

India's Weak Structural Transformation

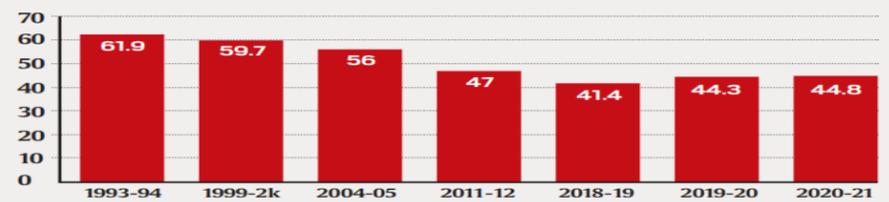
❖ Context

- A study of data, from the **NSO's Periodic Labour Force** surveys, by the **Centre for Sustainable Employment** at Azim Premji University reveals that the share of the working population engaged in farming has fallen quite significantly in the last three decades.

❖ Key Highlights

- Between 1993-94 and 2018-19, **agriculture's share in India's workforce** came down from 61.9% to 41.4%.
- However, the movement, according to experts, doesn't qualify for structural transformation.
- The reason is the **surplus labour of farms is being largely absorbed in construction and services**.
- The bulk of the service jobs in this case are in petty retailing, small eateries, domestic help, sanitation, security staffing, and similar **informal economic activities**.
- The **share of manufacturing and mining** in total employment has also fallen along with agriculture.
- Structural transformation would involve the **transfer of labour** from farming to sectors where productivity, value-addition and average incomes are higher particularly, manufacturing and modern services known as **Kuznets process**.
- Weak structural transformation and persistence of informality also explains the tendency, especially by rural families, for pursuing **multiple livelihoods**.
- The **Indian IT industry** is an isolated island that added jobs in the pandemic and is continuing to do so.

% SHARE OF WORKFORCE IN AGRICULTURE



SECTORAL EMPLOYMENT SHARES (IN PER CENT)

	2011-12	2018-19	2019-20	2020-21
Agriculture	47.0	41.4	44.3	44.8
Manufacturing	12.5	12.1	11.3	11.0
Mining	0.6	0.4	0.3	0.3
Construction	10.7	12.2	11.7	12.4
Services	28.6	33.2	31.8	30.9
Utilities	0.6	0.6	0.6	0.6
Total	100.00	100.00	100.00	100.00
Organised sector	24.1	23.3	22.9	23.2

❖ Kuznets Curve

- According to this hypothesis, as an economy develops, market forces first increase and then decrease **economic inequality** due to structural transformation.



Long March 5B Uncontrolled Re-entry

❖ Context

- **China's** 22-tonne core stage of the rocket, Long March 5B, hurtled **uncontrollably** back to earth crashing to earth over the **Pacific and the Indian oceans**. There were fears across the globe that it might hit a populated area.



❖ Background

- The Long March 5B blasted off in July 2022 to deliver a laboratory module to the new Chinese space station under construction in orbit.
- Most nations' rockets separate the launcher from the payload before leaving the atmosphere.
- The **launcher falls back safely** along a **near-precise projected trajectory**.
- An extra engine then gives the payload a final boost.
- If they do enter an orbit, then a **costly de-orbit manoeuvre** is required for a steered, controlled return using engine burn.
- Without a de-orbit manoeuvre, the orbital core stage makes an **uncontrolled fall**.
- China's 5B series is one such rocket which does not use a second engine and pushes right into orbit.

❖ Tracking Uncontrolled Re-entry

- The variables involved make it difficult to precisely track the re-entry time and drop zone of rocket debris in uncontrolled descents.

- The factors that make this prediction extremely challenging include **atmospheric drag, variations in solar activity, angle and rotational variation of the object** among others.

❖ Space Liability Convention 1972

- The Space Liability Convention of 1972 defines **responsibility in case a space object causes harm**.



- The treaty says that a launching state shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the earth or to aircraft, and liable for damage due to its faults in space.
- The Convention also provides for procedures for the settlement of claims for damages.
- However, there is **no law against space junk** crashing back to earth.
- In April this year, suspected debris from a Chinese rocket was found in two Maharashtra villages.

