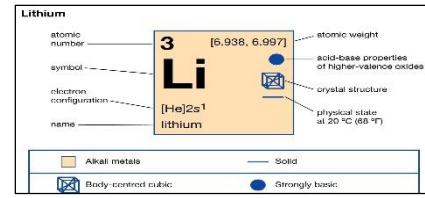


Lithium Deposit in Iran



❖ Context

- Iranian officials claimed to have found a deposit containing **8.5 million metric tons of lithium** ore in the country's Hamedan Province.

❖ Key Highlights:

- If true, this discovery would be a **major boost for Iran**, whose economy has suffered under US sanctions and embargoes for decades.
- Given lithium's salience in making batteries, any transition away from fossil fuels is expected to **heavily rely on lithium**. This is **Iran's first lithium find**.
- The **world's largest identified lithium resources** (not counting Iran) are as follows :
 - Bolivia (21 million tons); Argentina (20 million tons); Chile (11 million tons); Australia (7.9 million tons); China (6.8 million tons).
- India recently established inferred lithium resources of 5.9 million tons in the Reasi district of Jammu and Kashmir.

❖ About Lithium:

- It is a **chemical element** which is a soft, **silvery-white metal**. Under standard conditions, it is the **lightest metal** and the lightest solid element.
- It has the lowest density of all metals.
- It is **highly reactive and flammable**, and must be stored in mineral oil.
- The most important use of lithium is in **rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles**.

- **Australia, Chile, China and Argentina** are the world's top four lithium-producing countries.

- As of now, **India currently imports all its lithium needs**.

- The Department of Atomic Energy, Government of India has discovered 1600kg Lithium in Mandya district of Karnataka

❖ Lithium ion Battery:

- A battery is made up of an anode, cathode, separator, electrolyte, and two current collectors (positive and negative).
- Lithium-ion batteries use aqueous electrolyte solution.
- In the solution ions transfer to and fro between the
 - **Anode** (negative electrode generally made of graphite) and
 - **Cathode** (positive electrode made of lithium).
- It triggers the recharge and discharge of electrons.
- Even promising alternatives to the lithium-ion batteries, such as QuantumScape Corp's **solid-state lithium-metal battery**, continue to use lithium.
- This is primarily due to Lithium's low weight as compared to other metals (such as nickel, used in traditional batteries) as well as its superior electrochemical potential.

Action Against Hunger 2023



❖ Context

- Only 47% of hunger funding needs through the UN humanitarian system are met, leaving a hunger funding gap of 53%, according to a recent report.

❖ Key Highlights:

- The report shows that countries experiencing the worst hunger crises received less funding than those with lower hunger rates.
- In 2022, only 3% of hunger program needs were fully funded, and 65% of appeals were not fulfilled even to the halfway point.
- The war in Ukraine, which has increased the cost of food, fertilizer, and energy, contributed to the crisis.
- Approximately 828 million people worldwide are undernourished, and as many as 50 million people in 45 countries are on the brink of famine.
- The report suggests that each dollar invested in resilience reduces later humanitarian spending by up to \$3.

❖ About Action Against Hunger:

- Action Against Hunger is a nonprofit leader in a global movement to end hunger in our lifetimes.
- It innovates solutions, advocates for change, and reaches 24 million people every year with proven hunger prevention and treatment programs.
- As a nonprofit that works across 50 countries, it partners with communities to address the root causes of hunger, including climate change, conflict, inequity, and emergencies.
- It strives to create a world free from hunger, for everyone, for good.

News in Between the Lines

'VAIBHAV Fellowship'






❖ Context

- The government recently unveiled a fellowship to bring Indian-origin researchers to higher educational institutions in the country for a maximum period of two months per year.

❖ Key Highlights:


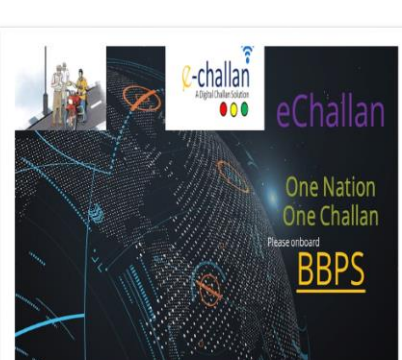

- It aims to improve the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations with the best institutions in the world through mobility of researchers from overseas institutions to India.

