

July - 21

TNPSC BITS

- ❖ INS Sunayna ship participated in the multinational maritime security exercise known as Op Southern Readiness 2023 in Seychelles.
- ❖ The Indian Army has launched the Tri-Services 'Nari Sashaktikaran Women Motorcycle Rally' to commemorate 24 years of victory over Pakistan in the Kargil War of 1999.
- ❖ The India's fiscal deficit for April-May, narrowed to 11.8% of annual estimates to ₹2.10 trillion, from 12.3% a year ago.
- ❖ The Third G20 Finance Ministers and Central Bank Governors (FMCBGs) held in Gandhinagar, Gujarat.
- ❖ The NITI Aayog has introduced the Techno-Commercial Readiness and Market Maturity Matrix (TCRM Matrix) framework.
 - It aims to revolutionize technology assessment and fuel innovation and entrepreneurship in the country.

TAMIL NADU

Tamil Nadu Day - July 18



- ❖ Former Chief Minister C.N. Annadurai, passed a resolution on July 18th 1967, to rename the Madras State as Tamil Nadu.
- ❖ The previous AIADMK government had announced that November 1 would be observed as Tamil Nadu Day from 2019.

- ❖ The then Madras Presidency, became Andhra Pradesh, Karnataka and Kerala on November 1, 1956.

NATIONAL

Digital and sustainable trade facilitation rankings



- ❖ United Nation's Economic and Social Commission for Asia Pacific's (UNESCAP) released a latest global survey on digital and sustainable trade facilitation.
- ❖ India's score has jumped to 93.55% in 2023 from 90.32% in 2021.
- ❖ India is now the best performing country amongst all the countries of South Asia region.
- ❖ India achieved 100% in key areas such as transparency, formalities, institutional arrangement and cooperation, and paperless trade.
- ❖ Its score in the "Women in Trade Facilitation" component rose from 66.7% in 2021 to an impressive 77.8% in 2023.
- ❖ The overall score of India has been greater than many developed countries including Canada, France, UK, Germany etc.

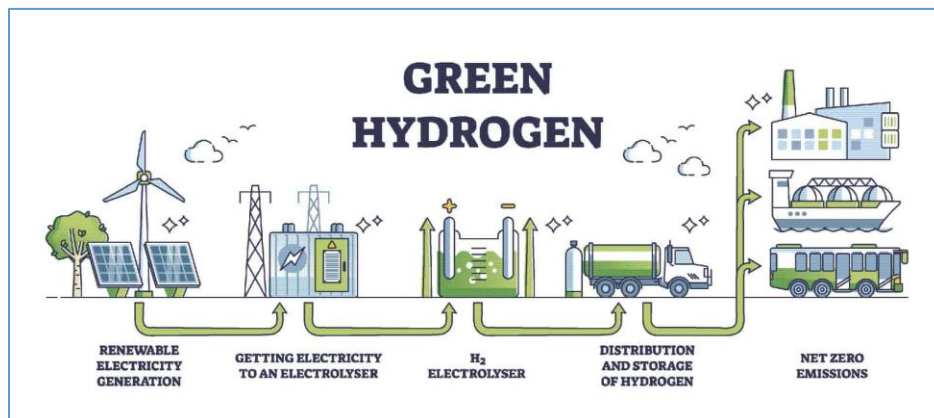
NITI Aayog export preparedness index

- ❖ Tamil Nadu has been ranked the No. 1 State in Export Preparedness Index (EPI) for 2022.
- ❖ It is followed by Maharashtra and Karnataka.
- ❖ Gujarat has been pushed to the fourth slot this time.

- ❖ Tamil Nadu has been in the top 5 list among Large/Coastal States' categories in the past two years.
- ❖ Karnataka and Tamil Nadu have the highest number of GI products being exported.
- ❖ According to the report, the top three exporting districts of Tamil Nadu are Kanchipuram, Chennai, and Tirupur.
- ❖ Other than its top export which is engineering goods, Kanchipuram is the leading exporter of silk and its finished products.
- ❖ Tirupur stands 22nd in the country, in terms of value of exports, on the back of its textile exports.

Niti Aayog's Export Preparedness Index		
State	Score	Ranking
Tamil Nadu	80.89	1
Maharashtra	78.2	2
Karnataka	76.36	3
Gujarat	73.22	4
Andhra Pradesh	59.27	5
Odisha	58.84	6

Roadmap for Green Hydrogen Ecosystem



- ❖ The Ministry of New and Renewable Energy Sources has unveiled draft and roadmap to outline the research and development priorities for manufacturing and storing of Green Hydrogen.
- ❖ It aims to promote efficient, safe and cost-efficient hydrogen storage, paving the way for its widespread adoption as a clean energy source.

