WEEKLY UPDATES – (31th July– 6th Aug)

Contents

ART & CULTURE

GI Tags Given To Crafts From Rajasthan, Mangoes Grown In Goa

Context: Seven products from across India including four from Rajasthan were given the Geographical Indication (GI) tag by the Geographical Indications Registry in Chennai.

Key Highlights

GI Tags were given to	Facts	Image
The Jalesar Dhatu Shilp (metal craft)	At Jalesar in Etah district in Uttar Pradesh, which was the capital of Magadha King Jarasandha, over 1,200 small units are engaged in making Jalesar Dhatu Shilp. This place is known for making decorative metal craft as well as brassware.	
Goa Mankurad mango	The Portuguese named the mango as Malcorada meaning poor coloured and with time this word transformed to 'Mankurad' aamo. Aamo means mango in Konkani language.	
Goan Bebinca	Bebinca is a type of pudding and a traditional Indo-Portuguese dessert. It is also known as the Queen of Goan desserts.	
Udaipur Koftgari metal craft	The Udaipur Koftgari metal craftsmen practices the ancient art of Koftgari used in making ornamental weaponry. The weapons are exquisitely ornamented by a complicated process of etching of design, heating and then cooling intertwined with the process of embedding gold and silver wire into the metal, pressing and flattening it to a smooth surface using moonstone and finally polishing.	
Bikaner Kashidakari craft	Kashidakari work is done majorly on objects associated with marriage, especially gift items, and makes use of mirror work.	
Jodhpur Bandhej craft	The Jodhpur bandhej craft is the Rajasthani art of tying and dyeing. It is the art of printing varied patterns on fabrics using the tie and dye method.	

Bikaner Usta Kala craft	The Bikaner Usta Kala craft is also known as gold nakashi work or gold manauti work, due to the prominence of golden colour in an actual manner developed by gold in the previous period. Due to this, the craft has longevity.	

ENVIRONMENT

Hybrid EV imperative

Context: With their higher fuel economy and reduced carbon emissions, hybrid EVs offer an opportunity for economically developing countries to kick start the shift towards sustainable transportation while addressing infrastructure and cost challenges associated with full EV adoption.

- A crucial element of the world's transition to becoming net-zero is electric vehicles (EVs).
- In this milieu, hybrid EVs present a big opportunity for economically developing countries: while their power generation and grid capacity and reliability, the fraction of renewable sources in the power generation mix, and availability of fast-charging infrastructure are still less than ideal, hybrid EVs offer a way to begin the transition instead of waiting.

THE GIST

- Hybrid electric vehicles (EVs) is a crucial element in the world's transition to a net-zero future.
- By combining the benefits of internal combustion engines with electric drivetrains, these vehicles offer an effective short-term solution to lower emissions and fuel costs while paving the way for a more sustainable future.
- These vehicles offer a realistic approach for nations facing grid limitations and challenges in building fast-charging infrastructure.

What is net-zero for a vehicle?

Net-zero for a vehicle includes emissions at both the tailpipe of the vehicle and at the power plant. Making vehicles net-zero requires cutting emissions from both new and existing vehicles

What are the different types of EVs?

Any vehicle propelled by an electric drivetrain, taking electric power from a portable, electrical energy source, is called an Electric vehicle (EV).

- In a hybrid EV, an internal combustion engine (ICE) is used to produce electricity with an electrical generator.
- A small battery, typically 1-5kWh, is used in a hybrid EV as an energy buffer to store the electricity. The battery can't be charged from the grid.

Full EV

- A **full EV** – a.k.a. a battery EV or a plug-in EV – has no ICE and hence no tailpipe emissions.
- The battery typically is much larger at 20-120 kWh. And it can only be charged from the grid.

Plug-in hybrid EV

- A **plug-in hybrid EV** is still a hybrid EV with a much larger battery, typically 5-15 kWh.
- This larger battery can also be charged from the grid.
- This means a plug-in hybrid operates like a fully electric vehicle as long as there is energy in the battery.

Fuel-cell EV

- A **fuel-cell EV** uses a fuel cell to produce electricity for the drivetrain together with a small battery buffer to manage variations.

What is the fuel economy of hybrid and fully electric EVs?

- The use of an ICE in combination with a generator and battery in a hybrid EV results in the fuel economy of these vehicles being 1.5-2x times higher than in conventional ICE vehicles for city driving and 1-1.5x times higher for highway driving.
- A plug-in hybrid EV combines the best of both hybrid and full EVs. It can cover 80-90% of all short, day-to-day commutes in a fully electric mode with 3-4x higher fuel economy than conventional vehicles. A driver on intercity trips can switch to the hybrid mode.

What are the net emissions of hybrid EVs?

- Well-to-wheel emissions include both tailpipe emissions and emissions due to fuel production – electricity or fossil fuels.
- The life-cycle emissions is a more comprehensive index that includes well-to-wheel emissions and emissions due to vehicle and battery production, maintenance, and end-of-life recycling.
- The grids of different countries are decarbonised to different extents at present. In the case of full EVs: the lower the emissions from power production, the lower the vehicle's well-to-wheel and life-cycle emissions.

