

INTERNATIONAL RELATION

Chile Rewrites Its Constitution

The South American country of Chile has formed a Constitution Convention to write a new constitution to tackle a "climate and ecological emergency." As climate catastrophes become inevitable, countries that are already struggling with resource depletion (water, in Chile's case) are being forced to take action by its people.

Key Points

Background:

- Chilean politicians want to leverage its lithium to make the country richer. As Most Chileans disagree with the government's approach, similar measures in the past (including privatisation of water) have done little to help out people who need these resources the most.
- Under the leadership of military ruler Augusto Pinochet (who overthrew communist Salvador Allende in a coup in 1980), Chile began its ongoing journey of resource exploitation.
- There's a problem - lithium mining causes soil moisture to decline and causes daytime temperatures to increase which in turn makes the area drier. While more lithium may be extracted, it may become even more unfit for humans.

About:

- The new constitution will focus on lithium mining and its regulation. In addition, it will foresee how lithium mining benefits indigenous communities. The architects of the new constitution will also assess whether Chile's political system needs a revamp
- Their work will not only shape how this country of 19 million is governed. It will also determine the future of a soft, lustrous metal — lithium — lurking in the salt waters beneath this vast desert beside the Andes Mountains.
- This reworking of the constitution is a reminder of changing priorities in a world moving towards climate catastrophes.

Challenges:

- Many fear that the new constitution will impose hefty royalties and restrictions on mining and improve focus on local decision-making.

Lithium in Chile:

- Chile's extremely rich in lithium (second-largest lithium producer after Australia) - an essential component of batteries that support almost all modern smart devices.
- As the world races to replace fossil fuel consumption, the demand for lithium is causing a surge in its price.

India- Chile Relations

- Chile is India's window to Latin America and to the Pacific Alliance.
- Chile is the fifth largest trading partner of India in the Latin American region.
- India- Chile signed the Preferential Trade Agreement in 2017 to enhance the trade.
- The bilateral trade is growing and stood at USD 2.8 billion in 2017-18.
- India and Chile are partners in the International Solar Alliance.
- Both countries cooperate extensively in multilateral fora and share similar views on climate change/renewable energy issues and on expansion and reforms of the UNSC (United Nations Security Council).
- India- Chile has signed three Memorandum of Understandings (MoUs) in the fields of - mining, culture, disability.

Lithium's Usage in Batteries

- With countries looking for quick ways to decarbonise, lithium is being seen as the choice of metal. With electric vehicles being pitched as the future of transportation and all industries looking for cleaner alternatives, lithium is seen as their best bet. Seen as a key part of renewable energy, lithium ion batteries are considered "energy-dense, cheap and safe."
- Lithium ion batteries do pack a lot of power and energy into a small package with a longer life-cycle. Most gadgets including smartphones and laptops use lithium-polymer batteries, an alternative to lithium ion batteries.
- Since lithium is considered the standard non-renewable mineral that makes renewable energy possible, its demand is expected to continue shooting up.

- But in this fight against climate change, lithium mining might create toxic regions where water (saltwater brine) is unfit for human consumption and chances of growing vegetation are low.

Chile

- Chile is officially known as the Republic of Chile. Its capital is Santiago.
- It is a South American country occupying a narrow strip of land between the Andes to the east and the Pacific Ocean to the west.
- It borders Peru to the north, Bolivia to the northeast, Argentina to the east, and the Drake Passage in the south.
- The Atacama desert is one of the driest places in the world and touches Chile in its northern side and is a source of sodium nitrate fertilizer. It owes its aridity due to a constant temperature inversion of cool north-flowing Humboldt ocean current.
- Chuquibambilla is the World's largest copper town of Chile.

ECONOMY

Dairy Sector & Opposition to Free Trade

According to some experts, India's withdrawal from the Regional Comprehensive Economic Partnership (RCEP) is a major victory for the farmer's organisations, trade unions, associations of small and medium industrial producers. Similar views are also shared by the Indian Dairy Sector, who opposed free trade in dairy products.