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	<ul style="list-style-type: none"> • The fellowship offers NRI researchers an opportunity to work for a minimum of one month to a maximum of two months a year with a research institution or an academic institution in India. • The duration of the fellowship is three years with the government offering the researchers an amount of up to Rs 37 lakh for the entire period. • Researchers from institutions featuring in the top 500 QS World University Rankings will be eligible for the fellowship.
<p>CE-20 Cryogenic Engine</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Ahead of the expected Chandrayaan-3 mission later this year i.e in 2023, the hot test of the CE-20 cryogenic engine was conducted successfully recently at the Indian Space Research Organisation (ISRO) Propulsion Complex in Mahendragiri, Tamil Nadu. ❖ Key Highlights: <ul style="list-style-type: none"> • The CE-20 cryogenic engine will provide thrust to the Cryogenic Upper Stage of the LVM3 launch vehicle used in the Chandrayaan-3 Mission. • The test was done for a duration of 25 seconds in the High Altitude Test Facility, and the propulsion parameters were seen to be satisfactory and in line with expectations. • The cryogenic engine will now be combined with propellant tanks, stage structures and related fluid lines so as to produce the integrated flight cryogenic stage. ❖ What is a hot test? <ul style="list-style-type: none"> • A hot test is an assessment of an engine's performance which replicates conditions that occur when it is running in a real vehicle. • It evaluates all the parameters which are necessary to make sure the engine is running properly.
<p>Bahu Balli</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ The world's first 200-meter-long Bamboo Crash Barrier which has been installed on the Vani-Warora Highway, Vidarbha, Maharashtra. ❖ Key Highlights: <ul style="list-style-type: none"> • This Bamboo Crash Barrier, which has been christened Bahu Balli, underwent rigorous testing at various government-run institutions. • It was rated as Class 1 during the Fire Rating Test conducted at the Central Building Research Institute (CBRI) in Roorkee. • Additionally, it has also been accredited by the Indian Road Congress. • The recycling value of the bamboo barrier is 50-70% whereas that of steel barriers is 30-50%. • The bamboo species used in the making of this barrier is Bambusa Balcoa, which has been treated with creosote oil & coated with recycled High-Density Poly Ethylene (HDPE). ❖ Significance: <ul style="list-style-type: none"> • This achievement is remarkable for the bamboo sector and India as a whole, as this crash barrier offers a perfect alternative to steel and addresses environmental concerns and their aftermath. • Furthermore, it is a rural and agriculture-friendly industry in itself making it an even more significant milestone.
<p>SWAMIH Investment Fund</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ SWAMIH Fund completes 20,557 homes since inception in 2019. ❖ Key Highlights: <ul style="list-style-type: none"> • Fund targets to complete over 81,000 homes in next 3 years across 30 Tier 1 and 2 cities • Fund completes construction in 26 projects while unlocking liquidity of more than Rs. 35,000 crores. • The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund is India's largest social impact fund specifically formed for completing stressed and stalled residential projects. • The Fund is sponsored by the Ministry of Finance, Government of India, and is managed by SBICAP Ventures Ltd., a State Bank Group company. • The Fund has no precedent or comparable peer fund in India or in the global markets.

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	<ul style="list-style-type: none"> It has raised Rs. 15,530 crores so far with an aim : <ul style="list-style-type: none"> to provide priority debt financing for the completion of stressed, brownfield and Real Estate Regulatory Authority (RERA) registered residential projects that fall in the affordable, mid-income housing category.
<p>UN Report</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Globally, just 1 in 4 children is covered by social protection according to a recent report by United Nations. ❖ Key Highlights: <ul style="list-style-type: none"> Only 26.4% of children aged 0-15 years have social protection, leaving the rest exposed to poverty, exclusion, and deprivation. 1.77 billion children aged 0-18 years lack access to a child or family cash benefit, a fundamental pillar of a social protection system. Child and family social protection coverage rates fell or stagnated in every region in the world between 2016 and 2020, leaving no country on track to achieve the Sustainable Development Goal (SDG) of achieving substantial social protection coverage by 2030. Before the COVID-19 pandemic, children were more than twice likely to be living in extreme poverty than adults, and approximately 356 million children were living in extreme poverty then. ❖ Why do we need social protection? <ul style="list-style-type: none"> Social protection policies are powerful tools for - <ul style="list-style-type: none"> alleviating poverty for children and their families at risk of falling into poverty and helping all children deprived of key services. The lack of social protection for children can have significant long-term effects on their development, health, and well-being, and hinder their opportunities for the future.
<p>One Nation, One Challan Initiative</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ The Gujarat government recently told the High Court, which was hearing a public interest litigation seeking the setting up of virtual traffic courts in the state, that it was already in the process of doing so under the 'One Nation One Challan' initiative. ❖ About One Nation, One Challan Initiative: <ul style="list-style-type: none"> One Nation, One Challan is an initiative of the Ministry of Road Transport and Highways. It's objective is to bring all related agencies, such as the traffic police and the Regional Transport Office (RTO), on one platform, to enable seamless collection of challans as well as data transfer. The integrated system involves detection of traffic violations through the CCTV network and getting the registration number of the erring vehicle from applications like VAHAN (detecting the vehicle's ownership details) and SARATHI (compilation of driving licenses). An e-challan is then generated with the relevant penalty amount, and sent to the mobile number linked with the vehicle. Virtual Traffic Courts : <ul style="list-style-type: none"> If someone doesn't pay the challan amount within 90 days, the challan will be automatically forwarded to a virtual court and proceedings will be initiated. Summons will be sent on the mobile phone of the offender. If the fine is still not paid, further legal proceedings will follow. Virtual courts are aimed at eliminating the presence of litigants in the court
<p>Hallmark Unique Identification (HUID) Number</p>	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Recently, the Union Ministry of Consumer Affairs, Food and Public Distribution said that from April 1, the sale of gold jewellery will not be allowed without a Hallmark Unique Identification (HUID) number. ❖ Key Highlights: <ul style="list-style-type: none"> HUID number is a six-digit alphanumeric code. It is given to every piece of jewellery at the time of hallmarking, and is a unique identifier for each gold item. 