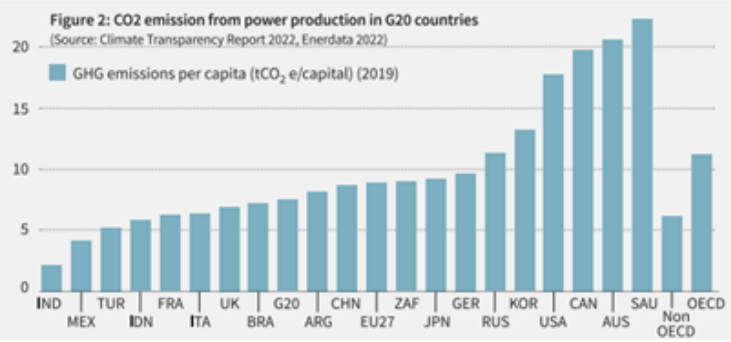
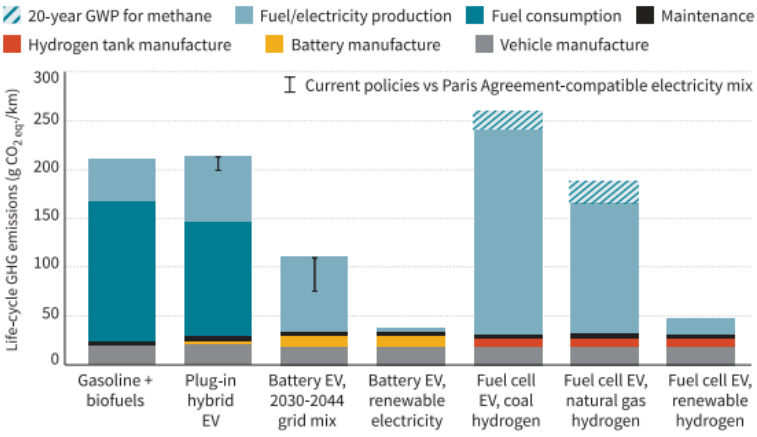


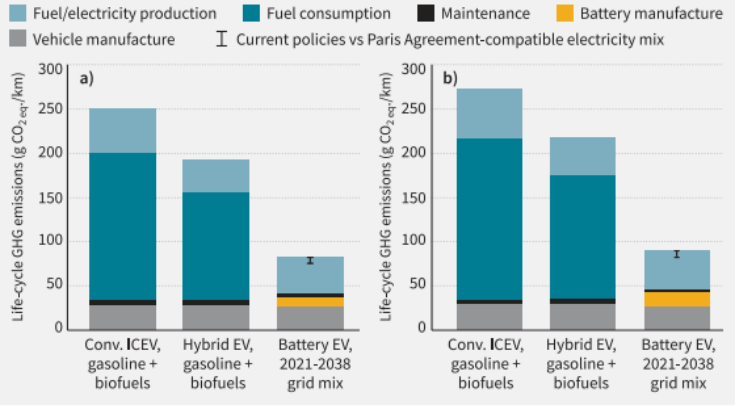
Figure 3: Life-cycle greenhouse gas emissions of average new sedan segment registered in India in 2021. GWP = global warming potential. (Source: ICCT 2021: CC BY-SA 4.0)



How do EVs' life-cycle emissions compare to ICE vehicles?

- According to an analysis by the International Council on Clean Transportation of life-cycle emissions of various vehicles in the U.S., Europe, China, and India, switching to full EVs will result in 19-34% lower emissions by sedans and 38-49% by SUVs – even with the fossil-fuel-dominated energy mix in India.
- By 2030, when renewables account for a greater share in the grid, emissions are expected to be 30-56% lower.
- The same report also compared the life-cycle emissions of hybrid EVs with that of conventional EVs in Europe and found 20-23% lower emissions.

Figure 4: Life-cycle greenhouse-gas emissions of a) lower medium and b) SUV segment conventional gasoline ICE vehicles, gasoline hybrid EVs, and average electricity-powered full-EVs registered in Europe in 2021. (Source: Global comparison of the life-cycle GHG emissions of combustion engine and electric passenger cars, ICCT 2021)



Challenges to transitioning to electric mobility

- First fast-charging infrastructure along highways:
    - This is vital because people generally want to own one affordable car serving both short and long-distance travel needs over 5-15 years, and want to drive without range anxiety.
    - The lack of a fast-charging infrastructure will discourage people from buying full EVs. Fast-charging means power levels of 50-350 kW for cars and up to 1,000 kW for heavy-duty vehicles. To compare, our smartphones charge at 10-25 W.
    - Fast-charging will enable drivers to make long-distance trips using their EVs with 10-20-minute stops to gain ranges of 300-400 km.
    - The indicative prices for EV fast-chargers are: capital cost of $500-1,000/kW, service and maintenance at 5% per year; and an installation cost of around 50% of the charger cost.
    - The high cost and wide variation are due to the high-capacity power connections required, the cost of making and installing a new transformer and cables; service-level agreements; DC charger plug options and quantities; customisation costs; labour costs; and permits.
- Second, many parts of the world, especially economically developing nations, don't yet have access to a grid or the grid isn't 100% reliable.
    - The relatively high charging power for slow-charging (<22kW) and fast-charging (<350kW) make the problem more prominent vis-à-vis generation and transmission capacities. This in turn could retard the transition to EVs.
- Third, mass-market price points of cars in the economically developing world are much lower, ~$12,000 – whereas EVs with a range of 300-400 km will reach parity with conventional vehicles in the richest countries at a price of $25,000-35,000 in the short term.
    - This is due to the high battery costs, between $130-200/kWh at the pack level.
    - EVs with higher range will need larger battery packs and thus be more expensive.

How can hybrid or plug-in hybrid EVs help us decarbonise?

Hybrid EVs – either full or plug-in hybrids – present a big opportunity to lower emissions in the interim, i.e. from today, with ICE vehicles, until we have full EVs powered 100% by renewable energy.

- The 1.5-2x higher fuel economy of hybrids and 3-4x higher fuel economy of plug-in hybrids in electric mode drastically reduces fuel costs, emissions, and oil imports.
    - Plug-in hybrids in particular can match several (but not all) of the benefits of full EVs vis-à-vis emissions and performance without requiring large batteries. With a limited all-electric range, this may not cater to all use cases, such as taxis.
- Regenerative braking in hybrid EVs – i.e. recovering the kinetic energy of the vehicle while slowing down instead of dissipating it as heat in the braking system – can improve fuel economy esp. in urban areas with frequent stop-go conditions and in hilly conditions. An engine start-stop mechanism can also save fuel at traffic junctions and in heavy traffic.
- Finally, the purchase price of hybrid cars is only 5-15% higher than conventional vehicles and is independent of the vehicle range.
    - In an ideal future, all our electricity comes from renewable sources and we power our EVs using solar energy during the day and with wind energy at night.

