



## **DAILY CURRENT AFFAIRS 29-05-2025**

### **GS-1**

1. Bow Echo

### **GS-2**

2. 50 years of Sikkim State
3. Lokpal
4. India's Digital Addressing System

### **GS-3**

5. Viksit Krishi Sankalp Abhiyan

## **Bow Echo**

### **Syllabus: GS-1: Indian Geography - Climate & Weather Phenomena**

#### **Context:**

- The recent storm that struck Delhi showcased a unique phenomenon known as a bow echo.

### **Bow Echoes and Their Impact: Understanding the Delhi Storm Phenomenon**

#### **Introduction**

The recent storm in Delhi brought attention to a meteorological phenomenon known as a **bow echo**, captured on weather radar as a distinctive crescent shape. These formations are significant because they often precede **severe windstorms**, such as the one that swept across Delhi with wind speeds reaching **up to 100 km/h**. Understanding bow echoes is essential for predicting and preparing for extreme weather events.

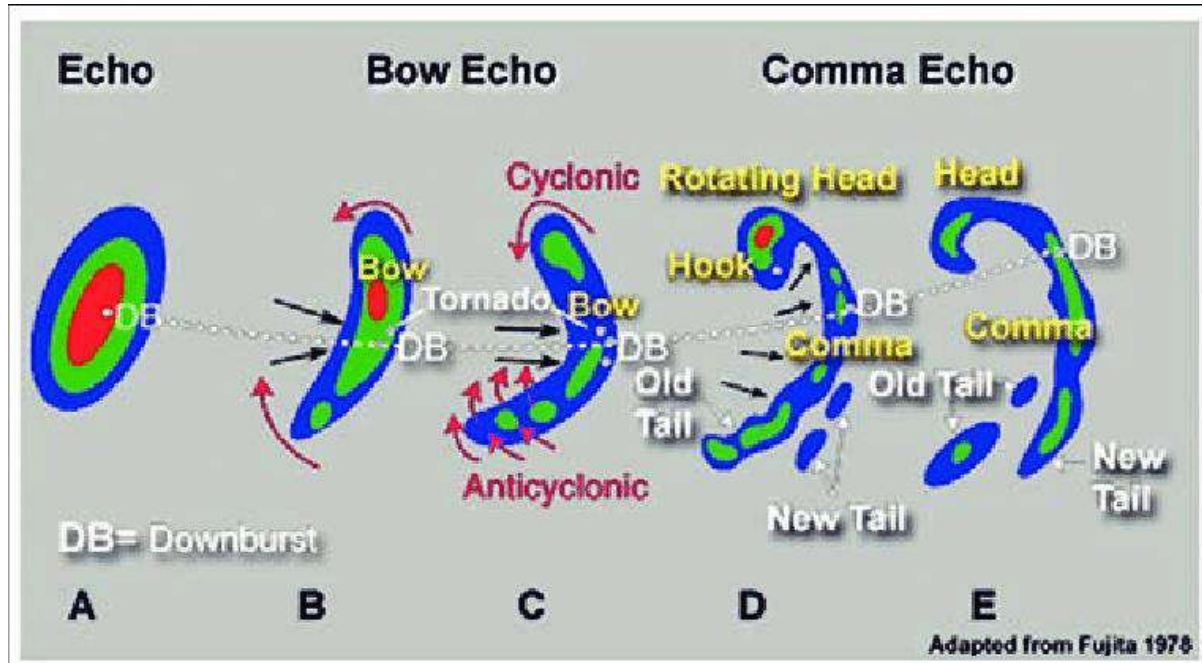
#### **What Is a Bow Echo?**

A **bow echo** is a radar signature that appears as a **bowed or curved line of thunderstorms**, typically ranging from **20 km to 100 km in length** and lasting **3 to 6 hours**. The term was first introduced in the 1970s by renowned meteorologist **Ted Fujita**, known for his work on severe storms.

#### **Formation Process of Bow Echoes**

Bow echoes form through a process involving **rain-cooled air** that descends and spreads outward upon hitting the ground, creating a **gust front**—a boundary between cool and warm surface air.

- The gust front forces **warm, moist air upward**, leading to the development of new thunderstorms.
- This continual cycle of storm formation and gust front interaction causes the storm system to bend, resulting in the **characteristic bow shape** on radar.



### Key Characteristics

- **Straight-line Winds:** Bow echoes are known for producing **damaging straight-line winds**, unlike the rotating winds of tornadoes.
- **Association with Derechos:** They are often linked with **derechos**, a more intense and long-lived form of a bow echo system.
- **Self-reinforcing:** They sustain themselves by continuously generating new thunderstorms from the gust front interaction.

