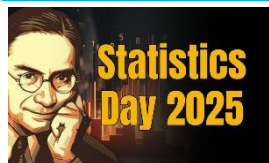


STATISTICS DAY 2025



- Statistics Day is celebrated annually on 29th June to commemorate the birth anniversary of Prof. Prasanta Chandra Mahalanobis, a pioneering Indian statistician and planner.
- The day aims to create awareness, especially among the youth, about the importance of statistics in socio-economic planning and evidence-based policymaking.
- Theme of Statistics Day 2025: “75 Years of National Sample Survey”
- It highlights the long-standing contribution of the National Sample Survey (NSS) in providing reliable, timely, and large-scale socio-economic data essential for governance and national development.
- Organised by: Ministry of Statistics and Programme Implementation (MoSPI)

About Prasanta Chandra Mahalanobis

- Birth: 29 June 1893
- Known as the Father of Indian Statistics.
- Creator of Mahalanobis Distance – a key statistical metric for multivariate data analysis.
- Founder of the Indian Statistical Institute (ISI) in 1931.
- Established the National Sample Survey (NSS) in 1950.
- Member of India’s First Planning Commission, contributed to Five-Year Plans.
- Awarded the Padma Vibhushan for his contribution to science and statistics.
- Advocate of data-based governance and

Other Important Facts

- National Statistics Day was first celebrated in 2007.
- World Statistics Day is observed by the United Nations every five years on 20th October.

INDIA DECLINES TO SIGN SCO STATEMENT

- SCO is a regional bloc of 10 countries: India, China, Russia, Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Iran, and Belarus.
- It is the world's largest regional organisation by area and population.

India Refuses to Sign SCO Draft Statement

- At the 2025 SCO Defence Ministers' meeting, Defence Minister Rajnath Singh refused to sign the joint statement.
- This was after the joint statement excluded any mention of the April 22 Pahalgam terror attack but included a reference to the Jaffar Express hijacking in Balochistan.
- **India's Objection: Terrorism Omitted**
 - According to MEA, India had pushed to include references to terrorism, particularly Operation Sindoor and the Pahalgam attack, but "one particular country" objected—a veiled reference to Pakistan.
 - As consensus was required, the statement was not adopted.
- **India Highlights Pahalgam Attack and Operation Sindoor**
 - In his speech, Indian Defence Minister strongly condemned the Pahalgam terror attack, where victims were targeted based on religious identity.
 - He named The Resistance Front, a proxy of Lashkar-e-Taiba (LeT), as responsible.
 - He described India's retaliatory Operation Sindoor as a demonstration of its zero tolerance for terrorism.
- **No Tolerance for Double Standards**
 - India asserted that peace cannot coexist with terrorism or WMD proliferation. It called for:
 - Decisive global action against terror sponsors
 - Consequences for countries enabling cross-border terrorism
 - An end to SCO's silence on state-sponsored terror

KEY FACTS ABOUT DNA POLYMORPHISM AND FINGERPRINTING



- DNA (Deoxyribonucleic Acid) is the hereditary material found in almost all human cells – blood, skin, bone, teeth, etc.
- Humans have **46 chromosomes**:
 - **23 inherited from the father** (via sperm)
 - **23 inherited from the mother** (via egg)
- **Genes** within chromosomes determine **physical traits** and **biological identity**.

DNA Polymorphisms

- **DNA polymorphisms** are **variations in DNA sequences** unique to individuals.
- Useful for:
 - **Parentage identification**
 - **Genetic lineage tracing**
 - **Identity verification** in Forensic Science
- Enable **accurate matching** between body samples and known relatives.

Short Tandem Repeats (STRs)

- **STRs** are **short, repeating sequences of DNA bases** (e.g., GATCGATC).
- Each individual has a **unique STR pattern**, making them ideal for:
 - **Criminal investigations**
 - **Forensic victim identification**
 - **Ancestry and paternity testing**
- STRs are **inherited**, providing strong evidence for **genetic relationships**.

DNA Fingerprinting

- A **DNA fingerprinting** is a **unique genetic profile** built using **STR variations**.
- **Capillary Electrophoresis** separates STR fragments based on size using electric current.
- Final output is a **distinct DNA profile, unique to each person** (except identical twins).
- **Sources for DNA**: blood, saliva, bone, teeth, skin cells, sweat, semen.



