER" changes to "ADANIPOWER T" when moved to the T2T segment.

#### KHANJAR-XII



The 12th edition of the India-Kyrgyzstan Joint Special Forces Exercise Khanjar-XII is set to take place in Kyrgyzstan.

- It is an **annual exercise conducted alternatively in India-Kyrgyzstan.** It was first initiated in December 2011, in Nahan, India.
- It is the **12th edition** of the annual India-Kyrgyzstan Joint Special Forces Exercise.





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- The Indian contingent is represented by troops from the Parachute Regiment (Special Forces), and the Kyrgyzstan contingent is represented by the Kyrgyz Scorpion Brigade.
- The primary objective of the exercise is to **exchange expertise in counterterrorism operations and special forces' tactics,** particularly in mountainous and high-altitude environments.
- Training modules will include advanced sniping, close-quarters combat, complex building interventions, and mountain warfare techniques.
- In addition to military drills, the exercise will **foster cultural ties** through engagements such as **celebrating Nowruz**, **the Kyrgyz New Year festival**.