### Bow Echoes in India

Though often studied in North America, **bow echoes also occur in India:**

- **May 31, 2022:** A significant bow echo event hit **Delhi and Noida**, with wind speeds reaching **100 km/h**.
- Similar occurrences have been observed in **Odisha** and other regions prone to intense pre-monsoon thunderstorms.

### What Is a Derecho?

A **derecho** is a **long-lived, widespread windstorm** associated with one or more bow echoes.

**Criteria for classification:**

- **Wind gusts  $\geq 93$  km/h (58 mph)**

- **Travel distance > 400 km (250 miles)**

Derechos are particularly dangerous because of their sustained high winds and long track.

### Importance in Weather Forecasting

Meteorologists monitor bow echoes closely due to their potential for **severe weather, property damage, and power outages**.

- **Advanced radar systems** help detect the formation and development of bow echoes.
- Improved understanding of their dynamics enhances **forecast accuracy**, enabling timely **warnings and public safety measures**.

### Conclusion

Bow echoes, though fleeting in appearance, have a powerful and lasting impact on the regions they affect. The recent Delhi storm underscores the need for heightened awareness and **advancement in storm prediction technologies**. As extreme weather events become more frequent, **knowledge of systems like bow echoes becomes increasingly critical** for disaster preparedness and resilience.

## 50 years of Sikkim State

### Syllabus: GS-2: Indian Polity – States/UTs

#### Context:

- PM Modi In Sikkim Today To Celebrate 50th Anniversary Of Statehood.

#### Introduction

- **Sikkim Statehood Day**: Celebrated annually on **May 16**, marking Sikkim's integration as the **22nd state of India** in 1975.
- **2025 Significance**: Marks the **50th anniversary** (Golden Jubilee) of Sikkim's merger with India, highlighting its journey from a Himalayan kingdom to a progressive Indian state.
- **Strategic Importance**: Located in northeastern India, Sikkim shares borders with **China (Tibet Autonomous Region), Nepal, Bhutan, and West Bengal**, making it geopolitically significant.

## Historical Background

- **Namgyal Dynasty:** Sikkim was a monarchy ruled by the **Chogyals** (Buddhist priest-kings) of the Namgyal dynasty from **1642 to 1975**.
- **British Protectorate:** Under the **Treaty of Tumlong (1861)**, Sikkim became a British protectorate, with the British controlling its foreign affairs and defense.
- **Post-Independence Protectorate:** After India's independence in 1947, the **Indo-Sikkim Treaty (1950)** made Sikkim an Indian protectorate, with India managing defense, external affairs, and communications while Sikkim retained internal autonomy.
- **Anti-Monarchy Protests:** In the 1970s, growing discontent against the monarchy, led by the **Sikkim National Congress** under **Kazi Lhendup Dorji**, fueled demands for democracy and integration with India.

## Journey to Statehood

- **1973 Protests:** Anti-monarchy demonstrations escalated, prompting the Chogyal to seek Indian military assistance. A **tripartite agreement** (1973) was signed between the Chogyal, Indian government, and political parties for political reforms.
- **1974 Elections:** The **Sikkim State Congress** won, adopting a new constitution that reduced the Chogyal's role to a titular figure.
- **35th Constitutional Amendment (1974):** Introduced **Article 2A** and the **Tenth Schedule**, granting Sikkim **Associate State** status with one seat each in the Lok Sabha and Rajya Sabha.
- **1975 Referendum:** Held on **April 14, 1975**, with **97.5% voting** (59,635 in favor, 1,496 against) to abolish the monarchy and merge with India.
- **36th Constitutional Amendment (1975):** Enacted on **April 26, 1975** (effective retrospectively), repealed Article 2A, and made Sikkim the **22nd state** of India. **Article 371F** was introduced to protect Sikkim's distinct identity, customary laws, and rights.

## Constitutional Provisions

- **Article 371F:** Provides special provisions for Sikkim, including:
  - Protection of pre-1975 laws and customs.
  - Reservation of Legislative Assembly seats for Sikkimese origin people.
  - Non-interference in religious and social practices.

- **Unique Constitutional Journey:** Sikkim is the only state to transition from an **Associate State** to a full-fledged state via separate constitutional amendments (35th and 36th).