MAHUA

Mahua: The Lifeline of Central India's Tribal Communities

Aspect	Details
Botanical identity	The Mahua tree (<i>Madhuca longifolia</i>) is a medium-sized deciduous tree that grows to a height of 16–20 metres , predominantly found in the forests of Central India .
Seasonal blooming cycle	The tree produces creamy-white flowers between March and April , which fall before dawn. The fruits ripen from June to August .
Cultural and Religious Value	Mahua is revered as a “ Tree of Life ” among tribal communities and is considered sacred . Its flowers, leaves, fruits, seeds, and even fruit shells are used in everyday tribal practices, including funeral rites .
Geographical distribution	It is commonly found in West Bengal, Odisha, Chhattisgarh, Jharkhand, Bihar, parts of Northern and Central India, and also in Maharashtra, Gujarat, Telangana, Tamil Nadu, and Kerala .
Nutritional and Economic Role	The flowers are consumed raw or sun-dried and are highly nutritious . They are traditionally fermented to produce a strong alcoholic drink , which is a major source of livelihood for tribal families.
Livelihood support	The collection and processing of Mahua flowers support tribal economies , offering food security, employment, and income generation , especially for women collectors .

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Ecological importance	Mahua's night-blooming, strong-smelling flowers attract bats , aiding in pollination and seed dispersal . Sloth bears and other forest animals also feed on its flowers, showing its importance in the forest food web .
Inter-species Competition	Sloth bears and humans often compete for Mahua flowers and leaves, indicating their high ecological and economic demand.
Innovation and Value Addition	A new product called Mahua Nutra Beverage has been developed by TRIFED , in collaboration with the Foundation for Innovation and Technology Transfer (FIIT) , to enhance tribal income .
Policy significance	This is the first such initiative in Jharkhand and in India , reflecting TRIFED's focus on value addition of Minor Forest Produce (MFP) through scientific innovation and technology transfer .

INDIA REJECTS ARBITRATION COURT RULING UNDER INDUS WATERS TREATY

- The Indus Waters Treaty (IWT), signed in 1960 between India and Pakistan with the **World Bank** as a guarantor, includes structured mechanisms for resolving disputes and differences over the interpretation and application of its provisions.
- These mechanisms include:
 - **Permanent Indus Commission (PIC):**
 - Comprising one commissioner from each country, the PIC serves as the first tier for resolving issues.
 - It conducts annual meetings and field visits and works to resolve technical and operational matters through mutual consultation.
 - **Neutral Expert Mechanism:**
 - For technical differences that cannot be resolved at the PIC level, either party can approach the World Bank to appoint a neutral expert.

- The expert's mandate is limited to factual and technical questions, and their decisions are binding on both parties.
- **Court of Arbitration (CoA):**
 - For disputes involving legal interpretations or the validity of treaty provisions, a Court of Arbitration can be constituted.
 - However, both countries must agree on invoking this mechanism. Any deviation from mutual consent challenges the treaty's fundamental design.
- India has consistently favoured the Neutral Expert route, while Pakistan has pushed for the arbitration court on issues like the design of hydropower projects.
- India maintains that parallel proceedings before both mechanisms violate the treaty's structure and purpose.

India's Rejection of the Court of Arbitration's Authority

- Recently, the Hague-based Court of Arbitration issued a supplemental award asserting its jurisdiction over disputes concerning the Kishenganga and Ratle hydropower projects in Jammu and Kashmir.
- India has categorically rejected the authority of the Court of Arbitration, labelling it **"illegally constituted"** and devoid of legal legitimacy.
- Ministry of External Affairs (MEA) stated that the **very constitution of the court violates the provisions of the IWT, and hence, any decisions or awards issued by it are "per se void."**
 - India reiterated that it never recognised the court's authority and views its functioning as lacking legal standing.
- In response to Pakistan's request, the arbitration court examined India's move to place the IWT in abeyance after the April 22 Pahalgam terror attack.
- India clarified that its suspension of treaty obligations was a sovereign act justified under international law and that **a tribunal formed without mutual consent has no jurisdiction over such decisions.**