For countries that can already work towards this goal now, our priority must be to realise this vision. In places where transitioning to renewables for power and building fast-charging infrastructure will take a decade or more, we need to switch to hybrid EVs as a short-term solution due to the fuel-economy and emissions benefits.

Climate Finance Adds Another Layer Of Inequity To Climate Change

Context: Many countries in Sub-Saharan Africa are in debt distress and are also among the nations that are most vulnerable to climate change.

Key Highlights

- In the last few years, climate justice activists have been campaigning for the world's economically developed countries to raise their investments in climate adaptation and mitigation, including paying for other countries' abilities to deal with the effects of climate change.
- Countries in Sub-Saharan Africa, Latin America, and South Asia have historically contributed the least to global warming; yet, they are bearing the bigger brunt of climate disasters – both in the form of extreme natural phenomena and debt distress.
- On the other hand, countries in North America and Europe have contributed and continue to contribute the most, and are also the creditors of the debt crisis.

Chart 1 shows

- The carbon dioxide emissions per capita emitted in 1980-2021 by various geographical regions, including Africa, Asia (excluding China and India), and South America, and by some countries.
- It also shows (as a fixed black line) a baseline target of carbon dioxide emissions (2.3 tonnes per capita) needed to limit global warming to 1.5° Celsius, as determined by the Institute for European Environmental Policy.
- The global average emissions per capita is currently double this target, and has stayed above 4.7 tonnes per capita since 2010, whereas Africa and India have both been consistently under.
- China crossed the global average in 2004. It steadily climbed to 8 tonnes per capita in 2021 and joined Europe and Oceania.
- Notably, while the the overall emissions of the UAE and the U.S. have declined, as of 2021 these countries still had the highest emissions per capita (21.8 tonnes and 14.9 tonnes, respectively).

Chart 1 | CO_2 emissions per capita emitted in 1980-2021 by various geographical regions (in tonnes per capita)

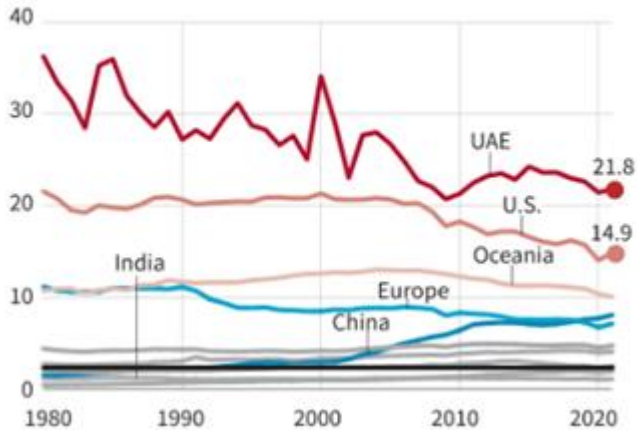
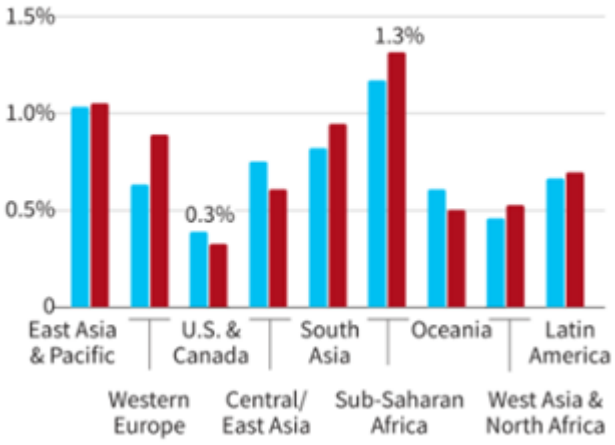


Chart 2 shows

- The total investment in climate-related activities by each World Bank region as a fraction of that region's total GDP in 2019 and 2020.

Chart 2 | Total climate investment by each World Bank region as a fraction of that region's total GDP in 2019 and 2020



- This includes public and private investment in, among others, climate mitigation and adaptation activities, reduction of fossil-fuel use, and reforestation.
- In both years, Sub-Saharan Africa had the highest investment fraction in climate finance (1.3% of its GDP), followed by East Asia and the Pacific (1%) and South Asia (0.9%).
- The U.S. and Canada had the lowest proportionate investment, at only 0.3% of their GDP.
- A large fraction of the funds for climate mitigation and adaptation in the Global South comes from international multilateral climate funds, such as the Green Climate Fund and the Clean Technology Fund. The sources for the Global South are usually economically developed countries.

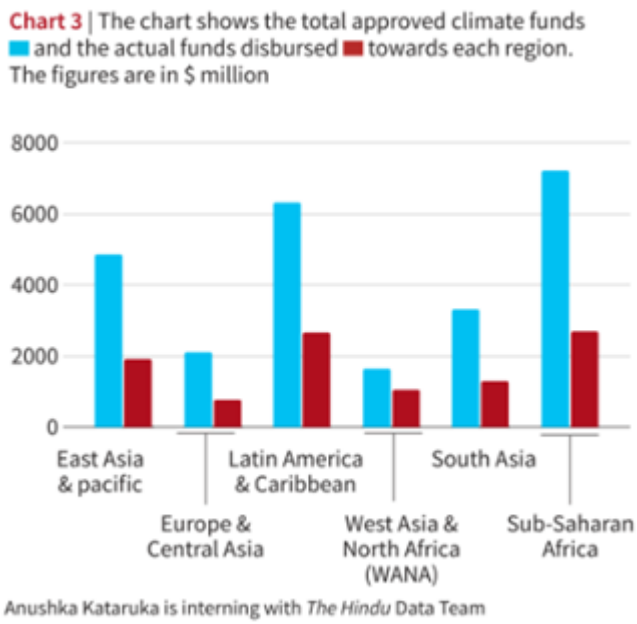
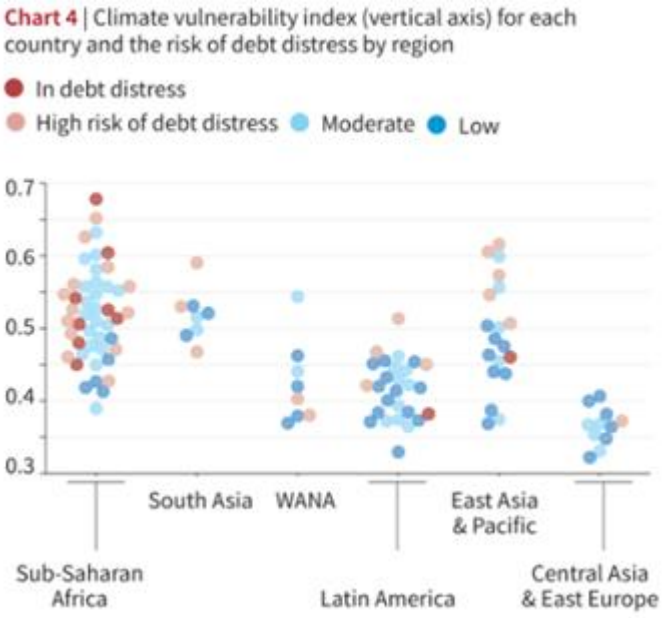


