

INTERNATIONAL RELATION

India's Lithium Deal with Argentina

Why in News?

- India is on the brink of securing a significant deal for five lithium blocks in Argentina, with negotiations reportedly in the final stages.
- This strategic move could be a game-changer in reducing India's reliance on China for critical minerals.

About Lithium

- Lithium is a chemical element with the symbol Li and atomic number 3. It is a soft, silvery-white alkali metal.
- Lithium is a special metal in many ways. It's light and soft — it can be cut with a kitchen knife and so low in density that it floats on water.

Applications of Lithium

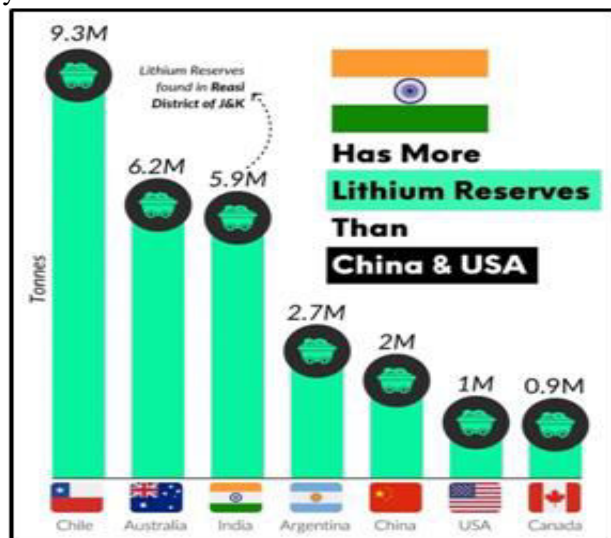
- The most important use of lithium is in rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles (EVs).
 - Lithium is often dubbed as “white gold” for electric vehicles.
- Lithium metal is made into alloys with aluminium and magnesium, improving their strength and making them lighter.
 - Aluminium-lithium alloys are used in aircraft, bicycle frames and high-speed trains.
- Lithium has no known biological role. It is toxic, except in very small doses.

Where is Lithium Found Naturally?

- Lithium makes up a mere 0.0007 per cent of the Earth's crust and it's only found locked up in minerals and salts.
- With 9.3 million tonnes, Chile has the world's largest known lithium reserves.
- Chile is followed by Australia (6.2 million tonnes).
- In 2023, the Geological Survey of India, found that 9 million tonnes have been found in Salal-Haimana area of Reasi district of J&K.
 - India now has the third largest resource of lithium globally, but it will take time to convert it to reserves.
- India is followed by Argentina (2.7 million tonnes) and China (2 million tonnes).
- Global lithium production surpassed 100,000 tonnes for the first time in 2021, quadrupling from 2010. Currently, Australia alone produces 52% of the world's lithium.

Future of Lithium Production

- As the world produces more batteries and EVs, the demand for lithium is projected to reach 1.5 million tonnes of lithium carbonate equivalent (LCE) by 2025 and over 3 million tonnes by 2030.
- Based on the above demand projections, production needs to triple by 2025 and increase nearly six-fold by 2030.



Acquisitions in Argentina

- India has over the last one year upped its search for critical mineral, especially lithium.
- Lithium is a cornerstone in India's switch to green energy thereby reducing its carbon footprints.
- Argentina, with its enormous lithium deposits and low production costs, is ideally positioned to supply this demand.
- As of September 2023, Argentina has two active lithium mines. There are 14 lithium projects under construction or in the advanced exploration stage in Argentina.
 - Argentina is expected to become one of the world's leading lithium producers once these projects become operational.
- The KABIL board had approved the 'Draft Exploration and Development Agreement' earlier and a proposal for opening of Branch Office in Catamarca, Argentina was subsequently cleared by the Ministry.

Conclusion

- The Union Ministry of Mines, through the state-owned KhanijBidesh India Ltd (KABIL), has entered into a draft exploration and development agreement with Argentinean miner CAMYEN.
- This agreement is for possible acquisition and development of five-odd lithium blocks.
- The company has also entered into a non-disclosure agreement with Chilean miner ENAMI for "possible exploration, extraction, processing and commercialisation" of the mineral.
- It has also appointed consultancy major PwC for identification of investable projects in Australia.

