



News Analysis (10 Feb, 2021)

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Sedition Law

Why in News

Recently, the **Supreme Court** protected a political leader and six senior journalists from arrest in multiple **sedition** FIRs registered against them.

Key Points

Historical Background of Sedition Law:

- Sedition laws were **enacted in 17th century England** when lawmakers believed that **only good opinions of the government should survive**, as bad opinions were detrimental to the government and monarchy.
- The law was originally drafted **in 1837 by Thomas Macaulay, the British historian-politician**, but was **inexplicably omitted when the Indian Penal Code (IPC) was enacted in 1860**.
- **Section 124A was inserted in 1870** by an amendment introduced by **Sir James Stephen** when it felt the need for a specific section to deal with the offence.

It was one of the many draconian laws enacted to stifle any voices of dissent at that time.

Famous sedition trials during freedom movement:

Some of the most famous sedition trials of the late 19th and early 20th century involved Indian nationalist leaders. The initial cases that invoked the sedition law included numerous prosecutions against the editors of nationalist newspapers.

The first among them was the trial of *Jogendra Chandra Bose* in 1891. Bose, the editor of the newspaper, *Bangobasi*, wrote an article criticizing the Age of Consent Bill for posing a threat to the religion and for its coercive relationship with Indians.

The most well-known cases are the three sedition trials of *Bal Gangadhar Tilak* and the trial of *Mahatma Gandhi* in 1922. Gandhi was charged, along with Shankerlal Banker, the proprietor of Young India, for three articles published in the weekly.

- **Sedition Law Today:** Sedition is a **crime under Section 124A of the Indian Penal Code (IPC)**.
 - **Section 124A IPC:**
 - It defines sedition as an offence committed when "**any person by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the government established by law in India**".
 - Disaffection includes **disloyalty and all feelings of enmity**. However, comments without exciting or attempting to excite hatred, contempt or disaffection, will not constitute an offence under this section.
 - **Punishment for the Offence of Sedition:**
 - Sedition is a **non-bailable offence**. Punishment under the Section 124A ranges from **imprisonment up to three years to a life term**, to which fine may be added.
 - A person charged under this law is **barred from a government job**. They have to live without their passport and must produce themselves in the court at all times as and when required.

- **Major Supreme Court Decisions on Sedition Law:**
 - The SC highlighted debates over sedition in **1950** in its decisions in *Brij Bhushan vs the State of Delhi* and *Romesh Thappar vs the State of Madras*.
 - In these cases, the court held that a law which **restricted speech on the ground that it would disturb public order was unconstitutional**.
 - It also held that **disturbing the public order will mean nothing less than endangering the foundations of the State** or threatening its overthrow.
 - Thus, these decisions prompted the **First Constitution Amendment, where Article 19 (2) was rewritten to replace “undermining the security of the State” with “in the interest of public order”**.
 - In **1962**, the SC decided on the constitutionality of Section 124A in *Kedar Nath Singh vs State of Bihar*.
 - It upheld the constitutionality of sedition, but **limited its application** to “acts involving intention or tendency to create disorder, or disturbance of law and order, or incitement to violence”.
 - It **distinguished these** from “very strong speech” or the use of “vigorous words” strongly critical of the government.
 - In **1995**, the SC, in *Balwant Singh vs State of Punjab*, held that mere sloganeering which evoked no public response did not amount to sedition.
- **Arguments in Support of Section 124A:**
 - Section 124A of the IPC has its utility in **combating anti-national, secessionist and terrorist elements**.
 - It **protects the elected government from attempts to overthrow** the government with violence and illegal means. The continued existence of the government established by law is an essential condition of the **stability of the State**.
 - If **contempt of court** invites penal action, contempt of government should also attract punishment.
 - Many districts in different states face a **maoist insurgency and rebel groups virtually run a parallel administration**. These groups openly advocate the overthrow of the state government by revolution.
 - Against this backdrop, the abolition of Section 124A would be ill-advised merely because it has been wrongly invoked in some highly publicized cases.

