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# **TARGET 2025**

## **ECONOMICS & AGRICULTURE**



**MAY 2024 TO FEBRUARY  
2025**

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Out of 100 questions asked in UPSC Civil Services (Preliminary) Examinations, 2024,  
**19 questions reflected directly** and  
**19 questions reflected partially**  
from the Shankar IAS Parliament

Total number of questions directly reflected from IAS Parliament (including Target 2023 series)	19
Number of questions directly reflected from the Target Series 2023	14
Total number of questions partially reflected from IAS Parliament	19

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SHANKAR IAS ACADEMY

# TARGET 2025

## ECONOMY & AGRICULTURE



MAY 2024 TO FEBRUARY 2025

### INDIAN ECONOMY

#### Basic Economic Terminologies

- **Inflation** – The rate of increase in prices of goods and services over a given period of time.
- **Imported inflation** – Inflation due to an increase in costs of imported products.
- **Currency depreciation**- Currency depreciation is a fall in the value of a currency in terms of its exchange rate versus other currencies.
- **Depreciation** – Wear and tear or depletion which capital stock undergoes over a period of time.
- **Devaluation** – The decrease in the price of domestic currency under pegged exchange rates through official action.
- **Foreign direct investment (FDI)** – It involves an investor or company buying a significant, lasting interest in a company in another country.
- **Current account deficit (CAD)** – The deficit that occurs when the inflow of foreign currencies from exports of goods and services is less than the outflow of foreign currencies from imports of goods and services.
- **Fiscal deficit** – It is the difference between total revenue and total expenditure of the government.
- **Repo rate**- Repo rate is the interest charged by the RBI when commercial banks borrow from them by selling their securities to the central bank.
- **Reverse repo rate**- It is a rate at which RBI borrows money from the commercial banks of the country.
- **Cash Reserve Ratio**- It is a percentage of the banks' deposits maintained in cash form with the RBI.
- **Statutory Liquidity Ratio**- It is an obligatory reserve of commercial banks' net demand and time liabilities, maintained as approved securities by the commercial banks themselves.
- **Global systemically important banks (G-Sib)** – It is a bank whose systemic risk profile is deemed to be of such importance that the bank's failure would trigger a wider financial crisis and threaten the global economy.
- **Credit default swap (CDS)** – It is a financial derivative that allows an investor to swap or offset their credit risk with that of another investor.
- **Liquidity coverage ratio** – It is the portion of cash and other assets that can be quickly accessed in a crisis.
- **Core equity capital ratio** – It is the portion of capital made up of core assets which is calculated against the risk-weighted assets or loans of a bank.
- **Capital Adequacy Ratio (CAR)** – Ratio of a bank's capital in relation to its risk weighted assets and current liabilities.
- **Balance of payments** – A set of accounts that summarise a country's transactions with the rest of the world.
- **Bank rate** – The rate of interest payable by commercial banks to RBI if they borrow money from the latter in case of a shortage of reserves.



- **Currency deposit ratio** – The ratio of money held by the public in currency to that held as deposits in commercial banks.
- **Reserve deposit ratio** – The fraction of their total deposits which commercial banks keep as reserves.
- **Fiat money** – Money with no intrinsic value
- **Legal tender** – Money issued by the monetary authority or the government which cannot be refused by anyone.
- **Fiscal policy** – The policy of the government regarding the level of government spending and transfers and the tax structure.
- **Foreign exchange** – Foreign currency, all currencies other than the domestic currency of a given country.
- **GDP Deflator** – Ratio of nominal to real GDP.
- **Money multiplier** – The ratio of total money supply to the stock of high powered money in an economy.
- **High powered money** – Money injected by the monetary authority in the economy. Consists mainly of currency
- **Narrow money** – Currency notes, coins and demand deposits held by the public in commercial banks
- **Broad money** – Narrow money + time deposits held by commercial banks and post office savings organisation.
- **Nominal (GDP)** – GDP evaluated at current market prices
- **Real GDP** – GDP evaluated at a set of constant prices.
- **Unemployment rate** – This may be defined as the number of people who were unable to find a job (though they were looking for jobs), as a ratio of total number of people who were looking for jobs
- **Consumer Price Index (CPI)** – Percentage change in the weighted average price level. We take the prices of a given basket of consumption goods.
- **Wholesale Price Index (WPI)** – Percentage change in the weighted average price level. We take the prices of a given basket of goods which is traded in bulk.

## 1. NATIONAL INCOME

### 1.1 Sample India- The Fastest Growing Economy

*PM Modi while inaugurating International Exhibition-cum-Convention Centre in New Delhi has assured that during 3<sup>rd</sup> tenure of his government, India will be among the top three economies of the world.*

#### Status of Indian Economy

- **Size** – India is the **5<sup>th</sup> largest economy** in the world with the GDP of around 3737 billion US Dollars.
- India was the 10<sup>th</sup> largest economy in 2014 it doubled its growth in 7 years.
- The International Monetary Fund (IMF) data shows that India is indeed forecast to become the **3<sup>rd</sup> largest economy by 2027.**
- It is expected to overtake Germany and Japan in future which is currently the 3<sup>rd</sup> and 4<sup>th</sup> largest economies respectively.
- **Per Capita GDP** – India's per capita GDP is only 2600 dollars per annum.
- **India's GDP growth** – All top 10 countries have seen their GDP stagnate or even contract, except China, India and the US.

- Even a more modest growth rate of 6% per annum will be enough for India to overtake Germany and Japan by 2027.

## Steps Taken to Fasten the Economic Growth

- **Niti Aayog** – Released "15-year Road Map", "7-Year Vision, Strategy and Action Plan" to foster economic policy decisions through cooperative federalism.
- **Startup India** – It was launched in 2016 with aim to catalyze startup culture and build a strong and inclusive ecosystem for innovation and entrepreneurship in India.
- **Goods and Service Tax** – It is an indirect tax announced in 2017 with a motto of "One Nation One Tax" to improve growth momentum by reducing barriers to trade, business and related economic activities.
- **Ujjwal DISCOM Assurance Yojana (UDAY)** – Launched in 2015 that aims for financial turnaround and revival packages for electricity companies in India.
- **National Infrastructure Pipeline** – It is a roadmap for 5 years (2020-25) to invest around Rs 100 lakh crores in social and economic infrastructure.
- **National Monetization Pipeline** – It was launched in 2021 with the principal aim of asset creation through monetization.
- **Atmanirbhar Bharat Abhiyan** – It is a self-reliant India mission launched in 2020 as an economic stimulus package for revival of COVID situation.
- **PM Gati Shakti** – It is a National Master Plan for Multimodal Connectivity launched in 2021.

Country	GDP Growth (2014-23)
India	83%
China	84%
USA	54%

Country	Per Capita GDP (per annum)
India	2600 dollars
UK	47000 dollars
Brazil	10000 dollars

## 1.2 Forecasting GDP growth of India

OECD recently revised India's FY25 growth forecast upward to 6.7% in its Interim Economic Outlook.

### Analysis

- **OECD** – It revised growth upward to 6.7% in FY25 and that growth is expected to increase to 6.8% in FY26.
- **Asian Development Bank** – It retained India's growth at 7% for FY25, projecting a pick up to 7.2% in FY26.
- **World Bank** – It has raised its growth forecast for India's economy to 7 per cent for the current financial year (FY25), up from an earlier projection of 6.6 per cent
- **Nomura** - Lowered its FY25 economic growth forecast for India to 6.7% from 6.9%.
- **RBI**- Upgraded its GDP growth projection for FY25 to 7.2%.
- **Morgan Stanley** - Raised its India GDP growth forecast for FY25 to 6.8%.

*Global GDP growth is projected to stabilize at 3.2% in 2024 and 2025.*

### Trends

- **Inflation** – Inflation is also projected to be higher at 4.5% compared with 4.3% projected in May.
- Prices would likely inch towards the RBI's mid-point target of 4% in FY26.
- **Consumer inflation** – It remained below 4% in July and August and economists expect it to rise to 5% in the coming months.
- **Gross Domestic Product (GDP)** – It reflects demand in the economy, grew by 6.7% in the quarter under consideration, compared to 8.2% during the same period of the last fiscal and 7.8% in the previous quarter.
- **Gross Value Added (GVA)** – It reflects supply in the economy, rose to 6.8% during Q1 of FY25 compared to 8.3% in the corresponding quarter of the last fiscal and 6.3% of the previous quarter.
- **Manufacturing** – Accounts for about 17% of India's GDP, grew by 7% year-on-year in the April-June quarter, compared to an 8.9% expansion in the previous quarter.
- **Agricultural output** – Grew 2% year-on-year in the same period, up from 1.1% in the previous quarter.

### 1.3 Wholesale Price Index (WPI), July 2024

Recently Index Numbers of Wholesale Price in India for July, 2024 has been released.

- **Wholesale Price Index (WPI)** – It is a measure of changes in the prices of goods sold and traded in bulk by wholesale businesses to other businesses.
- **Components of WPI** – WPI is calculated by taking a weighted average of prices in a basket of goods.
- **WPI Released by** - Office of Economic Adviser
  - **Department** - Department for Promotion of Industry and Internal Trade DPIIT
  - **Nodal Ministry** - Ministry of Commerce and Industry.
- DPIIT releases the index number of wholesale prices in India on monthly basis on the 14<sup>th</sup> of every month (or the next working day) with a time lag of two weeks of the reference month.
- **Consumer Price Index (CPI) released by** – National Statistical Office (NSO), Ministry of Statistics and Programme Implementation.
- Annual Rate of WPI inflation in July 2024 over July 2023 – **2.04 % (Provisional)**.

Index Numbers and Annual Rate of Inflation (Y-o-Y in %)*							
All Commodities/Major Groups	Weight (%)	May-24		June-24 (P)		July-24 (P)	
		Index	Inflation	Index	Inflation	Index	Inflation
All Commodities	100.00	153.5	2.74	153.9	3.36	155.2	2.04
I. Primary Articles	22.62	188.1	7.42	191.6	8.80	197.6	3.08
II. Fuel & Power	13.15	150.1	1.01	147.7	1.03	147.9	1.72
III. Manufactured Products	64.23	142.0	1.00	141.9	1.43	141.7	1.58
Food Index	24.38	186.3	7.75	190.3	8.68	195.4	3.55

Month Over Month (M-o-M in %) change in WPI Index#							
All Commodities/Major Groups	Weight	Feb-24	Mar-24	Apr-24	May-24	Jun-24 (P)	Jul-24 (P)
All Commodities	100.00	0.00	0.13	0.99	0.39	0.26	0.84
I. Primary Articles	22.62	0.06	0.94	2.13	0.53	1.86	3.13
II. Fuel & Power	13.15	0.00	-1.81	-0.46	-0.86	-1.60	0.14
III. Manufactured Products	64.23	0.07	0.21	0.79	0.57	-0.07	-0.14
Food Index	24.38	0.17	1.12	2.33	0.92	2.15	2.68

- Annual rate of inflation change for the last three months.
- Monthly WPI change in July 2024 over June 2024 is **0.84%**.
- Monthly change of WPI inflation for last three months.
- **Major reason for Increase in Inflation in July** – Increase in prices of food articles, manufacture of food products, mineral oils, crude petroleum & natural gas, other manufacturing etc.

WPI Components	
Commodity Group	Weightage (%)
Primary Articles	22.62
Fuel & Power	13.15
Manufactured Products	64.23



- **WPI Food Index (Weight 24.38%)** – It measures the movement of wholesale prices of food articles.
- It consisting of 'food articles' from primary articles group and 'food product' from manufactured products group.
- The rate of inflation (Y-o-Y) based on WPI Food Index decreased from 8.68% in June, 2024 to 3.55% in July, 2024.

#### 1.4 Purchasing Managers' Index (PMI)

*India's services PMI recovered from its 10-month low in September to reach 58.5 in October supported by strong expansions in output and new business, which in turn boosted job creation.*

- The Purchasing Managers' Index (PMI) is an indicator of the prevailing direction of economic trends in the **manufacturing or service sectors**.
- **Released by** – The **Institute for Supply Management (ISM)**, a nonprofit supply management organization.
- The indicator is compiled and released **monthly** is a survey of supply chain managers across 19 industries, covering both upstream and downstream activity.
- The value of the PMI and its movements can provide useful insight to business decision makers, market analysts, and investors.
- The PMI is a leading indicator of overall economic activity in the U.S.
- **Calculation** -  $PMI = (P1 * 1) + (P2 * 0.5) + (P3 * 0)$ , Where
  - P1 = percentage of answers reporting an improvement.
  - P2 = percentage of answers reporting no change.
  - P3 = percentage of answers reporting a deterioration.
- **Focused areas** – The PMI is based on 5 major survey areas each of which is weighted equally - New orders, Inventory levels, Production, Supplier deliveries, Employment.
- **Headline** – The headline PMI is a number from **0 to 100**.
  - A PMI above 50 represents an expansion when compared with the previous month.
  - A PMI reading under 50 represents a contraction while a reading at 50 indicates no change.
  - The further away from 50, the greater the level of change.
- The PMI is usually released on a monthly basis, offering up-to-date information about the economic activity in the manufacturing or services sector.
- Changes in the PMI can signal shifts in economic activity before those changes are seen in other indicators like GDP growth or employment numbers.
- The PMI also captures information from various sub-components such as new orders, production, employment, supplier deliveries, and inventories.

## 2. PUBLIC FINANCE

#### 2.1 AT1, Tier-II bonds

*Recently Bank of Baroda announced its board's approval to raise capital through Additional Tier 1 (AT1) and Tier 2 bonds.*

- A bond is a fixed-income investment that represents a loan made by an investor to a borrower, usually corporate or governmental.

Feature	Additional Tier 1 (AT1) Bonds	Tier 2 Bonds
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<b>Definition</b>	AT1 bonds, also called <i>perpetual bonds</i> , carry no maturity date but have a call option.	Tier-2 bonds are a type of debt instrument banks issue to raise capital for their operations.
<b>Ranking in Capital Structure</b>	Higher risk, subordinated to Tier 2 and other senior debts.	Lower risk, subordinated to senior debts but senior to AT1 bonds.
<b>Coupon Rate</b>	Generally higher due to higher risk.	Generally lower compared to AT1 bonds.
<b>Call Option</b>	Often callable by issuer after 5-10 year.	Typically, callable by issuer after a specific period.
<b>Interest Payments</b>	Non-cumulative, can be skipped without default.	Cumulative, cannot be skipped without default.
<b>Conversion to Equity</b>	Can be converted to equity if bank's capital falls below a threshold	Not convertible to equity.

## 2.2 Equity mutual funds

According to the Association of Mutual Funds in India (AMFI), inflows into India's equity mutual funds hit a record high.

- **About** – Equity mutual funds are *investment vehicles* that pool money from multiple investors to invest primarily in *stocks or equity securities* of publicly traded companies.
- **Objective** – Equity mutual funds aim to provide *capital appreciation over the long term* by investing in stocks that are expected to grow in value.

Equity Mutual Funds	
Types	Details
<b>Small-cap Equity Funds</b>	<ul style="list-style-type: none"> <li>• These funds are considered to be riskier than mid- or large-cap equity funds but can offer the relatively higher returns.</li> <li>• Their minimum exposure to such stocks is 65% of the total assets.</li> </ul>
<b>Mid-cap Equity Funds</b>	<ul style="list-style-type: none"> <li>• These funds are considered to be less risky than small-cap funds, but more than large-cap funds.</li> <li>• Their minimum exposure to such stocks is 65% of the total assets.</li> </ul>
<b>Large-cap Equity Funds</b>	<ul style="list-style-type: none"> <li>• These funds are considered to be the least risky as far as equity fund-picking goes. Their minimum exposure to such stocks is 80% of the total assets.</li> </ul>
<b>Large- &amp; Mid-cap Equity Funds</b>	<ul style="list-style-type: none"> <li>• These equity mutual funds equally divide the allocation between large- and mid-cap equity and related instruments and have the potential to offer high returns.</li> </ul>
<b>Multi-cap funds</b>	<ul style="list-style-type: none"> <li>• Multi-cap equity funds invest in stocks across large-, mid-, and, small-cap companies. Their minimum exposure to such stocks is 65% of the total assets.</li> </ul>

### Features of an Equity Mutual Fund

- **Returns** – E equity mutual funds *focus on stocks*, offering potentially high returns compared to other types of mutual funds due to their concentration on equities.
- **Tax Benefits** – The investor can gain tax benefits with the investments in these funds.
- **Risk** –The risk factor of equity funds is *high*.

- **Expense Ratio**-These funds also tend to have a higher expense ratio than their counterparts, given the requirement of constant management.
- **Long-Term Investments**- These funds are suitable for long-term investors, given that they perform well in the long term.
- **Growth trend** - India's equity mutual funds surged 17% sequentially to a record high of US\$ 4.87 billion (Rs. 40,608 crore) in June.
- Equity mutual funds have seen net inflows aggregating to **Rs 5.9 trillion from domestic investors** since February 2021.