SCIENCE AND TECHNOLOGY**Improving health outcomes using sin tax****Context:**

- Currently, sugar sweetened beverages (SSB) attracts 28% GST plus a 12% cess, while high fat, salt and sugar (HFSS) products only attracts 12% GST.
- It focuses on India, where these unhealthy eating habits are growing fast, and suggests that higher taxes on such foods could help reduce their consumption.

What is HFSS food?

- According to Ministry of Women and Child Development, HFSS foods may be defined as foods (any food or drink, packaged or non- packaged) which contain low amounts of proteins, vitamins, phytochemicals, minerals and dietary fiber but are rich in fat (saturated fatty acids), salt and sugar and high in energy (calories) that are known to have negative impact on health if consumed regularly or in high amounts.
- While the global average consumption of sugar is 22kg per person per year, it is 25kg per person per year in India. Free sugar consumption in India is five times the WHO recommended threshold.

What is the need to tax HFSS foods?

- Health Risks: HFSS foods contribute to obesity, diabetes, and high blood pressure. In India, NCDs due to poor diet have increased from 38% to 65% since 1990, causing 1.2 million deaths annually.
- Economic Burden: Obesity's cost in India was \$23 billion in 2017, potentially rising to \$480 billion by 2060. This highlights the economic impact of unhealthy diets.
- Growing Consumption in India: India, the world's largest sugar consumer, has seen snack and soft drink sales triple, exceeding \$30 billion. This indicates a worrying rise in HFSS food consumption.

What initiatives have been taken to tax HFSS foods?**Global Initiatives:**

- Over 60 countries have implemented taxes on sugary drinks, while 16 countries tax other HFSS foods.
- Countries like Denmark, France, Hungary, Mexico, South Africa, the UK, and the US have specific HFSS food taxes.
- Colombia recently introduced a law to tax ultra-processed foods.

Indian Initiatives:**1. Kerala's Fat Tax:**

- In 2016, Kerala introduced a 'fat tax', which later merged into India's Goods and Services Tax in 2017.

2. GST and Nutritional Content:

- In India, the current GST system taxes ultra-processed foods such as salty snacks and Sugar-sweetened beverages (SSBs) uniformly. For example, all aerated beverages are subject to the same tax rate, regardless of their sugar content, failing to differentiate based on their health impacts.
- For SSBs, a health tax of 10-30% could result in 7-30% decline in demand.
- For HFSS, 10-30% health tax could result in 5-24% decline in demand.

Way Forward

- The WHO and the Indian Council for Research on International Economic Relations (ICRIER) Recommendations for:
 - a) It urges the FSSAI to clearly define High Fat Sugar Salt foods, ensuring transparency,
 - b) It recommends a nutrient-based tax model, levying higher taxes on products high in fat, sugar, and salt, and lower taxes on healthier alternatives.
- HFSS taxation should aim to improve public health, not just generate income. It should encourage industry to create healthier products and motivate consumers to choose better diets.

PRELIM FACTS**1. Chameleon Trojan**

- A new version of the 'Chameleon Trojan' malware has been discovered by security researchers, capable of disabling biometric authentication methods such as fingerprint and face unlock to steal a phone's PIN.

About Chameleon Trojan:

- Chameleon Trojan attaches itself to legitimate Android apps to avoid detection and runs code in the background.
- It uses 'Accessibility service' on Android devices to disable biometric authentication methods like fingerprint and face unlock to steal the phone's PIN.
- It uses stolen PIN to unlock the device and steal more sensitive information like credit card passwords, login credentials, etc.

2. Eurasian otter

- Recently, Eurasian otter was found in the Chinnar Wildlife Sanctuary in Kerala.

About Eurasian otter (Lutra lutra):

- Features: Shy, nocturnal, good swimmer and fish catcher etc.
- Habitat: Semi-aquatic, lives in water bodies, marshes, swamp forests, coastal areas etc.
- Distribution:
 - World: Europe, Asia and Africa.
 - India: Northern, northeast and southern India.
- Conservation Status:
 - IUCN List: Nearly Threatened
 - Wildlife Protection Act: Schedule I
 - CITES: Appendix I
- Threats: Pollution, poaching, habitat loss, accidental trapping etc.

3. Marine Energy Conversion Systems Sectional Committee (MECSSC)

- Bureau of Indian Standards (BIS) formed a dedicated technical committee MECSSC to promote standardization in the field of Marine Energy Conversion Systems (MECS).
 - BIS is the National Standard Body of India established under the BIS Act, 2016.