- ❖ It highlights the importance of combining hydrogen fuel cells, advanced batteries and super-capacitors.

Variable Rate Reverse Repo Auctions (VRRRs)

REPO AND REVERSE REPO AUCTIONS BY RBI				
AMOUNT IN RS CRORE				
Date	Tenure	Notified amount	Amount allotted	reversal
April 21, 2023	13-day VRRR	50,000	20,480	May 4, 2023
May 4, 2023	15-day VRRR	50,000	8,447	may 19, 2023
May 19, 2023	14-day Variable rate repo	50,000	46,790	June 2, 2023
June 2, 2023	14-day VRRR	2,00,000	50,868	June 16, 2023
June 5, 2023	4-day VRRR	1,00,000	66,640	June 9, 2023
June 6, 2023	3-day VRRR	75,000	32,375	June 9, 2023
June 7, 2023	2-day VRRR	75,000	1,850	June 9, 2023
June 9, 2023	4-day VRRR	1,00,000	5,780	June 13, 2023

- ❖ After a gap of almost a month, the Reserve Bank of India announced a 14-day variable rate reverse repo (VRRR) operation.
- ❖ Variable rate reverse repo (VRRR) auctions are a tool used by the Reserve Bank of India (RBI) to manage the amount of money in the banking system.
- ❖ The VRRR is usually undertaken to reduce surplus liquidity by withdrawing existing cash in the system.
- ❖ The RBI conducts these auctions to absorb excess money from banks when there is too much liquidity.

Amendments to Promote Mineral Exploration

- ❖ The Indian government approved amendments to the Mines and Minerals (Development and Regulation) Act, 1957.
- ❖ It aims to incentivize mineral exploration and development in the country, with a specific focus on minerals such as lithium, gold, silver, copper, and zinc.
- ❖ The changes mark the fifth amendment to the Act since 2014.

- ❖ This amendment demonstrating India's commitment to tapping into its mineral resources.
- ❖ They are
 - Boosting Lithium and Deep-Seated Minerals
 - Exploration License Through Auction
 - Specified Minerals in the New Schedule
 - Promoting Private Sector Participation
 - Attracting Global Investment



Exploring Opportunities

Fifth MMDR Act amendment being readied

On the Cards

Provision of exploration licenses

Private players to be allowed to identify mineral deposits | Identified areas to be bid out after approvals

Why the Changes?

Only around 1/3rd of India's geological potential explored

Only 1% of global exploration budget spent in India

Hunt for gold, silver, copper, zinc metal deposits

Rare earth and critical minerals in the list

Schedule M

- ❖ Union Ministry of Chemicals and Fertilizers has directed regulatory authorities to conduct risk-based inspections and audits of manufacturing plants.
- ❖ It also added that Schedule M shall be made compulsory for the MSME pharma sector in a phased manner.
- ❖ Schedule M part of Drugs and Cosmetics Act 1940 deals with 'Good Manufacturing Practices' for pharmaceuticals.
- ❖ It aims to strengthen quality assurance and protect India's reputation as a global pharmaceutical powerhouse.

- ❖ It covers various aspects, including shop floors, quality control systems, labs, production, equipment cleaning, and housekeeping.