**Expense ratio** is the annual maintenance charge levied by mutual funds to finance its expenses.

### Association of Mutual Funds in India

- It is a non-profit industry body of the asset management companies (AMCs) of all Mutual Funds in India that are registered with Securities and Exchange Board of India (SEBI).
- AMFI was incorporated on 1995 under section 25 of the Companies Act, 1956.
- It sets ethical standards, promotes investor education, and collects industry data.
- AMFI represents all registered Mutual Funds in India, ensuring fair practices among distributors and advisors.
- It advocates for industry interests and spearheaded the 'Mutual Funds Sahi Hai' campaign since 2017 to boost awareness about Mutual Funds as a viable investment option.
- AMFI is also a member of the **International Investment Funds Association (IIFA)**.

## 2.3 Look-Out Circular (LOC)

The Bombay High Court has held that public sector banks (PSBs) cannot recommend or request the issuance of Look out Circulars (LOCs) against loan defaulters.

- **Need** – To make sure that an individual who is absconding or wanted by law enforcement agencies is not able to leave the country.
- It is mostly used at immigration checkpoints at international airports and seaports by the immigration branch.
- **Issuing authority** – By a large number of authorised officers, including:
  - An officer not below the rank of deputy secretary,
  - An officer not below the rank of joint secretary in the state government,
  - A district magistrate or superintendent of police,
  - Designated officers of various law enforcing agencies,
  - A designated officer of Interpol,
  - An officer not below the rank of additional director in the Serious Fraud Investigation Office, and the Ministry of Corporate Affairs and
  - An officer not below the rank of chairman/managing director/chief executive of any public sector bank can make a request (currently quashed by Bombay HC).
- It can be modified/deleted/withdrawn by the Bureau of Immigration only on the specific request of the authorised originator on whose request the LOC was issued.
- **Actions** – It can seek to merely stop a person from travelling outside the country or from entering the country.
- It can also contains a request to detain the individual at the local police/investigation agency, which generally leads to arrest.
- **Issue** – A 2018 clause that empowered the head of all Public Sector Banks (PSBs) to request immigration authorities to issue LOCs against default borrowers in the economic interest of India.
- **Observations of High Court** – It quashed LOCs issued to restrain PSB debtors from travelling abroad.

**Default borrowers** – It includes not only the borrowers but also the guarantors for repayment of loans and the principal officers or directors of corporate entities in debt.

**Article 14** deals with 'Equality before law or equal protection of the laws within the territory of India'.  
**Article 21** deals with 'Protection of life and personal liberty'.

- It says that they are “*strong-arm tactics*” used to get around legal processes, and *violative of fundamental rights* guaranteed under Articles 14 and 21 of the Constitution.
- The fundamental right to travel abroad cannot be curtailed by executive action without any government statute and inclusion of only PSBs violates right to equality.
- It also clarified that its order would *not affect any existing restraint order* issued by a competent authority, court, Debt Recovery Tribunal, or investigative or enforcement agency.

## 2.4 Vertical Fiscal Imbalance

*The 15<sup>th</sup> Finance Commission had noted that India has had a larger, and rising, vertical imbalance than most other federations.*

- **Fiscal imbalance** – It occurs when there is a mismatch between a government's future debt obligations and future income streams.
- **Types** - Vertical and horizontal fiscal imbalance.
- **Horizontal fiscal imbalance** – It occurs when revenues do not match expenditures *for different regions* of the country.
- **Vertical fiscal imbalance** – It occurs when revenues do not match expenditures *for different government levels*.
- It is a structural issue that can be resolved if revenue and expenditure responsibilities can be reassigned.
- **Constitutional provision - Article 280 addresses the issue of "vertical fiscal imbalance"** by establishing a Finance Commission, tasked with recommending the distribution of tax revenues between the central government and state governments.
- It reviews the fiscal conditions of the Centre and states from time to time and suggests resource transfer from the Centre to the states.
- For the transfer of central resources, the constitution itself points out what tax resources of the Centre have to be shared with the states.
- **Divisible pool** – Tax sources of the Centre that must be shared with the states is known as the divisible pool.
- It consists of all taxes, except surcharges and cess levied for specific purpose, net of collection charges.

*A fiscal deficit is the shortfall in a country's revenue stream compared to its spending*

### Status of Vertical Fiscal Imbalance in India

- VFI in India is calculated *after the devolution of taxes to the States.*
- VFI measurement should be at the level of “all States”, and not separately for each State.
- **Suggested Ratio** = The sum of the Own Revenue Receipts (ORR) and the tax devolution from the Union government for all States / Own Revenue Expenditure (ORE) for all States
- If this ratio is less than 1, it implies that the sum of own revenue receipts and tax devolution of the States is inadequate to meet the ORE of the States.
- If we subtract this ratio from 1, we get the deficit in receipts. It is this deficit that we use as a proxy for VFI after devolution.
- As the 15<sup>th</sup> Finance Commission noted, States incur 61% of the revenue expenditure but collect only 38% of the revenue receipts.
- The role of the 16<sup>th</sup> Finance Commission should be to eliminate vertical fiscal imbalance in federal relations.
- Many States have raised the demand that the share of tax devolution from the net proceeds must be fixed at 50% by the 16<sup>th</sup> Finance Commission.
- They substantiate this demand by pointing to the exclusion from the net proceeds of the substantial amounts of cesses and surcharges, which trims the net proceeds within the gross tax revenue.

### 3. MONEY

#### 3.1 Money mule

*The Reserve Bank of India has warned banks about mule accounts and urged them to strengthen their security measures to curb digital fraud.*

- A money mule is someone who receives and moves money that is transferred from **victims of fraud**.
- A person may become a money mule intentionally or unintentionally and receive **illegally acquired funds** and help in its transfer to others.
- The Money mules are frequently innocent individuals who are drawn into the plan by a variety of tactics, such as **job offers, online classified ads, or social media postings**.
- **Financial Frauds** – Money Mule Actions are commonly associated with various types of financial crimes, such as **money laundering, fraud, and cybercrime**.
- **Types of Money Mules** – The FBI categorizes money mules into 3 categories based on their goals and degree of involvement:
  - Unknowing/unwitting money mules
  - Witting money mules
  - Complicit money mules
- **Process** – Fraudsters contact customers via **e-mails, chat rooms, job websites or blogs** and convince them to receive money into their bank accounts, in exchange of attractive commissions.
- The fraudsters then transfer the illegal money into the money mule's account.
- The money mule is then directed to transfer the money to another money mule's account starting a chain that ultimately results in the money getting transferred to the fraudster's account.
- When such frauds are reported, the money mule becomes the target of police investigations.
- **Mule Accounts** – It is a bank account used to receive/transfer funds acquired illegally on behalf of others.
- These accounts are often used for money laundering and tax evasion.
- Mule accounts are in violation of several rules and individual involved in it can be prosecuted under the **Prevention of Money Laundering Act (PMLA)**.

#### 3.2 Commemorative coins

*The Union Ministry of Finance recently issued a commemorative coin on the occasion of the birth centenary of former Tamil Nadu Chief Minister M Karunanidhi.*

- **Commemorative coins** – Also known as **ceremonial coins** are issued to commemorate a certain event, celebrate a certain person, or further a certain message.
- They have a distinctive design, which references the occasion for which they were issued and are often of a different or generally larger denomination, than regular coins.
- **Authority** – The sole authority to print or mint any Indian currency lies with the **Reserve Bank of India**, which works under the Union Finance Ministry.
- Thus, it is the **Union Finance Ministry** that ultimately decides whether to issue a commemorative coin or not.
- State governments, government-run cultural institutions, or even private organizations can request the government to issue commemorative coins.
- **Circulation** – These are often issued in very small quantities, and kept by the RBI as uncirculated collectors' items and sometimes they can also be meant for mass circulation.
- The mass circulation depends on the Centre's intention behind issuing a certain coin.
- **Famous personalities** – Commemorative coins have been issued in honor of many Indian luminaries, including Rabindranath Tagore, B R Ambedkar, Bhagat Singh, Lal Bahadur Shastri, Lala Lajpat Rai, Shyamaprasad Mukherjee, Jayprakash Narayan, and Indira Gandhi.



- In 1974, the Indira Gandhi Government introduced a coin with the theme and legend 'Family Planning', reflecting her government's concerted population control push.
- The very first commemorative coins in India were issued in 1964, after the death of Prime Minister Jawaharlal Nehru.
- Some coins institutions (like the State Bank of India or Mata Vaishno Devi Shrine Board), or **occasions** (like the 75th anniversary of Indian Independence) rather than individuals.

### 3.3 Report on Currency and finance

Recently, the Reserve Bank of India released its Report on Currency and Finance (RCF) for the year 2023-24, highlighting India's role in the global digital revolution.

#### Highlights of the report

- India is at the forefront of global digital transformation.
- **Economic contribution** – The digital economy currently accounts for a **10% of India's GDP** and is expected to constitute a 5% of India's GDP by 2026 based on growth rates observed over the past decade.
- **Internet penetration**- In 2023, internet penetration in India reached **55%**, with an increase of 199 million internet users over the past three years.
- **Data affordability** – India has the **lowest cost per gigabyte (GB)** of data globally, averaging ₹13.32 (US\$ 0.16) per GB.
- **Mobile data consumption** – India has one of the highest mobile data consumption rates in the world, with an average per-user, per-month mobile data consumption of 24.1 GB in 2023.
- **Smartphone users**- India has about 750 million smartphone users, a number expected to reach approximately **one billion by 2026**.
- **Smartphone manufacturing** – India is on track to become the **second-largest** smartphone manufacturer within the next five years.
- **Startup ecosystem**- India has the world's **third-largest** startup ecosystem, with over 1.4 lakh startups and more than 100 unicorns.
- **Global rankings** – India ranks first in biometric-based identification (Aadhaar) and real-time payments volume and second in telecom subscribers.
- **FinTech and digital payments**- India has embraced financial technology (FinTech) by speeding up digital payments comprising biometric identification, UPI, mobile connectivity, digital lockers, and consent-based data sharing.

### 3.4 Inverted Duty Structure

Government may look at addressing inverted duty structures in washing machines, air purifiers.

- **Inverted Duty Structure** – It refers to taxation on inputs at higher rates than finished products.
- In other words, the GST rate paid on purchases is more than the GST rate payable on sales.
- **Impact** – It affects the domestic industry, as manufacturers have to pay a higher price for raw materials in terms of duty.
- Expensive inputs make products costly and cannot compete in the export market and in the domestic market, such products are prone to cheaper imports.
- **Other issues** – Taxpayers who face an inverted duty structure will always have Input Tax Credit (ITC) in their GST electronic credit ledger even after paying off the output tax liability.
- This creates working capital issues for the taxpayers, as crucial resources remain blocked in the form of ITC.

Products		GST on	
Finished Goods (Output)	Raw Materials (Input)	Finished Goods	Raw Materials
Fabric Bag	Non-Woven Fabric	5%	12%

**Input Tax Credit** means the GST paid by a taxable person on any purchase of goods and/or services that are used or will be used for business.

- **Refund** – A registered person may claim a refund of unutilised ITC that can be claimed at the end of any tax period.
- **Eligibility** – When the credit has accumulated on account of the rate of tax on inputs being higher than the rate of tax on output supplies.

### 3.5 Central Value Added Tax (CENVAT) Credit

*Recently, the Supreme Court allowed telecom companies to claim Central Value Added Tax (CENVAT) credit for the installation of mobile towers and shelters.*

- It allows a manufacturer to utilize the **credit of excise duty/additional duty** paid for the procurement of input services to pay off the excise duty on his/her final product or output services.
- It was introduced as a modification to the previously functioning **Modified Value Added Tax** or MODVAT.
- During the course of the manufacture of final products, the raw materials travel through various stages of production, wherein a duty is levied on every value-added at each stage.
- CENVAT, therefore, **eliminates this double taxation**, thereby simplifying taxation for manufacturers, and consumers at large.
- The CENVAT Credit Rules, 2004 established to implement CENVAT across the country and offer Indian manufacturers of final products certain tax credits on the excise duty payable by them.
- CENVAT credit refers to the set-off available to manufacturers if they utilise some specific inputs for manufacturing their products.
- A manufacturer can claim CENVAT credit on the following cases:
  - **Excise duty on a final product** – For manufacturers and producers of final products.
  - **Service tax on output services** – For providers of taxable and exempted services.
  - **Input and capital goods** – If these goods are being partially processed.

#### Central Value Added Tax (CENVAT) Credit Rules, 2004

- It exercises the powers conferred by section 37 of the Central Excise Act, 1944 and section 94 of the Finance Act, 1994.
- **Rule 2(a)(A) Capital Goods** – All goods falling under the First Schedule to the Excise Tariff Act and Pollution control equipment, components, spares and accessories of the goods, moulds and dies, jigs and fixtures, refractories and refractory materials, tubes and pipes and fittings and storage tank used.
- **2(k) Input** – All goods, except light diesel oil, high speed diesel oil and motor spirit, commonly known as petrol, used in or in relation to the manufacture of final products whether directly or indirectly and whether contained in the final product or not, or used for providing any output service.

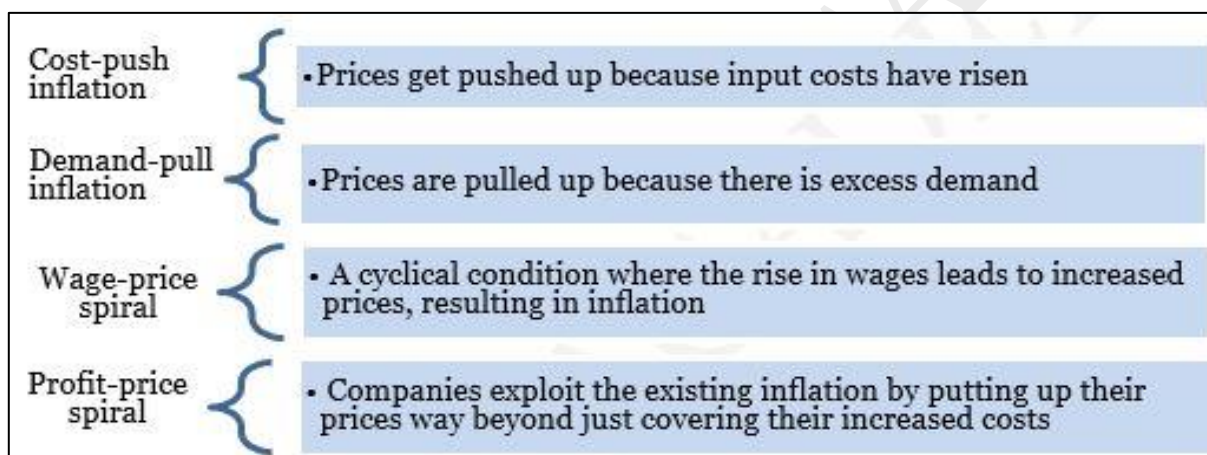
## 4. INFLATION

### 4.1 Sample Greedflation

*There is a growing consensus across the world that corporate turns crisis into an opportunity for businesses to make supernormal profits.*

- **Inflation** – It is the rate of increase in prices over a given period of time.
- Central banks use monetary policy to contain the inflation.
  - It raise interest rates to bring overall demand in line with overall supply containing demand-pull inflation.
  - It raise interest rates to contain demand which in turn contains cost-push inflation.

- In case of Greedflation, the whole monetary policy prescription becomes more unjust and ineffective because it is neither due to higher input cost nor due to excess demand.
- **Greedflation** – Greedflation is the exploitation of inflation by corporates to create excessive profits. It simply means (corporate) greed fueled inflation.
- In normal inflation situation, corporates go for the wage-price spiral, whereas in Greedflation corporates choose the profit-price spiral.
- This is used to maximise their profit margins that, in turn, further fuelled inflation.
- Greedflation happens in two scenarios.
  - When the price mark-up is far in excess of the increase in inputs.
  - When businesses do not bring down the market prices even when the input prices fall.
- **Implications of greedflation**
  - Less likeliness to spend money will lead to reduced economic activity.
  - Creates social unrest due to raising cost of living.
  - Forces governments to intervene like windfall tax to contain inflation.
  - Reduces the purchasing power of the people making even basic needs hard to afford.
  - On the corporates' side it affects the business as well as loss of customer trust.

