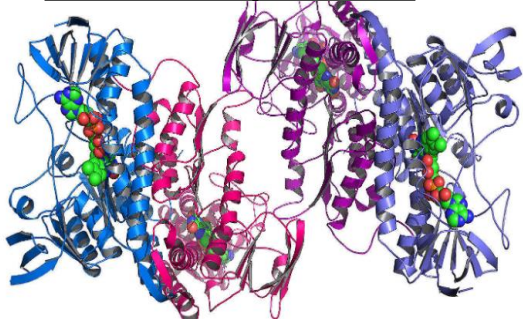


AlphaFold

❖ Context

- DeepMind, a company owned by Google, announced recently that it had predicted the **three-dimensional structures of more than 200 million proteins** using AlphaFold.

❖ What is AlphaFold



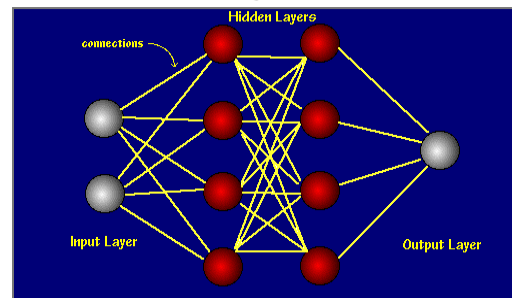
- It is an AI-based protein structure prediction tool.
- It is based on a computer system called deep neural network.

❖ Neural Network

- It is a type of machine learning process, called deep learning, that uses interconnected nodes or neurons in a layered structure that resembles the human brain.
- They use a large amount of input data and provide the desired output.
- The real work is done by the black box between the input and the output layers, called the **hidden networks**.

❖ How it works

- It uses processes based on “**training, learning, retraining and relearning.**”



- AlphaFold is fed with protein sequences, available structures of 1,70,000 proteins in the Protein Data Bank (PDB), as input to train the computer model.
- Then, it uses the results of that training to learn the structural predictions of proteins not in the PDB.
- It then uses the high-accuracy predictions from the first step to retrain and relearn to gain higher accuracy of the earlier predictions.
- The predicted three-dimensional structures come out as output through the other end.

Entry 23 of the list II of MMDR Act

❖ Context

- The Kerala government has opposed the new set of proposed amendments to the act. The Centre had invited suggestions from the public to the draft amendments to the MMDR (Mines and Minerals Development and Regulation) Act.



❖ Key Highlights

- The main objection is against the provision that will empower the centre to auction some minerals from the list of atomic minerals.
- The **state** contends that the state governments are the **owners of the mines and minerals** located within the territory of the state concerned, under Entry 23 of List II and thus have the power to make laws.
- Following the principle of federalism, the constitution has divided the powers of the Union and states into three lists under seventh schedule - List I (Union), List II (State) and List III (concurrent) under **Article 246** of the constitution.

❖ Relevant Union and State Subject Entries in the 7th Schedule

- **Entry 23** of the List II says - “Regulation of mines & mineral development subject to the provisions of List I with respect to regulation & development under the control of the Union.”
- Relevant entries in List I are :
 - **Entry 6** - Atomic energy and mineral resources necessary for its production.
 - **Entry 54** - Regulation of mines and mineral development to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.

No Risk of Recession or Stagflation

❖ Context

- Recently Finance Minister said that Indian economy is not facing any risk of recession or stagflation.



❖ Key Highlights

- GST collection in July touched ₹1.49-lakh crore, which is the second highest since the introduction of the new tax regime.



- Gross NPAs of scheduled commercial banks have reached a six-year low of 5.9%.

- The government's debt to GDP ratio has come down to **56.29 per cent** in FY22.
- **Recession:** Recession is a **slowdown or a massive contraction in economic activities**. A significant fall in spending generally leads to a recession.
- **Stagflation:** Stagflation is a situation in which the **inflation rate is high** or increasing, the economic growth rate slows, and unemployment remains steadily high.

