

CEO NITI AAYOG PARAM IYER ON BUDGET 2023-24: AN INFRASTRUCTURE PUSH FOR THE PEOPLE

Context

- The article highlights the powerful thrust provided by Budget 2023 on infrastructure development with a strong focus on not just physical dimension, but also social and digital infrastructure which, put together could accelerate inclusive growth.

Summing-up Physical Infrastructure Outlay

- The Government of India's **capital expenditure as a percentage of GDP increased** from 1.7 per cent in 2014 to nearly 2.9 per cent in 2022-23.
- In Budget 2023-24, Rs 10 lakh crore (3.3 per cent of the GDP), an increase of three times from 2019, was allocated for infrastructure.
 - The **Ministry of Railways** received its **highest-ever allocation** of Rs 2.4 lakh crore, approximately nine times the allocation in 2013-14.
 - The **Ministry of Road Transport and Highways** saw a **36 per cent increase** in its budget to about Rs 2.7 lakh crore.
- The **direct capital investment** by the Centre has been further **supplemented** by a one-year **extension of the 50-year interest-free loan to state governments**.

Significance of Investments in Physical Infrastructure

- The targeted infrastructure investments to various Ministries will help create **vital physical infrastructure, jobs** and spur **private investments**.
- It will improve **connectivity** that will accelerate the movement of passengers and freight and will also provide a **cushion** against global headwinds and prevailing **global slowdown**.
- The extension of interest-free loans to state governments will lead to **decentralized infrastructure development** in urban and peri-urban areas across regions.
 - For example, a 66 per cent increase in allocation to the **PM Awas Yojana** will not only provide housing but also create jobs in rural areas.

- Investment on infrastructure development is critical as **every rupee** spent on capital expenditure gives **95 as a multiplier**.
- In contrast, the money given through revenue expenditure gets less than a rupee for every rupee spent.
- In the last eight years, one can witness the blurring of the digital divide that existed between urban and rural areas. The world has acknowledged India's phenomenal success in building **population-scale platforms** at startup speed.

Digital Infrastructure Development in India

- Digital transformation of India has been happening in two phases as follows:
- **First phase:** It started in 2015 led by the **JAM trinity**- Jan Dhan, Aadhaar and mobile linkages, and the Digital India programme. Few successful milestones in this phase of public digital infrastructure creation are as follows:
 - Low-cost accessibility (Aadhaar), the success of citizen-centric services such as the Unified Payments Interface (UPI), large-scale adoption and reach (**DigiLocker, MyGov**), and the vaccine journey (**CoWin**) etc.
 - This had benefited India's populace through increasing penetration of government schemes and **efficient financial inclusion**.
- **Second phase:** It is now being led by the development, application, and large-scale expansion of cutting-edge technologies such as 5G, Internet of Things (IoT), artificial intelligence (AI), quantum computing, mechatronics, robotics, and more.

Conclusion

- The concerted thrust on **creation, maintenance and expansion** of physical, digital and social infrastructure has emerged as a systemic focus of India's unique development model.
- This **infrastructure triad** will be the **enabler of growth and leveller of opportunities** in the dream of a "**Viksit Bharat**" by 2047 and people must be kept at the focal point of this infrastructure growth story.

NASA-ISRO SYNTHETIC APERTURE RADAR (NISAR)

NISAR recently got a send-off ceremony at the American space agency's Jet Propulsion Laboratory (JPL) in Southern California to be shipped to India in a special cargo container flight.



Key facts about NISAR:

- NISAR is a **Low Earth Orbit (LEO) observatory** jointly developed by NASA and ISRO.
- It is an **SUV-size satellite weighing 2,800 kilograms**.
- It consists of both **L-band and S-band synthetic aperture radar (SAR) instruments**, which makes it a **dual-frequency imaging radar satellite**.
- NISAR will be the **first satellite mission to use two different radar frequencies (L-band and S-band)** to measure changes in our planet's surface.
- SAR is **capable of penetrating clouds and can collect data day and night** regardless of the weather conditions.
- **NASA has provided the L-band radar, GPS, a high-capacity solid-state recorder to store data, and a payload data subsystem. ISRO has provided the S-band radar, the GSLV launch system, and spacecraft.**
- It also consists of a large **39-foot stationary antenna reflector** made of a gold-plated wire mesh which will be **used to focus “the radar signals emitted and received by the upward-facing feed on the instrument structure.**
- **Mission Objectives:**
- It will measure **Earth’s changing ecosystems, dynamic surfaces, and ice masses, providing information about biomass, natural hazards, sea level rise, and groundwater.**
- NISAR will observe **Earth’s land and ice-covered surfaces globally with 12-day regularity** on ascending and descending passes.

WHAT IS THE AGRICULTURAL AND PROCESSED FOODS EXPORT DEVELOPMENT AUTHORITY (APEDA)?

The Agricultural and Processed Foods Export Development Authority (APEDA) targets 1000 Farmer Producer Organisations (FPOs) to turn direct exporters of farm produce.



