15 July, 2023

Lithium for Commercial Mining

HYEYA IAS

Context: Recently, the Union Cabinet approved amendments to the Mines and Minerals (Development and Regulation) Act, enabling commercial mining of lithium and other minerals.

Importance of Lithium:

- Lithium is a highly valuable and sought-after mineral due to its crucial role in the production of rechargeable batteries, especially for electric vehicles (EVs) and renewable energy storage.
- It is considered a strategic resource as it plays a vital role in advancing clean energy technologies and reducing carbon emissions.

Global Lithium Reserves and Production:

- > The majority of lithium reserves are found in countries like Australia, Chile, China, and Argentina.
- > As of now, Australia is the largest producer of lithium, followed by Chile and China.

Potential of Commercial Lithium Mining in India:

- India is currently dependent on imports for its lithium requirements, primarily from countries like Australia and Argentina.
- > However, the country possesses substantial lithium reserves, estimated to be around 4,00,000 metric tonnes.
- Commercial lithium mining in India can significantly reduce import dependence and support domestic production for the growing electric vehicle industry.

Lithium Extraction and Processing:

- Lithium extraction methods include both conventional and advanced techniques such as open-pit mining, underground mining, and brine extraction.
- Processing involves several stages, including crushing, grinding, and chemical treatment, to extract lithium carbonate or lithium hydroxide, which are used in battery production.

Environmental and Social Considerations:

- Lithium mining can have environmental impacts such as water pollution, habitat disruption, and depletion of natural resources.
- It is essential to ensure sustainable mining practices, proper waste management, and social responsibility to minimize adverse effects on local communities and ecosystems.

Government Initiatives:

- The Indian government has recognized the significance of lithium resources and has taken initiatives to promote lithium exploration, extraction, and processing within the country.
- Policies and incentives are being introduced to attract investments and support domestic lithium mining and battery manufacturing.

Future Prospects:

- With the global shift towards clean energy and the rapid growth of the electric vehicle market, the demand for lithium is expected to increase significantly.
- Commercial lithium mining in India has the potential to contribute to the country's economic growth, reduce import dependence, and support the transition to a sustainable energy future.

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Securities Contract Regulation Act (SCRA)

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Context: Recently, the Securities and Exchange Board of India (SEBI) announced plans to form an expert committee to recommend changes to the 67 year old Securities Contract Regulation Act (SCRA).

Securities Contract Regulation Act:

- > The Securities Contract Regulation Act (SCRA) is an important legislation enacted in India in 1956.
- Its primary objective is to regulate and control securities contracts, stock exchanges, and other related matters in the country.

Regulation of Securities Contracts:

- > The SCRA governs the formation, rights, and obligations related to securities contracts.
- It establishes rules for the trading, transfer, and settlement of securities to ensure fair practices and investor protection.

Role of Securities and Exchange Board of India (SEBI):

- The SCRA empowers the Securities and Exchange Board of India (SEBI) to regulate and supervise securities markets.
- SEBI plays a crucial role in enforcing the provisions of the SCRA and ensuring the smooth functioning of securities markets.

Prohibition of Fraudulent Practices:

- > The SCRA prohibits fraudulent and unfair trade practices in securities transactions.
- It aims to maintain the integrity of the market by preventing activities such as insider trading, price manipulation, and other deceptive practices.

Investor Protection:

- The SCRA prioritizes the protection of investor interests by promoting transparency and disclosure of information.
- It establishes rules for the registration and conduct of brokers, ensuring fair dealings and minimizing risks for investors.

Amendments and Updates:

- The SCRA has undergone several amendments over the years to align with evolving market needs and regulatory changes.
- These amendments aim to enhance the effectiveness of the SCRA in addressing emerging challenges and safeguarding investor interests.

Coordination with Other Laws:

- The SCRA works in coordination with other securities laws and regulations, such as the Companies Act, Depositories Act, and SEBI regulations.
- > This ensures comprehensive regulation and a harmonized legal framework for the securities market.

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BHARAT Campaign

Context: Recently, the BHARAT campaign was launched to raise Rs 7200 crore under the Agri Infra Fund from July 15th to August 15th, 2023.

What is BHARAT Campaign?

- BHARAT (Building Human Assets and Resilient Agriculture) is an important campaign initiated by the Government of India.
- It aims to strengthen the agriculture sector, improve rural livelihoods, and promote sustainable agricultural practices across the country.