Face to Face Centres





Regional Rural Banks

❖ Context

- At a meeting convened by the Finance Minister, heads of RRBs and sponsor banks have been asked by the government to take a slew of measures to make them financially sustainable.

❖ Background

- The cost of operations of RRBs were much lower as compared to scheduled commercial banks but that has increased now.
- One of the key reasons for **RRBs incurring losses** is the fact that many of these branches do not have enough business as they **focus mainly on offering government's schemes** like direct benefit transfer in the rural areas of the country.
- The government has asked them to :

Setting Priority

- RRBs have **90%** of their portfolio under priority loans
- Most banks buy lending certificates from RRBs to meet target
- RBI mandates **75%** loans of RRBs in priority sector, commercial banks only **40%**
- NABARD extends refinance at concessional rate of interest to RRBs

- Move towards **digitisation**, including offering internet banking services to its customers &
- Expand their credit base further through increased **lending to the Micro, Small and Medium Enterprises (MSME)** sector.

- The government had, in 2005-06, initiated a **consolidation programme** that resulted in the number of RRBs declining from 196 in 2005 to 43 in FY21.

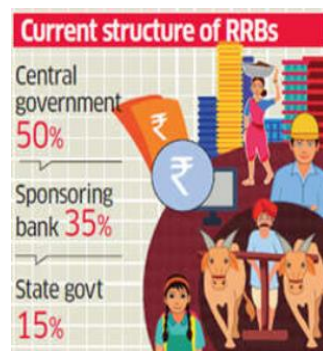
- The aim was to improve their operational viability and to take advantage of economies of scale.

❖ Future Plans

- Merging branches of the RRBs with sponsor banks once the branches reach a certain level of business.
- Merging them with sponsor banks.

❖ About RRBs

- Regional Rural Banks (RRBs) are banks formed under the **Regional Rural Banks Act, 1976**.
- They are **regional based, commercial banks**, set up in collaboration by the central government, state governments and sponsoring commercial banks.



- Shareholding pattern of RRBs among central government, sponsoring banks and state government is **50:35:15**.
- RRBs were configured as **hybrid** micro banking institutions, combining the local orientation & small-scale lending culture of the cooperatives and the business culture of commercial banks.

- Their mission was to fulfil the credit needs of the relatively un-served sections in the rural areas - small and marginal farmers, agricultural labourers and socio-economically weaker sections.

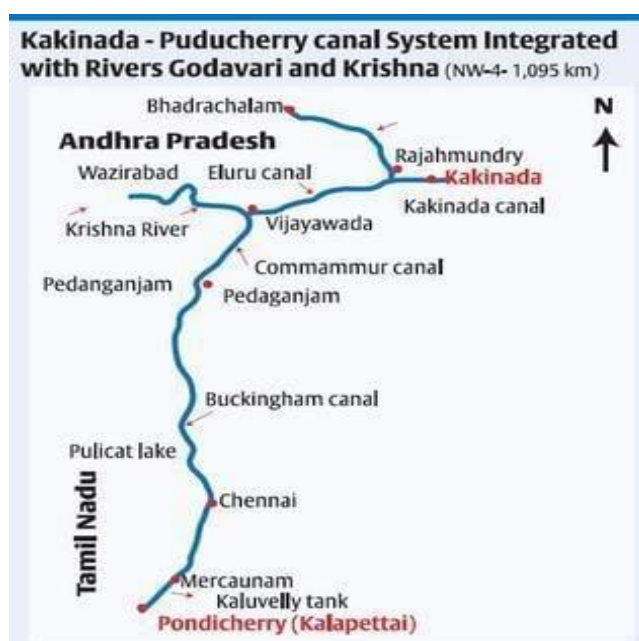
Development of National Waterway-4

❖ Context

- The stretch of river Krishna between Vijayawada and Galagali is part of declared **National Waterway - 4** has undergone some development.