Chart 3 shows

- The total approved funds and the actual funds disbursed towards each region.
- Since 2003, for example, $3.3 billion was approved to be disbursed to South Asia, but only $1.3 billion was actually disbursed. Most regions received only 40% of the approved funding for that region, on average.

Chart 4 shows

- The climate vulnerability index by country and the risk of debt distress by region.
- This index, calculated annually by the Notre-Dame Global Adaptation Initiative, combines a country's exposure, sensitivity, and capacity to adapt to climate change.
- The risk of debt distress is based on the International Monetary Fund's Debt Sustainability Framework reports.
- As most reports are limited to the Global South, several high-income countries had to be excluded from the analysis.
- The chart shows that most countries in debt distress or facing a high risk are in Sub-Saharan Africa, which is also the most vulnerable to climate change.
- Overall, countries at high risk or in debt distress are also more vulnerable to climate change. Three of the eight countries in South Asia are in this group.



Endangered Himalayan Vulture

Context: Researchers have recorded the first instance of captive breeding of the Himalayan vulture (Gyps himalayensis) in India at the Assam State Zoo, Guwahati.

Key Highlights

- Categorised as 'near threatened' on the International Union for Conservation of Nature (IUCN) Red List of threatened species, the Himalayan vulture is a common winter migrant to the Indian plains, and a resident of the high Himalayas.
- Details of the successful breeding were recently published in a paper titled "Breeding of Himalayan Vulture Gyps himalayensis Hume, 1869 (Aves: Accipitriformes: Accipitridae) in the Assam State Zoo, Guwahati, Assam, India" in the Journal of Threatened Taxa.
    - During first month, the nestling was kept in the brooder made up of a plastic box (1 x 1 x ½ f) with a mat for the grip. The temperature was maintained around 30-35 C with a lamp, a water bowl and it was monitored with a thermo-hygrometer. The nestling was provided with sufficient space to move towards and away from the heat source.
    - Along with the housing for nestling, the paper says, the food, frequency of feed, and the growth and colouration of the nestling were observed.
- The Himalayan vulture at the Guwahati Zoo is the second such instance in the world, after France, where the species has been bred in captivity.
- Four VCBCs (Vulture Conservation Breeding Centre) established by Bombay Natural History Society (BNHS) at Pinjore in Haryana, Bhopal in Madhya Pradesh, Rani in Assam, and Rajabhatkhawa in West Bengal are involved in conservation breeding of the white-rumped vulture (Gyps bengalensis), slender-billed vulture (Gyps tenuirostris), and the Indian vulture (Gyps indicus).
- The unprecedented scale and speed of declines in vulture populations has left all the three resident Gyps vulture species categorised 'Critically Endangered'.

Clouded Leopards

Context: New study reveals endangered species does not follow any specific pattern of operating in a space, unlike other carnivores.

- Two scientists from the Wildlife Institute of India (WII) have found that the clouded leopard in western Assam's Manas National Park and Tiger Reserve seems to play a mysterious game of hide-and-seek in the tropical canopy forests.

About Clouded Leopards

- The mainland clouded leopard (Neofelis nebulosa) is often likened to the Ice Age sabretooth because it has the largest canines in proportion to its skull size among all cat species.
- It also has rotating rear ankles that enable it to climb down head first from trees, unlike the other felines.
- Carnivore ecologist observed that the cat with cloud-like spots on its hide does not follow any specific pattern of operating in a certain space, unlike other carnivores.

- They seemed to go wherever they pleased without worrying about other predators, primarily because of their ability to climb trees, even hang upside down from large branches.

- ✓ The clouded leopard is categorised into two species:
  - The mainland clouded leopard distributed from central Nepal to peninsular Malaysia, and
  - The Sunda clouded leopard (Neofelis diardi) native to Borneo and Sumatra.
- ✓ The mainland clouded leopard is tagged vulnerable on the International Union for Conservation of Nature(IUCN) Red List and is considered at high risk of extinction in the wild due to deforestation and poaching.
- ✓ Despite this, knowledge of the animal's ecology and population status remains limited.

Indian eagle-owl

Context: The Indian eagle-owl was classified as a species only in recent years, thus distinguishing it from the Eurasian eagle-owl.

- ✓ The Indian species is an imposing bird.
- ✓ The slightly larger female can reach a total length of two and a half feet, with a wingspan of six feet.
- ✓ Prominent ear tufts that look like horns are seen to project from its head.
- ✓ Its nocturnal habits have meant that very little is known about this bird.
- ✓ The widespread range — the entire Indian peninsula — would seem to indicate that it is a stable population. But nobody knows for sure, as it is not a very common bird. Their total numbers have never been estimated.
- ✓ The Indian eagle-owl does not have a dependency on forests. The regular items on their menu, such as rats, bandicoots, and even bats and doves are best hunted over open scrubland and agricultural tracts. Nearby rocky perches and crags provide ideal settings for its nests.

