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To The Point

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GS Paper 3 – Economy

1 India Meets Fiscal Deficit Target of 4.8% in FY25: A Step Toward Fiscal Prudence

Context: In a significant achievement, the **Government of India** has successfully **met its fiscal deficit target of 4.8% of GDP** for the financial year **2024–25**, according to **provisional data released by the Controller General of Accounts (CGA)**. This performance reflects strong fiscal management and adherence to revised budgetary goals, even amid global economic uncertainties.

Key Fiscal Figures for FY25:

- **Fiscal Deficit**: **15.77 lakh crore**, amounting to **4.8% of GDP**, exactly in line with the **Revised Estimates (RE)**.
- **Total Revenue Receipts**: **30.78 lakh crore**
- **Net Tax Revenue**: **24.99 lakh crore**, which is **97.7%** of the target
- **Disinvestment Earnings**: **10,131 crore** from sale of Public Sector Undertakings (PSUs), **significantly below the target**
- **Total Expenditure**: **46.55 lakh crore**, about **97.8%** of RE
    - **Capital Expenditure**: **10.52 lakh crore** — spending on infrastructure and long-term growth assets
    - **Revenue Expenditure**: **36.03 lakh crore** — includes subsidies, salaries, pensions, etc.

Understanding Fiscal Deficit:

Fiscal Deficit represents the **gap between total government expenditure and total receipts**, excluding borrowings.

Formula:
Fiscal Deficit = Total Expenditure – (Revenue Receipts + Non-Debt Capital Receipts)

A controlled fiscal deficit reflects **prudent fiscal management**, while a rising deficit can lead to macroeconomic instability.

Implications of High Fiscal Deficit:

- **Inflationary Pressure**: Financing deficit through central bank borrowing can trigger **inflation**.
- **Crowding Out Effect**: Government borrowing reduces funds available to the **private sector**, leading to **lower private investment**.
- **Limited Fiscal Space**: High deficits restrict government capacity to **respond to crises** or economic shocks.
- **Rising Interest Costs**: As borrowing increases, the government must **offer higher interest** to attract buyers for its bonds.

Advantages of Maintaining a Lower Fiscal Deficit:

- **Boosts Credit Ratings**: Lower deficits can improve **India's global credit profile**, making borrowing cheaper.
- **Reduced Debt Servicing Burden**: More funds can be allocated to **healthcare, infrastructure, and education**.

- **Better Balance of Payments**: Lower borrowing needs help **stabilize the exchange rate** and reduce **external vulnerabilities**.
- **Higher Investor Confidence**: Reflects **fiscal discipline**, attracting both **foreign and domestic investment**.

NK Singh Committee Recommendations for Fiscal Sustainability:

To ensure **long-term fiscal responsibility**, the **FRBM Review Committee** led by **NK Singh** suggested:

- **Debt-to-GDP Ratio**: Target of **60%**, split between **40% for the Centre** and **20% for States**.
- **Fiscal Deficit Target**: A more ambitious target of **2.5% of GDP by FY23**.
- **Establishment of a Fiscal Council**: An **independent body** to:
    1. Provide **multi-year fiscal forecasts**
    2. Recommend changes in fiscal strategy
    3. Improve **fiscal transparency and data quality**
    4. Advise on **exceptional deviations** from targets
- **Strict Deviation Criteria**: Clearly defined situations where the government may deviate from targets—**no discretionary powers** to declare new exceptions.

Additional Insights:

- India's current fiscal deficit is **well above the NK Singh Committee's ideal target**, but in line with recent pandemic-induced relaxations.
- While **disinvestment targets were missed**, robust **tax revenue collection** helped maintain balance.
- **Capital expenditure** reaching historic highs signals the government's focus on **infrastructure-led growth**, boosting long-term productivity.

India's ability to meet its fiscal deficit target in FY25 is a **positive signal** for the economy, reflecting **commitment to fiscal prudence**, even while ensuring growth and development through strategic investments.

