



WEEKLY CURRENT AFFAIRS

SEPTEMBER, 2022

Week-2

8-14 Sep, 2022

★★ Useful for ★★

**CSE, ESE, PSUs, State Services Exams,
SSC and Banking Exams**

8th SEPTEMBER, 2022

iNCOVACC

- **Context:** Bharat Biotech has applied for market authorisation from the Drugs Controller General of India (DCGI) for intranasal heterologous booster.

Key Highlights

- Bharat Biotech's intranasal vaccine iNCOVACC has got the Indian regulator's approval for emergency use authorization (EUA) for ages 18 and above.
- The company is waiting for approval for administering the vaccine as a booster shot after Covishield and Covaxin.
- The company also sought DCGI nod for phase three study of Intranasal vaccine in the 5-18 age group.
- The company has done clinical trials for the vaccine used as a heterologous booster dose after Covishield and Covaxin and has submitted the same to the Drugs Controller General of India (DCGI).
- Heterologous boosting refers to using a booster dose which is different from the vaccine used for primary dosing.

About iNCOVACC

- iNCOVACC is a recombinant replication-deficient adenovirus vectored vaccine with a pre-fusion stabilized spike protein.
- This vaccine candidate was evaluated in phase I, II and III clinical trials with successful results.
- iNCOVACC has been specifically formulated to allow intranasal delivery through nasal drops.
- The nasal delivery system has been designed and developed to be cost-effective in low- and middle-income countries.
- iNCOVACC is stable at 2-8°C for easy storage and distribution.

China's Solar Powered Semi-Satellite Drone

- **Context:** China's first fully solar-powered unmanned aerial vehicle has successfully completed its maiden test flight with all onboard systems functioning optimally.

Key Features

- According to Chinese state media reports, the drone took off from an airport in Shaanxi province had a smooth flight for 26 minutes and landed safely.
- With a wingspan of 164-ft, the drone is a large machine powered entirely by solar panels.
- The high-altitude, long-endurance (HALE) UAV can stay airborne for long durations.
- Named the Qimingxing-50, or Morning Star-50, this drone flies above 20-km altitude where there is stable airflow with no clouds. This helps these drones to make the maximum use of solar equipment to stay functional for extended durations.

Uses and Advantages

- The drone's chief designer told that it can operate without a break for months, even years.
- The drone can operate in near-space – 20 km to 100 km above the Earth's surface – makes it capable of carrying out satellite-like functions.
- If satellite services are not available for, say, time-sensitive operations or in case of wartime disruption, then near-space UAVs can step in to fill the operational gap.
- These drones are also referred to as 'High Altitude Platform Stations' or pseudo-satellites.
- China already has this capacity, but the Qimingxing-50's long-endurance provides an added advantage to make this capability available over a longer period.
- Drones like the Morning Star-50 are cost-effective to build and are also easy to launch and operate.

PM-SHRI Yojana

- **Context:** Prime Minister Narendra Modi announced development and upgrade of 14,500 schools across India under the Pradhan Mantri Schools For Rising India (PM-SHRI) Yojana.

Key Features

- The PM-SHRI schools will have a modern, transformational and holistic method of imparting education.
- The centrally sponsored scheme will be implemented by strengthening existing schools selected from amongst those managed by the Central government, states, Union Territories and local bodies.
- PM SHRI Schools will showcase all components of the National Education Policy 2020 and act as exemplar schools and also offer mentorship to other schools in their vicinity.
- The aim of these schools will not only be qualitative teaching, learning and cognitive development, but also creating holistic and well-rounded individuals equipped with key 21st century skills.
- Pedagogy adopted in these schools will be more experiential, holistic, integrated, play/toy-based (particularly, in the foundational years) inquiry-driven, and discovery-oriented.
- Focus will be on achieving proficiency in learning outcomes in every grade.
- Assessment at all levels will be based on conceptual understanding and application of knowledge to real life situations and will be competency-based.
- These schools will be equipped with modern infrastructure including labs, smart classrooms, libraries, sports equipment, art room etc. Which is inclusive and accessible.
- These schools shall also be developed as green schools with water conservation, waste recycling, energy-efficient infrastructure and integration of organic lifestyle in curriculum.