Face to Face Centres



States Fail to Give Details on Elephant Reserves

❖ Context

- The Elephant Range States across India, have ignored an 18-month-old instruction from the Ministry of Environment, Forests and Climate Change (MoEFCC), to furnish information on their Elephant Reserves

❖ Wildlife Institute Data

- The **last census** was carried out in 2017 and concluded that there are more than 27,000 elephants in India.
- More than 60% of the Asian elephant population resides in India.
- According to the report, **Karnataka** has the highest number of elephants (6,049), followed by **Assam** (5,719) & **Kerala** (3,054). The figures are lower than the last census estimate from 2012. India has 30 notified ERs, spread across 15 Elephant Range States.
- There are also 10 sites for the MIKE (monitoring of illegal killing of elephants) programme, mandated by the Conference of Parties to the Convention on International Trade in Endangered Species.

- The MIKE sites are :



- Chirang-Ripu & Dihing-Patkai in Assam,
- Deomali in Arunachal Pradesh,
- Garo Hills in Meghalaya,
- Eastern Dooars in West Bengal,
- Mayurbhanj in Odisha,
- Shivalik in Uttarakhand,
- Mysore in Karnataka,
- Wayanad in Kerala and
- Nilgiri in Tamil Nadu.

Two Floating Solar Project Launched

❖ Context

- Prime Minister recently inaugurated two of the country's largest floating solar projects, which have been set up by the state-run NTPC.



❖ Key Highlights

- The Prime Minister also launched a national solar rooftop portal:
 - This will enable online tracking of the process of installation of rooftop solar plants,
 - Starting from registering the applications to release of subsidies in residential consumers' bank accounts after installation and inspection of the plant.
- ❖ **Ramagundam Floating solar power Plant**
 - The 100-MW floating solar project at Ramagundam boasts advance technology as well as environment-friendly features.
 - The project is spread over 500 acres of NTPC-Ramagundam reservoir.
 - The floating solar panels of the power plant would reduce the evaporation rate of water from the reservoir to an extent of 32.5 lakh cubic metres per year.

- The water body underneath the solar modules would also help maintain the ambient temperature thereby improving the efficiency and generation.
- It would also save coal consumption of **1.65 lakh tonnes** a year and carbon dioxide emission to the tune of **2.1 lakh tonnes a year**.
- ❖ **Kayamkulam Plant**
 - The **Kayamkulam plant** in Kerala is the second-largest floating solar power project of the NTPC after the 100-MW plant at Ramagundam in Telangana having total capacity of 92MW.
 - The power generated from the plant could light up around **26,000 households** every day.
 - The project could help reduce carbon emissions by **1.73 lakh tonnes** every year.

Nagar Van Yojana

❖ Context

- Various greening activities undertaken through Nagar Van Yojana along with other Afforestation efforts are envisaged for improving the green cover in the country.



❖ About Nagar Van Yojana

- The Pilot Scheme of Nagar Van Yojana (NVY) envisages developing **400 Nagar Vans** and **200 Nagar Vatikas** in the country during the period of 2020-21 to 2024-25.
- The main objective of the scheme are:-
 - Developing at least one forest area in every selected city under this scheme.

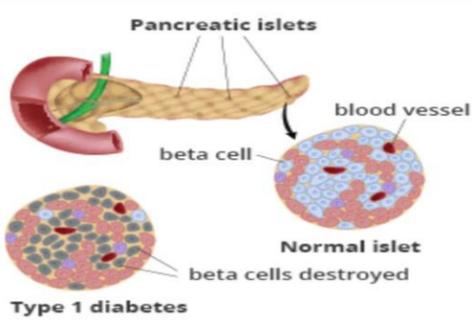
- Spreading awareness about local animals and plants and local biodiversity and their importance in that so that we can protect them better.
- Fasten the protection of local flora and fauna and their importance in the local ecology by providing enough information about them.
- Enhancement of biodiversity and ecological benefits to the urban and peri-urban areas.
- A total of 173 projects have been sanctioned till 2021-22 in 26 States.

Face to Face Centres



News in Between the Lines

GSK-123



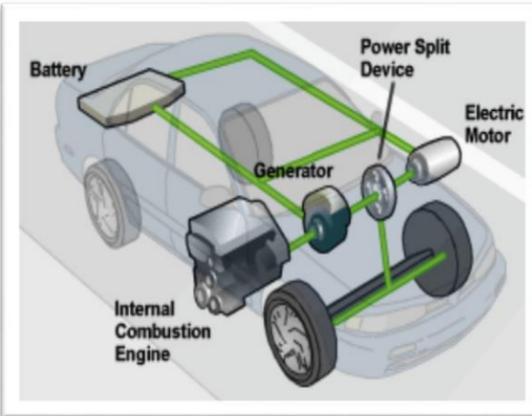
❖ Context

- A study by an Australian university has identified a new way to restore insulin production in the pancreatic cells.

