

23 September, 2023

## El Nino Weather Phenomenon

**Context:** Peruvian President Dina Boluarte called for an international agreement to address El Nino's impacts while addressing world leaders at the United Nations General Assembly (UNGA).

### What is El Nino?

- The term "El Nino" originates from Spanish and means "little boy" or "Christ child."
- South American fishermen first identified this phenomenon in the early 17th century.
- El Nino events, characterized by warm Pacific Ocean waters, typically occurred in December, inspiring the name.
- El Nino is a significant ocean-atmosphere climate interaction involving periodic warming in sea surface temperatures in the central and east-central Equatorial Pacific.
- It is often associated with high atmospheric pressure in the western Pacific.
- El Nino has adverse effects on the Indian monsoons, impacting agriculture in India.

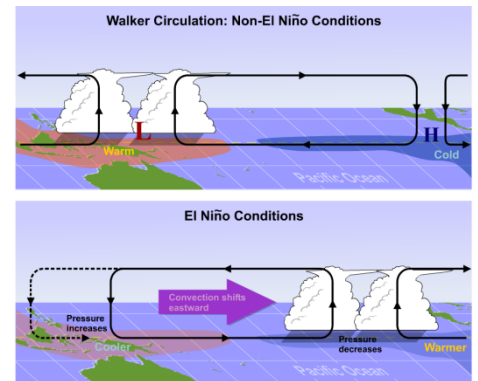
### Impact of El Nino on India

#### ➤ Normal Monsoon Year:

- Peru's coast has higher pressure compared to northern Australia and Southeast Asia.
- The Indian Ocean is warmer than neighboring oceans, creating relatively lower pressure.
- Moisture-laden winds move from the western Pacific towards the Indian Ocean.
- Lower land pressure in India draws these moist winds inland.

#### ➤ El Nino's Impact:

- El Nino warms the surface water off the Peruvian coast.
- Warm water disrupts or reverses the normal trade winds.
- Moisture-laden winds shift towards Peru from the western Pacific (near northern Australia and Southeast Asia).
- This leads to heavy rainfall in Peru during El Nino years.
- India experiences reduced monsoon rains during El Nino events.
- The greater the temperature and pressure differences, the more severe the rainfall shortage in India.



## La Nina

### ➤ La Nina Overview:

- "La Nina" translates to "little girl" in Spanish, also known as "El Viejo" or "cold event."
- Occurs when Eastern Pacific water temperatures become colder than usual.
- Results in strong high pressure over the eastern equatorial Pacific.
- Western Pacific and Asian regions experience low pressure.
- Effects of La Nina include drought in Peru and Ecuador, heavy floods in Australia, high temperatures in Western Pacific, Indian Ocean, and off the Somalian coast.
- La Nina tends to bring good monsoon rains to India, making it beneficial for Indian agriculture.

### ➤ Frequency and Duration:

- El Nino and La Nina events typically occur every 2-3 and 5-7 years, respectively.
- El Nino events are more frequent than La Nina.
- Typically, both El Nino and La Nina episodes last for nine to twelve months.

## Personality Right

**Context:** The Delhi High Court granted Anil Kapoor's requests for safeguarding his personality rights against unauthorized use by third parties.

### What is Personality Right?

- Personality rights encompass a celebrity's name, voice, signature, images, or any recognizable features.
- These features, such as a unique pose or mannerism, are associated with a celebrity's identity.
- Some celebrities even register specific aspects as trademarks for commercial use.
- The core concept is that only the owner or creator of these distinctive features can profit from them commercially.
- Exclusivity plays a significant role in attracting commercial opportunities for celebrities, and unauthorized use results in actual revenue loss.
- **Legal Action for Protection**
  - Celebrities have the option to take legal action by approaching the court.
  - They can seek an injunction against unauthorized third-party use of their personality rights for commercial purposes.
  - This legal recourse helps protect their exclusive rights and potential earnings.

### Personality Rights in India

- Personality rights in India are not explicitly defined in statute but are associated with the right to privacy and the right to property.

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- Legal protection for these rights is relatively new in India, with nascent development.
- Intellectual property concepts like passing off and deception from trademark protection can be applied to determine if a celebrity should be safeguarded through an injunction.
- **Challenges for Celebrities:**
  - Despite obtaining an injunction, it's challenging for celebrities to monitor and address all instances of misuse.
  - Celebrities must issue takedown orders to online intermediaries like Google to remove unauthorized content.
  - Legal processes involve significant costs but can be beneficial in comparison to the revenue loss suffered by the celebrity.