INDIA EXPANDS COASTLINE BY 3,500 KM

LENGTH OF INDIA'S COASTLINE ALONG STATES

State/UT	Coastline length (in km)
Gujarat	2340.62
Maharashtra	877.00
Karnataka	343.30
Kerala	600.15
Tamil Nadu	1068.69
Andhra Pradesh	1053.07
Odisha	574.71
West Bengal	721.02
Daman and Diu	54.38
Pondicherry	42.65
Lakshadweep	144.80
Andaman & Nicobar Islands	3083.50

Source: Ministry of Ports, Shipping

- India's coastline has increased from 7,516 km to 11,098 km, a rise of 3,582 km (nearly 48%).
- This change is due to improved measurement techniques, not territorial expansion.
- From Low to High-Resolution Mapping**
 - The previous measurement used low-resolution data (scale 1:4,500,000), which missed fine land features.
 - The new measurement used high-resolution data (scale 1:250,000), capturing more bends, curves, and irregularities, thereby increasing the measured length.
- How Scale Affects Measurement**
 - Using a smaller-scale "ruler" (low resolution) smoothens out intricate details, showing straight lines where bends exist.
 - High-resolution tools now map minute variations more precisely, thanks to modern GIS software, replacing older manual methods.
- Inclusion of Offshore Islands**
 - Another contributor to the increase is the inclusion of many previously uncounted offshore islands, which were either invisible or missed due to manual limitations.
- Significance**
 - Though the actual land has not changed, the updated coastline data holds strategic and administrative value, improving mapping accuracy and planning for coastal development and security.

The Coastline Paradox: Why Lengths Keep Changing

- India's new coastline measurement is more accurate but still not definitive.
- This is due to the coastline paradox, which states that irregular natural features like coastlines have no fixed length, as the measured length increases with finer resolution.

- **Precision Changes Everything**

- The more detailed the measurement (higher resolution), the longer the coastline appears. Advancements in mapping technologies, such as GIS, lead to greater precision and thus a longer calculated length.

- **Periodic Reassessment Now a Norm**

- Due to evolving technology and natural processes (like erosion and land reclamation), India has decided to recalculate its coastline every 10 years.
- This aligns with practices in other countries to maintain updated and precise coastal data.

- **Implications**

- The changing length has administrative, environmental, and strategic relevance, even if it doesn't reflect a change in physical territory.
- It emphasizes the importance of continuous monitoring and adaptive planning.

Island Counting: A Different Challenge

- **Previous Discrepancies in Island Numbers**

- In 2016, the Surveyor General of India listed 1,382 offshore islands, while state agencies, Coast Guard, and Navy reported a lower count of 1,334.
- The difference arose due to varying definitions and criteria.

- **Standardisation and Updated Island Count**

- A data reconciliation and standardisation exercise resolved these discrepancies. The final count is:
 - 1,298 offshore islands and 91 inshore islands
 - Total: 1,389 islands
- This count excludes river islands like those in Assam and West Bengal.

- **Why It Matters**

- Standardising island counts has administrative, security, and environmental implications, especially for maritime boundaries, disaster planning, and coastal development.

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SUGAMYA BHARAT APP



- It is a **flagship initiative of the Government of India** dedicated to enhancing accessibility for **divyangjan and elderly citizens** in India.
- It was **launched in 2021** by the Department of Empowerment of Persons with Disabilities (DEPwD), Union **Ministry of Social Justice and Empowerment**.
- **Features of App**
 - Users can easily upload **geo-tagged photos** of locations **where accessibility barriers exist**, enabling authorities to take prompt corrective action.
 - It serves as an **essential platform for citizens** to report accessibility issues across public infrastructure, transportation, and information and communication technology (ICT) systems.
 - It is a more intuitive and user-friendly interface.
 - **It is revamped to AI-powered chatbot support** to assist users in real time
 - Through this app one can get to know circulars and notifications about new initiatives related to accessibility
 - **Integration of government schemes** and other valuable resources for persons with disabilities.
 - It is available in **10 languages**.
 - Only accessibility related issues pertaining to Buildings, Transportation System and ICT (websites and TV viewing) can be registered at Sugamya Bharat App.