GS Paper 3 –Environment and Disaster Management

2 Perito Moreno Glacier: The 'White Giant' Faces Alarming Crumbling Amid Climate Change

Context: One of the world's most iconic and visually stunning glaciers, the **Perito Moreno Glacier**, located in **Argentina's Santa Cruz Province**, is currently **crumbling at an alarming rate**. Spanning a massive **250 square kilometers**, this glacier is now succumbing to the **impacts of global warming**, placing a precious natural treasure at risk.

Geographical Marvel in the Andes:

- Also known as the **"White Giant"**, the **Perito Moreno Glacier** lies in the **Andes Mountains** of **South America**, near the picturesque town of **El Calafate**.
- It forms a significant part of **Los Glaciares National Park**, a **UNESCO World Heritage Site** renowned for its glacial beauty.
- The glacier was formed during the **last Ice Age**, nearly **18,000 years ago**.
- It measures about **30 kilometers in length** and rises **60 meters above the water surface**, with an additional 120 meters below water — giving it a total height of **180 meters**.

A Critical Freshwater Reserve:

Due to its vast size and constant ice flow, the **Perito Moreno Glacier** serves as one of the **largest freshwater sources** in **Argentina**. It is one of the few glaciers in the world that has remained relatively stable in recent decades — until now.

Calving Events & Rising Concerns:

Since **1917**, the glacier has been known for its spectacular **ice calving events**, where **massive chunks of ice break off and crash into the waters** of Lake Argentino. These events produce **deafening roars** and dramatic visuals that have made the glacier a **major tourist attraction**.

However, recent reports highlight a **concerning acceleration in its disintegration**, attributed primarily to **rising global temperatures**. The **frequency and scale of ice calving** are increasing, signaling an unsettling shift in the glacier's long-term health.

Climate Change and Glacial Retreat:

- The **Perito Moreno Glacier** is now joining the growing list of glaciers worldwide that are **rapidly retreating**.
- **Warmer atmospheric and oceanic temperatures** are causing ice to melt faster than it can be replenished.
- This not only endangers **local ecosystems** but also contributes to **rising sea levels** and the **loss of freshwater reserves**.

Did You Know?

- The glacier is one of only a few in the world that **continues to advance**, even as others retreat — a phenomenon that has puzzled scientists for decades.

- It plays a crucial role in maintaining **regional hydrological balance**.
- The glacier forms a **natural ice dam** that periodically blocks the flow of water between parts of Lake Argentino, leading to dramatic **ruptures** when the pressure builds up — a spectacular event witnessed by thousands.

A Call for Global Action:

The **crumbling of the Perito Moreno Glacier** is more than a local tragedy — it is a **global warning**. It underscores the urgent need for **climate action**, **sustainable tourism**, and enhanced efforts to **protect fragile ecosystems**. As one of nature's great spectacles begins to falter, the time to act on **climate change** is more pressing than ever.

GS Paper 3 –Environment and Economy

3 South Asia's Largest Battery Energy Storage System Launched in Delhi

Context: In a major stride toward energy sustainability, **Delhi's Power Minister** recently **inaugurated a 20-MW Battery Energy Storage System (BESS)** at **Kilokari, South Delhi**. This marks the launch of **South Asia's largest utility-scale battery storage project** and also **India's first commercially approved energy storage system**, signaling a significant leap in the nation's clean energy transition.

What is a Battery Energy Storage System (BESS)?

Battery Energy Storage Systems are large-scale setups designed to **store excess electricity**, particularly from **renewable energy sources like solar and wind**, and release it when needed. These systems are key to making **green power more dependable** by balancing energy supply and demand.

There are **three primary types** of BESS:

- **Battery modules** (basic battery packs),
- **Pre-packaged systems** (batteries with chargers, inverters),
- **Custom battery banks** (assembled with various components).

BESS can also **feed surplus energy back into the main grid**, boosting overall efficiency and resilience.

Delhi's Energy Storage System: A Regional Game-Changer

The new BESS in **Kilokari** features a **40 MWh capacity**, enhancing the city's power infrastructure by:

- **Stabilizing the grid** during peak demand
- **Reducing peak-hour stress**
- **Integrating renewable energy** into the power mix
- **Lowering power procurement costs**

This system uses **Lithium Iron Phosphate (LFP)** battery technology, prized for its **thermal safety, long life, and stability** — ideal for handling **Delhi's extreme climate**.