### What is Injunction by the Court?

- An injunction is a legal order issued by a court of equity.
- It is initiated by a complaining party (complainant) against a party named as a defendant.
- The injunction directs the defendant to refrain from certain actions or to prevent their agents or employees from taking specific actions.
- It is issued when the defendant is threatening or attempting to commit an unjust and inequitable act.
- The act in question must be injurious to the plaintiff, and its resolution cannot be adequately addressed through a standard legal action.
- In India, the law of injunction is primarily governed by the Specific Relief Act, 1963.
- Additionally, the Code of Civil Procedure, 1908, also plays a significant role in regulating injunctions within the legal framework.

### Types of Injunctions

- **Temporary Injunction:**
  - Temporary injunctions are issued for a specific duration or until further court orders are provided regarding the matter.
  - They can be obtained at any stage of a trial and are governed by the Code of Civil Procedure (CPC), 1908.
- **Permanent Injunction:**
  - A permanent injunction is granted by the court through a decree made during the hearing and based on the merits of the case.
  - Once such a decree is issued, the defendant is permanently prohibited from asserting a right or committing an act that would violate the plaintiff's rights.

## Statue of Oneness

**Context:** Madhya Pradesh Chief Minister unveiled a 108-foot-tall statue of the 8th-century spiritual leader Adi Shankaracharya in Omkareshwar town.

- The statue, known as the 'Statue of Oneness,' portrays Shankaracharya as a 12-year-old child during his visit to Omkareshwar.
- The statue weighs 100 tonnes and was conceptualized by an Indian team of artists, sculptors, and engineers.
- Metal casting took place in China's Nanchang city, and the idol was shipped to Mumbai in multiple batches.
- It is made of bronze with a composition of 88% copper, 4% zinc, and 8% tin, and its internal structure is constructed using high-quality steel.
- The statue's design was inspired by Raja Ravi Verma's depiction of Shankaracharya.

### Adi Shakaracharya

- Also known as Adi Shankara, he was born on May 11, 788 AD, in Kaladi near Kochi, Kerala.
- He attained Samadhi at the age of 33 in Kedar Tirth.
- Adi Shankara was a devoted follower of Lord Shiva.
- **Philosophical Contributions:**
  - He propagated the Doctrine of Advaita, emphasizing Monism.
  - Adi Shankara wrote extensive commentaries in Sanskrit on the Vedic canon, including Upanishads, Brahma Sutras, and Bhagavad Gita.
  - He held contrasting views with Buddhist philosophers.
- **Major Works:**
  - Brahmasutrabhasya: A commentary on the Brahma Sutra.
  - Bhajagovinda Stotra.
  - Nirvana Shatakam.
  - Various Prakaran Granths.
- **Revival of Hinduism:**
  - Played a significant role in revitalizing Hinduism in India, countering the rising popularity of Buddhism.
  - Established four Mathas in different corners of India: Shingeri, Puri, Dwaraka, and Badrinath, dedicated to the propagation of Sanathana Dharma.
- **Advaita Vedanta Philosophy:**
  - Articulated a philosophy of radical nondualism rooted in ancient Upanishadic texts.

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- Advaita Vedanta emphasizes the concept of 'brahman' as the ultimate reality, transcending individuality and empirical plurality.
- According to this philosophy, one's self (atman) is fundamentally identical with brahman.
- The core tenet is that atman is pure non-intentional consciousness, nondual, infinite, and identical with brahman.

## SDG Summit 2023

**Context:** Leaders worldwide met in New York on September 18, 2023, for the High-level SDG Summit and pledged to ramp up efforts to achieve the SDGs by 2030.

- Global leaders convened for the UN SDG Summit on September 19, 2023, in New York.
- They pledged to intensify efforts to achieve the Sustainable Development Goals (SDGs) by 2030.

### Cost of Achieving SDGs

- UNCTAD analysis estimated the cost of SDG indicators related to sustainable food systems at \$6.1 trillion annually till 2030.
- This translates to \$1,383 per person per year.
- Shortfall in funding is hindering progress, with a \$328 billion annual gap for 48 developing countries.
- A 5.7% annual spending increase is required to bridge this gap.