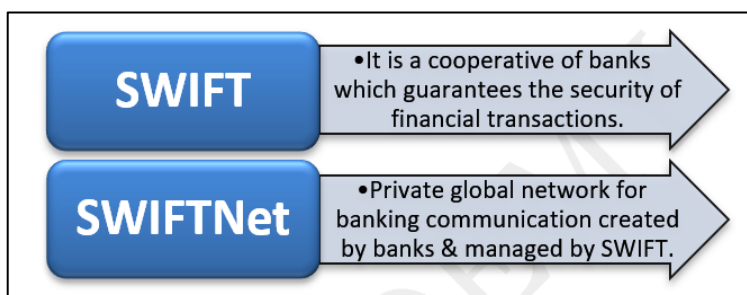


## 5. BANKING

### 5.1 Society for Worldwide Interbank Financial Telecommunication (SWIFT)

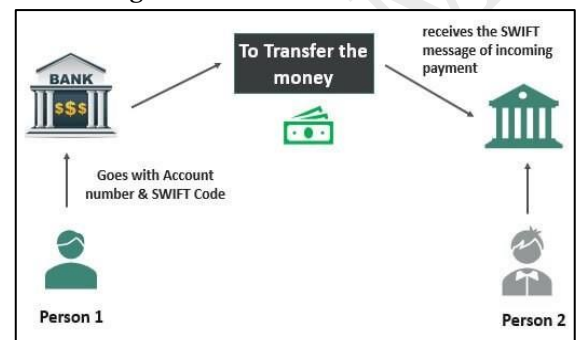
*Society for Worldwide Interbank Financial Telecommunication (SWIFT) serves as a pivotal network for international financial transactions for countries around the world including India.*

- SWIFT is a **global member-owned cooperative** that functions as a huge messaging system for international funds transfer.
- The **world's leading provider** to secure financial messaging services.
- **Founded in** – 3 May 1973 by 239 banks from 15 countries.
- **Headquartered in** – Belgium.
- It provides safe and secure financial transactions for its members.
- Initially, SWIFT founders designed the network to facilitate communication about Treasury and correspondent transactions only.
- SWIFT is the **largest and most streamlined** method for international payments and settlements.



- This payment network allows individuals and businesses to take electronic or card payments even if the customer or vendor uses a different bank than the payee.
- It works by assigning each member institution a **unique ID code** (a BIC number) that identifies the bank name and the country, city, and branch.
- It has been used to impose economic sanctions on Iran, Russia, and Belarus.
- SWIFT is overseen by the **Group of Ten countries'** G-10 central banks which includes:
  - Belgium, Canada, France, Germany, Italy, Japan, Netherlands, United Kingdom, United States, Switzerland, and Sweden.
  - The European country of Belgium acts as the lead overseer alongside other members such as the U.S. Federal Reserve.
- Before SWIFT, **Telex** was the only available means of message confirmation for international funds transfer.
- **Features** – It's messaging system sets up the transfer of money between member banks and other member financial institutions.
- Through which banks send information about transactions.
- The banks themselves carry out their transactions.
- **Uses** – It is used by banks, financial institutions, foreign exchanges, asset-management companies, and even some non-financial institutions.
- **Swift Oversight Forum** – It was established on 2012, and joined by other countries central banks from
  - Australia, China, Hong Kong, **India**, Korea, Russia, Saudi Arabia, Singapore, South Africa and Turkey.

**Telex** is an international **message-transfer service** that allowed users to send and receive text messages over a network of teleprinters.



### Swift India Domestic Services (Swift India)

- It is a member-owned cooperative created by the Indian community.
- **Launched on** - 18 March 2014, Mumbai.
- It includes partners of leading public and private banks and it is fully committed to serving and addressing domestic market needs.
- It offers deep expertise and experience in international standards and best practices.

## 5.2 India Post Payment bank (IPPB)

Recently the India Post Payments Bank celebrated its 7th Foundation Day.

- **India Post Payments Bank (IPPB)** – It is a **public sector payments bank** with 100% equity owned by Government of India.
- **Established** - September, **2018**
- **Nodal ministry**- Department of Posts, Ministry of Communications.
- **Objective**- To provide every household in India an **access to efficient banking services** and enable them financially secured and empowered.
- **Services provided** – It offers various Personal and Merchant banking products and services.
- **Aadhaar services** – Aadhaar enrolment for children up to 5 years old and mobile number update through Child Enrolment Lite Client (CELC) service.
  - Aadhaar-enabled payment systems

**Payment banks** are a new type of financial institution that was introduced in 2014 to provide basic banking services to people who are currently unbanked or



- **Door Step Banking** – It provides paperless, cashless, and present less banking facilities at the doorstep, even in remote areas.
- **Postmen and Gramin Dak Sevaks**- They are functioning as mobile banks through IPPB, delivering various services at the doorstep.
- It promotes the initiative "**Aapka Bank, Aapke Dwar**" (Your Bank at Your Doorstep).
- **Fincluvation** – It is Innovation for Financial Inclusion initiative to invite Fintech Start-up community to co-create solutions for financial inclusion.

<b>Deposits</b>	<ul style="list-style-type: none"> <li>• Savings Account</li> <li>• Current Account</li> </ul>
<b>Money Transfer</b>	<ul style="list-style-type: none"> <li>• Simple &amp; Secure</li> <li>• Instant 24x7</li> </ul>
<b>Direct Benefit Transfers</b>	<ul style="list-style-type: none"> <li>• MGNREGA</li> <li>• Scholarships</li> <li>• Social welfare benefits &amp; other Government subsidies</li> </ul>
<b>Third Party products</b>	<ul style="list-style-type: none"> <li>• Loans &amp; Investments</li> <li>• Insurance</li> <li>• Digital life certificates</li> <li>• Post Offices Saving Schemes</li> </ul>
<b>Bill &amp; Utility payments</b>	<ul style="list-style-type: none"> <li>• Mobile, DTH Recharge</li> <li>• Electricity, water and gas bills.</li> </ul>
<b>Enterprise &amp; Merchant Payments</b>	<ul style="list-style-type: none"> <li>• Postal Products</li> <li>• Digital Payments of e-commerce delivery (CoD)</li> </ul>

#### Key Achievements of India Post Payments Bank (IPPB)

- Acquired over 9.88 crore customer accounts.
- On-boarded more than 12 lakh merchants.
- Successfully disbursed over Rs.45, 000 crore in Direct Benefit Transfers (DBT) to beneficiaries under various government schemes.
- Facilitated mobile number updates for Aadhaar cards for over 7.10 crore customers.
- Enabled Digital Life Certificate services for more than 20 lakh pensioners.

### 5.3 Non-Banking Financial Companies (NBFCs)

The Reserve Bank of India (RBI) has significantly eased lending restrictions for Non-Banking Finance Companies (NBFCs) recently.

- **Recent provisions** – RBI reduced the risk weights applied to bank loans given to NBFCs by 25% points.
- It is expected to encourage banks to lend more readily to NBFCs.
- The reduction in risk weight will be based on the credit rating of each NBFC, with higher rated NBFCs likely to benefit more.
- This move is expected to improve the liquidity situation for NBFCs, allowing them to access more credit from banks and potentially leading to increased lending to the retail segment.
- By facilitating easier credit flow to NBFCs, the RBI aims to stimulate economic growth by enhancing credit availability to the retail sector.
- **Non-Banking Financial Companies (NBFCs)** – Also known as nonbank financial institutions (NBFIs), are financial institutions that offer various banking services but do not have a banking license.
- They are **not subject** to banking regulations.
- **Registered under** – The Companies Act, 1956.

*Financial activity as principal business is considered when a company's financial assets constitute more than 50% of the total assets and income from financial assets constitute more than 50% of the gross*

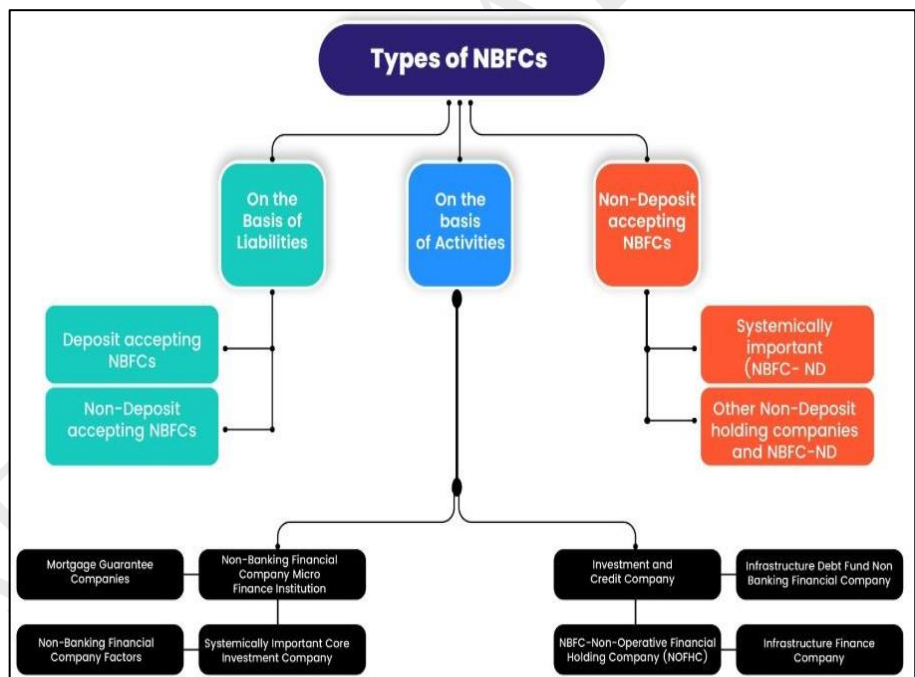


## • Eligibility

- It should be a company registered under **Section 3** of the companies Act, 1956.
- It should have a minimum net owned fund of at least **Rs. 10 crores**.

Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is **not available** to depositors of NBFCs, unlike in case of banks.

- It does not include any institution whose principal business is agriculture activity, industrial activity, purchase or sale of any goods or providing any services and of immovable property.
- A company that has
  - The principal business of receiving deposits under any scheme or arrangement in one lump sum or
  - In instalments by way of contributions or in any other manner and is also a non-banking financial company (Residuary Non-banking Company).
- **Features - Lending** – Provide credit to sectors where there's a gap in credit.
- **Investment** – Invest in shares, stocks, bonds, and other securities.
- **Insurance** – Underwrite economic risks like illness, death and damage.
- **Leasing** – Finance assets like vehicles, machinery, and equipment.
- **Hire purchase** – Help individuals and businesses acquire assets without upfront payment.
- **Asset management** – Help individuals and institutions invest in assets like equities, debt, and real estate.
- **Venture capital** – Provide funding to early-stage and high-growth potential businesses.
- NBFC **cannot accept** demand deposits.
- NBFCs **do not form** part of the payment and settlement system and cannot issue cheques drawn on itself.



## 5.4 CASA

The recent liquidity concerns in the face of loan growth outpacing deposit growth made the regulators and the government to press for higher augmentation of overall deposits, specifically the CASA component.

- **CASA** – Current Account and Savings Account, which is mostly used in West Asia and South-east Asia.
- **CASA deposit** – It is the amount of money that gets deposited in the current and savings accounts of bank customers.
- **Features** – Since interest rates are lower than term deposits, **CASA is a cheaper source of funds** for banks.
- The savings accounts portion pays more interest compared to current accounts.

CASA deposits involve a multitude of transactions day in and day out in terms of withdrawal, remittance, statements of accounts, mandates, linkage to gateways and so on. All these transactions entail significant costs that are not accounted for while banks calculate CASA cost.

- **CASA Ratio** – It is the percentage of total bank deposits that are in a CASA, an important metric to determine the bank's liquidity.
- It indicates how much of a bank's total deposits accounts are in both current and savings.
  - **Higher CASA Ratio** - A bank has a higher proportion of stable deposits available for lending.
- **Significance** – CASA ratio reflects the bank's financial health and the bank's capacity to raise money with lower borrowing costs.

*The current account portion of CASA is called as a checking account. The customer can withdraw cash and write checks against the balance and it earns no interest.*

### Two Types of Banks Accounts

- **Term deposits** – It includes fixed or recurring deposits.
- It is valid for a fixed period of time and in return the bank pays interest at a fixed rate with the condition that you do not touch the money in the interim.
  - For example, you put in Rs 10,000 in a fixed deposit for a period of 7 years and the bank pays you an interest at the rate of 12% per annum.
- **Non-term deposits** – It includes current or savings accounts.
- They are used for daily operations and are valid as long as the customer wants them to be.
- They have lower interest rates than term deposits depending on the bank's terms and conditions.
  - For example, in an urban area ICICI Bank pays 4.0% interest on a savings account with cheque book on a minimum balance of Rs 10,000.

$$\text{CASA Ratio} = \text{CASA Deposits} \div \text{Total Deposits}$$

## 5.5 Committee of Creditors

*The recently Insolvency and Bankruptcy Board of India (IBBI) has issued guidelines for the Committee of Creditors (CoC).*

- **Committee of Creditors** – It is a group of people representing a company's creditors during a bankruptcy proceeding.
- It is the higher-level decision-making body in initiating and governing the Corporate Insolvency Resolution Process (CIRP).
- **Formation** – It is formed under the regulation 21 of the IBC Code 2016.
- This committee is majorly responsible for a bankrupted company's future and/or possible reorganization.
- **Composition** – A committee of creditors consists of both secured and unsecured creditors.
  - Secured creditors are associated with credits backed by collateral. An example of a secured creditor is a bank.
  - Unsecured creditors are associated with credits not backed by collateral. Examples of unsecured creditors are contractors and customers.
- **Roles and Responsibilities** – All important decisions are finalized after the approval of committee of creditors.
  - They are liable to decide about the restoration of the corporate debtor by accepting the resolution plan.
  - They Appoint insolvency resolution professionals to manage the insolvency process
  - They conduct regular meetings in which the rules are discussed for the working of interim resolution professionals.
  - They are responsible for the evaluation and approval of the resolution plan along with the modification, if any required.

*The **Insolvency and Bankruptcy Board of India** is the regulator for overseeing insolvency proceedings in India. It was established in 2016 under the Insolvency and Bankruptcy Code, 2016.*

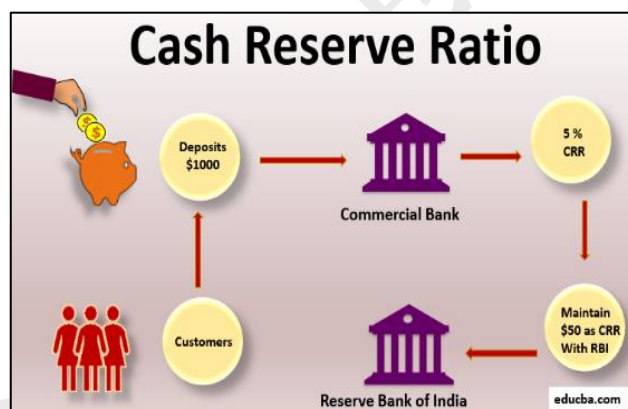
- Once the committee of creditors is confident about the practicality and viability of the proposed resolution plan, they can approve it with the mandate of more than 66% of the vote.

## 5.6 Cash Reserve Ratio (CRR)

Recently, there has been an expectation that the Reserve Bank of India (RBI) may announce a reduction in the Cash Reserve Ratio (CRR) by 25 basis points (bps) or 50 bps.

- CRR** – It is the percentage of **bank's public deposits** that the bank must maintain **as cash reserves** with the RBI.
- It is one of the main components of the RBI's monetary policy.
- CRR is decided by the Monetary Policy Committee (MPC) of RBI under Section 42 (1) of the Reserve Bank of India Act, 1934.
- RBI change this ratio from time to time at regular intervals.
- It applies to **all Scheduled Commercial Banks (SCB) excluding Regional Rural Banks (RRB)**.
- It is either stored in the bank's vault or sent to the RBI.
- Restriction on CRR** – Banks can't lend this money to corporates or any individual borrowers.
- It can't use CRR money for any investment purposes.
- Banks don't earn any interest on from this money.
- Features** – It ensures that a part of the bank's deposit is with the Central Bank.
- It ensures the security of the amount in case of any emergencies.
- It is a tool used by the RBI to manage high [inflation](#) and check excessive lending.

The Reserve Bank had last reduced the CRR from 4% on March 28, 2020, after **keeping it unchanged** at 3% for the previous 7 years. It was last changed to 4.5% on May 21, 2022.



Increase in CRR	Decrease in CRR
<ul style="list-style-type: none"> <li>When there is a threat of high inflation in the economy, RBI increases the CRR, so that banks need to keep more money in reserves.</li> <li>It effectively reducing the amount of money that is available with the banks.</li> <li>This curbs excess flow of money in the economy.</li> </ul>	<ul style="list-style-type: none"> <li>When there is a need to pump funds into the market, the RBI decreases the CRR rate.</li> <li>It helps the banks provide loans to a large number of businesses and industries for investment purposes.</li> <li>It boosts the growth rate of the economy.</li> </ul>

## 5.7 Information Ratio

SEBI's recent consultative paper recommends that asset management companies (AMCs) disclose their funds' information ratio (IR) to highlight risk-adjusted returns.