9th SEPTEMBER, 2022

Nature Index 2022

- **Context:** The University of Hyderabad (UoH) continues to be in the top position in the latest Nature Index 2022 ranking. The UoH has been ranked first among Indian Universities and 16th among all institutions in the academic sector

Key Highlights:

- In the index, University of Hyderabad has secured first position among Indian Universities while has been placed at 16th position among all institutions in academic sector.
- University of Hyderabad was ranked first with 72 research papers and a share of 19.46 in academic sector.
- **Ranking of other Indian universities can be summed up as:**
 - **Rank 23rd:** Indian Institute of Technology (IIT) Hyderabad.
 - **Rank 26th:** Indian Institute of Science Education and Research (IISER), Tirupati.
 - **Rank 54th:** Amity University.
 - **Rank 76th:** National Institute of Pharmaceutical Education and Research (NIPER) Hyderabad.
 - **Rank 82nd:** International Institute of Information Technology (IIIT), Hyderabad
 - **Rank 92nd:** Andhra University
 - **Rank 108th:** Jawaharlal Nehru Technological University, Kakinada
 - **Rank 122nd:** Indian Institute of Technology Tirupati (IIT) Tirupati.

About Nature Index 2022:

- Nature Index is an indicator of high-quality research in natural, physical sciences (includes chemistry, life sciences, earth & environmental sciences, and physical sciences).

- The rankings are based on the Nature Index data from 1 April 2021 to 31 March 2022.
- This index is a database of affiliations of author and relationships of institution. It records contributions to research articles, published across 82 high-quality natural science journals.
- These journals are selected by an independent group of researchers. This database is compiled by Nature Research. It provides real-time proxy of high-quality research output.
- The Index is updated monthly and also releases annual tables of country.

National Intellectual Property Awareness Mission (NIPAM)

- **Context:** National Intellectual Property Awareness Mission (NIPAM) has achieved target of imparting Intellectual Property (IP) awareness and basic training to 1 million students on 31st July 2022, ahead of the deadline which was 15 August 2022. It covered 3662 Educational Institution In 28 States and 7 UTs.

About National Intellectual Property Awareness Mission (NIPAM):

- NIPAM, a flagship program to pass information and awareness about Intellectual property and to give basic training. It was launched on 8 Dec 2021 as a part of "Azadi Ka Amrit Mahotsav" celebrations.
- NIPAM is being implemented by Intellectual Property Office, the Office of Controller General of Patents, Designs and Trade Marks (CGPDPTM) and Ministry of Commerce and Industry.
- It aims to inculcate the spirit of creativity and innovation to students of higher education (classes 8 to 12) and ignite and inspire the students of college/ Universities to innovate and protect their creations.
- NIPAM program encourages innovation and creativity, thereby contributing towards cultural and economic development of the society through a revamped manner utilizing the existing resources of the IP Office in collaboration with Atal Innovation Mission (AIM), AICTE, UGC etc.

About Intellectual Property Rights:

Intellectual property rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time.

There are four types of intellectual property rights (IP): patents, trademarks, copyrights, and trade secrets.

Need for Intellectual Property Rights:

- IPR is required to safeguard creators and other producers of their intellectual commodity, goods and services by granting them certain time-limited rights to control the use made of the manufactured goods.
- It promotes innovation and creativity and ensures ease of doing business.

Global Employment Trends for Youth 2022 Report

- **Context:** Recently, a report titled "Global Employment Trends for Youth 2022" has released by International Labour Organization (ILO). Investing in transforming futures for young people.