Benefits To Agriculture

- ✓ Research done by the Ela Foundation and the Zoological Survey of India has shown that Indian eagle-owls nesting near agricultural lands had more, and healthier, owlets than scrubland nesters.
- ✓ The former benefited from the abundant populations of rodents near farms.

INTERNATIONAL RELATIONS

Two Indian Military Aircraft Visit Australia's Strategic Cocos Islands

Context: The planes were at Cocos Island for a week, which can be an important base for refuelling and operational turnaround for Indian armed forces; India aims to increase its military-to-military engagement, deepening interoperability in the region.

- ✓ Expanding the strategic reach of the Indian military and improving interoperability with Australia, an Indian Navy Dornier maritime patrol aircraft and an Indian Air Force (IAF) C-130 transport aircraft visited Australia's Cocos (Keeling) Islands (CKI) in the Southern Indian Ocean, close to Indonesia and strategic maritime choke.

Key Highlights

- ✓ Cocos can be an important base for refuelling and operational turnaround for the Indian military, especially once the runway there is expanded to accommodate large aircraft like the P-8 long range maritime patrol aircraft.
- ✓ This week's visit by Indian Navy Dornier maritime patrol aircraft and a C-130 Hercules from the IAF effectively elevates the Cocos Islands as a staging point for Australian and Indian air surveillance of the maritime choke points through Southeast Asia and the entire eastern Indian Ocean.
- ✓ The visit represents an important step in the bilateral relationship as the two countries increasingly give each other access to their military facilities in the Indian Ocean.
- ✓ This is the latest in a series of India's growing military-to-military engagements, deepening interoperability broadly in the region and especially with Australia.
- ✓ In February, in another first, an Indian Navy Kilo class conventional submarine, INS Sindhukesari, which was on operational deployment, travelled through the Sunda Strait and docked in Jakarta, Indonesia for operational turnaround.
- ✓ Even before the Indian military reached there, Cocos Islands had been a point of cooperation between the space agencies of the two countries for India's Gaganyaan human space flight mission.
- ✓ Australia's active support in establishing a temporary ground station at CKI for the Gaganyaan missions, and potential opportunities for cooperation in earth observation, satellite navigation, space situational awareness, weather and climate studies using satellite data, were the highlights of the discussion, an Indian Space Research Organisation (ISRO) statement had said during the visit of Enrico Palermo, head of the Australian Space Agency (ASA) to the ISRO's headquarters in September 2022.
- ✓ India's access to CKI and Christmas Island, which is even closer to the strategic choke points, has been under discussion for a while. A turnaround from either of the islands would significantly enhance the on-station time of the Indian Navy's P-8Is to monitor movements into the Indian Ocean, especially by China's People's Liberation Army Navy, whose forays into the region have significantly gone up in recent years.

SCIENCE

Worldcoin Project

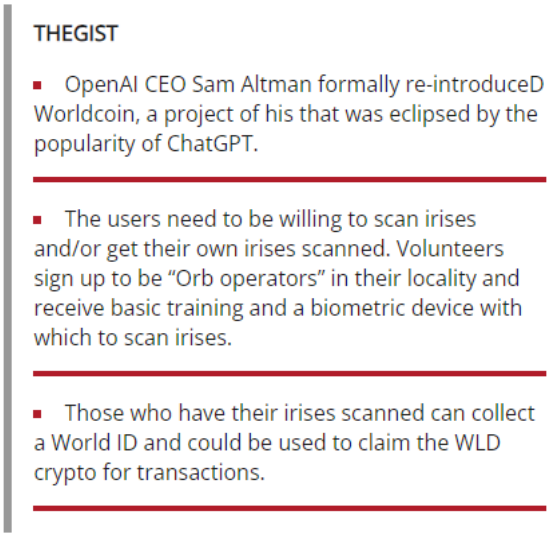
Context: OpenAI CEO formally re-introduce Worldcoin project.

- The Worldcoin venture runs on a simple model: allow your eyes to be scanned in order to prove your human uniqueness, and receive some crypto and an ID (called a World ID) in exchange.
- Worldcoin claims it is building the "world's largest identity and financial public network" open to people worldwide.

What is Worldcoin?

Worldcoin is an initiative to create a digital network in which everyone can claim some kind of stake, and join the digital economy.

Using a device called "Orb," Worldcoin volunteers known as 'Orb operators' scan a person's iris pattern to collect their biometric data and help them get a World ID through the World app.



How does Worldcoin work?

- The users need to be willing to scan irises and/or get their own irises scanned.
- Individuals who want to receive a World ID are not required to share their name, phone number, email address, or home address.
- Images collected by the Orb are used to generate a unique iris code. By default these images are immediately deleted once the iris code is created, unless the user opts in to Data Custody.
- Volunteers sign up to be "Orb operators" in their locality and receive basic training and a biometric device with which to scan irises.
- Orb operators can even rent out the Orb to others to let them scan eyeballs as well.
- Those who have their irises scanned and collect a World ID can use this to claim the WLD crypto, which they may use for transactions or hold on to the asset in the hope that its price might rise, as it did after launching.
- However, users can also buy or sell WLD without getting scanned or using the app.
- In return for signing up more people to the Worldcoin network, Orb operators get WLD, which is a token based on the Ethereum blockchain.
- Ethereum has a native coin, Ether, which is the second-largest crypto by market capitalisation. However, anyone can create a token which runs on the Ethereum blockchain. WLD is one such cryptocurrency.

Criticism

Worldcoin was criticised long before its re-launch. NSA whistleblower Edward Snowden pointed out that even if a person's biometric scans were deleted for privacy reasons — as Worldcoin said it would do — the unique identifier for the scan would match future scans of the same person's eyes.

Worldcoin & India

According to the company website, it has. Worldcoin lists 18 locations, largely in Delhi, Noida, and Bangalore, where Orb operators are scanning people's eyes. Some locations include popular malls and metro stations in these cities.

Why does Worldcoin scan irises?

In a company blog post, Worldcoin explained that it wanted to include everyone in its network and that using biometric information to avoid duplication was a valid method for this.