Quality Control Orders

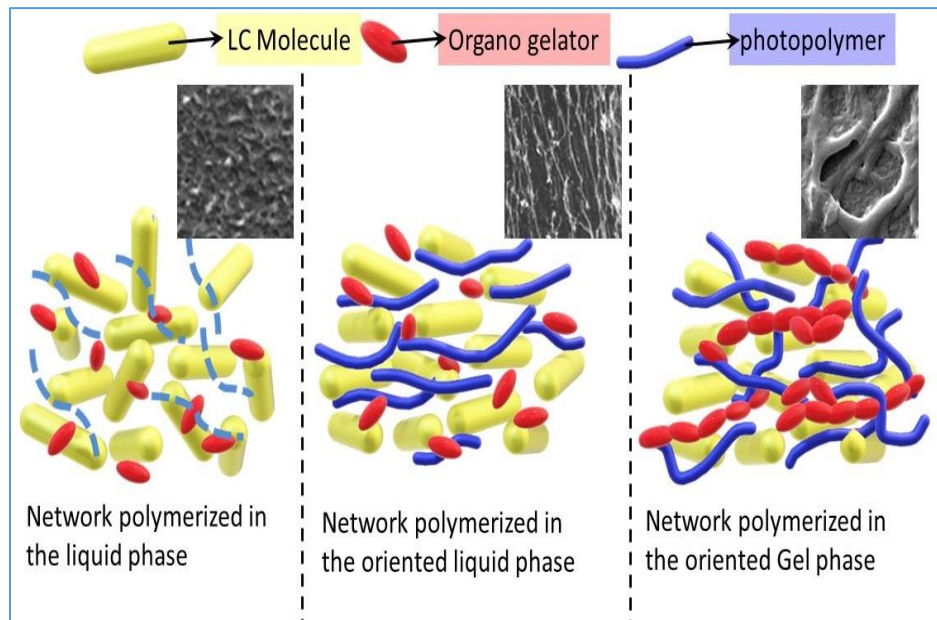


- ❖ Department for Promotion of Industry and Internal Trade (DPIIT) has notified two new Quality Control Orders (QCOs).

- ❖ It has taken a significant step towards enhancing the quality and safety standards of consumer products.
- ❖ These QCOs, covering potable water bottles and flame producing lighters.
- ❖ They aimed at strengthen the quality ecosystem in India and prioritize public health and safety.
- ❖ They will come into effect six months from the date of notification.

Low-energy Consuming Switchable Smart Windows

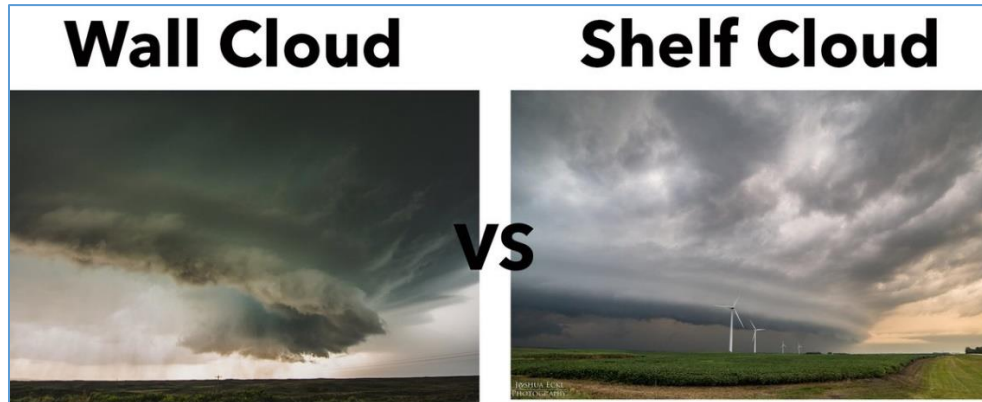
- ❖ The Ministry of Science and Technology has unveiled a groundbreaking technique for confining liquid crystals using hierarchical double networks of polymers.
- ❖ This innovative method holds immense potential in the development of low-energy consumption on-demand switchable smart windows.
- ❖ Low-energy-consuming switchable smart windows developed based on novel architecture for confining liquid crystals.



Shelf cloud

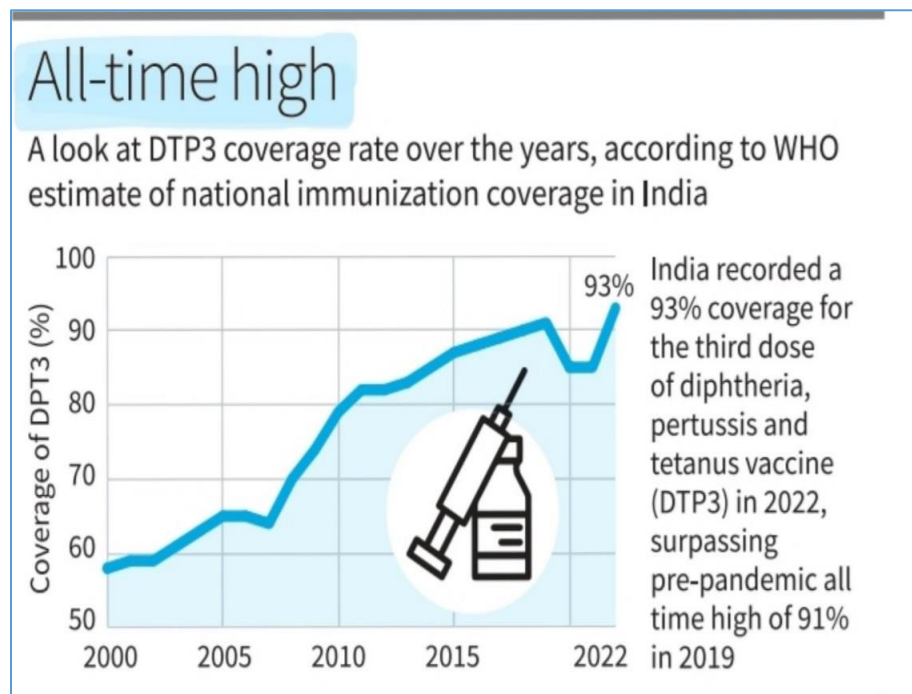
- ❖ Recently, a massive Shelf Cloud formation has been spotted in Haridwar, Uttarakhand.
- ❖ Shelf clouds also known as Arcus clouds.
- ❖ They are often associated with powerful storm systems, and many times they are reported as wall clouds, funnel clouds, or rotation.