Key Highlights:

- As per report, number of unemployed young population has decreased from 75 million in 2021 to 73 million in 2022. However, this number is still 6 million more than the number before covid-19 pandemic.
- Unemployment rate in Africa is 12.7%, below the global average of 14.9%. This figure highlights that, young people have withdrawn from labour markets.
- In India, schools were closed for 18 months. Out of 240 million school-going children, just 8% in rural and 23% in urban areas had access to online education. As a result, 92% children have lost one foundational ability in language on an average. 82% children have lost at least one foundational ability in mathematics. This has increased the NEET rate globally.
- Centre for Monitoring Indian Economy (CMIE) and Employee Provident Fund Organisation (EPFO) have also noted similar trends in their reports.

- According to CMIE, Labour Force Participation Rate (LPR) in India had fell down to 38.8% in June 2022. This highlights that, people have dropped off finding employment.
- Share of people aged 18-21 in the net EPF accounts created has decreased from 37.9% in 2018-19 to 24.1% in 2021-22.
- Another challenge faced by labour market is that, the share of youth “not in employment, education or training” (NEET) has increased to 23.3%. Share has increased by 1.5% as compared to 2019.

About International Labour Organization (ILO)

- It is the only tripartite United Nation (UN) agency. It brings together governments, employers and workers of 187 member States (India is a member), to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
- Received the Nobel Peace Prize in 1969.
- Established in 1919 by the Treaty of Versailles as an affiliated agency of the League of Nations.
- Became the first affiliated specialized agency of the UN in 1946.
- Headquarters: Geneva, Switzerland
- **Reports released by ILO:**
 - World work report
 - World employment and social outlook trends 2022
 - World social protection report
 - Social dialogue report
 - Global wage report

Udarashakti

- **Context:** Indian Air Force (IAF) contingent left for Malaysia to participate in a four-day bilateral exercise ‘Udarashakti’ with the Royal Malaysian Air Force (RMAF).

Key highlights:

- Exercise will secure the long-standing bond of friendship and enhance the line of defence cooperation between both the armies. Thus, it will strengthen security in the region.
- Through this exercise, IAF will get an opportunity to share and learn best practices with the Royal Malaysian Air Force. They would also discuss mutual combat capabilities.

About Udarashakti:

- In Udarashakti 2022, Indian Air Force is taking part in air exercise with Su-30 MKI and C-17 aircraft.
- On the other hand, Malaysian Air Force is taking part with Su 30 MKM aircraft.
- During the four days, various aerial combat drills will be conducted between two Air Forces.

10th SEPTEMBER, 2022

Chile’s new constitution

- **Context:** Chilean voters resoundingly rejected a new, progressive constitution in a referendum.

Key Highlights

- With almost all of the ballots counted, 62% of voters rejected the proposal with 38% voting in favor, according to the Chile Electoral Service.
- The progressive constitution had the support of leftist President Gabriel Boric.
- It included 388 articles that included extended social rights, increased environmental regulation and given the government wider responsibility for social welfare programs.
- It also would have provided full gender parity and added designated seats for indigenous representatives.
- The document was rejected in all of Chile’s provinces.
- The constitution currently in place was written under the dictatorship of Augusto Pinochet, who ruled Chile with an iron fist from 1973 to 1990. Proponents of the new constitution wanted a break from Chile’s authoritarian past.

James Webb Telescope

- **Context:** NASA's James Webb Space Telescope has captured images of the planet Jupiter showing two tiny moons, faint rings and auroras at the northern and southern poles.

Key Highlights

- The new images of Jupiter captured by NASA's newest James Webb telescope show the planet in a very different avatar.
- A greenish blue view of Jupiter can be seen in the latest infrared images of the planet released by NASA.
- The images show the planet complete with all its signature elements including the giant storms, auroras and regions of extreme temperature.
- The composite images were taken with the observatory's Near-Infrared Camera (NIRCam) and were artificially colored because infrared light is not visible to the human eye.