Objectives of MECSSC:

- Set comprehensive standards and guidelines for various aspects related to MECS.
- Foster collaboration, innovation, and knowledge exchange in MECS.
- MECSs are a group of technologies designed to extract energy from the ocean and convert it into electricity.

- Marine energy sources include waves, tides, ocean thermal energy, etc.

4. Salton Sea

- The U.S. Department of Energy recently discovered the world's largest Lithium reserve beneath California's Salton Sea.

About Salton Sea:

- It is a shallow, saline lake located in the lower Colorado Desert, southern California, USA.
- It is a geological depression tucked between mountain ranges and lying below sea level.
- It is currently 228 feet below sea level and its salinity (some 45 parts per thousand) far exceeds that of seawater.
- The Salton Sea is an important stopping point for migratory waterfowl and serves as critical habitat for birds moving south to Mexico and Central America.

Key Facts about Lithium:

- It is a soft, silvery-white metal that heads group 1, the alkali metals group, of the periodic table of the elements.
- It has the lowest density of all metals and lightest of the solid elements.
- Lithium does not occur as a metal in nature but is found combined in small amounts in igneous rocks.
- Lithium is found in brine deposits and as salts in mineral springs.
- Lithium is important in rechargeable batteries for mobile phones, laptops, digital cameras, and electric vehicles.

5. NATIONAL TRANSIT PASS SYSTEM

Context: The Indian government has introduced the National Transit Pass System (NTPS), a unified platform for the seamless transport of forest goods across the country through a single permit.

- Union Minister for Environment, Forest and Climate Change, inaugurated the system, emphasizing its role in promoting transparency and simplifying transportation processes for forest and agro-forestry businesses.

Features:

- The NTPS operates as a web portal and mobile application, enabling online filing of applications for permission to transport forest products and obtain no-objection certificates (NOCs).
- The system replaces the need for merchants and farmers to obtain permits from multiple states for inter-state transportation of forest and agro-forestry products.
- The QR-coded permits issued by NTPS are machine-readable and can be decoded by any state forest department in the country, streamlining the process and reducing the time taken to obtain permits.

The initiative aims to facilitate one-nation-one-pass transportation for forest products, enhancing the ease of doing business for timber merchants and farmers involved in agro-forestry.

ANSWER WRITING

Critically evaluate the pros and cons of the proposal of raising the minimum legal age of marriage for women to 21 years.

The government is proposing to raise the legal age of marriage for women from 18 to 21 years. If implemented, it will bring the age of marriage for both men and women at par.

Background

- For Hindus, The Hindu Marriage Act, 1955 sets 18 years as the minimum age for the bride and 21 years as the minimum age for the groom
- In Islam, the marriage of a minor who has attained puberty is considered valid.
- The Special Marriage Act, 1954 and the Prohibition of Child Marriage Act, 2006 also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men, respectively.
- Jaya Jaitley committee (2020) - The Ministry for Women and Child Development set up a task force to look into the correlation between the age of marriage with issues of women's nutrition, the prevalence of anemia, IMR, MMR, and other social indices.

Pros of raising the minimum legal age of marriage for women

- Gender Neutrality- Remove artificial age difference for legal age of marriage for boys and girls. It will ensure gender parity.
- Women Education- Girls are forced to drop their studies for marriage, thus it would give them time to pursue their studies and offer an opportunity to pursue higher education.
- Health-Pregnancies in teenage girls heighten the possibility of high blood pressure, anaemia, and many other health issues in the mother, and can also lead to severe pregnancy complications that can cause the death of the mother.
 - Early marriages also cause mental health problems.
- Issue of child marriage- India is home to the largest number of underage marriages in the world. This can be tackled by increasing the age of marriage.
- Women Empowerment- The educational level, living situations, health conditions, and decision-making power of women are all influenced by the mother's age at childbearing.
- Child Welfare- Early marriage and, as a result, early pregnancies have an impact on mothers' and children's nutritional levels, as well as their overall health and mental well-being.