- ❖ These clouds are sometimes seen beneath cumulonimbus clouds, the dense, towering vertical cloud that causes intense rain.



INTERNATIONAL

DPT3 immunization coverage in 2022



- ❖ The coverage rate for DTP3, the third dose of diphtheria, pertussis and tetanus vaccines, in India rose to an all-time of 93% in 2022.
- ❖ It is surpassing the previous pre-pandemic best of 91% recorded in 2019.
- ❖ In the WHO South-East Asia Region, the coverage rate for DTP3 recovered to the pre-pandemic level of 91%.

- ❖ It is a sharp increase from the 82% recorded in 2021.
- ❖ The region also witnessed a six per cent improvement in the coverage of the measles vaccine, rising to 92% in 2022 from 86% in 2021.
- ❖ Indonesia reported a DPT3 coverage of 85% in 2022.
- ❖ Bhutan recorded 98% and Maldives 99%, are surpassing their pre-pandemic immunisation rates.
- ❖ Bangladesh with 98% and Thailand 97% demonstrated consistency in routine immunisation coverage throughout the COVID-19 pandemic and beyond.
- ❖ Sri Lanka with 98% coverage, Nepal with 90% and Timor-Leste with 86% were closer to the pre-pandemic coverage of 99%, 93% and 90%, respectively.

Phosphate Discovery

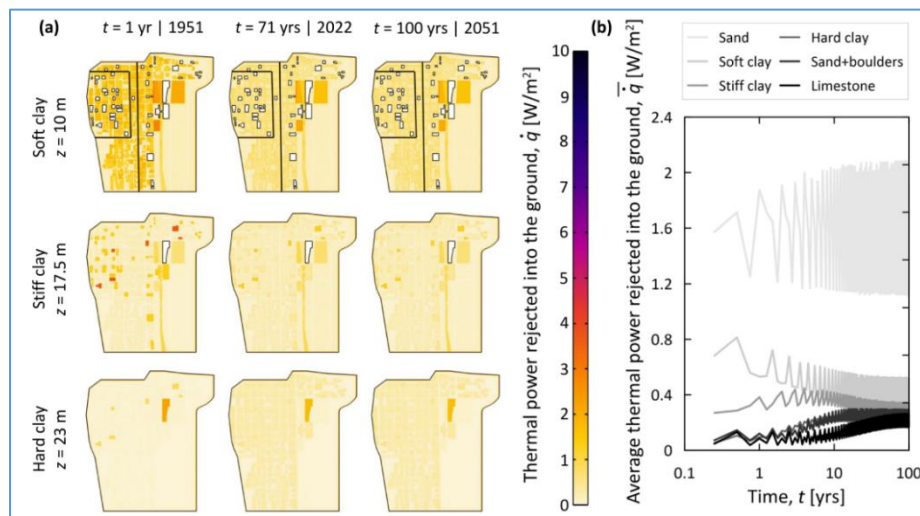


- ❖ A huge deposit of a valuable mineral called phosphate has been discovered in Norway.
- ❖ It can be used to power electric cars and solar panels.
- ❖ There are up to 70 billion tonnes of phosphorus in the deposit.
- ❖ It is enough to meet demand for the next 50 years.
- ❖ Previously, the largest amount of phosphate rock was found in Morocco's western Sahara region, with approximately 50 billion tonnes.
- ❖ China (the largest phosphate producer in the world) and Egypt also have significant phosphate reserves.