- The Information Ratio (IR) is a **quantitative measure** used to evaluate the **performance of an investment portfolio** or financial asset compared to a benchmark index, factoring in the volatility of the returns.
- The benchmark typically represents the market, an industry, or a specific sector.
- A higher information ratio indicates that the fund manager has **consistently outperformed the benchmark** and similar fund managers over a given period.
- IR figures are usually annualized for easy understanding.
- Calculation**

- Information Ratio =  $(\text{Portfolio Return} - \text{Benchmark Return}) / \text{Tracking Error}$
- The Portfolio Return refers to the portfolio's overall return.
  - **Benchmark Return** - The value of the benchmark index that was chosen.
  - **Tracking Error** - The standard deviation of the difference in portfolio returns from benchmark returns.
- **Applications for Information Ratio**
  - **Performance Evaluation** - Investors utilize internal rate of return (IR) to assess **portfolio manager performance**. It aids in analyzing whether the management is generating enough extra returns for the level of risk taken.
  - **Portfolio Comparison** - IR enables the comparison of many portfolios against the same benchmark, resulting in a standardized measure of **risk-adjusted performance**.
  - **Investment Decision-Making** - Investors utilize IR to make informed decisions about allocating funds to different portfolios or managers based on risk-adjusted returns.

## 6. FINANCIAL MARKET

### 6.1 Export Inspection Council (EIC)

Recently, the Export Inspection Council (EIC) has initiated an assessment on food testing infrastructure for exports.

- **EIC** – It is the apex advisory body to the Government.
- **Established in** – 1963, under section 3 of the Export (Quality Control and Inspection) Act, 1963.
- EIAs are located at Chennai, Delhi, Kochi, Kolkata and Mumbai.
- **Nodal agency** – Ministry of Commerce and Industry.
- **Vision** – To facilitate worldwide access for Indian exports to meet international norms.
- **Objectives** – To create an **export inspection & certification infrastructure** based on International Standards for Certification Authority in consonance with World Trade Organizations requirements.
- To instil confidence in importers as well as regulatory authorities of India's trading partners about quality and safety of products.
- **Role** – Notify commodities which will be subjected to quality control and/or inspection prior to export.
- Establish standards of quality for such notified commodities.
- Specify the type of quality control and/or inspection to be applied to such commodities.
- **Powers** – It exercises administrative control over the 5 Export Inspection Agencies (EIAs).
- Issue Certificates of origin to exporters under various preferential tariff schemes for export product.
- **Certification types**
  - Consignment wise inspection
  - Certification of quality of food items for export through installation of Food safety Management System in the food processing units.
- **International Recognitions** – It is recognized by European Union, United States, Australia, Turkey, Korea, Japan and among others.
- **Initiatives** – It is set to launch a user-friendly online portal integrating traceability modules, a Laboratory Information Management System (LIMS) and E-Health features.

	Active Equity Funds	Passive Equity Funds
<b>Fund Manager's Role in stock selection</b>	Active	Passive
<b>Expense ratios</b>	Higher	Lower
<b>Portfolio management</b>	Driven by different strategies	Driven by benchmark index
<b>Trading Frequency</b>	Higher	Lesser
<b>Capital Gains Tax</b>	Higher	Lesser
<b>Returns</b>	Relatively higher	Lesser
<b>Applicability</b>	For investors favoring fund managers' alpha generation potential	For investors who want to allocate exactly as per market index
<b>Examples</b>	ELSS (equity linked saving scheme)	Index mutual funds, Exchange-Traded Funds (ETFs)

## 6.2 India VIX Index

Recently, India VIX Index surged past the 21 mark amid Lok Sabha elections.

### The Volatility Index (VIX) or the Fear Index

- **VIX** – It is a measure of the market's expectation of volatility over the near term.
- It is a measure of the amount by which an underlying index is expected to fluctuate in the near term, (calculated as annualised volatility, denoted in percentage e.g. 20 per cent) based on the order book of the underlying index options.
- **Volatility** – It is often described as the 'rate and magnitude of changes in prices' and in finance often referred to as risk.
- Usually, during periods of market volatility, the market moves steeply up or down and the volatility index tends to rise.
- As volatility subsides, the Volatility Index declines.

- **India VIX** – It is India's volatility index, a measure of the market's expectation of volatility in near term.
- **Computed by** – The NSE based on the order book of NIFTY Options.
- **Usage** - 'VIX' is a trademark of the CBOE, and Standard & Poor's has granted a license to NSE, with permission from the CBOE, to use such a mark in the name of the India VIX.
- **Near term** – It depicts the expected market volatility over the next 30 calendar days.
- The higher the India VIX values, the higher the expected volatility and vice versa, as per NSE.
- **Impacts** – It typically risers ahead of events like the Lok Sabha elections, which could have a major impact on the market trajectory.
- **Significance** – Investors use it to gauge market volatility and base their investment decisions accordingly.

**The Chicago Board of Options Exchange (CBOE)** was the first to introduce the volatility index for the US markets in 1993 based on S&P 100 Index option prices.



## 7. EXTERNAL SECTOR

### 7.1 Sample India's FDI Flows

In FY23, India received lower Foreign Direct Investment (FDI) equity inflows than FY22 which raises the situation to analyse India's FDI status.

- **FDI** - It is a type of cross-border investment in which an investor from one country establishes a lasting interest in an enterprise in another country.
- FDI remains vital for bolstering domestic industry, stimulating growth and enhancing global competitiveness.
- **Investments under Automatic route**
  - It require no prior permission, resulting in minimal monitoring.
  - It only require the investor to inform the Reserve Bank of India (RBI) after the investment is made.
  - FDI up to 100%, under the automatic route is permitted for agriculture, manufacturing, airports, e-commerce, pharmaceuticals, and railway infrastructure.
- **Investments under Government route**
  - Prior to investment, approval from the Government of India is required.
  - It is permitted in sectors like defense & telecom (beyond 49%), mining (100%) and print media (26%).
- **Security clearances**
  - It apply only to specific areas such as broadcasting, defense, private security, civil aviation, and mining.
  - Ministry of Home Affairs (MHA) and Ministry of External Affairs (MEA) overseeing scrutiny and security clearance.

Top attractors of FDI between Oct 2019 and September 2023 - Maharashtra, Karnataka and Gujarat.

#### Status of India's FDI

- **Total FDI** – In terms of market value, the FDI amounted to Rs 50 lakh crore in FY23.
- **Inward FDI** – The USA was the largest source of inward FDI followed by Mauritius, the UK and Singapore which collectively accounted for 60% of the inward FDI in the country.
- **Outward FDI** – Singapore was the largest beneficiary of outward direct investment (ODI) by Indian firms.
- **Sector wise** – The manufacturing sector continued to attract the largest share of FDI equity, both at market value as well as at face value.
- **Services** – Among services, information & communication and financial & insurance activities were the major FDI recipient sectors.

### 7.2 Foreign Exchange Management (Non-debt Instruments) Amendment Rules, 2024

In pursuance of the Union Budget 2024-25 announcement, Department of Economic Affairs has amended the Foreign Exchange Management (Non-debt Instruments) Rules, 2019.

- Foreign Exchange Management (Non debt Instruments) Rules, 2019 was issued under Foreign Exchange Management Act, 1999.
- **Aim** - It aims to regulate the investment by foreign entities in non-debt instruments of Indian entities.
- Non-debt instruments consist of:
  - All equity investment instruments in incorporated entities such as public, private, listed and unlisted.
  - Capital participation in Limited Liability Partnerships.
  - All instruments of investment recognized in the FDI policy.

- Investment in units of Alternative Investment Funds (AIFs), Real Estate Investment Trusts (REITs), and Infrastructure Investment Trusts (InvIts).
- Investment in units of mutual funds or Exchange-Traded Fund (ETFs).
- Acquisition, sale or dealing directly in immovable property.
- Contribution to trusts.
- Depository receipts issued against equity instruments.

### The Amendments

- The transfer of equity instruments of an Indian company between a person resident in India and a person resident outside India by way of
  - Swap of equity instruments
  - Swap of equity capital of a foreign company
- Enabling Foreign Direct Investment (FDI) in White Label ATMs to boost financial inclusion nationwide.
- Harmonizing the definition of Startup Company with the definition of Department for Promotion of Industry and Internal Trade.
- **Aim of the amendments** - To Simplify rules and regulations for Foreign Direct Investment and Overseas Investment.
- **Objectives** – To simplify cross-border share swaps for greater Ease of Doing Business.
- To provide for the issuing or transferring of Indian company equity instruments in exchange for foreign company equity instruments.
- **Benefits of Amendment** – Facilitate the global expansion of Indian companies through mergers, acquisitions, and other strategic initiatives.
- Enabling Indian companies to reach new markets and grow their presence worldwide.

## GENERAL ECONOMY

### 8. PLANNING

Plan	Time Period	Focus
1	1951-56	Agriculture, irrigation & power projects (Based on Harrod-Domar model)
2	1956-61	Industrial development (Based on Feldman - Mahalanobis model)
3	1961-66	To make a self-reliant India (Based on John Sandy, Sukhmay Chakraborty model)
Annual Plans	1966-69	Emphasized on agriculture (Green Revolution and Bank Nationalization)
4	1969-74	Growth with stability and progress towards self-reliance
5	1974-79	Removal of poverty (Garibi Hatao)
Rolling Plan	1978-80	
6	1980-85	Strengthening the infrastructure for both agriculture and industry

7	1985-90	Rapid growth in food grains production & increased employment opportunities
<b>Annual Plans</b>	1990-92	
8	1992-97	Rapid economic growth & fiscal consolidation
9	1997-02	Growth with social justice and equity
10	2002-07	Accelerated GDP growth rate & job opportunities
11	2007-12	Faster and more inclusive growth
12	2012-17	Faster, more inclusive and sustainable growth

## 9. AGRICULTURE

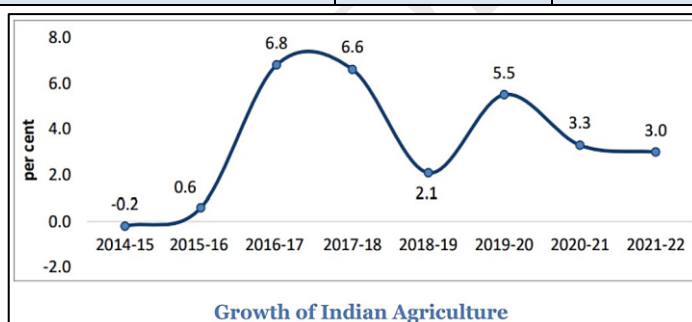
Description	Kharif Crops	Rabi Crops	Zaid Crops
<b>Season</b>	<ul style="list-style-type: none"> <li>Monsoon crops.</li> <li>They are sown when the rainy season begins (April-May).</li> <li>Harvesting is done in September-October.</li> </ul>	<ul style="list-style-type: none"> <li>Winter crops.</li> <li>Sown when winter season ends (Sep-Oct), Harvesting is done in June-July.</li> </ul>	<ul style="list-style-type: none"> <li>Summer crops.</li> <li>They are grown in the short duration between Rabi and Kharif crop season (March to June).</li> </ul>
<b>Conditions</b>	Require wet and hot conditions to grow	Require cold and relatively dry conditions to grow	Warm dry weather for major growth period, Longer day length for flowering
<b>Requirements</b>	Dependent on rainwater	Not dependent on rain water as too much water can be harmful for these crops	Grown on irrigated lands that do not have to wait for monsoons
<b>Examples</b>	Rice, Maize, Groundnut, cotton, Soybean, Pigeon Pea (arhar), Mung bean, Millets like Ragi, Jowar, Bajra, etc.	Wheat, Mustard, oats, barley, Sunflower, Onion, Coriander, Potato, Tomato, mustard, fenugreek, etc.	Cucumber, watermelon, Muskmelon, bitter gourd, pumpkin, ridge gourd, sunflower.

Crops	Producing States	Soil Type	Temperature	Rainfall
<b>Rice</b>	West Bengal, Uttar Pradesh, Tamil Nadu, Chhattisgarh, Andhra Pradesh, Haryana, Punjab, Orissa, Assam	Deep clayey & loamy soil	22 -32 °c	150-300 cm
<b>Wheat</b>	Uttar Pradesh, Punjab, West Bengal, Haryana, Gujarat, Uttarakhand, Rajasthan, Madhya Pradesh, Maharashtra	Well-drained fertile loamy and clayey loamy	10-15°C (Sowing), 21-26°C (Ripening & Harvesting)	75-100 cm
<b>Millets</b>	Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, Telangana, Uttarakhand, Jharkhand, Madhya Pradesh and Haryana	Grown in an inferior alluvial/loamy soil	27-32 °c	50-100 cm

<b>Sugar Cane</b>	Andhra Pradesh, Gujarat, Punjab, Uttar Pradesh, Tamil Nadu, Uttarakhand, Haryana, Maharashtra, Bihar, Karnataka	Deep rich loamy soil	21-27 °C	75-150 cm
<b>Tea</b>	Assam, Darjeeling (West Bengal), Meghalaya, Kerala, Himachal Pradesh, Tamil Nadu, Karnataka	Well drained, deep friable loamy soil	20-30 °C	150-300 cm
<b>Coffee</b>	Assam, Meghalaya, Kerala, Arunachal Pradesh, Andhra Pradesh, Manipur, Nagaland, Karnataka, Tamil Nadu, Telangana, Odisha	Well drained, deep friable loamy soil	15-28 °C	150-250 cm
<b>Cotton</b>	Andhra Pradesh, Odisha, Haryana, Madhya Pradesh, Karnataka, Tamil Nadu, Maharashtra, Gujarat, Punjab	Black soil of Deccan & Malwa Plateau, red, laterite & alluvial soils	21-30 °C	50-100 cm

### Status of agriculture sector in India

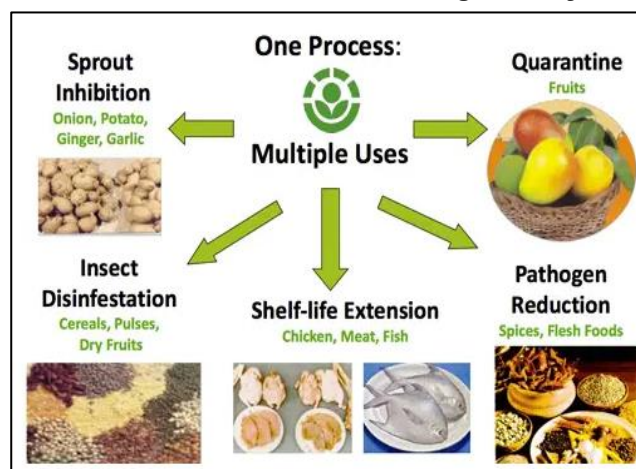
- **Contribution to India's GVA** - 18.3% (2022-23)
- **Population involved** - 54.6% of the total workforce (Census 2011)
- **Growth** - 3% in 2021-22 compared to 3.3% in 2020-21
- In recent years, India has also rapidly emerged as the net exporter of agricultural products.
- During 2021-22, agricultural exports reached an all-time high of US\$ 50.2 billion.



## 9.1 Food Irradiation

Indian government plans to expand irradiation process to boost shelf life of onion buffer stock.

- **Definition** – It is the physical process in which food and agricultural commodities, in pre-packed form or in bulk, are exposed to a controlled amount of ionizing radiations.
  - **Sources** – Gamma rays, X-rays and electron beam.
- **Principle** – Radiation by its direct effect on macromolecules and indirect effects through radiolysis of water inactivates essential biomolecules of insects, parasites & microorganism.
- **Prevention of Foodborne Illness** – It eliminates organisms like Salmonella and Escherichia coli (E. coli).
- **Preservation** – Destroy or inactivate organisms that cause spoilage and decomposition and extend the shelf life of foods.
- **Control of Insects** – Destroy insects and also decreases the need for other pest-control practices that may harm the fruit.
- **Delay of Sprouting and Ripening** – Inhibit sprouting (e.g., potatoes) and delay ripening of fruit to increase longevity.
- **Sterilization** – Sterilized foods can then be stored for years without refrigeration and used for immune compromised persons.
- **Pros** – It does not make foods radioactive, compromise nutritional quality, or noticeably change the taste, texture, or appearance of food.



### Quick Facts

- **Irradiation of Onion** – Department of Consumer Affairs has asked 2 agencies (NCCF and NAFED) to identify 50 centres where onions procured for the buffer stock can be irradiated and stored.
- The procurements are done under the Price Stabilisation Fund.
- **NCCF** – The National Consumers' Cooperative Federation, aims to promote consumer cooperative movement in the country, to facilitate the voluntary formation and democratic functioning of cooperatives, based on self-reliance and mutual aid for overall economic betterment and financial autonomy.
- **NAFED** – The National Agricultural Cooperative Marketing Federation of India, was established in 1958, registered under the Multi State Co-operative Societies Act.
- It aims to promote Co-operative marketing of agricultural produce to benefit the farmers.
- **Price Stabilisation Fund** – Established in 2014-15 under the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW).
- It aims to regulate the cost volatility of essential agricultural commodities, such as onion, potatoes and pulses.