About James Webb Telescope

- Launched in December 2021 from French Guiana on an Ariane 5 rocket, James Webb telescope is orbiting the Sun at a distance of a million miles (1.6 million kilometers) from Earth, in a region of space called the second Lagrange point.
- It took the spacecraft almost a month to reach the region, where it remains in a fixed position behind the Earth and Sun to give it a clear view of the cosmos.
- The Webb telescope is an international collaboration between the US space agency NASA, the European Space Agency, and the Canadian Space Agency, involving more than 10,000 people.

Eyes on the Solar System tool

- **Context:** Recently, NASA has updated its 3D visualization 'Eyes on the Solar System' tool.

Key Highlights

- NASA has revamped its "Eyes on Solar System" 3D visualisation tool, making interplanetary travel easier and more interactive than ever.

- More than two years in the making, the update delivers better controls, improved navigation, and a host of new opportunities to learn about our incredible corner of the cosmos-no spacesuit required.
- Using the new version, users can rotate objects, compare them side by side, and even modulate the perspective as well as the lighting.
- This latest version of "Eyes" also lets user scroll through rich interactive journeys, including Voyager's grand tour of Jupiter, Saturn, Uranus, and Neptune.

About "Eyes on the Solar System"

Eyes on the Earth is a tool to explore NASA mission data on our ocean, atmosphere, and land. It allows fly along with satellites and monitor the Earth's vital signs with constantly refreshed data on air temperature, carbon dioxide, carbon monoxide, sea level, ozone, ice and water.

11th SEPTEMBER, 2022

Kirit Parikh Committee

- **Context:** The Central Government has recently constituted a committee under the chairmanship of Kirit Parikh to control and reduce the continuous increase in LPG gas prices.

Key Highlights

- The government has set up a panel to review the formula that dictates the pricing of gas produced by companies like ONGC and Reliance.
- The committee under former planning commission member Kirit S Parikh will suggest a "fair price to the end consumer".
- The panel, which will include representatives of the gas producers association as also producers ONGC and OIL, has been asked to submit its report by the month-end.
- It also has a member from private city gas operators, state gas utility GAIL, a representative of Indian Oil Corporation (IOC) and a member from the fertiliser ministry.

Women in Engineering, Science and Technology (WEST)

- **Context:** Central government launched a new i-STEM (Indian Science Technology and Engineering Facilities) initiative named “Women in Engineering, Science and Technology (WEST)”.

Key Features

- The WEST programme will cater to women with a STEM background and empower them to contribute to the science, technology, and innovation ecosystem.
- Through the WEST initiative, I-STEM shall provide a separate platform to scientifically inclined women researchers, scientists, and technologists for pursuing research in basic or applied sciences in frontier areas of science and engineering.
- Women may join the WEST program and explore opportunities to become stakeholders in various domains and pursue careers in R&D at various levels: technicians, technologists, scientists, and entrepreneurs.
- Opportunities range from operating scientific equipment and maintaining them, to designing and manufacturing them.
- The Skill Development programmes under the WEST initiative will provide training for women with S&T backgrounds to brush up on their abilities and become engaged “in the field” as lab technicians and maintenance engineers, filling crucial gaps in the R&D infrastructure of the country.
- This initiative will also help bring women back into S&T domains after a career break.

About I-STEM

It is a national web portal for sharing research equipment/facilities and is the umbrella under which many programmes for promoting collaborations in R&D and technological innovation among and between academia and industry, especially startups, are underway.

Kartavya Path

Prime Minister Narendra Modi inaugurated the newly-christened Kartavya Path, the stretch of road from Rashtrapati Bhavan to India Gate earlier known as Rajpath.

Key Highlights

- The new stretch will be more pedestrian-friendly because of the new red granite walkways spreading 15.5 km that have been created, replacing bajri sand that lined the ground earlier.
- The revamped stretch from Rashtrapati Bhavan to India Gate is estimated to have cost around Rs 477 crore.
- Four new pedestrian underpasses have been built at busy junctions to segregate vehicular traffic from pedestrian movement, making the street safe to cross.
- 74 historic light poles and all chain links have been restored, upgraded and reinstalled on the site and more than 900 new light poles have been added where necessary to ensure that the space is always safe for visitors.
- The revamped stretch is part of the government's ambitious Central Vista redevelopment project, which also envisages a new triangular Parliament building, a common central secretariat, a new prime minister's residence and office, and a new vice-president's enclave.