- ❖ The refining process for phosphorus extraction can be highly polluting.

Underground Climate Change

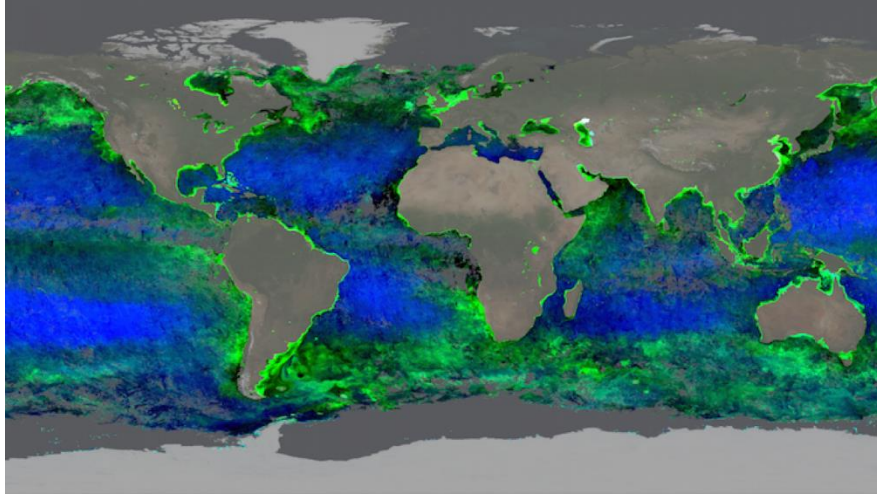
- ❖ According to the research done in North-western University in Illinois in the US, Underground Climate Change is a silent hazard that threatens major cities across the world.
- ❖ The heat from buildings in underground transportation system diffuses below the surface.
- ❖ Over time the ground warms and then expansions and contractions caused by this heat creates rocks.
- ❖ This impairs the long-term durability and operational performance of structures.
- ❖ They also claim that such rising temperatures may have contributed to previous building deterioration.



Change in color of world's Ocean

- ❖ As per the recent studies, climate change has caused a change in the colour of 56 per cent of the world's ocean.
- ❖ It found that waters in the tropics, particularly the southern Indian Ocean, have turned green.
- ❖ Green-coloured water indicates an increase in phytoplankton, microscopic plant-like organisms that are crucial for marine life and carbon dioxide absorption.
- ❖ The researchers analysed data from the Moderate Resolution Imaging Spectroradiometer (MODIS) aboard the Aqua satellite.
- ❖ It has been monitoring ocean colour for two decades.

- ❖ They observed long-term trends and used models to simulate scenarios with and without greenhouse gas emissions.



ECONOMY

Card network portability

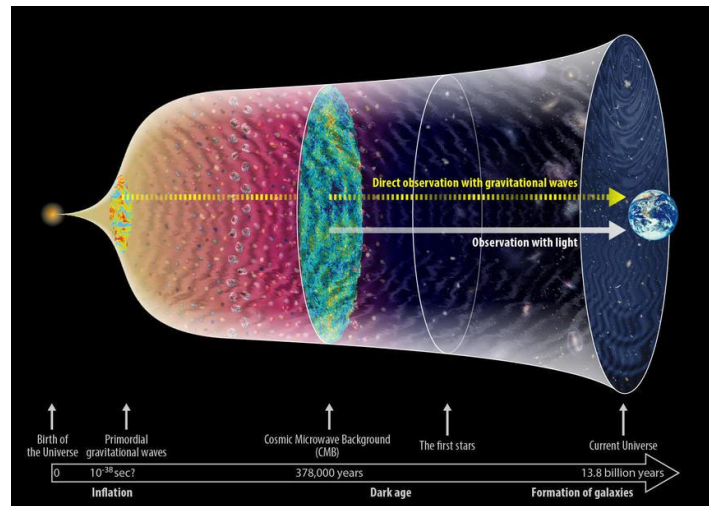


- ❖ The Reserve Bank of India (RBI) has unveiled a draft regulation that grants debit, credit, and prepaid cardholders the authority to select their desired card network.
- ❖ The authority to select their desired card network, is marking a potentially revolutionary development on a global scale.
- ❖ This regulation challenges the prevailing practice where card network options are predetermined through agreements between issuers and networks.

- ❖ This means users can port their card network just like one can switch/port mobile service providers while retaining the same phone number.
- ❖ The Card network portability will keep their existing card accounts, balances, and credit history intact.