RCEP is one of the world's largest trading blocs, signed between 15 countries (China, Japan, South Korea, Australia, New Zealand and the 10-state ASEAN grouping). India pulled out of RCEP negotiations in 2020.

Key Points

India's Dairy Sector Opposition to RCEP:

- Some of the major players in the global milk trade like Australia and New Zealand are in the RCEP agreement.
- Over the last 25 years, Indian policy has consciously encouraged the growth of private milk companies. At present, these firms are forced to buy milk from Indian farmers.
 1. The reason is that the applied tariff for foreign dairy products in India is about 35%.
 2. The bound tariff would have fallen to zero if India had signed RCEP.
- It would have then been far more profitable for firms to import milk from New Zealand or Australia rather than buy it from Indian farmers. Hence, India was in the opposition to the agreement.
- Moreover, there is no foreseeable future where India would be milk deprived. According to NITI Aayog, India is likely to be a milk-surplus country by 2033.

White Revolution 1970

- The White Revolution in India was the brainchild of Dr Verghese Kurein.
- Under him many important institutions were established like the Gujarat Cooperative Milk Marketing Federation Ltd and the National Dairy Development Board (NDDB).
- The bedrock of the revolution has been the village milk producers' cooperatives. Their major role during Operation Flood, was seen as engines of growth.
- Policy has also favoured the entry of multinational dairy corporations into the Indian dairy sector, through joint ventures: mergers and acquisitions.

India's Dairy Sector

Importance of Dairy Sector:

- **Labour Intensive Sector:** In the farm-dependent population comprising cultivators and agricultural labourers, those involved in dairying and livestock constitute 70 million. Moreover, in the total workforce of 7.7 million engaged exclusively in raising cattle and buffalo, 69% of them are female workers.
- **Contribution in Economy:** In the Gross Value Added (GVA) from agriculture, the livestock sector contributed 28% in 2019-20. A growth rate of 6% per annum in milk production provides a great support to farmers, especially during drought and flood.
- **Helping Farmers During Calamities:** Milk production rises during crop failures due to natural calamities because farmers bank more on animal husbandry then.

Associated Issues:

- **Invisible Labour:** Farmers keep two to five in-milk animals for livelihood. In this setup, unpaid female family labour supplies a major part of the labour requirement for milk

production. The landless and marginal farmers among them have no livelihood options to fall back when they fall short of buyers for milk.

- **Informal Nature of Dairy Sector:** Unlike sugarcane, wheat, and rice-producing farmers, cattle raisers are unorganised and do not have the political clout to advocate for their rights.
- **Lack of Remunerative Pricing:** Though the value of milk produced outweighs the combined value of the output of wheat and rice in India, there is no official and periodical estimate of the cost of production and Minimum Support Price for milk.
- **Negative Impact of Economies of Scale:** Even though dairy cooperatives handle about 40% of the total marketable surplus of the milk in the country, they are not a preferred option of landless or small farmers. This is because more than 75% of the milk bought by dairy cooperatives is at its lower price band.

Government Initiatives Related to the Dairy Sector

- **National Action Plan on Dairy Development 2022:** It seeks to increase milk production and double the income of dairy farmers.
- **National Animal Disease Control Programme & National Artificial Insemination Programme:** It was launched to control and eradicate the Foot & Mouth Disease (FMD) and Brucellosis amongst the livestock in the country,
- **Pashu-Aadhar:** It is a unique ID on a digital platform for traceability for the animals.
- **Rashtriya Gokul Mission:** It was launched in 2019 for setting up of 21 Gokul Grams as Integrated Cattle Development Centres.

Way Forward

- **Increasing Productivity:** There is a need to increase the productivity of animals, also ensuring better health care and breeding facilities and management of dairy animals. This can reduce the cost of milk production. Also, milk production and productivity can be enhanced by ensuring the availability of veterinary services, Artificial Insemination (AI), feed and farmer education. The Government and dairy industry can play a vital role in this direction.
- **Augmenting Production, Processing and Marketing Infrastructure:** For India, to emerge as a dairy exporting country:
 1. It is imperative to develop proper production, processing and marketing infrastructure, which is capable of meeting international quality requirements.
 2. Further, to address the infrastructure deficit in rural areas and address the power shortage, there is a need to invest in solar powered dairy processing units.
 3. Also, there is a need to strengthen dairy cooperatives. In this pursuit, the government should promote farmer producer organisations.