Objectives of the BHARAT Campaign:

- > Enhancing agricultural productivity and income of farmers.
- > Promoting sustainable farming practices and reducing environmental degradation.
- > Strengthening the value chains and market linkages for agricultural produce.
- > Ensuring better access to credit, insurance, and technology for farmers.
- > Empowering women farmers and promoting gender equality in agriculture.
- > Improving rural infrastructure and providing essential services to farming communities.
- > Enhancing research and development efforts in agriculture for innovation and technology adoption.
- > Promoting skill development and capacity building of farmers and rural youth.

Components of the BHARAT Campaign:

- Strengthening agricultural infrastructure, including irrigation facilities, storage and cold chain facilities, and rural roads.
- > Expanding the coverage of agriculture insurance schemes to provide risk mitigation to farmers.
- Implementing innovative agricultural practices, such as organic farming, precision agriculture, and agroforestry.
- Promoting the adoption of climate-resilient and resource-efficient technologies in agriculture.
- > Enhancing access to credit and financial services for small and marginal farmers.
- > Improving market linkages and creating robust marketing infrastructure for agricultural produce.
- > Empowering women in agriculture through training, capacity building, and access to resources.
- Enhancing research and development in agriculture for technology development and knowledge dissemination.

Implementation and Collaborations:

- The BHARAT Campaign is implemented by various government ministries, departments, and agencies, including the Ministry of Agriculture and Farmers Welfare, Ministry of Rural Development, and Ministry of Food Processing Industries.
- Collaboration with state governments, agricultural research institutions, non-governmental organizations (NGOs), and international agencies is essential for effective implementation and scaling up of the campaign.

Impact and Benefits:

- The BHARAT Campaign aims to address key challenges in the agriculture sector and improve the socioeconomic conditions of farmers and rural communities.
- It seeks to create sustainable livelihood opportunities, reduce rural-urban migration, and bridge the income gap between farmers and other sectors.
- > The campaign also contributes to food security, environmental sustainability, and overall rural development.

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Challenges:

- Despite its objectives and initiatives, the BHARAT Campaign faces challenges such as limited resources, fragmented landholding patterns, climate change, and market fluctuations.
- Addressing these challenges requires a comprehensive approach, including policy reforms, technological advancements, and institutional support.

News in Between the Lines	
LVM-3	 Recently, India successfully launched its third moon mission, Chandrayaan-3, using the Launch Vehicle Mark-3 (LVM-3) rocket from the Satish Dhawan Space Centre in Sriharikota. LVM-3: The Launch Vehicle Mark-3 (LVM-3) is a powerful launch vehicle developed by the Indian Space Research Organisation (ISRO). It is designed to launch heavy satellites and payloads into space. Capabilities: Payload capacity - 4 tons (GTO) and 10 tons (LEO). Successor to GSLV: LVM-3 is the successor to the Geosynchronous Satellite Launch Vehicle (GSLV) series of launch vehicles. GSLV: GSLV is ISRO's 3-stage launch vehicle using a Cryogenic engine. It launches communication satellites into higher elliptical orbits (GTO) using liquefied oxygen and hydrogen as fuel. New Space India Limited (NSIL): NSIL, established in 2019, is a PSU under DoS. It aims to
	transfer technology, outsource small satellite assembly and commercially exploit ISRO's R&D work. Recently, the successful launch of Chandrayaan using the launch vehicle has provided a significant boost to India's Gaganyaan mission.
Gaganyan	Gaganyan: Gaganyaan is India's human spaceflight program, demonstrating the country's capability to send astronauts into space and back safely. It involves a crewed spacecraft and launch vehicle, carrying three astronauts for a three-day mission.
	Human-rated Launch Vehicle Mark (LVM): Gaganyaan will utilize the human-rated Launch Vehicle Mark (LVM) for the mission. The successful launch of Chandrayaan-3 using LVM-3 further enhances the reliability of the launch vehicle.
	Human-rating of Rocket Systems: The rocket systems used in the Chandrayaan-3 mission were rated for humans. The S200 solid strap-on motors and L110 Vikas engine of LVM-3 have become human-rated, ensuring safety for crewed missions.
	Industry Contributions: Mishra Dhatu Nigam Limited (MIDHANI), Keltron, Kerala Minerals and Metals (KMML), and Ananth Technologies Ltd (ATL) played crucial roles in supplying materials, components, titanium alloys, and avionics packages for the launch vehicle.
Enforcement	Recently, the Supreme Court declined to hear an appeal by the Enforcement Directorate (ED) in a case involving the wife of Y.S. Jaganmohan Reddy, the Chief Minister of Andhra Pradesh, India.
	What is the Enforcement Directorate?
Directorate	The Enforcement Directorate (ED) is a specialized financial investigation agency in India. It operates
	under the Ministry of Finance. Jurisdiction: The ED has jurisdiction under various laws, including the Prevention of Money
FNEODOENEN	Laundering Act (PMLA) and the Foreign Exchange Management Act (FEMA). It investigates cases
ENFORCEMENT DIRECTORIT	related to money laundering, foreign exchange violations, economic frauds, and other financial offenses.
	Powers and Authorities: The ED has the authority to conduct searches, seize assets, and arrest
	individuals involved in financial crimes. It can attach and confiscate proceeds of crime, including properties and assets obtained through illegal means.