Cons of raising the minimum legal age of marriage for women

- Women's rights activists have opposed the suggestion and have cited evidence to show that such a move may be used to incarcerate young adults marrying without parents' consent.
- Also, this move would lead to the criminalization of a large number of marriages that will take place once the law comes into effect.
- No need to raise the legal age as the reduction in child marriages in India already happening - because of increased access to education, skilling, healthcare, and jobs
 - NFHS data, rates of early marriage in India fell from 47% in 2005-06 to 27% in 2015-16.
- The existing law governing child marriage – PCMA – is not very effective on the ground.
 - In 2018, only 501 cases were booked under the PCMA Act, even though data suggests that one in four women in India is still getting married under the age of 18.
- Early marriage is the consequence of deep-seated social norms and simply making laws won't be effective
 - Society believes that marrying girls off at an early age reduces the price of dowry, and protects them from sexual violence.
 - Girls are further seen as financial burdens (paraya dhan) who need to be married off at a young age.
 - Such a move will only succeed in driving these marriages underground, such that they are carried out in secret.
- Law being coercive-Negatively impacts marginalized communities, such as the Scheduled Caste and Scheduled Tribes, making them law-breakers.

Conclusion

The proposed changes in legislation are a welcome step. But it must be implemented through a social revolution with community participation rather than being coercive government policy. This will help India in achieving SDG 5- Gender equality.

MCQs

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| <p>1. Recently the Ministry of Jal Shakti released a document, which is the first such census of water bodies in India. According to it which of the following types of water bodies has the maximum share across India?
(a) Lakes (b) Ponds
(c) Reservoirs (d) Tanks</p> <p>2. Consider the following statements regarding Multidimensional Poverty Index (MPI).</p> <p>1. Multidimensional Poverty Index (MPI) is released by World Bank.</p> | <p>2. The global MPI constructs on indicators spanning health, education and standard of living.</p> <p>3. The MPI ranges from 0 to 1, and higher values imply higher poverty.</p> <p>How many of the above statements is/are correct?
(a) Only one (b) Only two
(c) All three (d) None</p> <p>3. The COVID restrictions, known as Title 42, was introduced by</p> |
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- (a) European Union
(b) Japan
(c) **United States**
(d) China
4. Which statements about Huntington's disease are accurate?
(a) Huntington's disease is a bacterial infection affecting the nervous system.
(b) **It is an autosomal dominant genetic disorder caused by a mutation in the HTT gene.**
(c) Symptoms of Huntington's disease typically manifest in old age.
(d) The disease primarily affects the peripheral nervous system.
5. Consider the following statements.
1. The Central Government sets a minimum support price (MSP) for various crops every year based on a formula that takes into account both paid-out costs (A2) such as seeds, fertilizers and pesticides as well as the imputed value of unpaid family labour (FL).
2. There is currently no statutory backing for the MSP, nor any law mandates their enforcement.
3. The Central Government procures almost all the stocks of wheat and rice crops throughout the country at MSP rates.
How many of the above statements is/are correct?
(a) Only one
(b) **Only two**
(c) All three
(d) None
6. With reference to National Culture Fund, consider the following statements:
1. It was set up by the Government of India under the Charitable Endowment Act, 1890.
2. The donations to this fund will be eligible for tax benefit.
3. It is utilized only for promoting and preserving India's intangible cultural heritage.
How many of the statements given above are correct?
(a) Only one
(b) **Only two**
(c) All three
(d) None
7. Andriamanelo Cave, which was recently discovered with prehistoric rock art drawings, is located in:
(a) Italy
(b) Mexico
(c) Egypt
(d) **Madagascar**
8. Which of the following is/are included in the capital budget of the Government of India?
1. Expenditure on acquisition of assets like roads, buildings, machinery, etc.
2. Loans received from foreign governments
3. Loans and advances granted to the States and Union Territories
Select the correct answer using the code given below:
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) **1, 2 and 3**
9. With reference to the history of philosophical thought in India, consider the following statements regarding Vaisheshika School
1. It believes in the physicality of the Universe and is considered to be the realistic and objective philosophy that governs the universe.
2. It developed the atomic theory, i.e. all material objects are made of atoms.
Which of the above statements is/are incorrect?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) **Neither 1 nor 2**
10. Consider the following statements regarding Eurasian otter:
1. It is recently found in Chinnar Wildlife Sanctuary in Kerala
2. It is shy, nocturnal, good swimmer and fish catcher.
3. It is listed as Critically Endangered in the IUCN list.
How many of the above statements is/are correct?
(a) Only one
(b) **Only two**
(c) All three
(d) None