Why India Needs Battery Energy Storage Systems:

India is rapidly expanding its clean energy footprint and has committed to:

- Achieving **500 GW of non-fossil fuel capacity** by **2030**
- Reaching **net-zero emissions by 2070**

Battery storage is essential for meeting these goals. Here's why:

Reliable Renewable Integration:

BESS stores surplus energy (e.g., solar power during the day) and **releases it during high-demand periods** (like evenings or cloudy days), ensuring **round-the-clock availability** of green power.

Reducing Grid Congestion & Curtailment:

- By easing the burden on the grid and preventing wasteful energy curtailment, BESS ensures **full utilization of renewable assets**.

Boosting 24x7 Renewable Power Tenders:

- India is encouraging tenders for **reliable, RTC (round-the-clock) green energy**, where BESS helps **compete with conventional coal-based sources**.

Supporting Electric Mobility:

- With the rise of EVs, BESS can power **fast-charging stations**, reduce stress on urban grids, and even enable **vehicle-to-grid (V2G) systems**, where cars act as mobile storage units.

Economic Growth & Innovation:

- Under the **18,100 crore PLI scheme for Advanced Chemistry Cell (ACC) batteries**, India is fostering **domestic manufacturing**, which can generate **green jobs** and stimulate technological innovation.

The Road Ahead:

- With projects like the **Kilokari BESS**, India is laying the foundation for a **modern, flexible, and sustainable energy ecosystem**. As the country moves toward a **low-carbon future**, such energy storage innovations will be **vital for decarbonizing the power sector**, promoting **energy independence**, and unlocking **economic opportunities** in clean tech.

The inauguration of South Asia's largest BESS isn't just a milestone for Delhi — it's a **symbol of India's clean energy ambitions and global leadership in energy transition**.

GS Paper 1 – Geography

4 Nigeria in the Headlines: Deadly Floods Highlight Climate Crisis in Africa's Most Populous Nation

Context: Nigeria, the most populous nation in **Africa**, is grappling with one of its deadliest **flooding events**, leaving at least **111 people dead**. The tragedy comes amid increasing **climate-induced weather extremes**, underscoring the country's **vulnerability to climate change**. These floods have caused widespread destruction to homes, farmland, and infrastructure, further straining the country's economy and humanitarian efforts.

Political Landscape: Nigeria at a Glance

- **Location:** Situated in **West Africa**, Nigeria serves as a geopolitical and economic powerhouse on the continent.
- **Bordering Nations:** It shares boundaries with **Niger** to the **north**, **Chad** and **Cameroon** to the **east**, **Benin** to the **west**, and the **Gulf of Guinea** to the **south**.
- **Capital: Abuja**
- **Political System:** Nigeria is a **federal republic** with a **bicameral legislature**, consisting of the **Senate** and the **House of Representatives**.
- **Demographics:** It holds the title of **Africa's most populous country**, with over **220 million people** as of recent estimates.

Geographical & Climatic Features:

- **Climate:** Nigeria experiences a **tropical climate**, which varies from **humid in the south** to **arid in the north**.
- **Harmattan Wind:** A distinctive **dry and dusty wind** blowing from the **northeast**, the Harmattan lasts **over three months** and significantly impacts air quality and agriculture in the **northern regions**.
- **Major Rivers:**
  - The **Niger River**, which gives the country its name, is its principal waterway.
  - The **Benue River** and **Cross River** also play vital roles in agriculture and inland transportation.
- **Lake Chad:** A **shrinking freshwater lake**, located at the confluence of **Nigeria, Niger, Chad, and Cameroon**. Once among Africa's largest lakes, it is now heavily impacted by **climate change and water overuse**.
- **Mountains:**
  - **Chappal Waddi** – the highest point in Nigeria, located in the **Gashaka Gumti National Park**.
  - **Mount Dimlang** – another notable elevation, offering insight into Nigeria's diverse topography.