SCIENCE AND TECHNOLOGY

Gravitational wave background



- ❖ Scientists have officially made the first detections of the gravitational wave background.
- ❖ It is a sign that gravitational waves from slowly merging pairs of supermassive black holes can be detected from Earth in a background field of low-frequency energy.
- ❖ Gravitational waves are created by astronomically dense objects in our universe, usually in orbit around each other.
- ❖ They discovered first in 2015 by the Laser Interferometer Gravitational-Wave Observatory, or LIGO.

ENVIRONMENT

New saline-tolerant plant species

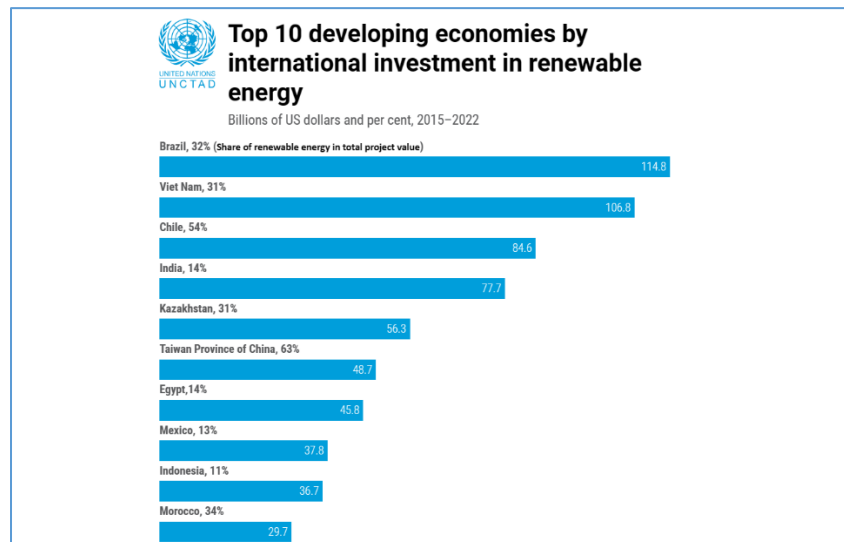
- ❖ Researchers has discovered a new species of saltwort called *Salsola oppositifolia* Desfontania in the Kutch district of Gujarat, India.
- ❖ The perennial shrub is belonging to the Amaranthaceae family.
- ❖ They grow in saline, arid to semi-arid environments.

- ❖ It is a halophyte, adapted to saline conditions.
- ❖ They are known for their salty juice stored in their leaves.
- ❖ The plants of the Salsola genus have various uses, including manufacturing soda ash, lye, soaps, and pharmaceutical products.



REPORTS AND INDICES

World Investment Report 2023



- ❖ United Nations Conference on Trade and Development released a World Investment Report 2023.

- ❖ Foreign Direct Investment (FDI) in developing countries in Asia remained flat at \$662 billion during 2022, as compared to the previous year.
- ❖ Overall global FDI declined by 12% to \$1.3 trillion in 2022.
- ❖ In Asia, the incoming FDI was highly concentrated in China (and Hong Kong), Singapore, India, and United Arab Emirates (UAE).
- ❖ During 2022, FDI inflows to India rose by 10% on an annual basis to \$49 billion.
- ❖ China registered a 5% yearly growth to \$189 billion.
- ❖ Singapore and UAE grew by 8% and 10% to \$141 billion and \$23 billion, respectively.
- ❖ Developing countries, including India, which have attracted FDI in clean energy to the tune of \$544 billion in 2022

