

IACE

DAILY CURRENT AFFAIRS

5th & 6th November 2023

DESCRIPTIVE

❖ Project Kusha

- In a significant move towards enhancing its air defence capabilities, India is embarking on an ambitious project called 'Project Kusha.'
- 'Project Kusha' is set to provide the Indian Air Force (IAF) with a long-range air defence system, with deployment targeted for 2028-29.
- This indigenous system is designed to detect and destroy a wide array of threats, including stealth fighters, aircraft, drones, cruise missiles, and precision-guided munitions at ranges of up to 350 km.
- The Long-Range Surface-to-Air Missile (LR-SAM) is being developed to provide interception capabilities similar to the Russian S-400 Triumph air defense system recently inducted by the Indian Air Force (IAF).
- The ambitious indigenous project will be developed by the Defence Research and Development Organisation (DRDO) at an estimated budget of Rs.21,700 crore.
- Drawing parallels with Israel's renowned Iron Dome system, 'Project Kusha' is expected to not only match but potentially surpass the capabilities of its Israeli counterpart.
- It aims to detect and destroy various hostile targets, including cruise missiles, stealth fighter jets, and drones at extended ranges.

❖ Japan scientists develop self-healing, stronger and partially biodegradable plastic

➤ Researchers at the University of Tokyo have successfully created “sustainable plastic,” which is based on an epoxy resin vitrimer.

➤ About Vitrimer:

➤ These represent a relatively recent category of plastics known for their impressive strength at low temperatures.

➤ They also possess the unique ability to be reshaped numerous times when exposed to higher temperatures.

➤ It is also partially biodegradable.

➤ Nonetheless, they do have a notable drawback - extreme brittleness, as they cannot be stretched far before breaking.

➤ To address this issue, researchers introduced a molecule called polyrotaxane into the plastic synthesis process, resulting in a novel plastic variant they dubbed VPR, an abbreviation for vitrimer incorporated with polyrotaxane

➤ VPR is over five times as resistant to breaking as a typical epoxy resin vitrimer.

➤ At a high temperature of around 150 degrees Celsius, VPR starts to recombine, allowing the material to take on different forms.

➤ It also repairs itself 15 times as fast, can recover its original memorised shape twice as fast, and can be chemically recycled 10 times as fast as the typical vitrimer.

➤ It even biodegrades safely in a marine environment, which is new for this material.

❖ **Free ration scheme to be extended 5 more years by the Union Government**

- The Union government's scheme to provide 5 kg of free food grains per month to 81 crore Indians will be extended for another five years.
- The Pradhan Mantri Garib Kalyan Anna Yojana was introduced in 2020 as a pandemic relief measure, providing 5 kg of free food grains per beneficiary per month under the National Food Security Act.
- Under this scheme, free ration has been provided to the poor in the country over the past three years.
- Even though the one-month free ration scheme is coming to an end, Modi's commitment is to extend it for the next five years.

❖ **Most Educated Countries in the World By November 2023**

- Education is a powerful catalyst for societal progress, innovation and economic development.
- It not only equips individuals with knowledge and skills but also fosters critical thinking and problem solving abilities.
- The level of education in a country plays a pivotal role in determining its overall well-being and competitiveness.
- South Korea secured the position of the most educated country in the world with the tertiary education rate of (69.29%) followed by Canada (66.36%), Japan (64.81%), Luxembourg (63.12%) and Ireland (62.88%).
- By placing education at the forefront, South Korea has effectively fostered a highly skilled workforce, sparked innovation and achieved significant economic success.

❖ **Vandana Katariya becomes the first Indian women's hockey player to make 300 international appearances**

- Indian Women's Hockey Team forward player Vandana Katariya has earned her 300th International Cap.
- Vandana made her debut in the 2013 Junior World Cup.
- She is also the only Indian women to score a hat-trick at the Olympics.
- Vandana, who hails from Roshnabad, Uttarakhand, achieved the feat during India's match against Japan at the ongoing Women's Asian Champions Trophy Ranchi 2023.
- She also became the first women player from India to play 300 international games.
- India has been unbeaten so far at the ongoing Women's Asian Champions Trophy Ranchi 2023, winning their first game 7-1 against Thailand, winning 5-0 against Malaysia in their second match, and then beating China 2-1 in a thrilling encounter.

❖ **World Tsunami Awareness Day - 5th November**

- In December 2015, the UN General Assembly designed 5th November as World Tsunami Awareness Day.
- World Tsunami Awareness Day was the brainchild of Japan.
- This year's World Tsunami Awareness Day theme is " Fighting Inequality for a Resilient Future".
- The word "tsunami" comprises the Japanese words "tsu" (meaning harbour) and "nami" (meaning wave).