## 9.2 PUSA-44

Many challenges are associated in the curbing cultivation of a banned rice variety in Punjab.

- **PUSA-44** – A paddy variety developed in 1993, by the Indian Council for Agricultural Research (ICAR).
- **Concerns** – It takes longer to grow and requires more water thus requiring 5 to 6 extra cycles of irrigation.
- Moreover, this variety is also known to exacerbate the issue of stubble burning in the state which greatly contributes to winter pollution in northern India.
- **Benefits of banning** – It had reportedly saved 5 billion cusecs of water & saved Rs. 477 crores through reduced power consumption.
- **Challenges** – It is still used owing to higher yield of around 32 to 36 quintals per acre and thus ensuring higher incomes.
- **Measures** – Punjab government is promoting PR-126 variety.

Punjab government banned PUSA-44 in 2023 while varieties like Peeli PUSA and Dogar PUSA were discouraged.

The straw stubble of the rice crop planted in the kharif season (from July to October) is left in the fields as the winter crops (for the Rabi season from November to March) are set to be planted.

### WHY GOVT WANTS PUSA-44 OUT: IT NEEDS...

36% more on preparing paddy nursery	21.6% more on labour cost
66.5% more on fertilizers	34% more on usage of tractor
40% more on plant protection	9% more on Mandi labour
36% more on irrigation	Total 29.6% more as compared to PR-126 per acre

### NURSERY TO HARVEST (in days)

Pusa-44 PR-126

155-160 125

### YIELD (quintals per acre)

Pusa-44 PR-126

35-36 30-32

## 9.3 Uses of Sweet sorghum

Research shows that Sweet sorghum might offer solutions in drought-hit southern Africa.

- **Sweet Sorghum** – It is a hardy, nutritious, biofuel crop.
- It is indigenous to the African continent.
- **Food Security** – It can produce grains, animal feed and sugary juice in stalk, making it unique among crops.
- The grains are prepared as steamed bread or porridge malt for traditional beer.



- **Nutritional security** – They're nutritionally rich, with high energy values, proteins, carbohydrates, and fibre as well as essential minerals such as potassium, calcium, sodium and iron.
- **Biofuel production** – Its sweet juice contains sucrose, glucose and fructose, which are essential for bioethanol production.
- **Drought resilient** – It enters a dormant state during extended periods of dryness and resumes growth afterwards.
- Under intense water scarcity conditions, it makes use of its stalk juice to supplement its plant needs.
- **Advantage over Maize** – Though both have similar nutrients, it is resilient in arid climates and produces more bioethanol.
  - For instance, it produces a lot of biomass as it grows, which is left over after harvest, which can be used as animal feed.

*Sweet sorghum's ability to withstand low water and nitrogen inputs, as well as its tolerance for salinity and drought stress, makes it an ideal crop for farmers in arid regions. It is widely cultivated in US, Brazil and China.*

### Biofuel Crops

- **Examples** – Sugarcane, maize, grain sorghum, sugar beet, rapeseeds and sunflower.
- **Uses** – They are rich in starch, sugar or oils that can be converted into bioethanol directly or through a fermentation process.
- **Bioethanol** – A type of ethanol produced from biological or plant based sources, emits fewer greenhouse gases compared to fossil fuels like petroleum, natural gas and coal.
- Among all crops, Sugarcane produces more biofuel.
- **Challenges** – They are highly susceptible to extreme weather events.
- They require high upfront investment for fertilisers, chemicals and irrigation and also compete with food production.

## 9.4 Makhana Cultivation

Makhana have become a popular 'super snack', with prices rising sharply in both domestic and international markets since 2019.

- **About** - Foxnuts or Makhana is an aquatic crop traditionally grown in India.
- **Botanical Name**- Euryale ferox.
- **Common Names**- Fox nut, Gorgon nut, Phool Makhana.
- **Production**- Makhana, is mainly cultivated in the states of **Bihar, West Bengal and Assam**.
- **Climate**- Makhana is an aquatic crop and requires a warm, humid climate.
- It is typically cultivated in areas with temperatures ranging from **20°C to 35°C**.
- **Soil**- It thrives in loamy and clayey soils with good water retention capacity. The pH of the soil should be between 5.5 to 7.5.
- **Nursery Preparation**- Seeds are collected from mature Makhana fruits.
  - Seeds are soaked in water for 24-48 hours before sowing.
  - Seeds are sown in nursery beds or trays filled with a mixture of soil and cow dung.
- **Main Field Preparation**- Select low-lying areas or water bodies like **ponds, lakes, or wetlands**.
  - **Transplanting**- Seedlings are transplanted into the main field after 30-40 days when they are about 15-20 cm tall.
- **Fertilization**- Organic fertilizers like cow dung can be applied. Chemical fertilizers are generally avoided.
- **Harvesting**- Makhana plants take about **4-5 months** to mature.

*Bihar is the leading producer of makhana accounting for more than **90%** of the total production of India. India contributes to **80%** of the world's demand.*

- The seeds are harvested when the fruits start to crack and the seeds float on the water surface.
- **Nutritional value** - The crop is a good source of vegetarian **protein**, at 10%, and contains five of the **nine amino acids**.
- There are also **quercetin and kaempferol flavonoids**, both of which protect against diabetes and obesity.
- It is considered a 'super snack' because they are low in calories, rich in protein, and contain essential nutrients.
- **Makhana Development Scheme** – The Bihar government runs the Makhana Development Scheme that gives a **75% subsidy** on the Suvarna Vaidehi variety of seeds, calculated at ₹97,000 per hectare.
- Makhana is approved under the Union government's **One District One Product scheme**, which provides subsidies to food processors for branding, marketing, and infrastructure development.

## 9.5 NUE rice variety

The scientists have identified major natural variations in rice nitrogen use efficiency (NUE), along with key traits and genes linked to this efficiency.

- **Nitrogen use efficiency (NUE)** - It's the ratio between grain yield or nitrogen uptake by plants to the amount of urea used as input.
- On average, rice plants use only 20–50% of the nitrogen fertilizer applied to them.
- **Significance** - It is used to measure how well rice plants use nitrogen and is crucial for reducing fertilizer waste and environmental pollution.
- **Economic Impact** - Poor NUE causes fertilizer waste worth Rs 1 lakh crore annually in India and \$170 billion globally.
- **Environmental Impact** – Less NUE crops cause greenhouse gas emissions and eutrophication in water bodies.
- **Benefits of High NUE varieties** - Enhanced agricultural sustainability by lowering fertilizer input costs, increased farmer productivity and profitability, and reduced environmental pollution.

India is a signatory to the **Kunming-Montreal Global Biodiversity Framework (2022)**, which mandates countries to halve their nutrient waste from all sources by 2030.

### NUE rice varieties

- Long duration High NUE rice varieties - **Khira and CR Dhan 301**.
- Short duration High NUE rice variety - **Dhala Heera variety**.
- Short duration high NUE varieties are better than long duration varieties.

## 9.6 Bhartiya Beej Sahkari Samiti Limited (BBSSL)

Recently, the Ministry of Cooperation has set up Bhartiya Beej Sahkari Samiti Limited (BBSSL) under the Multi-State Cooperative Societies (MSCS) Act, 2002.

- It is primarily **focused on seed production and distribution to support agricultural practices** across multiple states in India.
- **Nodal agency** – Ministry of Cooperation.
- **Promoted by** – IFFCO, KRIBHCO, NAFED, National Dairy Development Board (NDDB) and NCDC.
- It set up under the **Multi-State Cooperative Societies (MSCS) Act, 2002**.
- **Functions** – It will undertake the production, procurement & distribution of quality seeds under a single brand through a network of cooperatives.
- The cooperatives will improve crop yield and develop a system for preservation and promotion of indigenous natural seeds.
- It will help increase the seed replacement rate and variety replacement rate by ensuring farmers' role in producing certified seeds.
- **Focus** – This society will focus on producing, testing, certifying, procuring, processing, storing, branding, labelling and packaging foundation and certified seeds.

The share of India's domestic seed trade in the global market is only 4.5%.

- Breeder seeds will be sourced from Public Sector Research Organizations and International Research Institutes like ICRISAT, IRRI, and CIMMYT.
- This will be done through Primary Agricultural Credit Societies (PACS), leveraging various government schemes and policies using a 'Whole of the Government Approach'.
- **Significance-** It will increase the following:
  - Production of quality seeds in India through cooperatives,
  - Reducing dependence on imports,
  - Enhancing agricultural production,
  - Boosting the rural economy and
  - Promoting Make in India (Atmanirbhar Bharat).

## 9.7 Soil Degradation and retrogression

The Minister of Agriculture and Farmers' Welfare raised a concern over soil degradation, which affects 30% of the India's land.

### Soil Degradation

- It is the physical, chemical and biological decline in soil quality.
- It is caused by its improper use or poor management, usually for agricultural, industrial or urban purposes.
- Soil degradation can involve the following:
  - Water erosion, including sheet, rill and gully erosion
  - Wind erosion
  - Salinity, including dryland, irrigation and urban salinity
  - Loss of organic matter
  - Fertility decline
  - Soil acidity or alkalinity
  - Structure decline, including soil compaction and surface sealing
  - Mass movement
  - Soil contamination, including the effects of toxic chemicals and pollutants.

12 million hectares of agricultural soils are lost globally through soil degradation every year.

India produces over 330 million tons of food grains annually and exports agricultural products worth \$50 billion.

- **Influencing Factors** – Excessive use of fertilizer, imbalance in nutrient application, unsustainable exploitation of natural resources, and poor soil management practices.
- **Soil degradation in India** - 30% of the soil in India is degraded.
- Of this, around 29% is lost to the sea, 61% is transferred from one place to another, and 10% is deposited in reservoirs.
- The worst affected states are Punjab, Haryana, Gujarat, Maharashtra, Andhra Pradesh and Telangana.

### UN convention / multilateral treaty for Soil Conservation

- Land Degradation Assessment in Dryland (LADA) (FAO, 2020b),
- Global Assessment of Human-Induced Soil Degradation (GLASOD) 1991 (ISRIC, 1991),
- United Nations Convention to Combat Desertification (UNCCD) (UNCCD, 1994).

### Soil Retrogression

- Soil retrogression refers to the degradation of soil where it reverts back to a less developed or more primitive state, often resembling its initial, natural state.
- Retrogression is primarily due to soil erosion and corresponds to a phenomenon where succession reverts the land to its natural physical state.
- It is a form of evolution that is distinct from normal evolution and is influenced by the local climate and vegetation.

- It results in reduction in ecosystem productivity and standing plant biomass, declines in the availability of nutrients and shifts in both aboveground and belowground communities.
- It gets dominant by nutrient-stress-tolerant, slow-growing species that are adapted to nutrient poor conditions.

### 9.8 Third Advance Estimates of Horticultural Crops for 2023-24

The Department of Agriculture and Farmers' Welfare has released the Third Advance Estimates of 2023-24 of Area and Production of various Horticultural Crops.

- **Horticulture production 2023-24** - It is estimated to be about 353.19 million Tones, decrease of about 22.94 Lakh Tones (0.65%) over 2022-23 (Final Estimates).

Total Horticulture	2022-23	2023-24 (2nd Adv. Est.)	2023-24 (3rd Adv. Est.)
Area (Million Ha)	28.44	28.63	28.98
Production (Million Tonne)	355.48	352.23	353.19

- Production of Fruits, Honey, Flowers, Plantation Crops, Spices and Aromatics & Medicinal Plants were increased.
- **Production of Fruits** - It is expected to increase by 2.29 % over 2022-23 i.e. to 112.73 million Tonne.
- **Major contributors** - Production of mango, banana, lime/lemon, grapes and custard apple have increased.
- Production of apple, sweet orange, mandarin, guava, litchi, pomegranate, pineapple are expected to decrease as compared to 2022-23.
- **Production of Vegetables** - It is envisaged to be around 205.80 million Tones.
- Increase is expected in production of tomato, cabbage, cauliflower, tapioca, bottle gourd, pumpkin, carrot, cucumber, bitter gourd, parwal.
- Decrease in production is envisaged in potato, onion, brinjal, elephant foot yam, capsicum, and other vegetables.
- **Production of Onion** – It is expected to be at 242.44 Lakh Tonne in 2023-24.
- **Potato production** - It is expected to around 570.49 Lakh Tonne in 2023-24.
- It is, mainly due to decrease in production reported in Bihar and West Bengal.
- **Production of Tomato** – It is expected to be 213.20 Lakh Tonne in 2023-24 compared to around 204.25 Lakh Tonne last year, an increase by 4.38.

### 9.9 Global Strategy for Resilient Drylands (GSRD) 2030

Recently, the Consultative Group on International Agricultural Research (CGIAR) has launched the CGIAR 2030 Global Strategy for Resilient Drylands (GSRD) at COP16 summit in Riyadh, Saudi Arabia.

- **Drylands** – Are areas with a scarcity of water that cover more than 40% of the Earth's land surface.
- **Global drylands** – It makes up 46% of the world's land area.
- It supports nearly half of the livestock and 44% of food systems are present in this region.
- It is home to some of the world's poorest and most climate vulnerable communities.
- It warms at a rate of 20-40% higher than other regions.
- The factors leading to dryness in this region are:
  - Rising temperatures,
  - Soil degradation,
  - Unpredictable rainfall patterns and
  - Exacerbate food insecurity.

- **Global Strategy for Resilient Drylands (GSRD)** – Aims to revolutionize dryland agriculture and nurture resilient livelihoods in dryland communities globally.
- It provides a roadmap to enhance food security, conserve biodiversity and build resilient livelihoods for the 2.7 billion people inhabiting drylands, particularly in Asia and Africa.
- It commits to a thriving and resilient future for the millions of people who depend on drylands for their food and livelihoods.
- **Launched by** – Consultative Group on International Agricultural Research (CGIAR).
- **Spearheaded by** – International Center for Agricultural Research in the Dry Areas (ICARDA) of CGIAR and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).
- The 5 key areas of focus by the strategy are:
  1. Adapting agro-food systems to climate change
  2. conserving biodiversity
  3. sustainably managing soil and water resources
  4. promoting healthy diets
  5. fostering inclusive development

#### Consultative Group on International Agricultural Research (CGIAR)

- It is a global research partnership for a food-secure future dedicated to transforming food, land, and water systems in a climate crisis.
- It is the world's largest public global agricultural innovation network.
- **Founded** – 1971.
- **Headquarters** – France.
- It works with partners in 6 major regions.
- It is dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources.

### 9.10 Krishi Vigyan Kendras (Farm Science Centre)

*Government makes continuous efforts to upgrade the infrastructure of KVKs across the Country for better services to the farmers.*

- **KRISHI** – Knowledge based Resource Information System Hub for Innovation in agriculture
- **Establishment** – Based on the recommendation of the Education Commission (1964-66), Planning commission and by **Dr. Mohan Singh Mehta committee (1973)**.
- It is 100% financed by Government of India.
- **Mandate** – They are an integral part of the National Agricultural Research System (NARS).
  - **On-farm testing**
  - **Frontline demonstrations**
  - **Capacity development**
  - **Knowledge and Resource Centre**
  - **Farm advisories**
- **Activities** – They assess technologies and conduct technology demonstration in farmers' fields for their adoption by the farmers.