SCIENCE & TECHNOLOGY

Flex Fuel Vehicles

The Indian Army has set up a Quantum Computing Laboratory and a centre for Artificial Intelligence in Mhow, Madhya Pradesh.

Key Points

About:

- The Quantum Computing Laboratory has been established with the help of the National Security Council Secretariat (NSCS), to spearhead research and training in this key developing field.
- National Security Council is a three-tiered organization that oversees political, economic, energy and security issues of strategic concern.
- Indian Army has also established an Artificial Intelligence (AI) Centre at the same institution with over 140 deployments in forward areas and active support of industry and academia.
- Training on cyber warfare is being imparted through a state-of-the-art cyber range and cyber security labs.

Objective:

- The two Centres will carry out extensive research in developing the transformative technologies for use by the armed forces.
- The Centres will also facilitate the research and training in the developing field of Quantum and artificial intelligence.
- It will help it facilitate the next generation of communication and transform the current system of cryptography to post-quantum cryptography.

- The key thrust areas of Quantum Technology are Quantum Key Distribution, quantum computing and quantum communication. QKD, also called Quantum Cryptography, is a mechanism to develop secure communication.

Quantum Technology/Computing

About:

- Quantum Technology is based on the principles of Quantum mechanics that was developed in the early 20th century to describe nature at the scale of atoms and elementary particles.
- Using quantum superposition, a set of unbreakable codes or super-speedy information processing, quantum computers are able to mimic several classical computers working in parallel. Quantum computers compute in 'qubits' (or quantum bits). They exploit the properties of quantum mechanics, the science that governs how matter behaves on the atomic scale.
- The first phase of this revolutionary technology has provided the foundations of our understanding of the physical world, including the interaction of light and matter, and led to popular inventions such as lasers and semiconductor transistors.

Applications:

- **Secure Communication:** China recently demonstrated secure quantum communication links between terrestrial stations and satellites. This area is significant to satellites, military and cyber security among others as it promises unimaginably fast computing and safe, unhackable satellite communication to its users.
- **Research:** It can help in solving some of the fundamental questions in physics related to gravity, black holes etc. Similarly, the quantum initiative could give a big boost to the Genome India project.
- **Disaster Management:** Tsunamis, drought, earthquakes and floods may become more predictable with quantum applications. The collection of data regarding climate change can be streamlined in a better way through quantum technology.
- **Pharmaceutical:** Quantum computing could reduce the time frame of the discovery of new molecules and related processes to a few days from the present 10-year slog that scientists put in.
- **Augmenting Industrial revolution 4.0:** Quantum computing is an integral part of Industrial revolution 4.0. Success in it will help in Strategic initiatives aimed at leveraging other Industrial revolution 4.0 technologies like the Internet-of-Things, machine learning, robotics, and artificial intelligence across sectors will further help in laying the foundation of the Knowledge economy.

Challenges Associated with Quantum Computing:

- The dark side of quantum computing is the disruptive effect that it can have on cryptographic encryption, which secures communications and computers.
- It might pose a challenge for the government also because if this technology goes into the wrong hands, all the government's official and confidential data will be at risk of being hacked and misused.

Related Indian Initiatives:

- Budget 2020 allocated Rs 8000 Crore to a National Mission on Quantum Technologies & Applications (NM-QTA) for a period of five years.
- In 2018, the Union Cabinet approved the launch of the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) to make India a leading player in Cyber-Physical Systems.
- In 2018, the government initiated serious discussions in quantum technologies and kick started research projects across 51 organisations under QUEST – Quantum Enabled Science and Technology. However, no significant progress is made in this field until NM-QTA.

PRELIMS FACT

Sahitya Akademi Award

Recently, the Sahitya Akademi announced the Sahitya Akademi Award 2021 in 20 languages. The Akademi also announced Yuva Puraskar and Bal Sahitya Puraskar for 2021.