Did You Know?

- **Nigeria** is the **largest economy in Africa**, driven by sectors like **oil and gas**, **agriculture**, and **services**.
- The **Niger River** flows over **4,000 km**, making it the third-longest river in Africa.

Despite having rich water resources, **Nigeria suffers from seasonal water scarcity and poor water management**, which exacerbates the impact of floods and droughts.

A Call for Climate Resilience:

The ongoing **flood disaster** is a stark reminder of the urgent need for **climate adaptation strategies** in vulnerable nations like Nigeria. With its **rapid urbanization**, **infrastructure deficits**, and **climate-sensitive agriculture**, the country must invest in **early warning systems**, **flood-resistant infrastructure**, and **sustainable water management** to safeguard its future.

As the world focuses on climate resilience, Nigeria's plight must serve as a **global wake-up call** for **climate justice, international cooperation, and sustainable development**.

GS Paper 1 – Indian Heritage and Culture, History

5 Neolithic Age: Dawn of Civilization and Human Advancement

Context: The **Archaeological Survey of India (ASI)** has recently unearthed one of the earliest **rock grooves** in **Kanniyakumari district**, Tamil Nadu. This remarkable groove, believed to be from the **Neolithic Age**, was likely used for **sharpening tools and weapons**. Such findings offer a rare window into the life and survival skills of prehistoric communities in southern India.

Understanding the Neolithic Age:

The **Neolithic Age**, also known as the **New Stone Age**, represents the final and most advanced phase of **prehistoric human development**. It marked a major **technological and cultural shift**, laying the foundation for modern civilization.

- Timeframe: Approximately **10,000 BCE onwards**
- Historical Period: Falls under the **Holocene Epoch** (the last 11,700 years)
- Transitional Phase: Follows the **Paleolithic Age** and precedes the **Bronze Age**

The Neolithic Revolution: A Turning Point in Human History

One of the most transformative events in human history, the **Neolithic Revolution**, began in the **Fertile Crescent** of the Middle East and spread gradually to **India**, **Europe**, and other parts of the world.

Key developments included:

- **Domestication of plants and animals**
- **Transition from nomadic to settled life**
- **Invention of farming and agriculture**
- **Formation of permanent settlements**

This revolution not only provided food security but also allowed humans to explore other pursuits like art, religion, and governance.

Key Features of Neolithic Culture:

The Neolithic Age introduced numerous advancements that shaped early societies:

- Use of **polished and ground stone tools**
- Construction of **permanent homes** made from **mud, reed, and timber**
- Development of **pottery**, **weaving**, and **textile production**
- **Production of alcohol**—early fermentation techniques
- Introduction of **interior and exterior home decorations**
- Emergence of **social stratification**, visible in burial practices with **status objects** such as **elaborate pottery** and **jade carvings**

These developments reflected not only practical improvements but also a shift toward **symbolism**, **belief in the afterlife**, and **complex social organization**.

Effects and Legacy of the Neolithic Age:

The changes brought by the Neolithic Revolution had far-reaching consequences:

- Rise of **permanent villages** and **agricultural communities**

- Growth in **population density**
- Beginnings of **trade** and **economic systems**
- Evolution of **tools and techniques** that influenced the **Bronze Age** and later the **Iron Age**
- Foundations for **urban civilization**, **writing systems**, and **governance**

The Neolithic Age can be seen as the **launchpad of human civilization**, where mankind's destiny changed from survival to progress.

Transition to the Bronze Age:

Toward the end of the Neolithic period, the use of **copper tools** began to appear, leading to the **Chalcolithic (Copper-Stone) Age**. This period bridged the gap between stone tools and the more advanced **bronze technology**, signaling the end of the **Stone Age** and the beginning of **metal-based civilizations**.

