Prelim Bits 14-07-2023 | UPSC Daily Current Affairs

Grand Cross of the Legion of Honour

Prime Minister Narendra Modi has been conferred with the Grand Cross of the Legion of Honour, France's highest civilian and military honour, by French President Emmanuel Macron.

- **Launch** - It was established in *1802 by Napoleon Bonaparte.*
- **Categories** - The Legion of Honour is divided into ***5 classes*** (lower to higher) - Knight, Officer, Commander, Grand Officer and Grand Cross.
- The Prime Minister of India is awarded with the ***5th honour,*** making him the *first Indian premiere to receive this honour*.
- **Purpose** - The Legion of Honor is the reward for *outstanding merit* acquired in the service of the nation in a civilian or military capacity.
- **Criteria** - The award is restricted to French nationals but *foreigners may get this award* if they have rendered services (e.g. cultural or economic) to France or supported causes defended by France.

Other personalities who received this honour

- Nelson Mandela - Former President of South Africa
- King Charles - The then Prince of Wales
- Angela Merkel - Former Chancellor of Germany
- Boutros Boutros-Ghali - Former Secretary General of the United Nations
- Vladimir Putin - Russian President

Quick Facts
Prime Minister Narendra Modi's Other Awards

Awards	Countries	Year
Order of the Nile	Egypt	2023
Companion of the Order of Logohu	Papua New Guinea	2023
Companion of the Order	Fiji	2023
Ebakl Award	Republic of Palau	2023
Order of the Druk Gyalpo	Bhutan	2021
Legion of Merit	US	2020
King Hamad Order of the Renaissance	Bahrain	2019
Order of the Distinguished Rule of Nishan Izzuddin	Maldives	2019
Order of St. Andrew Award	Russia	2019
Order of Zayed Award	UAE	2019
Grand Collar of the State of Palestine Award	Palestine	2018
State Order of Ghazi Amir Amanullah Khan	Afghanistan	2016
Order of Abdulaziz Al Saud	Saudia Arabia	2016

References

1. The Hindu | Grand Cross of the Legion of Honour

2. Hindustan Times | What is Grand Cross of the Legion of Honour?

3. The Indian Express | PM Modi conferred with France's highest award

Different Kinds of Moon Missions

ISRO has launched Chandrayaan-3, India's 3rd lunar mission and 2nd attempt to make a soft landing on the surface of the moon.

- To know about Chandrayaan–3, click here.
- There are largely 6 kinds of Moon missions, including flybys, orbiters, impact missions, landers, rovers, and human missions.
- **Flybys** - Flybys are the missions in which the spacecraft passed near the Moon but *did not get into an orbit* around it.
- These were either designed to study the Moon from a distance or were on their way to some other planetary body or deep space exploration and happened to pass by the celestial body.
- Example - ***Pioneer 3 and 4 (U.S.A), Luna 3 (USSR)***
- **Orbiters** - Orbiters were spacecraft that were designed *to get into a lunar orbit* and carry out prolonged studies of the Moon's surface and atmosphere.
- Example - ***Chandrayaan 1 & 2 – India, Lunar Orbiter program – U.S.A***
- **Impact missions -** Impact missions are an *extension of Orbiter missions*.
- While the main spacecraft keeps going around the Moon, one or more instruments on board make an uncontrolled landing on the lunar surface.
- They get destroyed after the impact, but still send some useful information about the Moon while on their way.
- Example - ***Chandrayaan-1's Moon Impact Probe***.
- **Landers** - Lander missions involve the *soft landing* of the spacecraft on the Moon.
- Example - The first landing on the moon was accomplished on 1966, by the *Luna 9 spacecraft* of the then USSR.
- **Rovers -** Rovers are an extension of the lander missions and special wheeled payloads on the lander that can detach themselves from the spacecraft and *move around on the moon's surface* to collect data.
- Example – Pragyaan rover in Chandrayaan-2 (India).
- **Human missions** - These involve landing of astronauts on the moon's surface.
- So far, only *NASA of the United States* (***Apollo mission)*** has been able to land human beings on the moon.
- ***NASA's Artemis III***, currently planned for 2025, humanity is set to once again to the lunar surface.

Reference

The Indian Express | Chandrayaan-3 launch

U.S. Senate Committee's Resolution on Arunachal Pradesh

Recently, U.S. Senate Committee passes resolution recognising Arunachal Pradesh as an integral part of India.