12th SEPTEMBER, 2022

India's First Satellite Broadband Service

- **Context:** Satellite internet provider Hughes Communications India has partnered with the Indian Space Research Organisation (ISRO) to bring the country's first satellite internet service.

Key Highlights

- Satellite internet provider Hughes Communications India announced the commercial launch of India's first high-throughput satellite (HTS) broadband service powered by the Indian Space Research Organisation (ISRO).

- The service aims to deliver high-speed broadband across the country, including in the most remote areas beyond the reach of terrestrial networks, thus connecting enterprise and government networks.
- HCL provides satellite broadband across more than 200,000 business and government sites in India, supporting enterprises as well as strategic central and state government projects.
- This new broadband service will support the high-bandwidth requirements of government organisations, financial companies, cellular operators, mining and energy companies, among other businesses, large and small.
- As a part of the tie-up, the MeitY's startup hub and Meta will support 40 early-stage startups working in the field of XR technologies with a grant of Rs 20 lakh each.
- The program will also encourage early-stage innovators working on XR technology in sectors such as education, learning and skills, healthcare, gaming, entertainment, agritech, climate action, tourism and sustainability.
- The innovators will be provided support to upscale from the R&D (research and development) phase to developing workable products and services.
- At first 80 innovators will be shortlisted to attend a bootcamp, out of which, a total of 16 innovators will be provided grants of Rs 20 lakhs each and further support to help them develop Minimum Viable Product (MVP)/ prototypes.

About High-throughput Satellite (HTS)

- High-throughput Satellite differs from a conventional satellite in the sense that it increases capacity when using the same amount of orbital spectrum while simultaneously reducing the cost per bit.
- HTS refers to satellite connectivity that offers a higher bandwidth which in turn increases the amount of data that could be transferred between a satellite and a ground station. Conventional satellite connectivity has seen low bandwidth, as well as high latency of connectivity.
- HTS uses spot-beam to perform its operations, unlike traditional satellites which use a broad single beam or few beams. Spot beam technology allows focus on a limited area and provides seamless and fast connectivity.

XR Technologies

- **Context:** The Ministry of Electronics and Information Technology's startup hub and Meta have joined hands to launch an accelerator programme to support the growth of extended reality or XR technology-based startups across India.

Key Highlights

- XR Startup Program was jointly launched by MeitY Startup Hub and Meta to create the next generation startups focusing on Extended Reality Technologies.

Japan-India Maritime Exercise (JIMEX)

- **Context:** The sixth edition of Japan India Maritime Exercise (JIMEX) took place in the Bay of Bengal.

Key Highlights

- As part of the two phases of JIMEX, which involves exercises at sea and a harbour phase in Visakhapatnam, Japan was represented by two of its Maritime Self-Defense Force Ships (JMSDF) — Izumo, a helicopter carrier, and Takanami, a guided missile destroyer.
- India, meanwhile, brought three of its indigenously-built naval warships, two of which are Anti-Submarine Warfare Corvettes in Kadmat and Kavaratti, and a multi-purpose stealth frigate in the Sahyadri.
- Guided Missile Destroyer Ranvijay, Fleet Tanker Jyoti, Offshore Patrol Vessel Sukanya, submarines, MIG 29K fighter aircraft, Long Range Maritime Patrol Aircraft and ship borne helicopters also participated in the exercise.
- The sixth edition of JIMEX is not only significant due to India and Japan's involvement in the Quad, but the occasion also marks 10 years since the exercise's first edition. It is also 70 years since diplomatic relations between India and Japan were established.