- **Arguments against Section 124A:**

- Section 124A is a **relic of colonial legacy** and unsuited in a democracy. It is a constraint on the legitimate exercise of **constitutionally guaranteed freedom of speech and expression**.
- Dissent and criticism of the government are essential ingredients of robust public debate in a vibrant democracy. They should not be constructed as sedition.
Right to question, criticize and change rulers is very fundamental to the idea of democracy.
- The **British, who introduced sedition to oppress Indians**, have themselves abolished the law in their country. There is no reason why India should not abolish this section.
- The **terms used** under Section 124A like 'disaffection' are **vague and subject to different interpretations to the whims and fancies** of the investigating officers.
- IPC and **Unlawful Activities Prevention Act 2019** have provisions that penalize "disrupting the public order" or "overthrowing the government with violence and illegal means". These are sufficient for protecting national integrity. There is no need for Section 124A.
- The sedition law is **being misused as a tool to persecute political dissent**. A wide and concentrated executive discretion is inbuilt into it which permits the blatant abuse.
- In 1979, India **ratified the International Covenant on Civil and Political Rights (ICCPR)**, which sets forth internationally recognized standards for the protection of freedom of expression. However, misuse of sedition and arbitrary slapping of charges are inconsistent with India's international commitments.

Way Forward

- India is the largest democracy of the world and the **right to free speech and expression is an essential ingredient of democracy**. The expression or thought that is not in consonance with the policy of the government of the day should not be considered as sedition.
- **Section 124A should not be misused** as a tool to curb free speech. The SC caveat, given in Kedar Nath case, on prosecution under the law can check its misuse. It needs to be **examined under the changed facts and circumstances** and also on the anvil of ever-evolving tests of **necessity, proportionality and arbitrariness**.
- The higher judiciary should use its supervisory powers to **sensitize the magistracy and police to the constitutional provisions protecting free speech**.
- The **definition of sedition should be narrowed down**, to include only the issues pertaining to the territorial integrity of India as well as the sovereignty of the country.

- The word ‘**sedition**’ is extremely nuanced and needs to be applied with **caution**. It is like a cannon that ought not to be used to shoot a mouse; but the arsenal also demands possession of cannons, mostly as a deterrent, and on occasion for shooting.

Source: TH

NDMA Guidelines to Tackle Glacial Bursts

Why in News

A **Glacial Lake Outburst Flood (GLOF)** is suspected to have **caused the flash floods** in **Chamoli district of Uttarakhand**.

- In October 2020, the **National Disaster Management Authority (NDMA)** had issued detailed guidelines on how to reduce and deal with disasters caused by GLOFs/Glacial Bursts.
- The NDMA guidelines suggest that risk reduction can be done by **identifying and mapping potentially dangerous lakes, taking structural measures to prevent their sudden breach**, and establishing mechanisms to save lives and property in times of a breach.

Key Points

- **Glacial Lake Outburst Flood (GLOF):**
 - **Meaning:**
 - A GLOF refers to the flooding that occurs **when the water dammed by a glacier or a moraine** (accumulations of dirt and rocks fallen onto the glacier surface) **is released suddenly**.

When glaciers melt, the water in glacial lakes accumulates behind loose, natural “glacial/moraine dams” made of ice, sand, pebbles and ice residue.
 - Unlike earthen dams, the weak structure of the moraine dam **leads to the abrupt breach of the dam on top of the glacial lake** which could cause flash floods in the downstream areas.
 - **Causes:**

According to NDMA, **glacial retreat due to climate change** occurring in most parts of the **Hindu Kush Himalaya** has given rise to the **formation of numerous new glacial lakes**, which are the **major cause of GLOFs**.

- **Glacial Lakes:**

- **About:**

- Glacial lakes are **typically formed at the foot of a glacier**.
- As glaciers move and flow, they erode the soil and sediment around them, leaving depressions and grooves on the land. Meltwater from the glacier fills up the hole, making a lake.

- **Types:**

Lakes form when meltwater ponds, and this can happen on the ice surface (**supraglacial lakes**), in front of the ice (**proglacial lakes**), or even underneath the ice (**subglacial lakes**).