### Key Features of Sikkim

- **Geography:**
  - Located in the **Eastern Himalayas**, with **Kangchenjunga** (India's highest peak, world's third highest) in the **Kanchenjunga National Park** (UNESCO World Heritage Site, 2016).
  - Drained by the **Teesta River** and tributaries (e.g., Rangit, Lachung).
- **Culture:**
  - Multiethnic and multilingual: Official languages include **English, Nepali, Bhutia, Lepcha**, and others for cultural preservation.
  - Predominant religions: **Hinduism** and **Vajrayana Buddhism**.
  - Festivals: **Losar, Saga Dawa, Bhumchu** (Buddhist); **Maghe Sankranti, Bhimsen Puja** (Hindu).
  - Folk dances: **Mask Dance, Lu Khangtamo, Maruni, Limboo**.
- **Economy:**
  - Agrarian-based, with terraced farming of rice, maize, millet, and **cardamom** (largest cultivated area in India).
  - First Indian state to achieve **100% organic farming** (2003–2016), earning the **UN FAO Future Policy Gold Award**.
  - Tourism-driven, with attractions like hot springs (Phurchachu, Yumthang) and eco-tourism.

### Butterthon: International Butterfly-Watching Event

- **What is Butterthon?**
  - **Butterthon** is a *first-of-its-kind international butterfly-watching event* held across *Sikkim's diverse ecological zones*.
  - Organized by the **Butterfly Society of Sikkim – TPCF** (*The People's Charitable Foundation*).
- **Objectives:**

- Promote **butterfly tourism** as an eco-friendly travel initiative.
- Encourage **citizen science** through public participation in observation and documentation of butterfly species.
- Raise awareness about butterfly conservation and biodiversity.
- **Cultural Representation (TPCF):**
  - The name *TPCF* symbolically represents the word “butterfly” in four local languages:
    - **Lepcha** – *Thamblyok*
    - **Nepali** – *Putali*
    - **Limboo** – *Charphemba*
    - **Bhutia** – *Famiyap*

### Butterflies in Sikkim: Biodiversity and Significance

- **Diversity:**
  - Sikkim hosts around **700 species of butterflies**, accounting for nearly **50% of India's total butterfly species**.
  - The **Dzongu region** (78 sq. km) near *Khangchendzonga National Park* alone harbors about **420 species** (61% of Sikkim's butterflies).
- **Significant Butterfly Species:**
  - **Kaiser-i-Hind** – Rare, *Schedule I protected species* under the Wildlife Protection Act.
  - **Common Blue Apollo** – Found in *high-altitude* areas.
  - **Red-base Jezebel** – A key *mid-altitude pollinator*.
  - **Peacock Royal** and **Paris Peacock** – Known for their *vivid coloration*.
  - **Yellow Gorgon** – Indicates *undisturbed, pristine habitats*.
  - **Glassy Tiger** – Common in *lower elevations*.
  - **Indian Tortoiseshell** – Active in *alpine zones during early spring*.
- **Reasons for Rich Biodiversity:**
  - **Altitudinal variation** – From tropical lowlands to alpine zones.

- **Conservation efforts** – Strong environmental regulations and protected areas like the *Khangchendzonga National Park* (UNESCO World Heritage Site).

### Conclusion:

Butterthor not only celebrates Sikkim's *rich lepidopteran diversity* but also serves as a model for integrating **ecotourism, community participation, and biodiversity conservation**. It underscores the role of **butterflies as ecological indicators** and the importance of preserving habitats across varying altitudinal zones.

## Lokpal

### Syllabus: GS-2: Statutory Body – Lokpal.

#### Context:

The Lokpal on Wednesday (May 28, 2025) disposed of all three complaints against Madhabi Puri Buch, former Chairperson of Securities and Exchange Board of India (SEBI), in the Hindenburg case.

### Lokpal: Overview

#### Nature and Establishment

- **Statutory Body** established under the **Lokpal and Lokayuktas Act, 2013**.
- **Mandate:** To inquire into allegations of corruption against public functionaries and related matters.

#### Organisational Structure

- **Composition:** 1 Chairperson + 8 Members (4 must be **Judicial Members**).
- **Chairperson Eligibility:**
  - Former Chief Justice of India, or
  - Former Judge of the Supreme Court, or
  - Eminent person as per prescribed eligibility.
- **Judicial Members:**
  - Former SC Judges or
  - Former Chief Justices of High Courts.



➤ **Social Representation:**

- At least **50%** of members must be from **SC/ST/OBC/Minorities/Women**.

**Appointment and Tenure**

➤ **Appointing Authority: President of India.**

➤ **Based on Recommendation of Selection Committee:**

- Prime Minister (Chairperson)
- Speaker of Lok Sabha
- Leader of Opposition in Lok Sabha
- Chief Justice of India or a Judge nominated by CJI
- One eminent jurist

➤ **Tenure:** 5 years or until the age of 70, whichever is earlier.