❖ Key Highlights

- Researchers, using the drug GSK-123, reactivated donated **pancreatic stem cells** of a deceased Type-1 patient.
- Insulin is produced by beta cells in the pancreas.
- In Type-1 diabetes, **beta cells produce less or no insulin**.
- The development being seen as a major breakthrough can lead to elimination of the need for daily insulin injections.

Hybrid Electric Vehicles



❖ Context

- In recent months, automakers have launched hybrid electric vehicles in India.

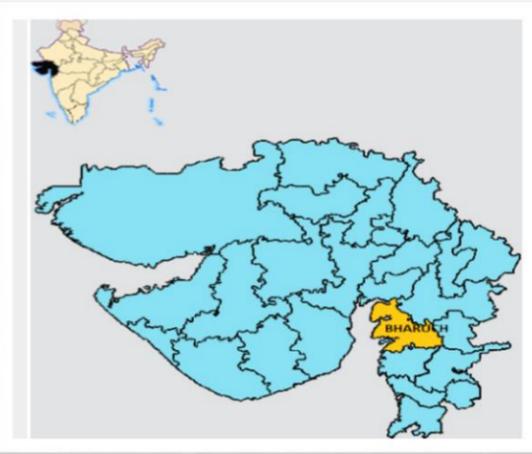
❖ Key Highlights

- A hybrid electric vehicle (HEV) uses an ICE (a petrol/diesel engine) and one or more electric motors to run.
- It is powered by the electric motor alone, which uses energy stored in batteries, by the ICE, or both.
- In these cars, the battery is charged through regenerative braking technology.
- **Fully electric vehicles differ from HEV as they do not contain an internal combustion engine at all and take no gasoline or fuel.**

❖ Regenerative Braking Technology

- It is a kinetic system that can recover the energy lost during braking and then use this energy to recharge the high-voltage battery of the vehicle.

Utkarsh Pahel



❖ Context

- The Prime Minister recently praised the **Bharuch district administration** and the Gujarat government for covering 100 % beneficiaries in the district under four schemes.

❖ Key Highlights

THE 'UTKARSH PAHEL' CAMPAIGN

BENEFICIARIES

Total: 13,431

BENEFIT

281 RKSYS

558 NVSY

1,987 IGRVPY

10,605 GSASY



Anklashwar Nagar Palika president Vinay Vasava informs local residents about the welfare schemes. Express

RKSYS: Beneficiary family gets a lump sum amount of ₹20,000 if the main earning member (aged 18-60 years) has died in an accident

NVSY: Beneficiary gets ₹750 per month (if aged between 60 and 75 years) and ₹1,000 per month (if aged above 75 years)

IGRVPY: Beneficiary gets ₹750 per month (if aged between 60 and 79 years) and ₹1,000 (if aged above 80 years)

GSASY: Beneficiary gets ₹1,250 per month

Source: Bharuch District Administration

- The district's drive to enrol all beneficiaries was named "Utkarsh Pahel".
- The schemes are for widows and senior citizens.
- The scheme are - Indira Gandhi Rashtriya Vrudhhavasta Pension Yojana (IGRVPY), Niradhar Vrudh Sahay Yojana (NVSY), Ganga Swaroop Arthik Sahay Yojana (GSASY) and Rashtriya Kutumb Sahay Yojana (RKSYS).

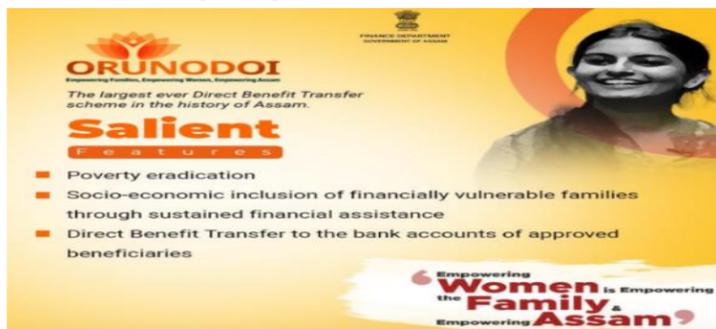
Orunodoi Scheme



❖ Context

- The **Assam government** is transferring extra Rs. 18 to the accounts of the Orunodoi scheme beneficiaries for the month of Aug-2022 to buy a National Flag.