### Investment Needs by Category

- **Different SDG pathways have varying annual costs:**
  - **Gender Equality:** \$6.4 trillion
  - **Food Systems:** \$6.1 trillion
  - **Education Transformation:** \$5.9 trillion
  - **Energy Transition:** \$5.8 trillion
  - **Inclusive Digitization:** \$5.6 trillion
  - **Climate Change, Biodiversity Loss and Pollution:** \$5.5 trillion
  - **Social Protection and Decent Jobs:** \$5.4 trillion

### Interconnected Indicators

- The analysis considered interconnected SDG indicators across various goals.
- It identified synergies, showing how investment in one area can benefit multiple SDGs.

### Global SDG Funding Gap

- The annual SDG funding gap has increased from \$2.5 trillion before the pandemic to an estimated \$4.2 trillion.
- Leaders acknowledged the need for massive investments to attain SDGs.

### Debt-for-Nature Swaps

- Leaders advocated for scaling up debt swaps for SDGs, including those focused on climate and nature.
- Debt-for-nature swaps help heavily indebted developing countries address conservation by replacing debts with new loans with lower interest rates.
- Climate change and extreme weather events pose threats to SDG achievement.
- Energy transition, vital for SDGs, is projected to cost about \$5.8 trillion annually from 2023 to 2030.

### Other Key Outcomes

- Leaders called for strengthening multilateral actions and coordination by all creditors.
- They recommitted to implementing the Paris Agreement and the Sendai Framework for Disaster Risk Reduction.
- Leaders urged for emergency course correction to hasten SDG progress and enhance global cooperation for sustainable development.

## SUSTAINABLE DEVELOPMENT GOALS



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## NEWS IN BETWEEN THE LINES

### Perovskite



Recently, scientists achieved a breakthrough in the field of perovskite materials.

#### What is Perovskite?

Perovskite is a class of materials known for their diverse properties like superconductivity and magnetoresistance.

**Structure:** Perovskite shares a crystal structure similar to **calcium titanium oxide (CaTiO<sub>3</sub>)** with a formula **ABX<sub>3</sub>**, where "A" and "B" are cations and "X" is anions.

**Discovery:** Gustav Rose discovered Perovskite in the **Ural Mountains of Russia in 1839**, named after **Lev Perovski**.

**Flexibility:** Scientists can customize perovskite crystals to have various **physical, optical, and electrical** properties.

**Optical Properties:** Perovskites efficiently absorb and emit light across a wide range of wavelengths, making them suitable for solar cells and light-emitting devices.

**Applications:** Perovskite finds use in sensors, **fuel cells, solar cells, lasers, memory devices and spintronics**.

**Solar Cells:** Perovskite solar cells are particularly notable for their potential as **low-cost, high-efficiency** photovoltaic materials.

### Electronic Voting Machine



Recently, the Supreme Court declined a plea for an independent audit of the 'source code' of the Electronic Voting Machine (EVM) system.

#### What is Electronic Voting Machine?

- Electronic Voting Machine (EVM) is an electronic device used in elections to cast and count votes.
- It consists of two units: the **Control unit** and the **Balloting unit**, connected by a cable.

**Control Unit:** The Control unit is with the presiding or polling officer to verify voters' identity.

**Balloting Unit:** It is placed in voting compartments, displays candidate names and symbols with voting buttons.

#### EVM in India:

- Indian EVMs were **developed in 1989** by the **Election Commission** in collaboration with **Bharat Electronics Limited and Electronics Corporation of India Limited**.
- They were first used in a limited **capacity in 1982** and for general elections in **Goa in 1999**.

### Central Water Commission



According to the Central Water Commission, the levels in India's **150 major reservoirs** are currently below the 10-year average and lower than the same period last year.

**What is the Central Water Commission (CWC)?** Central Water Commission (CWC) is a prominent technical organization in India specializing in Water Resources.

**Administrative Status:** It currently operates as an attached office of the **Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation, Government of India**.

#### Functions:

- CWC is responsible for initiating, coordinating, and advancing schemes related to water resource control, **conservation, and utilization** across India.
- These schemes encompass **Flood Control, Irrigation, Navigation, Drinking Water Supply** and Water Power Development.
- CWC also conducts investigations, construction and execution of relevant projects.

**Leadership:** The Commission is led by a Chairman, holding the status of Ex-Officio Secretary to the Government of India.

### Remission



Recently the Supreme Court supports remission for convicts who demonstrate reformation after a prolonged period of incarceration.