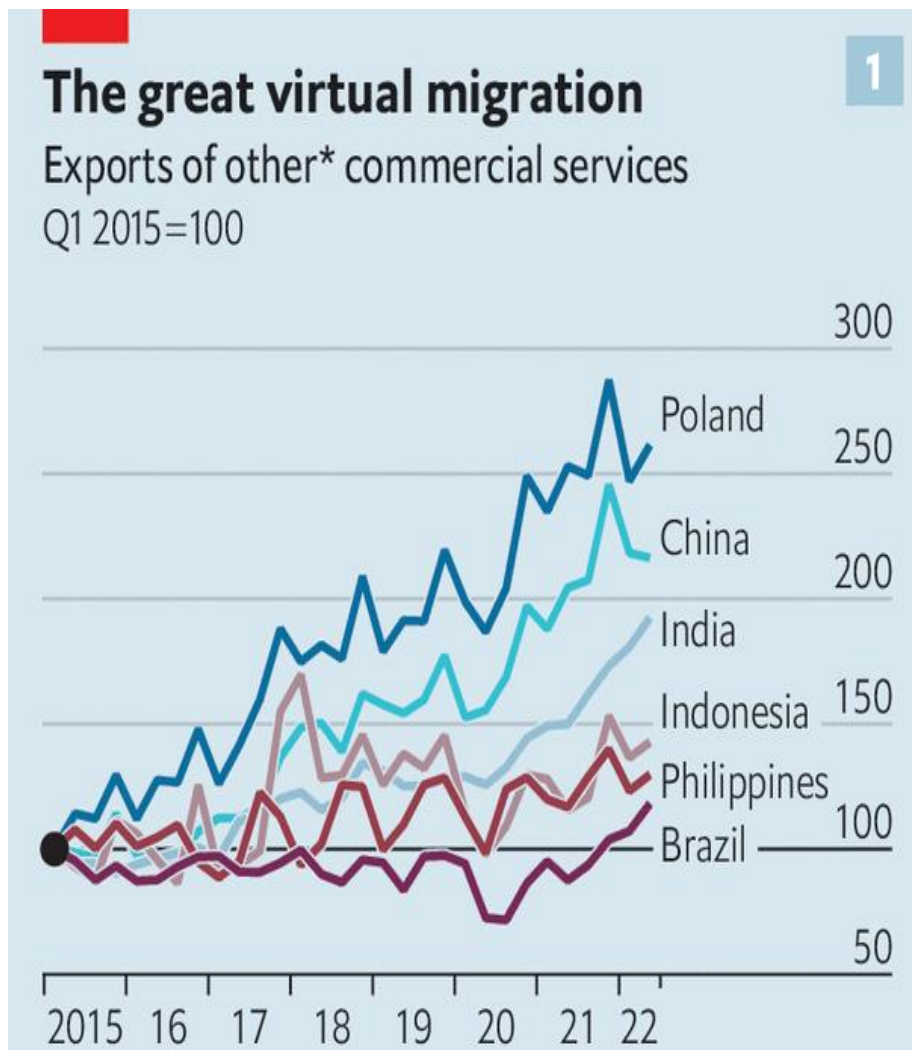
Henley Passport Index 2023



- ❖ The index includes 199 different passports and 227 different travel destinations.
- ❖ India has climbed seven places on Henley Passport Index 2023 to 80th rank.
- ❖ The Indians can travel to 57 destinations completely visa free or visas on arrival arrangements.
- ❖ In 2014, India ranked 76 with 52 countries allowing Indian passport holders visa free access but its performance has not been linear.
- ❖ It is ranked 88 in 2015 (visa free access to 51 countries), 85 in 2016, 87 in 2017, 81 in 2018, 82 in 2019 and 2020, and 81 in 2021.

- ❖ Japan, which occupied the top position on the Henley Passport Index for five years, dropped to the third place.
- ❖ It was replaced by Singapore.
- ❖ Germany, Italy, and Spain occupy the second place.

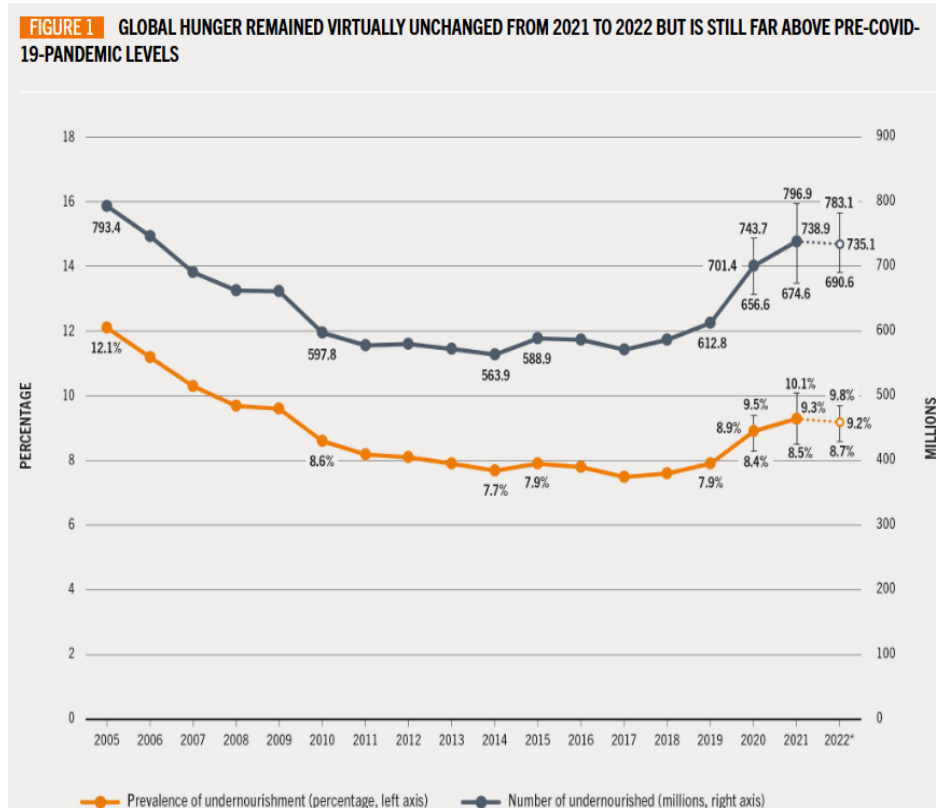
Global commercial services exports report