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	Recently, amidst the Delhi flood situation, a disagreement arose between the Delhi and Haryana
	governments regarding the release of water from Hathnikund to Delhi rather than Uttar Pradesh.
	Hathinikund Barrage:
Hathinikund Barrage	The Hathinikund Barrage plays a significant role in regulating the flow of the Yamuna River and
Framework	ensuring water distribution among riparian states. The barrage, located upstream on the Haryana-
FTamework	UP border, is instrumental in maintaining water-sharing agreements and managing water resources. Purpose and Agreement: The Hathinikund Barrage was built to resolve the Yamuna water dispute
and the second s	between Himachal Pradesh, Haryana, Delhi, Uttar Pradesh, and Rajasthan. An agreement was
	signed on May 12, 1994, under the Water Resources Ministry to allocate water for drinking and
	irrigation purposes.
	Function and Water Distribution: It ensures a minimum flow of 10 cumec (cubic meter per
	second) in the main Yamuna River. The water is shared between Delhi, Haryana (Western Yamuna
	Canal) and Uttar Pradesh (Eastern Yamuna Canal) as per the agreed-upon allocation.
	Management and Operation: The Haryana government manages and operates the Hathinikund
	Barrage as per the guidelines set by the Central Water Commission (CWC).
	Recently, the subscription to State Bank of India's (SBI) additional tier-1 (AT1) bond issue was
	underwhelming.
	Additional Tier-1: AT-1 bonds, also known as Additional Tier-1 bonds, are a type of debt instrument
Additional Tion 1	issued by banks to raise capital. These bonds have unique features that allow them to be written down or converted into equity under specific conditions.
Additional Tier-1	Risk and Loss Absorption: AT-1 bonds are considered riskier than other forms of debt due to their
AT1 BONDS	loss-absorbing nature. In times of financial stress, these bonds can be converted into equity, helping
	to absorb losses and strengthen the bank's capital position.
	Purpose and Regulations: Banks issue AT-1 bonds to meet regulatory capital requirements, such
BANKS AT1 BONDS	as Basel III guidelines. Regulatory authorities impose specific rules and conditions on AT-1 bonds to
	ensure their effectiveness as loss-absorbing instruments.
Raise Core Equity Base	Impact on Market Sentiment: The performance and subscription of AT-1 bonds can impact market
	sentiment, reflecting investor confidence in the banking sector. Poor subscription or market
	concerns can lead to a dampened investor sentiment and affect fundraising for banks.
	Recently, Russia made the decision to close the Polish consular agency located in Smolensk. Geographical location: Smolensk is
	leasted in western Dussia Importance It
	played a pivotal role as a stronghold
	controlling trade routes and experienced
	sieges and captures by various powers,
	including Moscow, Lithuania, Poland and A Demidov
	Russia. The Smolenskaya oblast
Place in News	Dnieper River: The Dnieper or Dnipro is
I face in ficews	one of the major rivers of Europe, rising in
	the Valdai Hills near Smolensk, Russia, before flowing through Belarus and Likraine
Smolonal	before flowing through Belarus and Ukraine to the Black Sea. It is the longest river of
Smolensk	
	river in Europe after the Volga Dapube and
	Ural rivers. Historical events: During World War II, Smolensk witnessed significant battles. It
	Historical events: During World War II,
	Smolensk witnessed significant battles. It Bryanskaya
	was heavily damaged and burned in 1812
	during Napoleon's invasion of Russia. In
	1941 and 1943, it became a crucial battleground, preventing the Germans from advancing to
	Moscow.

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