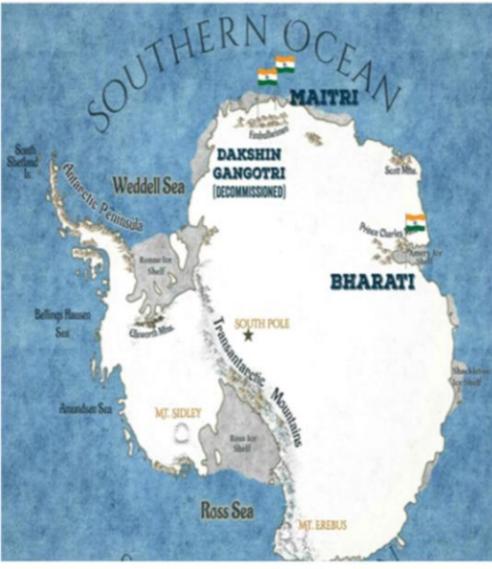
❖ Key Highlights



- Under the scheme, the state government **directly transfers a sum of Rs. 1000/-** to the **bank accounts of women** (primary caretakers of the family) of 24 lakhs poor households in the state as **financial assistance** towards procuring **medicines, pulses and sugar**.

Parliament Passes the Indian Antarctic Bill, 2022

INDIAN RESEARCH STATION IN ANTARCTICA



❖ Context

➤ Parliament recently passed the Indian Antarctic Bill, 2022.

❖ Key Highlights

- **Aim:** The main aim of the Bill is also to ensure de-militarization of the region along with getting it rid of mining or illegal activities. It also aims that there should not be any nuclear test / explosion in the region.
- It will facilitate India's interest and pro-active involvement in the management of growing Antarctic tourism and sustainable development of fisheries resources in Antarctic waters.
- It will help in **increased international visibility**, credibility of India in Polar governance leading to international collaboration and cooperation in scientific and logistics fields.
- The enforcement of such laws will confer Jurisdiction on the courts of India to deal with any dispute or crimes committed in parts of Antarctica.
- It shall provide a stable,
 - transparent and accountable process for the sponsorship and supervision of Antarctic research and expeditions;
 - ensure the protection and preservation of the Antarctic environment; and
 - shall ensure compliance by Indian citizens engaged in the Antarctic programs and activities with relevant rules and internationally agreed standards.
- **Research Stations:** India today has two operational research stations in Antarctica named **Maitri** (Commissioned in 1989) and **Bharati** (Commissioned in 2012). India has successfully launched 40 annual scientific expeditions to Antarctica till date. With **Himadri** station in **Ny-Alesund**, Svalbard, Arctic, India now belongs to the elite group of nations that have multiple research stations within the Polar Regions.

Apache Attack Helicopters



❖ Context

➤ Recently Hindustan Aeronautics Ltd. (HAL) has received the Letter of Intent from the Services for the manufacture of 12 Light Utility Helicopters (LUH), which have been designed and developed indigenously.

❖ About Light Utility Helicopters

- LUH is designed and developed as a replacement for Cheetah & Chetak helicopters which are being operated by Indian Armed forces.
- LUH is a new generation helicopter in the 3-Ton class incorporating the state of the art technology features like Glass cockpit with Multi-Function Displays (MFD) and powered by single Turbo Shaft engine with sufficient power margin to cater to demanding high altitude missions.
- LUH will meet the emerging needs in this class of helicopters in the coming decades. The helicopter will be capable of flying at **220 Km/h; service ceiling of 6.5 Km and a range of 350 Km with 500 kg payload.**

CoWin to Gird Universal Immunisation



❖ Context

➤ After the success of the Co-WIN platform, the government is looking to repurpose the technology for various healthcare cases.

❖ Key Highlights

- CoWIN is currently being repurposed for the **Universal Immunisation Program (UIP)**. It will bring the ease of discovery of vaccination centres/camps and reminders for subsequent vaccinations for preventable diseases for mothers and the newly born.
- The addition of digitally verifiable certificates for routine immunisation would be the first of its kind globally and a great way to start building longitudinal health records for a child right from its birth.
- In addition to immunisation, the platform would also be considered for the use-cases of **blood donation and organ donation** in the months to come.