- ❖ This report was released by the World Bank and World Trade Organization (WTO).
- ❖ India has witnessed a significant increase in its share of global commercial services exports.
- ❖ The share of global commercial services exports Doubled from 2.0% in 2005 to 4.4% in 2022.
- ❖ It showcased impressive trade performance, highlighting the rising importance of the services sector in India's economy.

- ❖ India is recognized as a popular destination for medical travel.
- ❖ It was attracting approximately 3.5 million foreign patients between 2009 and 2019.

State of Food Security and Nutrition in the World 2023 report



- ❖ It is an annual flagship report jointly prepared by the Food and Agriculture Organisation of the United Nations (FAO), International Fund for Agricultural Development (IFAD), United Nations Children’s Fund (UNICEF), World Food Programme (WFP) and World Health Organisation (WHO).
- ❖ It aims to inform on progress towards ending hunger, achieving food security and improving nutrition and to provide an in-depth analysis of key challenges for achieving this goal in the context of the SDG.
- ❖ The theme of the report is “Urbanisation, agrifood systems transformation, and healthy diets across the rural-urban continuum”.
- ❖ Over 700 million people was facing hunger in the world in 2022.
- ❖ 2.4 billion individuals did not have consistent access to nutritious, safe, and sufficient food in 2022.

- ❖ In 2021, 22.3% (148.1 million) children were stunted (too short for their age), 6.8% (45 million) were wasted (too thin for their height), and 5.6% (37 million) were overweight.
- ❖ Previously self-sustaining rural regions, especially in Africa and Asia, are now found to be increasingly dependent on national and global food markets.

PERSONALITIES, AWARDS, AND EVENTS

Chevalier Award

- ❖ The Carnatic vocalist Aruna Sairam and flautist Shashank Subramanyam were conferred with the prestigious Chevalier award by the French government.
- ❖ The award was given in recognition of their contribution to the music field and development of Indo-France relations.
- ❖ The award was intended to honour personalities for their creativity in cultural spheres and their works that formed the wealth of the cultural heritage.
- ❖ Ms. Sairam has received several honours, including the Padma Shri and Sangita Kalanidhi from The Music Academy.
- ❖ Mr. Subramanyam too has been awarded with several titles, including the Tamil Nadu government's Kalaimamani for his prowess in instrumental music.



SPORTS

Satwiksairaj - Guinness World Record

- ❖ India's Satwiksairaj Rankireddy broke a decade-old Guinness world record for the fastest shot ever in badminton with an astonishing 565 km/hour smash.



- ❖ The speed greatly exceeded the previous world record of 493 km/hour which was achieved by Malaysian badminton player Tan Boon Heong.
- ❖ The women's record stands of 438 km/hour belongs to Malaysia's Pearly Tan.
- ❖ The fastest speed recorded by a Formula 1 car is 397.48 km/hour.
- ❖ While the fastest tennis serves maxes out at 263 km/hour.

Sport	Fastest speeds
Fastest badminton smash	565 kmph (351.1 mph)
Fastest F1 car speed	397.483 kmph (247.0 mph)
Fastest golf drive	349.38 kmph (217.1 mph)
Fastest tennis serve	263 kmph (163.4 mph)
Fastest ice hockey shot	177.5 kmph (110.3 mph)
Fastest baseball pitch	170.3 kmph (105.8 mph)
Fastest football shot	129 kmph (80.2 mph)
Fastest table tennis smash	116 kmph (72.1 mph)