*1<sup>st</sup> KVK, on a pilot basis, was established in 1974 at Pondicherry under the administrative control of the Tamil Nadu Agricultural University, Coimbatore. Currently, there are about 731 KVKs.*

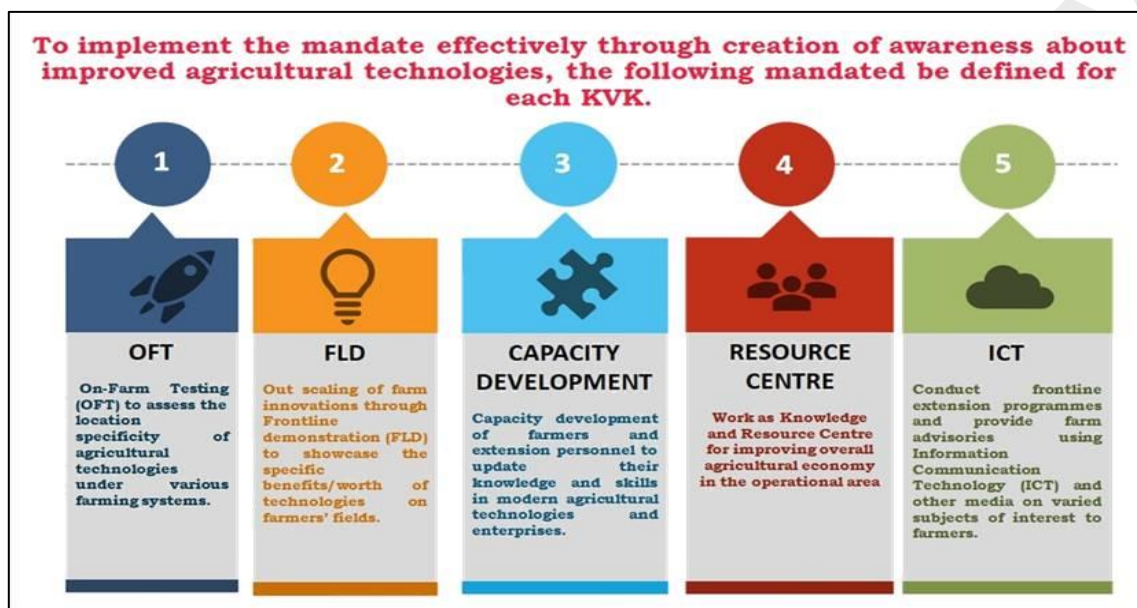
They produce quality technological products (seed, planting material, bio-agents and livestock) and make it available to farmers.

- They identify and document selected farm innovations and converge with ongoing schemes and programs within the mandate of KVK.



- **Monitoring and review** – It are done regularly at:
  - **National level** – Indian Council of Agricultural Research
  - **Zonal level** – Agricultural Technology Application Research Institutes
  - **University level** – Agricultural Universities
  - **District level** – Scientific Advisory Committee
- They are also reviewed by the Government periodically through Quinquennial Review Teams and 3<sup>rd</sup> Party.

Number of Krishi Vikas Kendras	
Body/Institution	Numbers
State Government	38
ICAR	66
NGO	101
Agricultural Universities	509



### 9.11 Primary Agriculture Cooperative Credit Societies (PACS)

The Government has recently allowed Primary Agricultural Credit Societies (PACS) to operate Retail Petrol/ Diesel outlets and LPG Distributorships.

- Primary Agricultural Credit Societies are the grass root level arms of the short-term co-operative credit structure.
- **Rural (agricultural) borrowers** – PACS deals directly with the rural (agricultural) borrowers, give those loans and collect repayments of loans given and also undertake distribution and marketing functions.
- **Final link** – It serves as the final link between the ultimate borrowers on the one hand and the higher financing agencies, namely the Scheduled Commercial Banks, and the RBI/NABARD on the other hand.

#### Organisational Structure of PACS

- **General Body of PACS** – Exercise the control over board as well as management.
- **Management Committee** – Elected by the general body to perform the work as prescribed by the society's rules, acts, and by-laws.
- **Chairman, Vice-Chairman, and Secretary** – Work for the benefit of the members by performing their roles and duties as assigned to them.
- **Office Staff** – Responsible for performing day to day work.
- **Significance of Primary Agriculture Credit Society** – For the uninitiated, a PACS is the first building block of the century-old cooperative banking system of India.

- PACS can play a colossal role, in bringing farmer communities closer to credit, inputs, market and value addition.
- No commercial bank branch can ever come close to providing the kind of services a Primary Agriculture Credit Society (PACS) can.
- PACS can also play a major role by integrating its warehouse with the physical and financial supply chain of agro-commodities in the upcoming Garmin Agriculture Markets (GrAMs) or large warehouses in the private sector.
- **Combined Category 2 (CC-2)** – PACS have been included under Combined Category 2 (CC-2) for retail Petrol/ Diesel dealership and Combined Category (CC) for LPG Distributorship.
- They can apply online as per the advertisements issued by Oil Marketing Companies (OMCs).
- **Strengthening of Primary Agriculture Cooperative Credit Societies (PACS)** – Refers to the process of enhancing the capacity, efficiency, and effectiveness of these cooperative institutions.
- It will be providing multiple services to the farmers and rural agricultural communities, apart from credit and financial services.
- By strengthening PACS, governments and stakeholders aim to improve the overall state of agriculture, uplift rural communities, and promote inclusive economic growth.
- These efforts can contribute to poverty reduction, food security, and sustainable development in agrarian economies.

## 9.12 National Agriculture Code

*The Bureau of Indian Standards (BIS) has begun the process of formulating a National Agriculture Code (NAC), on the lines of the existing National Building Code and National Electrical Code.*

- It will cover the entire agriculture cycle, and will also contain a guidance note for future standardization.
- It will serve as a guide for farmers, agriculture universities, and officials involved in the field.
- The first part will contain general principles for all crops, and the second will deal with crop-specific standards for paddy, wheat, oilseeds, and pulses.
- It will also cover all agriculture processes and post-harvest operations, such as:
  - Crop selection,
  - Land preparation,
  - Sowing/transplanting,
  - Irrigation/drainage,
  - Soil health management,
  - Plant health management,
  - Harvesting/threshing,
  - Primary processing,
  - Post-harvest, sustainability and
  - Record maintenance.
- It will also include standards for input management, like use of chemical fertilisers, pesticides, and weedicides, as well as standards for crop storage and traceability.
- The NAC will cover all new and emerging areas like natural farming and organic farming, as well as the use of Internet-of-Things in the field of agriculture.
- **Objectives** – To create a code covering recommendations for agriculture practices taking agro-climatic zones, crop type, socio economic diversity of the country and all aspects of agrifood value chain into consideration.
- To act as an enabler of quality culture in agriculture by providing the required reference to policy makers, agriculture departments and regulators for incorporating the provisions of NAC.

- To create a comprehensive guide for the farming community to ensure effective decision making in agricultural practices.
- To integrate relevant Indian Standards with recommended agricultural practices.
- To address the horizontal aspects of agriculture such as SMART farming, sustainability, traceability and documentation.
- To aid in the capacity building program organized by agriculture extension services and civil society organisations.
- **Deadline** - The panels will draft the code, with a tentative deadline for the NAC set as October 2025.

### 9.13 Good Agricultural Practices (GAP) & INDGAP

As a significant step to empower the farming community of Uttarakhand, APEDA has taken the key initiative for implementation and certification of Good Agricultural Practices (GAP) for over 350 farmers.

- **GAP** – They are some **codes, standards, regulation** followed in farm practices which were introduced in Europe, for the 1<sup>st</sup> time in the world, to ensure the food safety and quality.

- **Aim** – To deliver to the consumer healthy and safe high quality food and non-food products.

#### 4 Pillars

1. Economic viability
2. Environmental viability
3. Social acceptability
4. Food safety and quality

- **Stakeholders** – Governments, farmers, processors (food processing industries) and consumers.

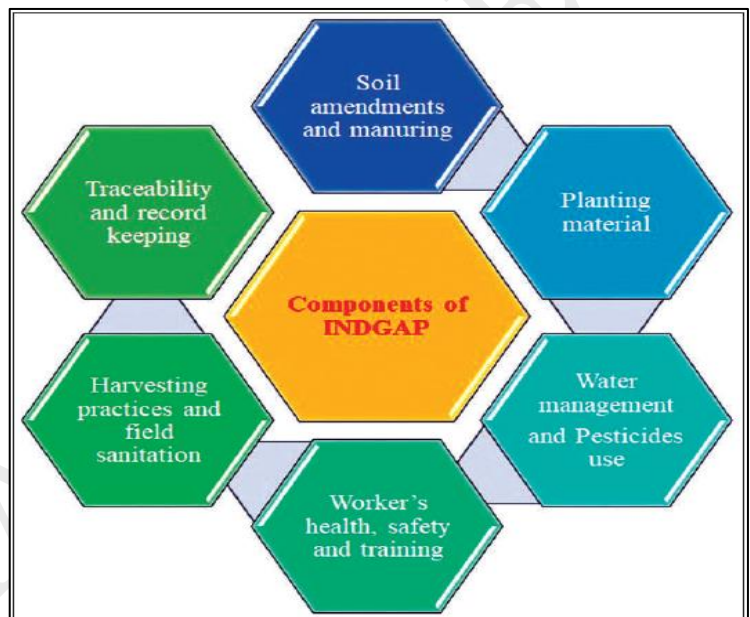
- **Focus** – It focus at two levels,

1. **Farm level focus** – From pre-harvest preparation, production and harvesting including transport to pack house.
2. **Pack level focus** – Post-harvest handling process like washing, grading, packing, storing, etc., including transport to consumers.

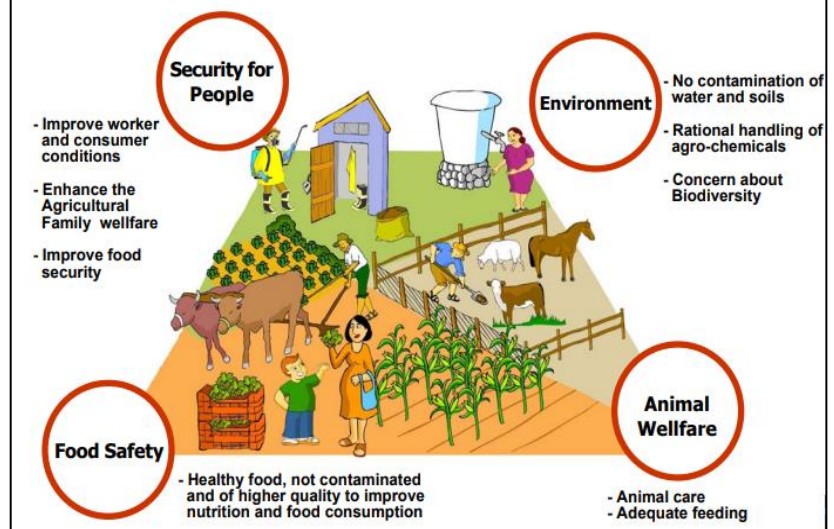
- **Potential benefits** – It helps improve the safety and quality of food and other agricultural products.

- It reduces the risk of non-compliance with national and international regulation, standards and guidelines.

- It also helps in promoting sustainable agriculture.
- It will ensure sustainable yield with development of livelihood.



#### What do the GAPs foster?



## Indian Good Agricultural Practices (INDGAP)

- **INDGAP** – It have been formulated to ensure the quality of our farm produce in the international market.
- These standards are voluntary and non-discriminatory to the growers.
- **Certification** - Quality Council of India (QCI) conduct voluntary certification scheme for these projects.
- **Institutional support** – It includes National Horticulture Board, APEDA, Spices Board, and National Medicinal Plants Board.
- These institutes encourage certified GAP and offer training on GAP procedures to equip farmers for globalized marketing.
- **Benefits for Uttarakhand** - This facilitates quality supply of agricultural products such as Mango & Vegetables from the state for exports to European Union (EU), UK, amongst other countries.

### 9.14 Livestock census

*The Union Minister of Fisheries, Animal Husbandry and Dairying recently launched the 21<sup>st</sup> Livestock Census in New Delhi.*

- The census carries out a headcount of the number of domesticated **animals, poultry and stray animals** in the country.
- **Duration** – Conducted **every 5 years**.
- Since 1919, a total of 20 livestock censuses have been carried out so far, with the last being conducted in 2019.
- The census takes into account information about the species, breed, age, sex and ownership status of the animals.

#### Livestock Census, 2024

- **Animals species included in the 21<sup>st</sup> census** – 16 animal species.
- These include cattle, buffalo, mithun, yak, sheep, goat, pig, camel, horse, ponies, mule, donkey, dog, rabbit and elephant.
- In total, the census will capture information on 219 indigenous breeds of these 16 species recognized by ICAR-National Bureau of Animal Genetic Resources (NBAGR).
- Besides these, the census will also carry out a headcount of poultry birds such as fowl, chicken, duck, turkey, geese, quail, ostrich, and emu.
- The census this time will be fully digitized, like the last one in 2019.
- The 21<sup>st</sup> census will capture several new data points. These include:
  - **Data on pastoral animals, pastoralists** - The census will, for the first time, collect data on the contribution of pastoralists to the livestock sector, their socio-economic status, and livestock holding.
  - **More details, granular information** - The census will find out the proportion of households whose major income comes from the livestock sector.
  - It will also contain data on the gender of stray cattle.
- **Significance** - In terms of productivity, especially in the agriculture sector, poultry and animal husbandry contributes to roughly 30% of the Gross Value Added (GVA).
- In the economy overall, the livestock sector's GVA stands at roughly 4.7%. For comparison, the whole agriculture sector contributes to a GVA of roughly 15%.
- The Livestock Census will provide data pertaining to Goal 2 (Zero Hunger), and Target 2.5 (to maintain genetic diversity in food and nutrition), specifically Indicator 2.5.2 (The percentage of local livestock breeds that are at risk of extinction) of the SDGs.

*GVA refers to the total output of a sector minus the cost of intermediate consumption.*

### 9.15 14th Asian Fisheries and Aquaculture Forum (14AFAF)

*Recently, the Minister of Fisheries, Animal Husbandry & Dairying inaugurated the 14<sup>th</sup> Asian Fisheries and Aquaculture Forum (14AFAF) in New Delhi.*



- **AFAF** – It is a **scientific forum** organized once in every 3 years.
- **Organized by** – Asian Fisheries Society (AFS).
- **14AFAF Theme** – Greening the Blue Growth in Asia-Pacific.
- **Aim** – To address key issues towards developing sustainable fisheries and aquaculture.
- **Purpose** – To provide an **international platform** for eminent scientists, young researchers, and other stakeholders across the globe to share their research experiences and innovative ideas.
- **Global Collaboration** – It focus on fostering cooperation in fisheries and aquaculture.
- It serves as an international collaboration, uniting stakeholders from various nations to discuss innovations in the fisheries sector.
- It uses the technologies, concentrating on improving fish varieties and production methods.
- **India's contributions** – To fisheries, enhances international relations, and promotes sustainable fish production.
- To enhance partnerships and propel initiatives for a sustainable and resilient fisheries industry.

*India emerged as the **world's 2nd largest** producer in the total fish and aquaculture production.*

#### Initiatives for Fisheries Sector

- **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** – It is a flagship program aimed at **boosting fish production**.
- **Digital solutions** – National Digital Fisheries Platform are being rolled out, featuring vessel monitoring systems and **emergency alerts for fishermen**.
- **Kisan Credit Card scheme** – It is now available for fishers, providing essential financial assistance.
- **Technological Advancements** – Indian Council of Agricultural Research (ICAR) has developed 75 innovative fisheries technologies focused on fostering sustainable and carbon-neutral aquaculture practices.

### 9.16 National Mission on Edible Oils - Oil seeds

*Cabinet Approves National Mission on Edible Oils – Oilseeds (NMEO-Oilseeds) for 2024-25 to 2030-31.*

- **Aim** - It is an initiative aimed at boosting domestic oilseed production and achieving self-reliance in edible oils.
- **Duration** - The Mission will be **implemented over a 7-year period**, from 2024-25 to 2030-31.
- **Ministry** – Ministry of Agriculture and Farmers Welfare.
- **Key crops** - It will focus on **enhancing the production of key primary oilseed crops** such as Rapeseed-Mustard, Groundnut, Soybean, Sunflower and Sesamum.
- It also focuses on increasing collection and extraction efficiency from secondary sources like Cottonseed, Rice Bran, and Tree Borne Oils.
- **Targets** – The mission aims to increase primary oilseed production from 39 million tonnes (2022-23) to 69.7 million tonnes by 2030-31.
- Together with **NMEO-OP (Oil Palm)**, the Mission targets to increase domestic edible oil production to 25.45 million tonnes by 2030-31 meeting around 72% of our projected domestic requirement.
  - Around 9 MT of palm oil is imported every year to the tune of Rs. 40,000 crore which is around 56 % of the total imports of edible oil.
- This will be achieved by promoting adoption of high-yielding high oil content seed varieties, extending cultivation into rice fallow areas, and promoting intercropping.
- **Features** – The Mission will harness ongoing development of high-quality seeds by using cutting-edge global technologies such as genome editing.
- The Mission also seeks to expand oilseed cultivation by an additional 40 lakh hectares by targeting rice and potato fallow lands, promoting intercropping, and promoting crop diversification.



- **SATHI Portal** – To ensure the timely availability of quality seeds, it will introduce an online 5-year rolling seed plan through the ‘Seed Authentication, Traceability & Holistic Inventory (SATHI)’ Portal.

### National Mission on Edible Oils - Oil Palm (NMEO-OP)

- It is a Centrally Sponsored Scheme in India aimed at enhancing the production of edible oils and oilseeds.
- **Launched in** – 2021.
- **Target** - The mission plans to expand oil palm cultivation to 10 lakh hectares by the year 2025-26.
- **Funding** - The cost of the initiative is shared between the Central and State Governments at a ratio of 60:40 for general states and 90:10 for northeastern states.