➤ **Remuneration:**

- Chairperson: Same as Chief Justice of India
- Members: Same as Judges of Supreme Court

**Jurisdiction**

➤ **Covers:**

- **Prime Minister** (with exceptions)
- **Union Ministers**
- **MPs**
- **Central Govt. officials** (Groups A–D)
- **Chairpersons, members, officers** of bodies established by Parliament or funded by government
- **Societies/Trusts** receiving **foreign contributions > ₹10 lakh**

➤ **Complaint Requirements:**

- Must be in prescribed form
- Must pertain to offences under **Prevention of Corruption Act, 1988**
- **No restriction** on who can file a complaint

## Procedure & Powers

- **Initial Action:**
  - Can order **preliminary inquiry** by its **Inquiry Wing** or other agencies.
  - May refer the case to **CBI** or **CVC** depending on the public servant involved.
- **CBI Supervision:**
  - Lokpal has **superintendence** and **direction** powers over CBI.
  - CBI officers handling Lokpal cases cannot be transferred without Lokpal's approval.
- **Search & Seizure:** Can authorize the same via CBI.
- **Civil Court Powers:** Inquiry Wing vested with these powers.
- **Asset Confiscation:** Can confiscate assets obtained via corruption under special conditions.
- **Preventive Powers:**
  - Recommend **suspension/transfer** of accused officials
  - Prevent **destruction of records** during inquiry

## Special Provisions for PM

- **Exceptions:** No inquiry into matters related to:
  - **International relations**
  - **Security (internal/external)**
  - **Public order**
  - **Atomic energy**
  - **Space**
- **Procedure for Inquiry Against PM:**
  - Initiation only by **full bench**
  - At least **2/3rds** members must approve

## Accountability

- **Annual Report:** Must be submitted to the **President**, who lays it before **both Houses of Parliament** (Section 48).

## Issues with the Lokpal/Lokayukta Office

### 1. Inadequate Protection to Complainants

- **Whistleblower vulnerability:** The Lokpal and Lokayuktas Act, 2013 does **not provide strong immunity** to whistleblowers.
- **Fear of backlash:** Provision allowing **inquiry against the complainant** if the accused is exonerated **discourages complaints**.

### 2. Weak Appeal Mechanisms

- The Act lacks **robust provisions for appeal**, affecting **transparency and accountability** in the inquiry process.

### 3. Political Influence

- The **selection committee** includes political figures (PM, Speaker, Leader of Opposition), potentially leading to **bias** in appointments.
- The term "**eminent jurist**" is **not clearly defined**, enabling **arbitrary selections**.

### 4. Inclusion of PM under Jurisdiction

- Inquiry into a **Prime Minister's official conduct** by Lokpal could **undermine their executive authority** and **hamper governance**.

### 5. Structural and Functional Lacunae

- **No constitutional status** for Lokpal/Lokayukta; their authority is only statutory.
- **Delayed investigations** due to lack of timely information from government departments.
- **Time-bar on complaints:** No complaints allowed after **7 years** of alleged offence.
- **Judiciary excluded** from Lokpal's ambit, creating a **gap in accountability**.
- **Ambiguity in appointment** of Lokayukta at the state level.

## Way Forward

### Recommendations by 2nd Administrative Reforms Commission (ARC)

- **Exclude the PM** from Lokpal's jurisdiction to preserve institutional independence and effectiveness.
- Provide **constitutional backing and financial autonomy** to Lokpal for greater independence.

- Adopt a **decentralized model** of anti-corruption bodies with **clear accountability structures**.

### Recommendations of the 11th All India Lokayukta Conference (2012)

- Designate **Lokayukta as the nodal agency** for all corruption-related complaints in states.
- Bring **State-level investigative agencies** under Lokayukta jurisdiction.
- Include **bureaucrats** and **government-funded NGOs** under Lokayukta's ambit.
- Grant **powers of search, seizure, and contempt of court** to strengthen enforcement.
- Ensure **administrative and financial autonomy** for independent functioning.

### Conclusion

As the Roman historian *Publius Cornelius Tacitus* rightly said:

"The more corrupt the state, the more laws."

This underscores the need for **effective execution** of existing laws, rather than mere enactment of new ones. **Empowering Lokpal and Lokayuktas** with independence, transparency, and accountability mechanisms is crucial to uphold integrity in public life.

## India's Digital Addressing System

**Syllabus: GS-2: Governance – Digital India.**

### Context:

- Launched by the **Department of Posts**, Ministry of Communications.
- Aligns with the **National Geospatial Policy 2022** to modernize **India's addressing system** and enhance **geospatial governance**.