Key Points

About:

- Sahitya Akademi award established in 1954, is a literary honour that is conferred annually by Sahitya Akademi, India's National Academy of letters.

- Akademi gives 24 awards annually to literary works in the languages it has recognized and an equal number of awards to literary translations from and into the languages of India. Besides the 22 languages enumerated in the Constitution of India, the Sahitya Akademi has recognised English and Rajasthani as languages in which its programme may be implemented.
- The Sahitya Akademi award is the second-highest literary honour by the Government of India, after the Jnanpith award.

Criteria for Choosing Awardee:

- The author must be of Indian Nationality.
- Book/work eligible for the award must be an outstanding contribution to the language and literature to which it belongs.
- When equal merit for books of two or more are found, certain criteria like total literary contribution and standing of authors shall be taken into consideration for declaring the award.

Other Sahitya Akademi Awards:

- **Sahitya Akademi Bal Sahitya Puraskar** is given to an author based on his/her total contribution to children literature and relates to books first published during the five years immediately preceding the year of Award.
- **Sahitya Akademi Yuva Puraskar** relates to books published by an author of the age of 35 and below.

Jnanpith Award

- The Jnanpith award is the highest literary award in India and can only be conferred annually upon an Indian citizen.
- English along with other languages mentioned in Indian Constitution (8th Schedule) is considered for the Award.
- The prize carries a cash award of Rs. 11 lakhs, a citation, and a bronze replica of Vagdevi (Saraswati), the goddess of learning.
- It is sponsored by the cultural organization Bharatiya Jnanpith.
- Assamese poet Nilmani Phookan Jr has won the 56th Jnanpith Award (2021), and Konkani novelist Damodar Mauzo has won the 57th Jnanpith Award (2022).

2. Indian Pangolin

Recently a radio-tagged Indian pangolin was released into the wild in Nandankanan Zoological Park (Odisha) following soft release protocols and provision for post-release monitoring. Radio-tagging involves attaching a transmitter to an animal to monitor its movements. Several wild animals — tigers, leopards and migratory birds — have been tagged over decades.

Key Points

About: Pangolins are scaly anteater mammals and they have large, protective keratin scales covering their skin. They are the only known mammals with this feature.

It uses these scales as armour to defend itself against predators by rolling into a ball when threatened.

Diet: Insectivore- Pangolins are nocturnal, and their diet consists of mainly ants and termites, which they capture using their long tongues.

Types: Out of the eight species of pangolin, the Indian Pangolin (*Manis crassicaudata*) and the Chinese Pangolin (*Manis pentadactyla*) are found in India.

- **Difference:** Indian Pangolin is a large anteater covered by 11-13 rows of scales on the back. A terminal scale is also present on the lower side of the tail of the Indian Pangolin, which is absent in the Chinese Pangolin.

Habitat:

- **Indian Pangolin:** It is widely distributed in India, except the arid region, high Himalayas and the North-East. The species is also found in Bangladesh, Pakistan, Nepal and Sri Lanka.
- **Chinese Pangolin:** It is found in the Himalayan foothills in Eastern Nepal, Bhutan, Northern India, North-East Bangladesh and through Southern China.

Threats to Pangolins in India:

- Hunting and poaching for local consumptive use (e.g. as a protein source and traditional medicine) and international trade for its meat and scales in East and South East Asian countries, particularly China and Vietnam.
- They are believed to be the world's most trafficked mammal.

Conservation Status:

- Wildlife Protection Act, 1972: Schedule I

- IUCN Red List: Endangered.Chinese Pangolin is 'critically endangered'
- CITES: Appendix I

DAILY ANSWER WRITING PRACTICE

Qns. Sex workers face excessive discrimination and violence owing to their criminalised status. Discuss. Suggest remedial steps to overcome this issue. (250 words)

Ans:

Introduction

People in sex work face discrimination and violence owing to their criminalised status and the continued conflation of sex work with trafficking. According to official estimates, there are over 12,00,000 sex workers in India, though the actual figures are well over that.