- A tsunami is a series of enormous waves created by an underwater disturbance usually associated with earthquakes occurring below or near the ocean. Volcanic eruptions, submarine landslides, and coastal rock falls can also generate tsunami.
- The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines 7 targets and 4 priorities for action to prevent new and reduce existing disaster risks.
- The Framework was adopted at the Third UN World Conference on Disaster Risk Reduction in Sendai Japan, on March 18, 2015.

❖ **Indian Delegation Heads to Netherlands for 2nd World Local Production Forum**

- The Indian delegation led by Bhagwant Khuba, Union Minister of State for Chemicals and Fertilizers participated in the 2nd World Local Production Forum (WLPF) at The Hague, Netherlands.
- Theme: Galvanizing regional partnerships for sustainable local production and equitable access.
- A Memorandum of Intent (MOI) between India and Netherlands on cooperation in the field of medical product regulation was signed.
- The World Local Production Platform is a platform created at the initiative of WHO with the aim of increasing access to medicines and other health technologies.

❖ **India-AU Workshop**

- Recently, NITI Ayog has organized a workshop on India-AU Cooperation for a better inclusive world.
- It is being organized from Nov 1-9 in New Delhi.

➤ The workshop topics included, G-20 to G-21, data for development, tourism, digital public infrastructure, sustainable development goals, trade and Indian development model.

➤ It is noteworthy that the recently held G-20 conference, chaired by India has included AU as a member of G-20.

➤ After this, G-20 has now become G-21.

❖ **India First Life gets GIFT CITY IFSC registration**

➤ It has received the registration to undertake life insurance business in the Gujarat International Finance Tec (GIFT) City-International Financial Services Centre (IFSC).

➤ The organization is all geared to embark on the journey, once the necessary formalities are in place.

➤ India first Life is proud to be the first Indian life insurance company to receive the GIFT city IFSC registration.

❖ **Environmental DNA (eDNA)**

➤ Researchers from the Laboratory for the Conservation of Endangered Species (LaCONES) at the CSIR-Centre for Cellular and Molecular Biology (CCMB) in Hyderabad have developed a new eDNA sequencing method to access biodiversity.

➤ eDNA is DNA shed by all organisms into their surroundings through natural processes during their lifetime or after death.

➤ Source: It originates from cellular material shed by organisms (via the skin, excrement etc) into aquatic or terrestrial environments that can be sampled and monitored using new molecular methods.

- The new non-invasive method can assess the total biodiversity of any ecosystem by sequencing the DNA fragments found in environmental samples such as water, soil or air.
- This method can detect all kinds of organisms, including viruses, bacteria, archaea and eukaryotes such as fungi, plants, insects, birds, fish and other animals.
- This method requires just a few litres of water sample without any direct capture or counting of species.
- The researchers filter out eDNA from environmental samples, read their sequences and thus identify the source of the eDNA.

❖ **Karnataka launches Dr Puneeth Rajkumar Hrudaya Jyoti Yojana for cardiac emergencies**

- The Karnataka Health Department launched Dr Puneeth Rajkumar Hrudaya Jyoti Yojana to treat people suffering from sudden heart attacks and cardiac issues.
- Health Minister Dinesh Gundu Rao announced the scheme two days after the second death anniversary of popular Kannada actor Puneeth Rajkumar, who died at the age of 46 following a heart attack.
- Notably, the scheme is also named after the late actor. The scheme seeks to install emergency devices in public places to cater to those suffering from heart attacks within the crucial response time.
- The government of Karnataka is making 85 district and Taluk hospitals as 'spoke' centres. Ten hubs have been created in a total of 16 super- specialty hospitals including Sri Jayadeva Institute of Cardiovascular Sciences and Research. Anyone who experiences chest pain, can visit the spoke centres and get an ECG immediately.

❖ 7th edition of Ganga Utsav was organized by National Mission for Clean Ganga

- The 7th edition of Ganga Utsav was organized by National Mission for Clean Ganga in New Delhi.
- It was inaugurated by Secretary, Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, Debashree Mukherjee and director General NMCG, G. Ashok Kumar.
- The 2nd edition of Ganga Pustak Parikrama was also launched.
- Ganga Pustak Parikrama will commence its 3 month long journey from Gangotri on 7 November 2023 and pass through all cities and towns on the banks of River Ganga.