About Agricultural and Processed Foods Export Development Authority (APEDA):

APEDA was established by the Government of India under the Agricultural and Processed Food Products Export Development Authority Act of 1985.

- **Objective:** To develop and promote the export of scheduled products.
- The products specified under the APEDA ACT are called **scheduled products**, and exporters of such scheduled products are required to register under APEDA.
- It provides financial assistance, information, and guidelines for the **development of scheduled products**.
- **Headquarters:** New Delhi
- **Functions:**
 - **Setting the standards** and specifications for the scheduled products.
 - **Registration of exporters** of the scheduled products on payment of required fees
 - **Improving packaging and marketing** of the Scheduled products
 - Carrying out an **inspection** of products to ensure the quality of such products
 - **Training** in various aspects of the industries connected with the scheduled products
 - Development of industries relating to the scheduled products and undertaking **surveys, feasibility studies**, etc
 - **Collection of statistics** from the owners of factories or establishments and publication of such statistics
- **Examples of scheduled products:** Fruits, Vegetable, Meat, Poultry Dairy Products, Confectionery, Biscuits, Bakery Products, Honey, Jaggery, etc.

What are Farmer Producer Organisations (FPOs)?

- A **Producer Organisation (PO)** is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, and craftsmen.
- A **PO provides for sharing of profits/benefits among the members.**
- **Farmers Producer Organisation (FPO)** is one type of PO where the members are farmers.
- **Goal:** To increase farmers' advantage in emerging market opportunities and their competitiveness.
- **Primary operations:** Supply of seed, market linkages and fertilizer, machinery, training, financial, networking, and technical advice.
- The FPOs are open to persons who are willing to accept the responsibilities of membership without social, gender, political, racial, or religious discrimination.
- **Small Farmers' Agribusiness Consortium (SFAC)** is providing support for promotion of FPOs.

YUVA SANGAM PORTAL

The Yuva Sangam registration portal was recently launched at Indira Gandhi National Centre for the Arts, New Delhi.



About Yuva Sangam portal:

- It is an initiative of the Prime Minister of India.
- The main aim of this portal is to build close ties between the **youth of the North East Region and the rest of India** under the spirit of Ek Bharat Shreshtha Bharat.
- Over 20000 youth will travel across India and gain a unique opportunity for cross-cultural learning.
- This **Cultural Exchange Program** will also allow youth to celebrate the ancient culture and natural diversity of India.
- The youth of 18 years to 30 years will get an opportunity to see different states of the country, to understand their art, culture and languages.

INS VIKRANT

Recently, the Naval variant of the indigenous Light Combat Aircraft undertakes its maiden landing onboard the country's first Indigenous Aircraft Carrier INS Vikrant.



About INS Vikrant:

- It is the first ever **indigenously designed and constructed** aircraft carrier which will strengthen the country's stand as a 'Blue Water Navy'.
- The ship has been designed in-house by **Indian Navy's Warship Design Bureau** and constructed by M/s Cochin Shipyard Limited.
- India also joined the elite group of nations – the US, Russia, France, the UK and China – who are capable of designing and constructing aircraft carriers.
- Also, with a displacement of 43,000 tonnes when fully loaded, INS Vikrant is set to be the seventh largest among the carriers or carrier classes in the world.

Historical facts about INS Vikrant

- INS Vikrant, with **pennant number R11**, was the first-ever aircraft carrier that was operated by the Indian Navy.
- The ship was officially laid down in 1943 and was being built for the Royal Navy as HMS (Her Majesty's Ship) Hercules when the constitution was put on hold after World War II ended.
- Like many other ships at the time, the under-construction HMS Hercules was put up for sale by the United Kingdom and was purchased by India in 1957.
- The construction work was completed and the ship was commissioned in the Indian Navy as INS Vikrant in 1961.



WHITE LABEL ATM

Recently, the Reserve Bank of India has extended the validity of authorization issued to Vakrangee to set up, own and operate White Label ATMs in India.

About White Label ATM:

- Automated Teller Machines (ATMs) **set up, owned and operated** by non-banks are called White Label ATMs.
 - Non-bank ATM operators are authorised under **the Payment & Settlement Systems Act, 2007** by the Reserve Bank of India (RBI).
 - Such non-bank entities should have a minimum net worth of **Rs 100 crore** as per the latest financial year's audited balance sheet, which is to be maintained at all times.
 - Foreign Direct Investment (FDI), **up to 100 per cent**, is allowed under the automatic route in the activity of White Label ATM (WLA) Operations.
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PM UNVEILS COUNTRY'S LARGEST CHOPPER-MAKING PLANT

Why in News?

- Prime Minister Narendra Modi inaugurated the Hindustan Aeronautics Limited's helicopter factory in Tumakuru district of Karnataka.