❖ Key Highlights

- **National Waterway 4 (NW-4)** is a 1,095 kilometres (680 mi) long waterway in India. It connects the Indian states of Telangana, Andhra Pradesh, Tamil Nadu and the union territory of Puducherry.
- The NW-4 runs along the Coromandal Coast through Kakinada, Eluru, Commanur, Buckingham Canals & also through part of Krishna & Godavari rivers in South India.
- In this stretch, following development work has been taken up by Inland Waterways Authority of India (IWAI) between **Vijayawada to Muktayala on Krishna River in Andhra Pradesh**:



- Deployment of four Floating jetties.
- Dredging in the stretch for navigational purpose.
- Land acquisition process for construction of three **Ro-Ro terminals** at Muktayala, Harichandrapuram and Ibrahimpatnam has been initiated with the State Govt.

Wild Life Protection Bill 2021

❖ Context

- The Lok Sabha recently passed the Wild Life (Protection) Amendment Bill, 2021.



Face to Face Centres



❖ Key Highlights

- **Aim:** The bill aims to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora and expand the number of species protected by the convention.



BACKGROUND

- 1887** The Wild Birds Protection Act was passed by the British India Government
- 1912** A second law was enacted in 1912 called the Wild Birds and Animals Protection Act. This act was amended in 1935.
- 1960** There is a rising issue for protection of wildlife and the prevention of certain species from becoming extinct came into the limelight.
- 1972** 'forests' part from state subject was shifted to Concurrent List by passing the Wildlife Protection Act, 1972

OBJECTIVES

- Prohibition of hunting
- Protection and management of wildlife habitats
- Establishment of protected areas
- Regulation and control of trade in parts and products derived from wildlife
- Management of zoos

Article 48B of the Constitution of India directs the State to protect and improve the environment and safeguard wildlife and forests.

- The previous Wild Life (Protection) Act, 1972 had six schedules for specially **protected plants (one)**, specially protected animals (four), and one vermin species (small animals that carry disease & destroy food).
- The amended bill **reduces** the total number of schedules to 4 by eliminating the schedule for **vermin species** & reducing the number of schedules for specially **protected animals to two**.

- It also inserts a new schedule for specimens listed under CITES (**Convention on International Trade in Endangered Species of Wild Fauna and Flora**).
- The Bill provides for the central government to designate an authority which grants export or import licences for the trading in specimens. Anyone who trades in a scheduled specimen must inform the appropriate authority of the transaction's specifics.
- In the last eight years protected areas in the country have increased from **693 to 987**, which includes **fifty two** tiger reserves.
- Under the 1972 act, the general fine was up to ₹25,000 which has been increased to **₹1,00,000**. For violating the provisions meant for specially protected animals, the previous fine was up to ₹10,000 and now has been increased to at least **₹25,000**.
- The bill provides for any person to **voluntarily surrender** any captive animals or animal products for which no compensation will be awarded and the items will become the property of the state government.
- **CITES:** It is a convention that requires countries to regulate the trade of all listed specimens through **permits and regulate** the possession of live animal specimens so it does not threaten the survival of the species.

News in Between the Lines

Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022



❖ Context

- The bill was passed in Rajya Sabha recently. It had already been passed in Lok Sabha in April 2022.

❖ Key Highlights

- Currently, the law covers only trading; it does not cover financing.
- **Recommendation 7 of the Financial Action Task Force** requires all countries to ensure that financing for WMD-related activities is prohibited.
- The Bill bars persons from financing any prohibited activity related to weapons of mass destruction and their delivery systems.
- To prevent persons from financing such activities, the central government may freeze, seize or attach their funds, financial assets, or economic resources (whether owned, held, or controlled directly or indirectly).
- It may also prohibit persons from making finances or related services available for the benefit of other persons in relation to any activity which is prohibited.