- The company claimed that India had "proven the effectiveness of biometrics" through its Aadhaar system. Worldcoin notes that Aadhaar IDs stopped people from signing up multiple times to benefit from social welfare schemes.
- It uses a technology known as zero-knowledge proofs (ZKPs) to maintain users' privacy.
- Worldcoin has also said it is fully compliant with Europe's General Data Protection Regulation (GDPR).

PSLV Puts 7 Satellites In Orbit

Context: The Indian Space Research Organisation (ISRO) on Sunday successfully launched the PSLV-C56 carrying Singapore's DS-SAR and six other satellites.

- The primary satellite DS-SAR was sponsored by the Government of Singapore; to reduce space debris, PS4 stage brought to a lower orbit so that it re-enters atmosphere in less than two months.
    - The DS-SAR satellite is developed under a partnership between the DSTA (representing the Government of Singapore) and ST Engineering.
- Co-passengers:
    - VELOX-AM, a 23-kg technology demonstration microsatellite;
    - Atmospheric Coupling and Dynamics Explorer (ARCADE), an experimental satellite;
    - SCOOB-II, a 3U nanosatellite flying a technology demonstrator payload;
    - NuLIoN by NuSpace, an advanced 3U nanosatellite enabling seamless IoT connectivity in both urban and remote locations;
    - Galassia-2, a 3U nanosatellite that will be orbiting on a low-earth orbit;
    - ORB-12 STRIDER, a satellite developed under an international collaboration.

GOVERNANCE

National Deep Tech Startup Policy (NDTSP)

Context: The office of the Principal Scientific Adviser to the Government put out a draft National Deep Tech Startup Policy (NDTSP) for public comment, following two versions that were iterated at high levels with other government departments, academia and stakeholder firms.

Key Highlight

- The policy seeks to "ensure India's position in the global deep tech value chain," in areas such as semiconductors, Artificial Intelligence (AI) and space technology.
- The policy seeks to bolster research and development in deep tech start-ups, which work on fundamental and technical problems, unlike firms that monetise technology with distinguished business models, the draft says.
- The policy also seeks to find approaches to provide financing to deep tech start-ups at critical moments, such as before they go to market with their products or ideas.
- The policy also seeks to simplify the intellectual property regime for such start-ups, ease regulatory requirements, and proposes measures to promote these firms.

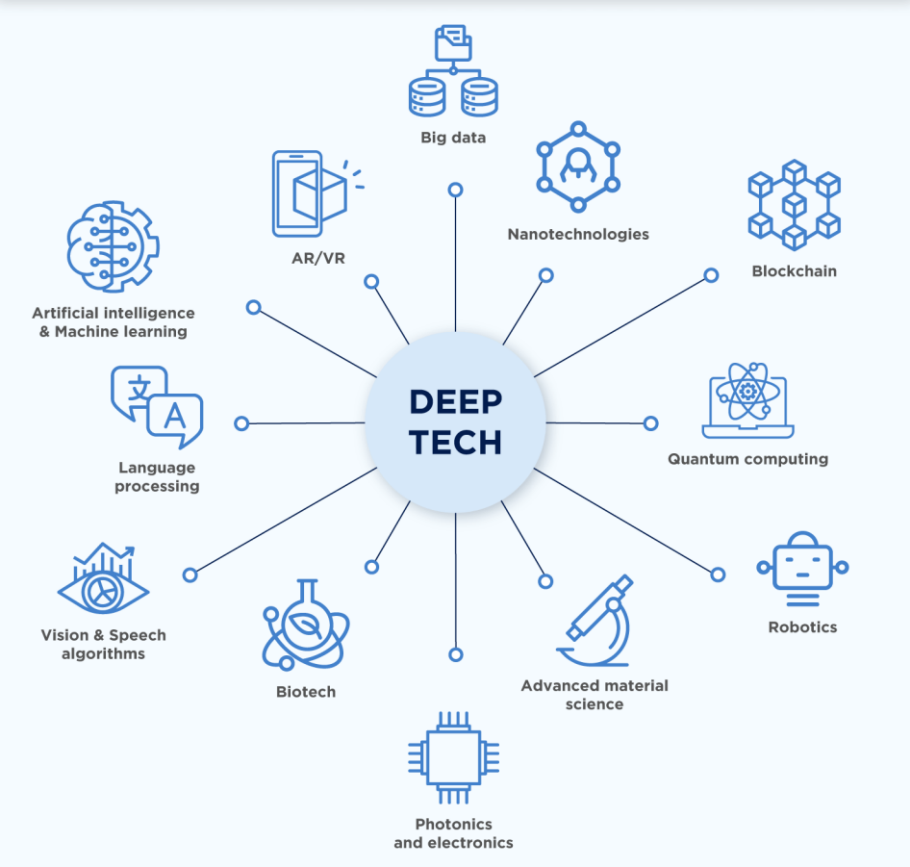
- For instance, the NDTSP suggests that an Export Promotion Board be created to ease barriers of entry for Indian deep tech start-ups into foreign markets, and that clauses to ease such market access be included in foreign trade agreements.

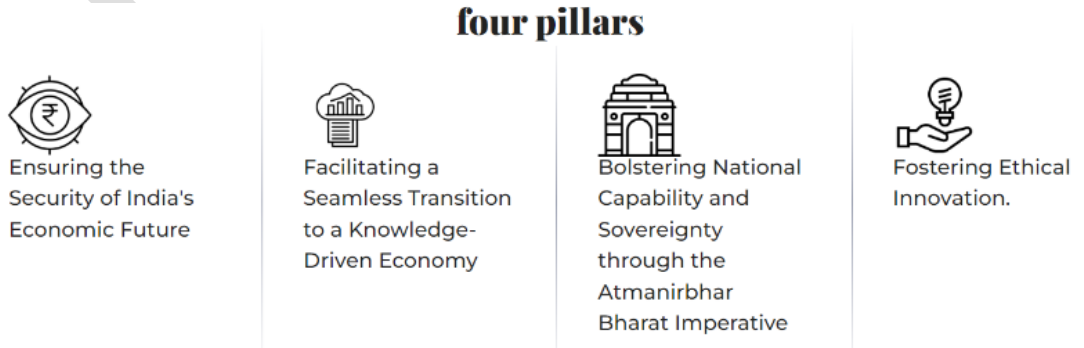
Deep Technology

Deep Technology refers to innovations founded on advanced scientific and technological breakthroughs. It is a classification of organization, or more typically Startup Company, with the expressed objective of providing technology solutions based on substantial scientific or engineering challenges.