## 9.17 Hand-in-Hand (HIH) Initiative

Recently, the Food and Agricultural Organisation (FAO) Director-General opens the third Hand-in-Hand Investment Forum.

- It is a program by the Food and Agriculture Organization (FAO), United Nations.
- **Aim**
  - Eradicating poverty (SDG1),
  - Ending hunger and malnutrition (SDG2), and
  - Reducing inequalities (SDG10).
- It uses advanced geospatial modelling and analytics, as well as a robust partnership-building approach to accelerate the market-based transformation of agrifood systems.
- **Launched in** – 2019.
- **Focused areas** - It focuses on countries and territories where
  - Poverty and hunger are highest
  - National capacities are limited
  - Operational difficulties are greatest due to natural or man-made crises
- The HiH Initiative also has an open-access geospatial platform that provides Food security indicators, Agricultural statistics and Access to millions of data layers from different domains and sources.
- **Members** - At present, 72 countries that have joined.

### Food and Agricultural Organization (FAO)

- **About-** It is a specialized agency of the United Nations that leads international efforts to defeat hunger.
- **Established year-** 1945.
- **Headquarters-** Rome, Italy
- **Goal-** To achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.
- **Membership-** 195 members including the European Union.
- **India-** It is one of the founding members of FAO.
- **Codex Alimentarius Commission** – It is created by WHO and FAO in 1961 to develop food standards, guidelines and texts such as codes of practice under the Joint FAO/WHO Food Standards Programme.
- **Publications** – The State of Food and Agriculture, The State of Food Security and Nutrition in the World, The State of World’s Forests, The State of Fisheries and Aquaculture etc.,

## 9.18 Price Monitoring System (PMS) version 4.0

Union Food and Consumer Affairs Ministry has launched the Price Monitoring System (PMS) Version 4.0 and Mobile App.

- **Price Monitoring System** – The price Monitoring Division (PMD) in the monitors prices of selected essential commodities.
- **Ministry** – Consumer Affairs, Food and Public Distribution.
- It monitors retail and wholesale prices and spot and future prices of selected essential commodities daily.
- It also implements commodity-specific market intervention schemes in the event of shortage and to control prices.
- Civil Supplies Departments of **34 States/UTs** provide information on 550 market centers.
- **Monitored Commodities – 38**
  - **Earlier 22** - Rice, Wheat, Atta, Gram Dal, Tur (Arhar) Dal, Urad Dal, Moong Dal, Masur Dal, Sugar, Gur, Groundnut Oil, Mustard Oil, Vanaspati, Sunflower Oil, Soya Oil, Palm Oil, Tea, Milk, Potato, Onion, Tomato and Salt.
  - **16 new commodities under Version 4** – Bajra, Jowar, Ragi, Suji (wheat), Maida (wheat), Besan, Ghee, Butter, Brinjal, Egg, Black Pepper, Coriander, Cummin seed, Red chilies, Turmeric powder and Banana.
  - The new commodities will be monitored from 1<sup>st</sup> August 2024.
- The 38 commodities constitutes close to **31% of the total CPI** weights.
- **Benefit of Monitoring** – Facilitate policy interventions to stabilize price volatility in food items and to control the overall inflation.
- **Price Monitoring System (PMS) mobile app** – It is a tool designed to track and analyze pricing data for products across various retailers.
- It helps users to monitor price changes in real-time, compare prices, and receive alerts for price drops or promotions, making it easier to make informed purchasing decisions.

### 9.19 Self-Reliance in P&K fertilizer

Recently, the government has been committed to making the country self-reliant in the production of Phosphorus and Potassium (P&K) fertilizers and is taking several steps towards this goal.

- **Components** – **Potash (K)** and **Phosphate (P)** are essential for increasing the production of food grains and other agricultural products, along with **nitrogen (N)**.
- **Ideal ratio** – A NPK ratio of **4:2:1** is considered ideal and accepted for macro-level monitoring of plant nutrient consumption for the country.
- **Decontrol of P&K Fertilizers in 1992** – It allowed market forces to dictate prices.
- **Production** – Currently, India's fertilizer production is 42-45 million tonnes while imports are around 18 million tonnes.
- **Imports**- During 2021-22, the total value of fertilizer imports, inclusive of inputs used in domestic production, was 24.3 billion dollars.
- **Current status on Imports of India**
  - **Potash (K)** - Depends entirely on imports coming mostly from Belarus, Canada, Russia, Israel, and Jordan.
  - **Import** - Import dependence is almost 80%-90%, with imports coming mainly from China, Saudi, Morocco, Jordan and Egypt.

#### Types of P&K Fertilizers

- **Diammonium Phosphate (DAP):** Widely used phosphorus fertilizer.
- **Muriate of Potash (MOP):** Key source of potassium.
- **NPK Complex Fertilizers:** Combination of nitrogen, phosphorus, and potassium in varying ratios.
- **Single Super Phosphate (SSP):** Source of phosphorus.

- **Auctioning of blocks**- The government has enacted laws to auction critical mineral blocks like potash and phosphate for exploration and processing in India.

### Government Steps for Self-Reliance in Fertilizer Production

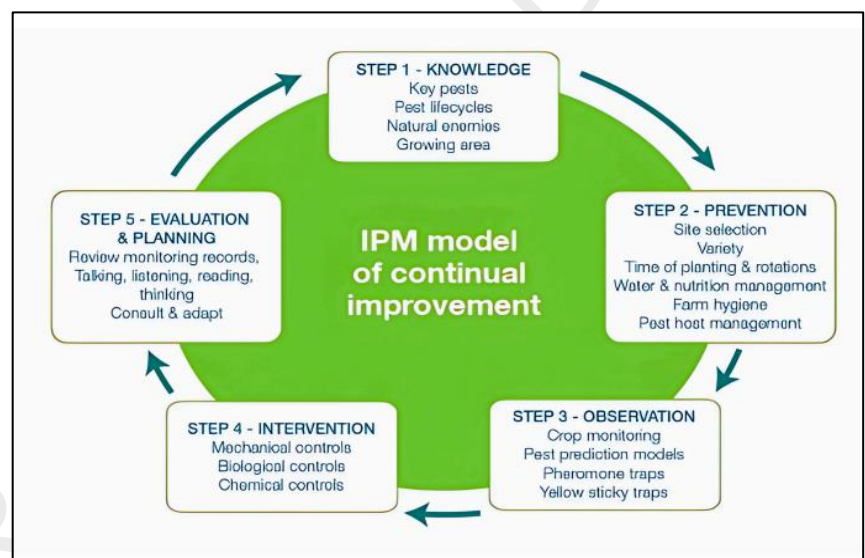
*The PV Narasimha Rao government removed subsidies on non-urea fertilizers (P and K) but retained control and subsidy on urea.*

- Permissions granted to fertilizer companies to increase manufacturing capacity under **Nutrient Based Subsidy (NBS)**.
- The policy provides a fixed subsidy on each grade of subsidized P&K fertilizers based on nutrient content.
- **New Investment Policy (NIP)** to facilitate fresh investments and set up 6 new urea units.
- Promotion of Organic Fertilizers under the **GOBARdhan initiative**.
- The use of **Liquid Nano DAP (diammonium phosphate)** and **Nano urea** is being promoted to reduce imports.

## 9.20 Integrated Pest Management (IPM)

*The recent launch of Kisan Kavach marks a significant advancement in protecting farmers from the harmful effects of pesticide exposure.*

- **IPM** – It is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks.
- **Different from organic practices** – IPM doesn't discourage spraying chemicals unlike organic, but rather promotes using them only when necessary.
- **Monitoring** – Keep tracks of the pests and their potential damage and is helpful in selecting the best possible combinations of the pest management methods.



- **Pest resistant varieties** – Breeding for pest resistance is a continuous process.
- **Cultural pest control** – It includes crop production practices that make crop environment less susceptible to pests.
- Cultural controls are based on pest biology and development.
- **Example** – Crop rotation, cover crop, row and plant spacing, planting and harvesting dates, destruction of old crop debris, etc.,
- **Mechanical control** – These are based on the knowledge of pest behavior.
- **For Examples** – Hand picking, installation of bird perches, mulching and installation of traps.
- **Biological control** – It include augmentation and conservation of natural enemies of pests such as insect predators, parasitoids, pathogen and weed feeders.
- Here, native natural enemy populations are conserved and non-native agents are released with utmost caution.
- **Chemical control** – Pesticides are used to keep the pest population below economically damaging levels when the pests cannot be controlled by other means.

*According to Indian Council of Agricultural Research-National Centre for Integrated Pest Management around **3-5% of India's total cultivated area** is under IPM.*

### IPM initiatives in India

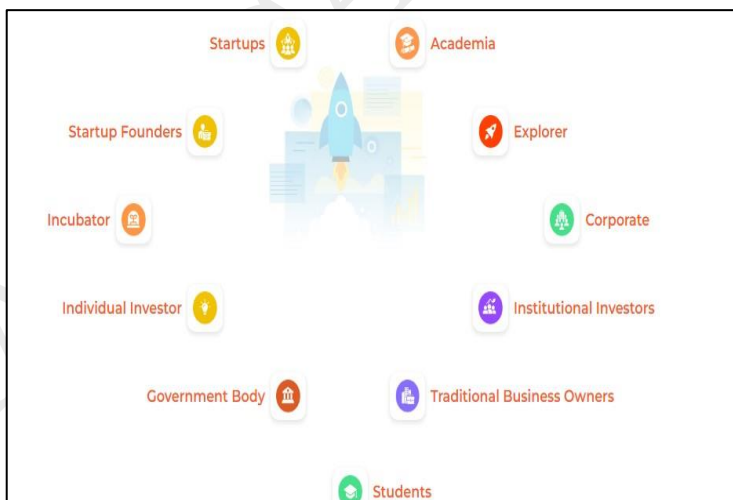
- IPM was declared as an official Ministerial Policy in 1985.
- There are 35 Central Integrated Pest Management Centers (CIPMCs) in over 28 states and 2 UTs.
- National Mission on Agricultural Extension and Technology (NMAET-Plant Protection & Plant Quarantine).
- Strengthening and Modernization Pest Management Approach in India (SMPMA)
- It is a season long activity which is confined in 14 weekly sittings in form of FFS in a village to popularize IPM.
- Training programme through Kisan vigyan Kendra about IPM.

## 10. INDUSTRY

### 10.1 Bharat Start up Knowledge Access Registry (BHASKAR)

The Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry is set to launch the Bharat Startup Knowledge Access Registry (BHASKAR).

- **Aim** – To bring together a diverse array of stakeholders ranging from entrepreneurs and government bodies to investors and academic institutions onto a single, integrated platform.
- To build the world's largest digital registry for stakeholders within the startup ecosystem.
- **Ecosystem Stakeholders**
- **Umbrella scheme** - Startup India program.
- **Vision**- To accelerate growth and foster cross-collaboration within the entrepreneurial community.
- **Networking** – Bridges gaps between startups, investors, mentors, and other stakeholders for seamless interaction.
- **Centralized access to resources** – Provides immediate access to critical tools and knowledge for faster decision-making and scaling.
- **Personalized identification** – Assigns unique BHASKAR IDs to each stakeholder for personalized & tailored platform interactions.
- **Enhanced discoverability** – Powerful search features for easy location of relevant resources, collaborators, and opportunities.
- **Supporting India's global brand** – Facilitates cross-border collaborations to promote India as a global hub for innovation.
- **Impact on India's Startup Ecosystem** – It will serve as a central hub for startups, investors, service providers, and government bodies to collaborate and accelerate growth.



## 11. SERVICE SECTOR

### 11.1 Sample Legal remedies available to Gig Workers

The strikes by Blinkit workers has once again brought to the forefront the issues plaguing the gig economy in the country.

#### Proposed law for gig workers

- **National Commission on Labour** – It recommended to consolidate central labour laws.



- Hence, the Ministry of Labour and Employment introduced the Code on Social Security, 2020 which brings workers within the ambit of labour laws for the first time.
- Social Security Schemes** – The Code stipulates that Central and State Governments must frame suitable social security schemes for gig workers.
- The Code also mandates the compulsory registration of all gig workers to avail of benefits under these schemes.
- National Social Security Board** – The Code also envisages the constitution of a National Social Security Board by the Central government to monitor the implementation of such schemes.

Gig worker and the Gig Platform	
<b>Gig workers</b>	<ul style="list-style-type: none"> <li>It refers to workers outside the traditional employer-employee relationship.</li> </ul>
<b>Gig economy</b>	<ul style="list-style-type: none"> <li>It falls outside the scope of traditional, full-time employment. There are two groups of gig workers, platform workers and non-platform workers.</li> </ul>
<b>Platform workers</b>	<ul style="list-style-type: none"> <li>Those working for an organisation that provides specific services using an online platform directly to individuals/organisations.</li> </ul>
<b>Non-platform workers</b>	<ul style="list-style-type: none"> <li>These include the construction workers and non-technology based temporary workers.</li> </ul>
<b>Status of India</b>	<ul style="list-style-type: none"> <li>In India, employees are entitled to a host of benefits under statutes such as the: Minimum Wages Act, 1948; Employees' Provident Fund and Miscellaneous Provisions Act, 1952 (EPFA); Payment of Bonus Act, 1965.</li> </ul>
<b>Contract Labourers</b>	<ul style="list-style-type: none"> <li>They are governed under the <u>Contract Labour (Regulation and Abolition) Act, 1970</u> and are also entitled to benefits such as provident funds in accordance with the EPFA.</li> </ul>

### Concerns of the gig workers

- Mixed nature** – The unique nature of gig work display characteristics of both employees and independent contractors and thus do not squarely fit into any rigid categorisation.
- Little recognition** – Out of the four new labour codes proposed, gig work finds reference only in the Code on Social Security.
- Excluded** – Gig workers remain excluded from vital benefits and protections offered by other Codes such as minimum wages, occupational safety and health benefits, and overtime pay.
- No unions** – They cannot create legally recognised unions and access a national minimum wage that applies to all forms of employment.
- No minimum wage** – Even the proposed law does not guarantee minimum wages for gig workers.
- Redundancy** – Minimum wages, which is presently governed by the Minimum Wages Act, will be subsumed under the Wages Code.
- No redressal mechanism** – Gig workers are excluded from accessing the redressal mechanism under the Industrial Disputes Act, 1947.



## 12. SOCIAL SECTOR

### 12.1 Sample Social Security in India

*India needs a well-crafted social security to all its work force, in a manner that is fiscally and administratively feasible.*

#### International practice on social security

- **ILO-** It was established under the treaty of Versailles in 1919 for the need of social security right to workers.
  - **1944 resolution-** Extension of social security measures
  - **Convention 102-** Minimum standards of social security was adopted in 1952.
- **Germany-** It is the first European industrial nation to start a social security programme that was extended to people other than military forces
- **Brazil-** Brazil's General Social Security Scheme is contribution-based, substituting income loss for a worker (and his family), whether in partial or full.

#### Steps taken to promote social security

##### Legislations

- **The Employees' State Insurance Act, 1948-** It covers factories and establishments with *10 or more employees* and provides for comprehensive medical care to the employees and their families as well as provides cash benefits.
- **The Employees' Provident Funds & Miscellaneous Provisions Act, 1952 -** It applies to specific scheduled factories and establishments employing *20 or more employees* and ensures terminal benefits to provident fund, superannuation pension, and family pension in case of death during service.
- **The Employees' Compensation Act, 1923 -**It requires payment of *compensation to the workman* or his family in cases of employment related injuries resulting in death or disability.
- **The Maternity Benefit Amendment Act 2017-** It extends the paid maternity leave from *12 weeks to 26 weeks*.
- **The Payment of Gratuity Act, 1972 -** It provides *15 days wages for each year of service* to employees who have worked for *5 years or more* in establishments having a *minimum of 10 workers*.
- **Code on Social Security in 2020-** It provides for a statutory framework to enable social security for the urban and rural poor, construction workers, those in the gig industry and informal sector workers.

##### Schemes

- **Pradhan Mantri Shram Yogi Maan-Dhan Yojana -** Launched in 2019, it is an old age protection, voluntary and contributory pension scheme for unorganised workers.
- **Pradhan Mantri Jeevan Jyothi Yojana-** It is a government-backed life insurance scheme in India launched in 2015.
- **Pradhan Mantri Suraksha Bima Yojana -** It is a government backed accident insurance scheme launched in 2015 at Kolkata.
- **Atal Pension Yojana-** It is a government-backed pension scheme in India, launched in 2015 which primarily targeted the unorganised sector.
- **E-Shram portal-** A push for greater digitisation under the e-Shram platform has enabled the enrolment of approximately 300 million workers while expanding coverage of accident insurance and disability.