13th SEPTEMBER, 2022

Zurich Diamond League Final 2022

- **Context:** Neeraj Chopra has become the first Indian to win the prestigious Zurich Diamond League Final 2022 in Switzerland.

Key Highlights

- Neeraj Chopra won Zurich Diamond League final with his best throw of 88.44m.
- He becomes the first Indian to win a Diamond League Grand Final title.
- The remaining three contenders saw USA's Curtis Thompson take the fourth spot with an 82.10m throw while Patriks Gailums (80.44m) and Portugal's Leandro Ramos (71.96) took the final two spots.

Human Development Report 2021-22

- **Context:** India has been ranked 132 out of 191 countries in the recently released Human Development Report 2021-22 by the United Nations Development Program (UNDP).

Key Highlights

- India's rank on the Human Development Index has slipped from 130 in 2020 to 132 in 2021, as per Human Development Report 2021-22 released recently.
- According to the report, released by the United Nations Development Programme (UNDP), India's HDI value stood at 0.633 during 2021, which was lower than the world average of 0.732.
- In 2020, too, India recorded a decline in its HDI value (0.642) in comparison to the pre-Covid level of 2019 (0.645).
- Ninety percent of countries have registered a reduction in their Human Development Index value in 2020 or 2021, reversing much of the progress toward the Sustainable Development Goals.
- A large contributor to the Human Development Index's recent decline is a global drop in life expectancy, down from 72.8 years in 2019 to 71.4 years in 2021.

- The last two years have had a devastating impact on billions of people worldwide when crises like COVID-19 and the war in Ukraine hit back-to-back and interacted with sweeping social and economic shifts and dangerous planetary changes.

About Human Development Index (HDI)

HDI, a composite index developed by United Nations Development Programme, measures average achievement in human development taking into account four indicators: life expectancy at birth (Sustainable Development Goal 3); expected years of schooling (SDG 4.3); mean years of schooling (SDG 4.4); and gross national income (GNI) per capita (2017 PPP\$) (SDG 8.5).

14th SEPTEMBER, 2022

Taragiri

- **Context:** Project 17A's third stealth frigate 'Taragiri' was recently launched by Mazagon Dock Shipbuilders Limited (MDL) in Mumbai.

Key Highlights

- Taragiri is the third stealth frigate built as part of Project 17A under which a series of such guided-missile frigates are being constructed for the Navy.
- The 149-metre-long and 17.8-metre-wide ship is propelled by a combination of two gas turbines and two main diesel engines which are designed to achieve a speed of more than 28 knots at a displacement of as much as 6,670 tonnes, officials said.
- The indigenously designed Taragiri will have state-of-the-art weapons, sensors, advanced action information system, integrated platform management system, world-class modular living spaces, sophisticated power distribution system and a host of other advanced features.

- The ship has been built using integrated construction methodology which involves construction of the hull blocks in different geographical locations and integration and erection on the slipway at MDL.
- The ship is designed by the Indian Navy's in-house design organisation, the Bureau of Naval Design. MDL has undertaken the detailed design and construction of the ship which is also overseen by the Warship Overseeing.

India's Largest Rubber Dam

- **Context:** Bihar Chief Minister Nitish Kumar inaugurated the country's largest rubber dam and a steel bridge over the Falgu river near Vishnupad temple in Bihar.

Key Highlights

- Water Resources Department has completed the construction of Bihar's first rubber dam "Gayaji Dam" to provide water throughout the year in the Falgu river near Vishnupad temple.
- The dam has been built at an estimated cost of ₹324 crores. The project included experts from IIT Roorkee.
- The dam is 411 meters long, 95.5 meters wide and 3 meters high.
- Apart from the rubber dam, the banks along the Falgu River have also been developed and a steel bridge has been built for pilgrims to visit Sita Kund.
- The Falgu river has water only in the monsoon season and remains dry for the remaining period. The dam will ensure water storage in the river throughout the year, helping the pilgrims who visit the place for Pind Daan (ritual to offer homage to departed souls).