About the Manufacturing Plant:

- According to the Prime Minister's Office, this helicopter factory is **Asia's largest helicopter manufacturing facility**.
- The plant will initially produce **Light Utility Helicopters (LUHs)**.
 - LUH is an indigenously designed and developed 3-ton class, single-engine multipurpose utility helicopter with the unique feature of high manoeuvrability.
- The factory will be expanded to manufacture other helicopters such as Light Combat Helicopter (LCH) and Indian Multirole Helicopter (IMRH) in the future.

Significance of the Plant:

- This factory is being equipped with state-of-the-art **Industry 4.0** standard tools and techniques for its operations.
 - Industry 4.0, which refers to the **fourth industrial revolution**, is the cyber-physical transformation of manufacturing.

- The name is inspired by Germany's Industrie 4.0, a government initiative to promote connected manufacturing and a digital convergence between industry, businesses and other processes.
- Over the next 20 years, Hindustan Aeronautics Limited (HAL) is planning to produce more than 1,000 helicopters in the class of 3-15 tonnes from Tumakuru.
- This will result in providing employment for around 6,000 people in the region, the PMO said.
- This facility will **enable India to meet its entire requirement of helicopters indigenously** and will attain the distinction of enabling self-reliance in helicopter design, development and manufacture in the country.

About Hindustan Aeronautics Limited (HAL):

- Hindustan Aeronautics Limited (HAL) came into existence on **1st October 1964**. It is owned by the Government of India.
- The company **develops, designs, manufactures, and supplies aircraft, helicopters, avionics, and communications equipment for military and civil markets**.
- It also provides repair, maintenance, and support services for aircraft.
- HAL serves the Indian Air Force, Indian Army, Indian Navy, Defence Research & Development Organization, Indian Coast Guard, Indian Space Research Organization, Mauritius Police Force, Boeing, and Airbus Industries.
- HAL is headquartered in **Bengaluru, Karnataka**.

TURKEY HIT BY SERIES OF POWERFUL EARTHQUAKES

Why in news?

- More than 2,000 people have been killed and thousands injured by a huge earthquake which struck south-eastern Turkey, near the Syrian border.
- The earthquake, which hit near the town of Gaziantep, was closely followed by numerous aftershocks - including one quake which was almost as large as the first.

What is an earthquake?

- An earthquake is an intense shaking of the ground caused by movement under the earth's surface.
- It happens when two blocks of the earth suddenly **slip** past one another.
- This releases stored-up 'elastic strain' energy in the form of seismic waves, which spreads through the earth and cause the shaking of the ground.
- The location below the earth's surface where the earthquake starts is called the **hypocenter**, and the location directly above it on the surface of the earth is called the **epicentre**.

What exactly causes earthquakes?

- The earth's outermost surface, crust, is fragmented into **tectonic plates**. The edges of the plates are called plate boundaries, which are made up of faults.
- World's major tectonic plates are shown below:



- The tectonic plates constantly move at a slow pace, sliding past one another and bumping into each other.
- As the edges of the plates are quite rough, they get stuck with one another while the rest of the plate keeps moving.
- Earthquake occurs when the plate has moved far enough and the edges unstick on one of the faults.

How are earthquakes measured?

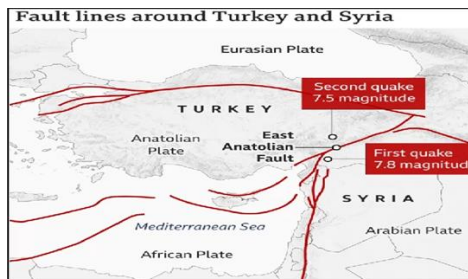
- They are measured on a scale called the **Moment Magnitude Scale (Mw)**.
- This has replaced the **Richter scale** (magnitude scale), now considered outdated and less accurate. Richter scale relates to the energy released during the earthquake which is expressed in absolute numbers, 0-10.
- The **intensity scale/ Mercalli scale** takes into account the visible damage caused by the event. The range of intensity scale is from 1-12
- The number attributed to an earthquake represents a combination of the distance the fault line has moved and the force that moved it.
- A tremor of 2.5 or less usually cannot be felt, but can be detected by instruments.

- Quakes of up to five are felt and cause minor damage.
- The Turkish earthquake at 7.8 is classified as major and usually causes serious damage
- Anything above 8 causes catastrophic damage and can totally destroy communities at its centre.

News Summary

- Turkey was hit by three consecutive devastating earthquakes of magnitude 7.8, 7.6 & 6.0 yesterday.

What caused this earthquake?



- The region where the earthquake has struck lies along a well-known seismic fault line called the Anatolia tectonic block.
- It is a seismically active zone — though not as active as, say, the Himalayan region.
- The seismicity in this region is a result of interactions between the **African, Eurasian, and Arabian plates**.
- In the present case, it was the Arabian plate moving northwards and grinding against the Anatolian plate.
- Also, the present earthquakes emerged from relatively shallow depths which made them devastating.
- Shallow earthquakes are generally more devastating because they carry greater energy when they emerge on the surface.