#### Constitutional Provisions

- **Concurrent list, includes the following:**
  - Social Security and insurance, employment and unemployment.
  - Welfare of Labour- work conditions, provident funds, employers' liability, workmen's compensation, invalidity and old age pension and maternity benefits.
- **Article 41-** It directs the state to secure the right to work, education and public assistance in certain cases such as unemployment, old age, sickness and disablement.
- **Article 42-** It deals with the provisions for just and humane conditions of work and maternity relief.
- **Article 43-** Participation of workers in the management of industries.

## 13. INFRASTRUCTURE

### 13.1 National Pest Surveillance System (NPSS)

*The Union Agriculture and Farmers Welfare Minister recently launched the National Pest Surveillance System (NPSS).*

- **NPSS** – It is an AI-based system aimed at helping farmers manage pests by connecting them with agriculture scientists and experts through mobile phones.
- The system includes a user-friendly mobile app and web portal for all farmers.
- **Aim** – It is designed to reduce farmers' dependence on pesticide retailers and promote a scientific approach to pest management.
- **Objective** – To make farmers learn about various insecticides and pesticides to protect their crops from harmful effects.
- **Real-time monitoring** – Using real-time data and advanced analytics, NPSS ensures accurate pest identification, monitoring, and management.
- The NPSS platform used Information and Communication Technology (ICT).
- **Functionality** – Farmers can snap photos of infested crops or insects using their phones and send them to experts for instant analysis and advice using the NPSS.
- **Significance** – The launch of NPSS is a major step in modernizing Indian agriculture, boosting food security, and promoting sustainable farming practices.
- The NPSS system aims to deliver fast, accurate pest identification and control, ensuring the right number of pesticides is used at the right time.
- This increases productivity, reduces pesticide overuse, and preserves soil health.

## 14. OTHERS

### 14.1 Non-Market Economies

*Vietnam wants US to change its 'non-market economy' status to "market economy"*

- **About-** Nonmarket economy country is any foreign country that does not operate on market principles of cost or pricing structures, leading to sales that do not reflect a product's fair value.
- **Criteria-** United States designates a country as a non-market economy based on several factors.
- **Currency convertibility-** Whether the country's currency can be exchanged freely on the international market.
- **Free bargaining for wages-** If wage rates result from free bargaining between labour and management.
- **Foreign investment-** The extent to which joint ventures or other forms of foreign investment are permitted.
- **Role of government-** Whether the government owns or controls the means of production.
- **Resource allocation-** If the state controls the allocation of resources and price and output decisions
- **Anti-dumping duties-** The non-market economy label allows the US to impose "anti-dumping" duties on goods imported from designated countries.
- **Surrogate country prices-** The duties are calculated based on comparison with the export prices in a third market economy country, which serves a surrogate to estimate what the price of the product would be under market-based principles.
- **Impact-** NME status have significant implications such as
  - Imposition of anti-dumping duties on imports of that country

- Trade barriers such as strict regulations
- Affect investment climate of the country
- Strain political and diplomatic relations between affected country and the US.
- Undermine competitiveness of affected country's exports

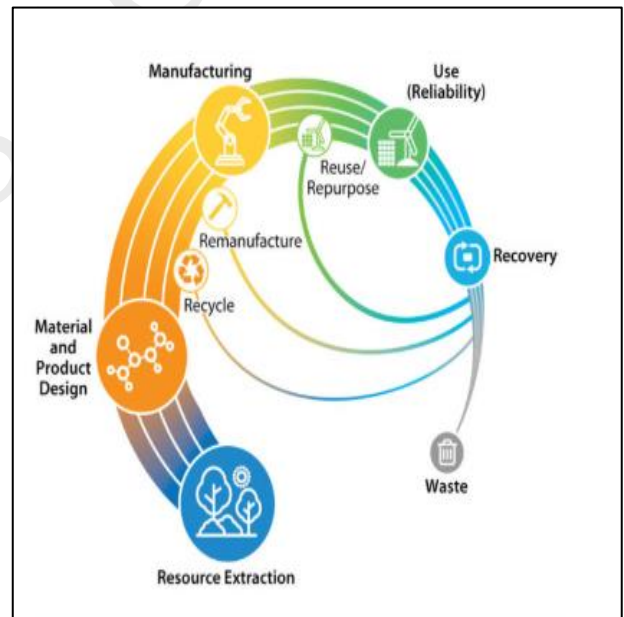
### Anti-Dumping Duty

- **Dumping-** It is a process where a company exports a product at a price that is significantly lower than the price it normally charges in its domestic market.
- **Protectionist tariff-** It is imposed by a country on foreign imports that it believes as being dumped.
- **Aim –** To ensure fair competition and protect domestic industries from potential harm caused by imported goods sold at artificially low prices.
- **WTO trade rules-** It include international regulation of anti-dumping measures.

## 14.2 Circularity in Solar Sector

Recently, G20 Indian Sherpa India's Amitabh Kant said that circular economy could generate a market value of over \$2 trillion and create 10 million jobs by 2050.

- **Circular economy –** It refers to an economic system designed to eliminate waste, maximize resource efficiency, and maintain products and materials at their highest quality for as long as possible
- **3 principles of circular economy**
  - Eliminate waste and pollution
  - Circulate products and materials (at their highest value)
  - Regenerate nature
- **Need –** India's installed solar capacity is 66.7 GW as of FY23, has generated about **100 kilotonnes (kt) of waste**, which will **increase to 340 kt by 2030**.
- Around 67% of this waste is expected to be generated in 5 states – Rajasthan, Gujarat, Karnataka, Andhra Pradesh, and Tamil Nadu.
- The addition of new solar capacities by 2030 to meet India's nationally determined contribution targets under Paris Agreement could create cumulative solar waste of **19 million tonnes by 2050**.
- **Circularity in solar sector –** It can be done through smarter product design, longer use, recycling and more, as well as regenerate nature.
  - Use recycled aluminum in frames
  - Use solar glass in new modules
  - Reduce use of critical minerals such as copper and silver
  - Eliminate use of toxic metals
  - Reuse components in new modules
  - Recycling of solar waste



### 14.3 Zinc

Researchers have discovered that zinc plays a crucial role in the health of legume crops.

- **Zinc's Role in Nitrogen Fixation** – The researchers found that zinc in plants aids in **nitrogen fixation**.
- The study identifies a key transcription factor that regulates nodule breakdown under high soil nitrogen levels.
- These discoveries can be applied to legume crops such as **fava beans, soybeans, and cowpeas**.
- **Fixation under Nitrate** – Researchers found that legumes use zinc as a secondary signal to integrate environmental factors and regulate **nitrogen fixation efficiency** through a transcriptional regulator called Fixation under Nitrate (FUN).
- FUN is an important transcription factor that controls **nodule breakdown when soil nitrogen concentrations are high**.
- **Symbiotic relationship**- Legume crops form a symbiotic relationship with **rhizobia**, a bacterium that fixes atmospheric nitrogen in root nodules.
- **Significance** – The Continued nitrogen fixation is a beneficial trait, increasing nitrogen availability for both legumes and subsequent crops that rely on residual soil nitrogen.
- Understanding how nitrogen fixation is regulated by zinc and FUN enables researchers to develop strategies to **optimize this process in legume crops**.
- This could lead to increased nitrogen delivery, improved crop yields, and reduced reliance on synthetic fertilizers.

*Legume crops are plants that belong to the family Fabaceae which includes beans, chickpeas, peanuts, lentils, lupins, mesquite, carob, tamarind, alfalfa and clover.*

### Nitrogen Fixation

- Nitrogen fixation is a crucial natural process through which nitrogen (N<sub>2</sub>) in the atmosphere is converted into ammonia (NH<sub>3</sub>) or related nitrogenous compounds in soil and in living organisms.
- This process is essential for the synthesis of amino acids, nucleotides and other cellular constituents required for life.
- The nitrogen-fixing bacteria participate in the process of nutrient fixation.
- Nitrogen-fixing bacteria includes Rhizobium (formerly Agrobacterium), Frankia, Azospirillum, Azotobacter, Herbaspirillum, Cyanobacteria, Rhodospirillum rubrum, Klebsiella, etc.
- **2 types of Nitrogen Fixation**
  1. **Biological nitrogen fixation** which is carried out by specific bacteria and cyanobacteria (diazotrophs). For example: Rhizobium bacteria, Azotobacter.
  2. **Abiotic nitrogen fixation** which occurs naturally through lightning strikes and ultraviolet radiation from the sun.
- **Nitrification** – It is the process that converts ammonia to nitrite and then to nitrate and is another important step in the global nitrogen cycle.
- Most nitrification occurs aerobically and is carried out exclusively by prokaryotes.

### 14.4 Effects of LPG price hikes

ACCESS survey highlighted that the cost of LPG was a significant obstacle for its adoption among rural poor households in India.

- **Findings** – The data from the 2014-2015 ACCESS survey, conducted by the Council on Energy, Environment and Water, found LPG's cost to be the foremost barrier to its adoption and continued use in rural poor households.

- **Hike in LPG prices** – In 2022, India reportedly had some of the highest LPG prices among 54 countries, around ₹300/litre.
- **Usage of solid cooking fuel** – Due to high cost of LPG, 750 million Indians primarily use solid cooking fuels – wood, dung, agricultural residues, coal, and charcoal every day.
- **Impact**-Solid cooking fuels are associated with innumerable health hazards and socio-economic and environmental impacts.
- **Fuelwood dependence** – A study highlighted the reliance of Jalpaiguri's communities in West Bengal on forests for fuelwood due to the high cost of commercial LPG cylinders and low income from tea estate work.

#### Steps taken by India to increase LPG distribution in rural areas

- **Rajiv Gandhi Gramin LPG Vitruk scheme** - It was launched in 2009 with the aim to increase LPG distribution in remote rural areas of India focusing on establishing LPG distribution centres.
- **PAHAL Scheme**- It was launched in 2015, it introduced direct benefit transfers (DBT) for LPG subsidies.
- **Surya Nutan** - It is an indigenous, stationary, rechargeable and kitchen-based indoor solar cooking platform developed by Indian Oil Corporation and Ministry of Petroleum and Natural Gas.
- **Pradhan Mantri Ujjwala Yojana**- It was launched in 2016 with the aim to replace solid and other biomass-based polluting cooking fuels used in urban and rural households in India with Liquefied Petroleum Gas (LPG).

#### Suitable alternatives

- **Affordability of LPG**- Subsidies and targeted financial assistance can help make LPG more accessible to low-income households.
- **Promote efficient stoves**- Encouraging the adoption of efficient cooking stoves can help reduce the overall demand for fuelwood and LPG while improving energy efficiency.
- **Diversify energy sources**- Exploring and promoting alternative energy sources for cooking, such as biogas or solar-powered cookers, can help reduce reliance on both LPG and solid fuels.
- **Sustainable forest management**- Collaborating with local communities and authorities to implement sustainable forest management practices is crucial for preserving forests and biodiversity while meeting the energy needs of rural populations.
- **Policy development**- Policies should consider the needs of marginalized communities, environmental sustainability, and long-term socio-economic development goals.

### 14.5 World Hydrogen Summit 2024

For the first time, India has set up its pavilion, at the World Hydrogen Summit 2024, which was held at Rotterdam in Netherlands.

- It is a prestigious event in the global green hydrogen ecosystem and is the *world's largest dedicated hydrogen event*.
- **Organised by** – The *Sustainable Energy Council* (SEC) in partnership with the Government of the Netherlands.
- **Participants** – Around 15,000 delegates from around the world are attending the Summit.
- **India's pavilion** – It is organised by Ministry of New and Renewable Energy (MNRE), one of the largest in the summit.
- It provides an opportunity to showcase to the world the progress made by India in the field of [Green Hydrogen](#).

#### India in Green Hydrogen

- India launched its *National Green Hydrogen Mission* in January 2023 with an overall outlay of Rs 19,744 crores.
  - Its target is to have green hydrogen production capacity of 5 million tonnes by the end of the year 2030.
- As in 2024, the MNRE has awarded tenders for setting up 412,000 tonnes of Green Hydrogen production capacity and 1,500 MW of electrolyser manufacturing capacity.



- India meets a sizable portion of its energy needs through various renewable energy sources, including green hydrogen.
- India has also released scheme guidelines for the use of Green Hydrogen in steel, transport, and shipping sectors.
- The Department of Science and Technology has initiated *Hydrogen Valley Innovation Clusters* to foster innovation and promote the green hydrogen ecosystem in India.

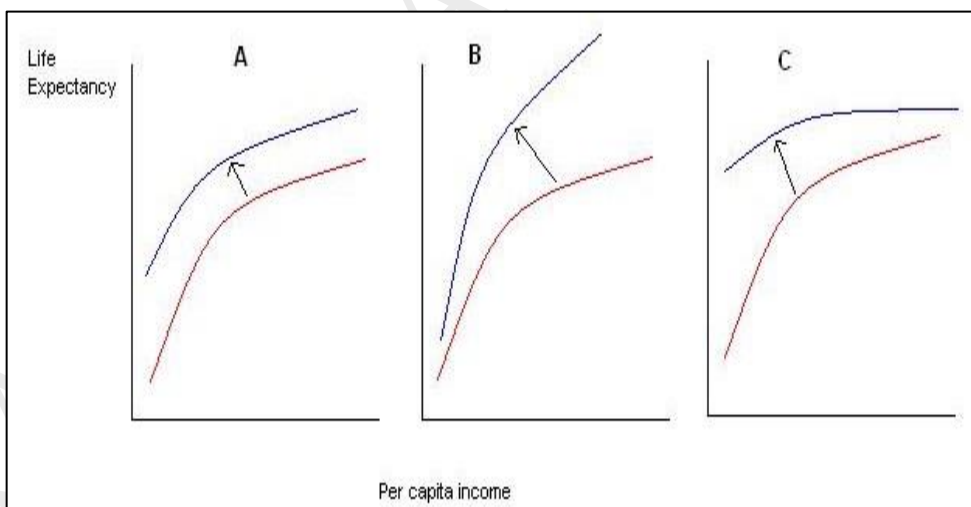
#### 14.6 Preston curve

Research experts observe that people in richer countries generally live longer than those in poorer countries.

- Preston curve** – It refers to a certain empirical **relationship between life expectancy and per capita income** in a country.
- Proposed by** – **Samuel H. Preston** in 1975.
- Demonstrations** – Higher life expectancy in wealthier countries is due to better access to education, healthcare, cleaner surroundings, better nutrition etc.
- When a poor country begins to grow, its per capita income rises and causes a significant increase in life expectancy initially as people are able to consume sufficient nutrients, enjoy better healthcare etc.

The rapid economic growth of India and China over the last few decades, which has helped improve life expectancy and other development indicators, has been cited as an example of faster economic growth leading to better development outcomes.

- Shift in Preston curve** – An increase in the per capita income of a country does not cause much of a rise in the life expectancy of its population beyond a point, perhaps because human life span cannot be increased indefinitely.
- Problems in the Curve** – Higher life expectancy has been achieved by countries even at low per capita income levels due to improvements in medical technology, such as the development of life-saving vaccines.
- Thus, improvement in life expectancy can hold true as a result of public investment in human development like better education & healthcare.
- Significance** – Other development indicators such as infant and maternal mortality, education, healthcare, etc. also improve when the per capita income of a country rises.



In India, the average per capita income rose from around Rs.9,000 per year in 1947 to around Rs.55,000 per year in 2011. Meanwhile, the average life expectancy also rose from a mere 32 years to over 66 years.

#### 14.7 Marrakesh Agreement

2024 marks the 30<sup>th</sup> anniversary of signing of Marrakesh Agreement.

- An agreement that fundamentally reshaped the international trading system by introducing a more robust and comprehensive structure for trade relations.
- Signed in** – **1994**, by 123 countries.
- Shared vision** – To transform the world through trade.

- **Outcome** – Establishment of **World Trade Organization (WTO)** in 1995.
  - **Headquarters** – Geneva Switzerland.
  - India is a member.
- **Achievements** – While the GATT mainly dealt with trade in goods, the WTO and its agreements also cover trade in services and intellectual property.
- It has helped to bring about a major expansion in global trade, with the objective of raising living standards, increasing employment and promoting sustainable development.
- More than 1.5 billion people have been lifted out of extreme poverty.
- The WTO's membership has expanded to 164 members, representing over 98% of international trade.
- In 2015, the WTO reached a significant milestone with the receipt of its 500<sup>th</sup> trade dispute for settlement.
- Expansion of the Information Technology Agreement.
- TRIPS Agreement amended to ease access to affordable medicine
- Trade Facilitation Agreement (TFA) enters into force.
- **Challenges** – Bias of favouring wealthier nations due to their greater negotiating power.
- Promoting policies that sometimes conflict with the economic interests and developmental needs of poorer countries.
- Issues such as agricultural subsidies remain highly contentious.

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