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	<ul style="list-style-type: none"> • The jewellery is stamped with the unique number manually at the Assaying and Hallmarking centre. • It is aimed at ensuring the purity of Hallmarked jewellery and check any malpractice. • HUID is a secure system and poses no risk to data privacy or security.
<p>Assam's Maidams</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Assam's pyramid-like structures known as moidams or maidams have met all the technical requirements of UNESCO's World Heritage Centre. ❖ Key Highlights: <ul style="list-style-type: none"> • It is the Ahom equivalent of the ancient Egyptian pyramids. • It is among 52 sites across the country seeking the World Heritage Site tag. • Charaideo, more than 400 km east of Guwahati, was the first capital of the Ahom dynasty founded by Chao Lung Siu-Ka-Pha in 1253. • There is currently no World Heritage Site in the category of cultural heritage in the northeast. ❖ Charaideo Maidams: <ul style="list-style-type: none"> • Maidams represents the late medieval (13th-19th century CE) mound burial tradition of the Tai Ahom community in Assam. • Out of 386 Maidams or Moidams explored so far, 90 royal burials at Charaideo are the best preserved, representative of and the most complete examples of mound burial tradition of the Ahoms. • The Charaideo Maidams enshrine the mortal remains of the members of the Ahom royalty, who used to be buried with their paraphernalia. • After the 18th century, the Ahom rulers adopted the Hindu method of cremation and began entombing the cremated bones and ashes in a Maidam at Charaideo.
<p>Whiskey Fungus</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ A recent lawsuit claims the release of ethanol vapors from six Jack Daniel's distilleries in Tennessee is causing the growth of black whiskey fungus on nearby property, causing a halt in construction, ❖ Key Highlights: <ul style="list-style-type: none"> • It was first discovered in the 1870s. • When whiskey or any other spirit is kept inside a cask for maturing, a small amount of it evaporates into the atmosphere through the wood. • Up to two per cent of the alcohol leaves the cask this way every year. • This evaporated whiskey was dubbed the angel's share in medieval Ireland & Scotland. • They believed the whiskey that disappeared into the air was meant as an offering for the angels. • Whiskey fungus, or Baudoinia compniacensis, feeds on these alcoholic vapours and is velvety or crust-like - it can reach one or two centimetres in thickness. • The fungus tends to spread to nearby surfaces, blanketing almost everything that comes in its way. It can destroy trees and damage properties.
<p>Olive Ridley Turtles</p>  <p>MCQ Quiz Daily Current Affairs Daily Pre PARE Daily</p>	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Recently a record number of over 6.37 lakh olive ridley turtles laid eggs on the Rushikulya river mouth in Odisha's Ganjam district during the eight-day duration of mass nesting. ❖ About Olive Ridley Turtles: <ul style="list-style-type: none"> • Scientific Name- Lepidochelys Olivacea. • They are the smallest and most abundant of all sea turtles found in the world. • They are carnivores and get their name from their olive colored carapace. • They are best known for their unique mass nesting called Arribada, where thousands of females come together on the same beach to lay eggs. • They can be found in warm waters of the Pacific, Atlantic and Indian oceans and the Odisha's Gahirmatha Marine Sanctuary is known as the world's largest rookery (colony of breeding animals) of sea turtles. • Conservation Status : Wildlife Protection Act,1972- Schedule 1 <ul style="list-style-type: none"> ▪ IUCN Red List- Vulnerable ▪ CITES- Appendix I