### Know Your DIGIPIN Web Application

#### DIGIPIN (Digital Postal Index Number):

- A **geo-coded, grid-based address system**.
- Developed in collaboration with:
  - **IIT Hyderabad**

- **National Remote Sensing Centre (NRSC), ISRO**

#### **Features:**

- Users can obtain their DIGIPIN using **geolocation coordinates**.
- Provides **Address-as-a-Service (AaaS)**.
- Facilitates:
  - Efficient **logistics**
  - Improved **emergency response**
  - Enhanced **last-mile delivery**, especially in **rural areas**
- Encourages use of **GIS technology**.
- **Source code & documentation** available on **GitHub** for open innovation and collaboration.
- Open to integration by **government and private entities**.

#### **Know Your PIN Code Web Application**

##### **Modernisation of Traditional PIN Code System:**

- India's 6-digit PIN Code system (est. 1972) has been **geo-referenced**.
- Conducted a **national geofencing exercise** to improve accuracy.

#### **Features:**

- Identifies the **correct PIN Code** based on user location.
- Users can **submit feedback** on data accuracy.
- Data available on **Open Government Data (OGD) Platform**.

#### **Significance for Digital Governance**

- Marks a major step in **digital transformation** and **precision governance**.
- Enables **every citizen to be digitally locatable**.
- Supports the development of **Digital Public Infrastructure (DPI)**.
- Facilitates **informed policy-making**, delivery of services, and disaster management.

#### **Public Participation & Future Potential**

- Public is encouraged to **contribute feedback** to improve data quality.
- Helps in creating a more **responsive, localized, and reliable** addressing ecosystem.

### Conclusion:

The initiatives **Know Your DIGIPIN** and **Know Your PIN Code** represent transformative tools that can **revolutionize address verification**, especially in **underserved and rural areas**, promoting **inclusive and data-driven governance**.

## Viksit Krishi Sankalp Abhiyan

**Syllabus: GS-3: Indian Agriculture – initiatives.**

### Context:

- The Viksit Krishi Sankalp Abhiyan is agricultural campaign launched in India.

### Viksit Krishi Sankalp Abhiyan (VKSA) – 2025

#### Overview

The **Viksit Krishi Sankalp Abhiyan** is a nationwide agricultural outreach campaign launched by the Government of India. Scheduled from **29th May to 12th June 2025**, the campaign seeks to engage with **approximately 1.5 crore farmers** across the country to enhance agricultural practices and awareness.

#### Objectives

- To **educate farmers** on **modern agricultural technologies**.
- To **raise awareness** about government schemes and beneficial policies.
- To promote effective usage of **Soil Health Cards** for **crop selection** and **balanced fertiliser application**.
- To provide **technical knowledge** on climate-resilient practices and **post-harvest management**.

#### Implementation Strategy

- **Duration:** 15-day campaign.
- **Launch Location:** Puri, Odisha.

- **Coverage:** Around **20 states** including **Jammu, Rajasthan, Gujarat, Tamil Nadu**, etc.
- Collaboration between:
  - **Indian Council of Agricultural Research (ICAR)**
  - **State Governments**
  - **Krishi Vigyan Kendras (KVKs)** – 731 centres
  - **ICAR institutes** – 113 in total
- Direct field-level engagement by **scientific teams** with farmers.

### Target Audience

- **1.5 crore farmers** across **700+ districts**.
- Officials from **State Departments of Agriculture**.
- **Progressive farmers** and **agricultural scientists**.

### Key Topics of Discussion

- **Vegetable research** and innovations.
- Development of **climate-resilient crop varieties**.
- Techniques for **water conservation** (e.g., drip irrigation, mulching).
- **Integrated Pest Management (IPM)** strategies.
- Adoption of **nutrition gardens** at the household/farm level.
- Addressing **climate change impacts** on agriculture.

### Focus on Post-Harvest Management

- Educating farmers on **reducing post-harvest losses**, especially in vegetables.
- Promotion of **low-cost storage and preservation techniques**, including:
  - **Zero energy cool chambers**
  - **Improved packaging and handling methods**

### Feedback and Research

- Collection of **field-level data and farmer feedback**.
- Identification of on-ground **challenges and gaps**.

- Utilisation of insights to guide **future agricultural research** and policy.

### **Broader Vision**

- Aligns with **Prime Minister Narendra Modi's Lab to Land mission**.
- Supports the national goal of **Viksit Bharat by 2047**.
- Recognises **farmers as key contributors** to national **nutrition security** and **economic stability**.

### **Conclusion**

The **Viksit Krishi Sankalp Abhiyan** represents a transformative step in agricultural extension and outreach. By bridging the gap between scientific research and grassroots practices, the campaign aims to build a resilient, productive, and sustainable agricultural future for India.