**What is Remission?** Remission involves reducing the **duration of a sentence** without altering its nature.

**Basis for Remission:** Remission is typically granted based on factors like **good conduct, reformation, and health** considerations.

**Constitutional Provisions:** **Articles 72 and 161** of the Indian Constitution **empower the President and Governor**, respectively, to pardon, suspend, remit or commute sentences.

**Legal Framework:** The Criminal Procedure Code (CrPC), specifically **Sections 432 to 435**, outlines the procedure for granting remission.

### Rashtriya Vigyan Puraskar



Recently, the Government of India introduced "**Rashtriya Vigyan Puraskar**," a set of National Awards in the field of science, technology and innovation.

**Objectives:** Recognize **exceptional work by scientists, technologists and innovators**, including teams, in various fields.

**Eligibility:** Open to individuals and teams from various sectors, including those of **Indian origin** abroad.

**Categories:** Awards include lifetime **achievements (VR)**, distinguished **contributions (VS)**, **young scientists (VY-SSB)** and team efforts (VT).

**Domains:** Recognizes excellence in **13 domains**, spanning **physics, chemistry, medicine, engineering, and more**.

**Selection:** A committee headed by the Principal Scientific Adviser reviews nominations annually.

**Timeline:** Nominations open on **January 14, National Science Day**, and close on **February 28**. Awards announced on **May 11, National Technology Day**, with the ceremony on **August 23, National Space Day**.

**Recognition:** Awardees receive a certificate and a medal, and these awards hold equal stature with other National Awards.

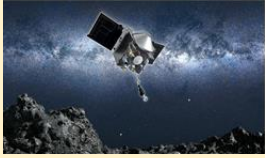
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## Asteroid Bennu



Recently, NASA's **Osiris-Rex mission** is set to return to Earth, carrying a sample of dust collected from **asteroid Bennu**

**Asteroid Bennu:** Bennu is a **near-Earth asteroid**, which means its orbit brings it close to Earth's path.

**Characteristics:** It is a **mountain-sized space rock**, approximately **500 meters** (1,640 feet) wide.

**Scientific Significance:** Bennu is of great interest to scientists as it holds clues about the origins of Earth and life itself.

**Water Content:** It is believed to contain a significant amount of water, possibly up to **10% by weight**, bound within its **minerals**.

**Carbon Content:** Bennu also contains **about 5-10% carbon**, a crucial element for organic chemistry and the potential development of life.

## Place in News

### Black Sea

Recently, the Ukrainian missile hits Russia's **Black Sea** navy headquarters in **Crimea**.

**Geographic Location:** The Black Sea is a significant inland sea situated in **southeastern Europe**.

**Bordering Countries:** Black Sea shares its borders with Ukraine (north), Russia (northeast), Georgia (east), Turkey (south), Bulgaria (southwest) and Romania (west).

**Connection to Mediterranean:** It connects to the **Mediterranean Sea** via the **Bosporus Strait**, **Sea of Marmara**, and **Dardanelles Strait**.

**Size:** The Black Sea covers an area of approximately **436,000** square kilometers (168,000 square miles).

**Freshwater Inflows:** Several rivers, including the **Danube**, **Dnieper** and **Dniester**, provide freshwater inflows to the Black Sea, primarily in the northwestern coastal areas.

**Limited Oxygen Levels:**

- The Black Sea's deeper waters have **lower oxygen levels** due to its unique geological and hydrological conditions.
- It is one of the **world's largest anoxic basins**, with areas characterized by very **little dissolved oxygen**.

**Islands:** The Black Sea contains several islands, with the largest ones being **Snake Island** (Ukraine), **Giresun Island** (Turkey) and **St. Ivan Island** (Bulgaria).



## POINTS TO PONDER

- ❖ **Who is the author of "Fiction and Beyond"?** – Ashokamitran (Sahitya Academy Award Winner)
- ❖ **Under what section of the RBI Act 1934 does RBI mandate AIFIs to maintain a capital adequacy ratio (CAR)?** -Section 45L
- ❖ **Where is the Permanent Secretariat of International Congress on the Chemistry of Cement (ICCC) located?** - Dusseldorf, Germany
- ❖ **Under which act is radio broadcasting covered in India?** -Indian Wireless Telegraphy Act, 1933
- ❖ **Who is honored by the "Statue of Oneness" in Omkareshwar?** - Adi Shankaracharya

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