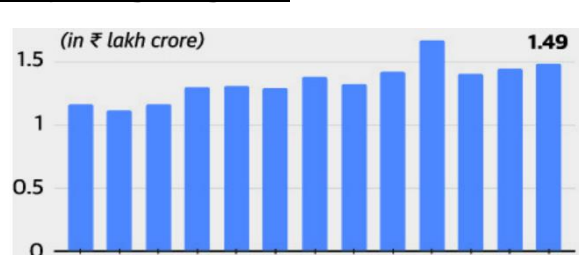
GST Collection Surge



❖ Context

- The gross **Goods and Services Tax (GST)** collections have risen **28 per cent** year-on-year to Rs 1,48,995 crore for July (for sales in June), the second highest level since the July 2017 rollout of the indirect tax regime.

❖ Key Highlights



- **High inflation rate, buoyancy in consumption patterns** triggered by the economic recovery, alongside **greater enforcement actions** against anti-evasion activities have contributed to the rise in GST collections.

Gatishakti University

❖ Context

- The **Education Minister** introduced the Central Universities (Amendment) Bill in Lok Sabha.

Face to Face Centres





❖ Key Highlights

- The bill seeks to convert the **National Rail and Transportation Institute (NRTI)**, a deemed-to-be university, into the Gati Shakti Vishwavidyalaya, an autonomous Central university.
- It seeks to expand the scope of the university from beyond just the railways to cover the entire transport sector. It will create critical capability and capacity by developing master's and doctoral degrees in transportation.
- It will also carry out critically-needed research and development to create innovative technologies so as to encourage local manufacturing and substitute the imports of expensive technology, equipment and products.

Milling of Paddy of Two Seasons Resumes



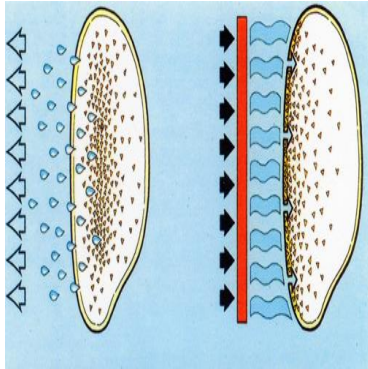
❖ Context

- The State government of Telangana has asked rice millers and Civil Supplies officials to ensure the launch of full-scale milling operations, now that the Centre has agreed to buy custom milled rice.

❖ What was the Issue?

- Earlier Telangana had alleged that the FCI in other words, the Centre has refused to procure parboiled rice.

❖ Parboiled Rice



- The expression parboiled rice refers to rice that has been partially boiled at the paddy stage, before milling.
- Benefits of Parboiling:
 - Parboiling makes rice tougher.
 - This reduces the chances of the rice kernel breaking during milling.
 - Parboiling also increases the nutrient value of the rice.
 - Parboiled rice has a higher resistance to insects & fungi.

Pingali Venkayya



❖ Context

- Recently the Prime Minister, has paid homage to **Pingali Venkayya on his birth anniversary.**

❖ About Pingali Venkayya

- Pingali Venkayya was born in a small village near **Machilipatnam**.
- Venkayya was fluent in many languages, including Sanskrit, Urdu and Japanese. His fluency in Japanese earned him the name of **Japan Venkayya**.
- In 1921, Venkayya presented the first draft design of the flag to Mahatma Gandhi **at the AICC session held at Bezwada**.
- Venkayya's design was adopted as the final Indian national flag just before independence in 1947.
- The first draft designed by Venkayya had two predominant colours: green and red. On top of them was a spinning wheel of the Gandhi Chakra in blue.

New Central Vigilance Commissioner



❖ Context

- Recently new Central Vigilance Commissioner sworn in.

• About Central Vigilance Commission (CVC)

- CVC is an apex Indian governmental body created in **1964** to address governmental corruption.
- In 2003, the Parliament enacted a law conferring statutory status on the CVC.
- It has the status of an autonomous body.
- The Commission consists of :
 - A Central Vigilance Commissioner - Chairperson;
 - Not more than two Vigilance Commissioners – Members.
- **Appointment:** The Central Vigilance Commissioner and the Vigilance Commissioners are appointed by the President on recommendation of a Committee consisting of the Prime Minister (Chairperson), the Minister of Home Affairs (Member) and the Leader of the Opposition in the Lok Sabha.