Sex workers in India have been asking for decriminalisation of sex work and a guaranteed set of labour rights. COVID-19's impact has provided yet another reason to consider this long-pending demand.

Body

Issues faced by sex workers

- **Violence:** Violence against sex workers in India is linked to the perception that they are criminals and not citizens. This has led to systemic and systematic violations of human rights of sex workers, such as the right to life, dignity, equality, equal protection and due processes under the law.
- **Stigma:** These workers are looked down upon and are easily prey to sexual assault, as they consent to sex work. They are often denied dignity and are ostracised from family as well as community.
- **Law and rights conflict:** The Suppression of Immoral Traffic in Women and Children Act was enacted in 1956.
 1. The Act represents the archaic and regressive view that sex work is morally wrong.
 2. It perceives that the people involved in it, especially women, never consent to it voluntarily.
- **Lack of sensitivity in law enforcement:** There is little appreciation amongst police of the contexts and factors affecting sex workers' lives, hence they ignore complaints related to family and partner violence; instead offering advice to women about stopping sex work and settling domestic matters amicably.
- **Raids and human rights issues:** Perhaps the most widespread human rights abuse emerges from the rescue and rehabilitation interventions. **Eg.:** In 2012, an operation was carried out over three or four days in a red light area called Simplex building in Mumbai and over 200 women were "rescued" and sent to "correction homes".

Remedial Steps needed in this regard

- The Supreme Court, in *Buddhadeb Karmaskar v. State of West Bengal* (2011), opined that sex workers have a right to dignity.
- Parliament must also take a re-look at the existing legislation and do away with the 'victim-rescue-rehabilitation' narrative.
- The country must thus rethink sex work from a labour perspective and guarantee basic labour rights to sex workers.
- Trafficking is a criminal offense and should not be conflated with sex work. Trafficking of Adult Persons and Trafficking of Children should be dealt with under two separate laws to ensure that consenting adults are not infantilised and children are given justice.
- Shut down compulsory detention or rehabilitation centres for people involved in sex work. Instead, provide sex workers with evidence-based, voluntary, community empowerment services.

Conclusion

Decriminalisation of sex work is a pre-requisite to ensure the physical and emotional inviolability of sex workers, their right to life, right to freedom of labour, health and reproductive and sexual rights. The uncertain legal status attached to their work and identity further "invisibilises" them as citizens with associate rights and entitlements. Hence there is an urgent need to decriminalise sex work and reinstate their rights.

DAILY QUIZ

Q1. Consider the following statements with reference to Chardham project:

1. Projects under Char Dham lie within the State of Uttarakhand only.

2. The works under Char Dham Pariyojna are being implemented on Hybrid Annuity Model (HAM) mode of contract.
3. Bio engineering methods like hydro seeding are being used in the project for vegetative growth on fragile slopes for their stability.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 1 and 3 only**
- c. 2 and 3 only
- d. 1, 2 and 3

Q2. Consider the following statements about Public Accounts Committee (PAC):

1. The PAC is formed every year with a strength of not more than 22 members.
2. The Chairman of PAC is appointed by the Speaker of Lok Sabha.
3. Its chief function is to examine the audit report of Comptroller and Auditor General (CAG) before it is laid in the Parliament.

Which of the statements given above is/are correct?

- a. 1 and 2 only**
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3

Q3. Consider the following statements regarding Non-Banking Financial Companies (NBFCs).

1. All the NBFCs are regulated by RBI.
2. The designation of 'Systematically Important' is applicable for Banks and not for NBFCs.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2**

Q4. With reference to Konyak Nagas, which of the following statements is/are correct?

1. They are the largest of the Naga tribes.
2. They are known in Arunachal Pradesh as the Wanchos.
3. Aoleng is the biggest festival of the Konyaks.

Select the correct answer using the code below:

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3**

Q5. Consider the following statements regarding National Tiger Conservation Authority.

1. It is a statutory body under the Ministry of Environment, Forests and Climate Change.
2. It is headed by the Prime Minister of India.
3. It accords approval for declaring new Tiger Reserves.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 1 and 3 only**
- c. 2 and 3 only
- d. 1, 2 and 3