Famous Neolithic Sites in India:

India boasts several significant Neolithic sites that offer deep insights into early life:

- **Burzahom** (Kashmir): Famous for **pit dwellings**, tools, and animal domestication
- **Chiron** (Bihar): Notable for **microlithic tools** and early **agricultural evidence**
- **Uttarapalli/Uttanur** (Andhra Pradesh): Important for **stone implements** and **grinding tools**
- **Edakkal Caves** (Kerala): Known for **prehistoric petroglyphs**, showcasing **early artistic expression**

Did You Know?

- **Neolithic humans were among the first to practice astrology**, using the stars to guide farming.
- **Wheels** were first believed to have been developed in the late Neolithic era.
- **Early musical instruments**, including simple flutes made from bones, also date back to this time.

Conclusion: The Lasting Impact of the Neolithic Age

The **Neolithic Age** was more than just a phase of tool improvement—it was a **revolution in human lifestyle**, thinking, and society. From the invention of agriculture to the birth of complex communities, its legacy continues to influence the modern world.

As we uncover more **archaeological evidence**, such as the **Kanniyakumari rock grooves**, we deepen our understanding of how far humanity has come—and how it all began with a few simple **tools**, a seed, and the desire to **settle and thrive**.

GS Paper 3 – Bio-diversity, Environment

6 Amolops shillong: A Rare Urban Frog Discovered in the Heart of Meghalaya

Context: In a stunning revelation, scientists have uncovered a **new species of frog**, **Amolops shillong**, right within the bustling city limits of **Shillong**, the capital of **Meghalaya**. Nicknamed the **Shillong Cascade Frog**, this elusive amphibian had been **hiding in plain sight**—thriving in the city's **urban forest patches and fast-flowing streams**.

About Amolops shillong: A Hidden Gem of Urban Wildlife

Amolops shillong belongs to the **Amolops genus**, a group of **stream-dwelling frogs** known for their preference for **rapid, clear water bodies**. Unlike most new species discovered in remote wildernesses, this frog was found **within walking distance of residential neighborhoods**—a rarity in herpetology.

- **Habitat**: Prefers **fast-moving hill streams** in **urban forest fragments**
- **Behavior**: Highly adapted to **waterfalls and cascades**
- **Appearance**: Part of a **visually similar group**, making identification challenging without **genetic testing**

This species belongs to the **Amolops indoburmanensis complex**, a group of frogs so similar in appearance that they can only be distinguished through **molecular analysis**.

A Close Relative with a Different Lifestyle:

The **Zoological Survey of India (ZSI)** confirmed that **Amolops shillong** is closely related to **Amolops siju**, a species discovered in **2023** from the **Siju Cave**—deep in the limestone cave systems of Meghalaya.

What sets **A. shillong** apart is its **urban habitat**. While **A. siju** prefers subterranean environments, **A. shillong** thrives in **above-ground, fast-flowing watercourses**, just kilometers from Shillong's city center.

A Biodiversity Hotspot in the City:

This discovery highlights the **importance of urban ecosystems** and **microhabitats** in supporting rare and endangered species. The streams of Shillong are not just water sources—they are **miniature ecosystems** that harbor unique and fragile lifeforms.

India's Amolops Diversity: A Closer Look

India now recognizes **20 species** under the **Amolops genus**, with **16 species discovered within the country itself**. Remarkably, **9 of these** were identified in the **last two decades**, primarily from **Northeast India**, reinforcing the region's status as a **global biodiversity hotspot**.

Extra Insights: Why This Discovery Matters

- **Urban Biodiversity**: A. shillong proves that even **urban areas can host endemic species**, challenging the notion that cities lack ecological importance.
- **Climate Indicators**: Amphibians like A. shillong are **sensitive to environmental changes** and act as **bioindicators** for **climate health** and **ecosystem integrity**.

- **Conservation Urgency**: Discovering such species in human-dominated landscapes calls for **immediate conservation efforts** to protect **fragile urban ecosystems**.

Conclusion: A Wake-Up Call from the Streams of Shillong

The discovery of **Amolops shillong** is more than just a new entry in the taxonomic records—it's a **powerful reminder** that **nature continues to surprise us**, even in the most **unexpected places**. As urbanization spreads, this small frog calls us to **look closer**, protect what remains, and recognize the **hidden wildness in our cities**.