Due to their disruptive nature, they have the potential to solve India's most pressing societal issues.

According to the BCG research, the overall investment in deep tech starting from 2015 increased by 300% to more than $60 million in 2020.

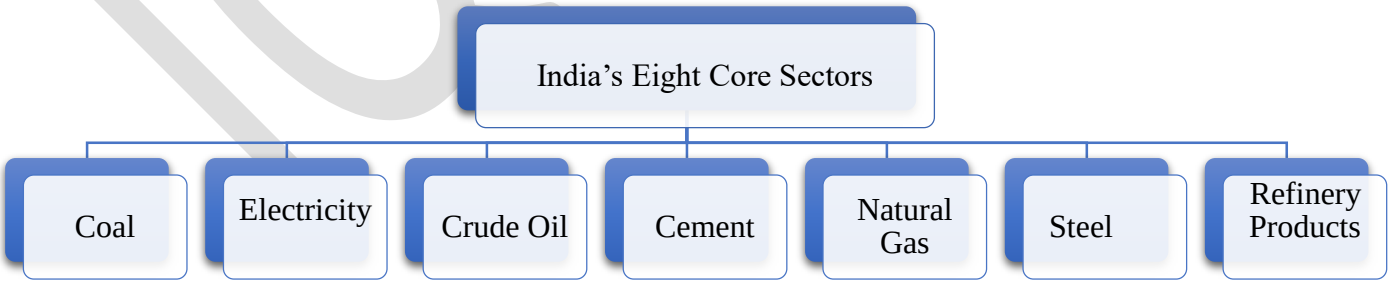




Objective of NDTSP	Provisions of Draft NDTSP
✓ To "ensure India's position in the global deep tech value chain," in areas such as semiconductors, Artificial Intelligence (AI) and space technology. ✓ To bolster R&D in deep tech start-ups working on fundamental and technical problems. ✓ To find approaches to provide financing to deep tech start-ups at critical moments. ✓ To significantly strengthen India's capabilities and enhance global competitiveness. ✓ To stimulate innovation, spur economic growth, and promote societal development through the effective utilization of deep tech research-driven innovations. ✓ To solidify India's financial stability and stimulating the transition towards a knowledge-centric economy, consequently augmenting India's overall productivity. ✓ To stimulate ripple effects throughout the economy and lay the groundwork for deep tech industry creation. ✓ To address the challenges confronting deep tech startups through definitive policy interventions to create a conducive ecosystem. ✓ To simplify the intellectual property regime for deep tech start-ups, ease regulatory requirements, and propose measures to promote these firms.	✓ It proposes an organisation "The Centre for Deep Tech Translation" to assess Indian research (publications, patents, etc.) for potential commercialisation. ✓ It suggests creation of Export Promotion Board to ease barriers of entry for Indian deep tech start-ups into foreign markets. ✓ It promotes setting up an Open Science and Data Sharing Platform for encouraging collaboration and knowledge sharing among the stakeholders to promote deep tech innovations. ✓ It suggests establishing a Single Window Platform that enables a Unified IP Framework, customised for deep tech startups. ✓ It suggests creating a thematically focused Fund of Funds (FoF) dedicated to deep tech investments; ✓ It suggests the use of Technology Impact Bonds to invite investment from the public and philanthropic entities. ✓ The policy insists on expanding skill enhancement grants, and incentivising venture capitalists to invest in female-led deep tech startups.

Government Effort To Boost Infrastructure Is Yielding Results

Context: Output at India's eight core sectors strengthened hearteningly in June, with the overall year-on-year growth in production estimated to have quickened to a five-month high of 8.2%.



Key Highlights

Seven of the sectors, including steel and cement and electricity, logged appreciable advances.

- **Steel,** which is the third-largest constituent of the index of eight core industries with a weight of just under 18%, was the standout performer, as output of the key alloy surged 21.9% undergirding the wider advance in the index.

- And **cement** posted an almost double-digit increase reflecting the continuing momentum in demand, a slight softening in the pace from the preceding two months on account of the onset of monsoon notwithstanding.
    - Steel and cement led the cross-sectoral advance over the April-June period, growing 15.9% and 12.2%, respectively, in the fiscal first quarter.
    - A key driver of demand for these two construction essentials continues to be the infrastructure sector, where the government's efforts to boost outlays including on affordable housing, urban renewal and transportation networks are providing a palpable tailwind.
    - Total capital expenditure by the Centre in June jumped more than 62% year-on-year and almost 24% from the preceding month to ₹1.10 lakh crore, Controller General of Accounts data showed.
- **Electricity**, which makes up a fifth of the core index, also posted its strongest increase in four months despite a cyclonic storm that impacted highly industrialised Gujarat the most, dampening demand.
- **Coal** output also rose 9.8% in June, lifting the first-quarter's production by 8.7%.
    - And official data showed output in July surged more than 14%, another positive augury given that coal demand extends beyond the electricity sector to other industrial segments including metal making and process industries where it is used in furnaces and boilers.

Areas Of Concern

- For all the talk of Aatmanirbharta, India's efforts to secure a degree of independence in the crucial oil sector are yet to yield meaningful dividends; the country is still heavily reliant on crude imports for its overall fuel needs.
- This is best reflected in the fact that crude oil production remained in the doldrums for a 13th straight month, contracting 0.6%.
- Along with refinery products, which have the heaviest weight of 28% on the index, crude oil also registered a sequential slide underlining the difficulties the oil sector as a whole continues to face because of regulatory inconsistencies.
- Policymakers have their task cut out to ensure the policy environment remains supportive especially at a time when global demand remains particularly uncertain.