- The resolution reaffirms that the United States recognises the ***McMahon Line*** as the international boundary between the *People's Republic of China (PRC)* and the *Indian state of Arunachal Pradesh*.
- **McMahon Line** - The McMahon Line is an 890-km border that serves as the de facto boundary between China and India in the Eastern Sector.
- It is named after Sir Henry McMahon, foreign secretary of British India, who drew the line.
- It was drawn at the ***1914 Simla Convention*** between the Great Britain, China, and Tibet.
- It runs from the eastern border of Bhutan along the crest of the Himalayas until it reaches the great bend in the *Brahmaputra River* into the Assam Valley.
- The McMahon Line is in alignment with the *Line of Actual Control (LAC) in the Eastern Sector.*
- **India's stand** - India recognises *Simla Convention (1914)* and Arunachal is controlled by India.
- **China's position** - China calls Arunachal Pradesh as 'Zangnan' and refers to 'South Tibet'.
- Further China claims approximately 90,000 sq. km of territory in Arunachal Pradesh of India as its own.

Reference

The Hindu | U.S. Senate passes resolution on Arunachal Pradesh

Kaas Plateau

A new study of the sediments from a seasonal lake in the Kaas Plateau, Maharashtra has indicated a major shift in the Indian Summer Monsoons during the Early-Mid–Holocene, around 8664 years B.P. (Before the Present)

- Kaas Plateau is made of igneous rock, situated in the ***Western Ghats of Maharastra.***
- Locally called as ***'Kas Pathar'*** or ***'Plateau of Flowers'.***
- Its name is derived from the *Kaasa tree*, botanically known as Elaeocarpus glandulosus (rudraksha family).
- The Kaas Plateau is designated as a *biodiversity hotspot* and is included in the ***UNESCO World Natural Heritage Site*** under the name "*The Western Ghats*" in 2012.
- The major portion of the plateau is reserve forest and the plateau contains 6% of the *Red data species*.
- ***Kas Lake*** is a perennial source of water supply for western part of Satara.
- It is popular for its stunning display of wildflowers (***Flower Wonder)*** that come to life during monsoon in Maharashtra, this unique characteristic has earned it the endearing

nickname of "*Maharashtra's Valley of Flowers*".
- *Thoseghar Waterfalls* and *Sajjangad Fort* is located in this plateau.

Recent Findings

- The study revealed that the seasonal lake is probably a product of an erosional localized shallow depression on a pediment (rock debris) developed over the crust.
- During the early to mid-Holocene, there was a change in the climate from freshwater to drier conditions with low rainfall with significant rise in the number of diatoms in between.
- This suggests a major shift in the Indian summer monsoon activity during that time, possibly resulting in intermittent humid periods amidst the dry spells.
- However, during the recent past (around last 1000 years), pollen, as well as the presence of a high number of diatom indicated lake eutrophication, possibly due to human impact and cattle/livestock farming in the catchment.

References

1. PIB | Sediments decode on Kaas Plateau

2. Kas | About Kas

Amendment of Mines and Minerals (Development & Regulation) Act, 1957

The Government of India amended the Mines and Minerals (Development & Regulation) Act of 1957, allowing private players to mine lithium and other 5 five critical minerals.

- Recently, the Union Ministry of Mines, has released a list of 30 critical minerals that are strategic to the country's economic development and national security.
- **Recent Amendments** – It allows private players to mine lithium and other 5 critical minerals including titanium, beryllium, zirconium, niobium and tantalum.
- These 6 minerals have been removed from the country's atomic minerals lists, paving way for private players to mine and empowering the government to auction their reserves going ahead.
- An exploration licence will be granted through auction for undertaking reconnaissance and prospecting operations of the private companies.
- The licence will also be granted *only for deep-seated and critical minerals* that will be specified in a new schedule to the Act.
- Such minerals include copper, tellurium, selenium, lead, zinc, cadmium, indium, gold, silver, diamond, rock phosphate, apatite, potash, and elements of the rare earth group.
- Critical and strategic minerals such as lithium, cobalt, molybdenum, rhenium, tungsten, graphite, vanadium, nickel, tin, platinum group of elements, columbite, tantalite, lepidolite, scheelite and cassiterite are also part of the list.
- The amendment will pave the way for granting mineral concessions for undertaking the full range of exploration starting from reconnaissance to prospecting operations.
- Companies will also be allowed to transfer the mineral concession in full or part during the exploration period or at the conclusion of exploration.

Source - Union Ministry of Mines (2020)

Critical Mineral	Percentage	Major Import Sources
Lithium	100	Chile, Russia, China, Ireland, Belgium
Cobalt	100	China, Belgium, Netherlands, US, Japan
Nickel	100	Sweden, China, Indonesia, Japan, Philippines
Vanadium	100	Kuwait, Germany, South Africa, Brazil, Thailand
Niobium	100	Brazil, Australia, Canada, South Africa, Indonesia
Tantalum	100	Australia, Indonesia, South Africa, Malaysia, US
Graphite (Natural)	60	China, Madagascar, Mozambique, Vietnam, Tanzania
Manganese	50	South Africa, Gabon, Australia, Brazil, China
Silicon	<1	China, Malaysia, Norway, Bhutan, Netherlands

References

1. Down to Earth | India’s decision to allow private players to mine

2. Economic Times | Indian cabinet allows lithium's commercial mining

3. Energy | Cabinet clears amendment to MMDR

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