Indian Institutes of Management (IIM) Bill

Context: In 2017, Parliament passed the Indian Institutes of Management (IIM) Act. The Act, which hugely expanded the autonomy already enjoyed by the IIMs, contains an important clause. It requires the Board of Governors (BoG) of the IIMs to commission an independent review of the institutes at least once every three years and place the report in the public domain.

- Six years on, very few of the 20 IIMs have done so. Among the top four IIMs, only the review report of IIM Bangalore is available on the website. This act of omission gives us an indication as to why the government thought fit to table the IIM (Amendment) Bill in Parliament last week.
- No government can take kindly to non-compliance with an Act of Parliament. The 2023 Bill seeks to take back from the IIMs the powers that the government ceded in 2017.
- The government seems to have judged that a dangerous governance vacuum has been created in the IIM system in the years since it relinquished control over these institutes.

Why The New Bill Is Required?

- The 2017 legislation was an extraordinary act of self-abnegation by the government. All key appointments — of the chairperson and board members, the director and the chairperson of the

Coordination Forum of the IIMs — were left to the BoG. The government reduced the presence of the Central and State governments on the Board from four members to two.

- The 2023 Bill seeks to undo many of the provisions of the earlier Act. It creates the post of Visitor, the President of India.
  - The Visitor will appoint the chairperson of the BoG, one nominee on the selection committee for the director, and the chairperson of the Coordination Forum for the IIMs.
  - He or she will also approve all director appointments.
  - The Visitor can initiate any review of or inquiry into the affairs of an institute and remove the director on his or her own.

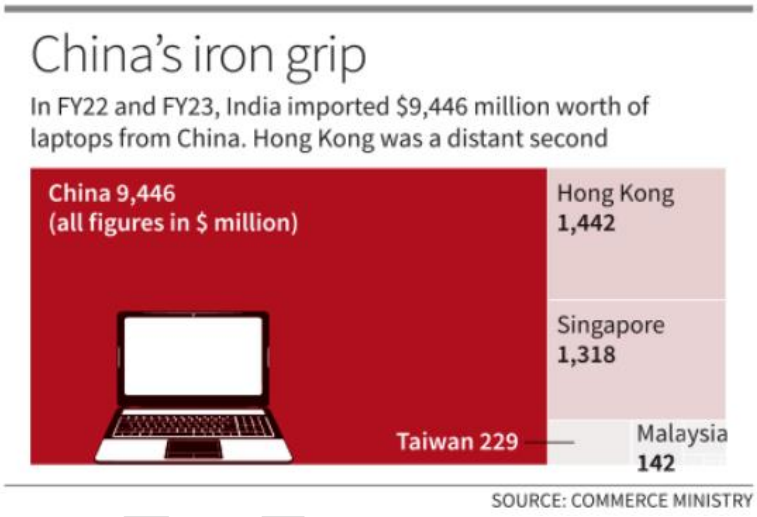
- The IIM Act created a situation where there were no meaningful checks and balances on the director.
- The absence of norms on key matters, such as the appointment of dean, had been evident even in the years leading up to the IIM Act as the government increasingly adopted a hands-off approach. The Act served to worsen the situation.
- The director became accountable to a BoG in which the two government nominees played a passive role. Individuals from industry, alumni, etc., who comprise the rest of the Board, have no stakes in their respective institutions and no incentive to exercise the necessary oversight.
- Moreover, the Act left answered the question: to whom are the boards now accountable?
  - Boards in the corporate world are notoriously ineffectual despite the fact that they are subject to company law, regulation, and monitoring by financial markets. To expect a BoG that is accountable to none to be effective is to demand a leap in faith.

Provisions of The Bill

Visitor	• The Bill designates the President of India as Visitor of every Institute covered by the Act.
Appointment of IIM Directors	• The Bill mandates the Board of Governors to obtain the prior approval of the Visitor before appointing an Institute Director. The procedure for selecting the Director will be prescribed by the central government.
Removal of IIM Directors	• The Bill provides that the Board will require prior approval of the Visitor before removing a director. The Bill also grants the Visitor the authority to terminate the services of the Director, as may be prescribed.
Appointment of the Chairperson of the Board of Governors	• The Bill stipulates that the Chairperson of the Board will be nominated by the Visitor.
Inquiries against IIMs	• The Bill confers the power of inquiry upon the Visitor. Based on the report of such inquiries, the Visitor may issue directions which will be binding on the Institute. The Board may also recommend such inquiries to the Visitor.
Dissolution of the Board	• The Bill provides that the central government may prescribe the conditions and procedure for dissolving or suspending an Institute's Board.
Co-ordination Forum	• The Bill provides that the Chairperson of the Co-ordination Forum for all the Institutes will be nominated by the Visitor. Chairpersons of all Institutes will be ex-officio members of the Forum.

Govt. Imposes Curbs On Import Of Laptops, Tablets

Context: New regulations require import licences with immediate effect; move will hit short-term availability of Dell, HP, Apple laptops, but will be a boost for domestic sector; some devices given exemption.



Key Highlights

- The Union government restricted all imports of laptops, tablets, and all-in-one and small-factor personal computers (PCs), requiring licences for these products to be brought into the country and sold to consumers.
- The move is expected to particularly impact short-term laptop availability from laptop brands that rely on assembly abroad, such as Dell, HP, Lenovo and Apple.
- The notification may entail longer wait times for individual products to be cleared for import and sale in India.
- The said restriction shall not be applicable to imports under Baggage Rules, the Directorate General of Foreign Trade said in its notification announcing the curbs, indicating that travellers may be free to bring one of these products back with them from overseas without attracting penalties.
- Laptops can still be purchased online from overseas, the government clarified; however, when these are imported by individual buyers, the import duty and shipping fees may make this an expensive prospect, as tax may also have to be paid in the country from where the laptop is purchased.
- Devices imported for research and development, and those repaired abroad, are exempt from these restrictions.