- **Impact:**

- Glacier lakes can **affect ice flow** by reducing friction at the ice-bed interface, encouraging basal sliding.
- They can **change the albedo of the ice surface**, encouraging more surface melt.
- Proglacial lakes **cause calving**, which affects mass balance and can decouple mountain glaciers from climate.
- Glacier lakes can be hazardous; moraine and ice dams can fail, **causing catastrophic glacier lake outburst floods** or jokulhlaups.

- **Increase in Number of Glacial Lakes:**

- According to recent studies, **there has been a rapid increase in the number of glacial lakes due to a retreat in the glaciers** caused by warming temperatures (due to global warming), and their potential to cause large scale flooding and destruction.

The **Kedarnath tragedy in 2013**, for example, had involved a breach in a large glacial lake.

- According to a study sponsored by the **Central Water Commission (CWC)**, conducted during 2011-15, there are 352, 283 and 1,393 glacial lakes and water bodies in the Indus, Ganga and Brahmaputra basins respectively.

- **Guidelines on Risk Reduction:**

- **Identifying Potentially Dangerous Lakes:**

Potentially dangerous lakes **can be identified** based on field observations, records of past events, geomorphologic and geotechnical characteristics of the lake/dam and surroundings, and other physical conditions.

- **Use of Technology:**

- Promoting use of **Synthetic-Aperture Radar imagery** (a form of radar that is used to create two-dimensional images) **to automatically detect changes in water bodies**, including new lake formations, during the monsoon months.
- Methods and protocols could also be developed to **allow remote monitoring of lake bodies from space**.

- **Channeling Potential Floods:**

To manage lakes structurally, the NDMA recommends **reducing the volume of water with methods such as controlled breaching**, pumping or siphoning out water, and making a tunnel through the moraine barrier or under an ice dam.

- **Uniform Codes for Construction Activity:**

- Developing a broad framework for **infrastructure development, construction and excavation** in vulnerable zones.
- There is a need to accept **procedures for land use planning** in the GLOF prone areas.

- **Enhancing Early Warning Systems (EWS):**

- The number of implemented and operational GLOF EWS is very small, even at the global scale.
- In the Himalayan region, there are at **three reported instances** (two in Nepal and one in China) of implementation of sensor- and monitoring-based technical systems for GLOF early warning.

- **Training Local Manpower:**

- Apart from pressing specialised forces such as National Disaster Response Force (NDRF), **ITBP** and the Army, NDMA has emphasised the need for **trained local manpower**.
- It has been observed that over **80% of search and rescue is carried out by the local community** before the intervention of the state machinery and specialised search and rescue teams.
- **The local teams could also assist in planning** and setting up emergency shelters, distributing relief packages, identifying missing people, and addressing the needs for food, healthcare, water supply etc.

- **Comprehensive Alarm Systems:**

Besides classical alarming infrastructure consisting of acoustic alarms by sirens, modern communication technology using cell and smartphones can complement or even replace traditional alarming infrastructure.

India-Poland Relations

Why in News

Recently, **Poland** has invited India's Prime Minister while he will be visiting **Portugal** for the **European Union-India summit (May 2021)**, and **Cornwall, United Kingdom** to attend the **G7 grouping where India is a special invitee (June 2021)**.

Poland is also negotiating with India for a **travel bubble arrangement** to resume direct flights suspended due to **Covid-19 pandemic**.

- Creating a travel bubble **involves reconnecting countries or states which have shown a good level of success in containing the Covid-19 pandemic** domestically.
- Such a bubble would **allow the members of the group to restart trade ties** with each other and open travel and tourism.



Key Points

- **Background:**

- India and Poland **diplomatic relations** were **established in 1954**, leading to the opening of the **Indian Embassy in Warsaw in 1957**.
- The two countries shared common ideological perceptions, based on their opposition to colonialism, imperialism and racism.
- During the **Communist era of Poland (1944 to 1989)**, **bilateral relations were close and cordial**, with regular high level visits, coupled with planned trade and economic interactions by state trading organizations, underpinned by the rupee clearing arrangements.
- The **relationship continued to remain close after Poland chose the democratic path in 1989**.
- A cordial political relationship has emerged in the current century, particularly after Poland joined the **European Union** in 2004, and became one of India's key economic partners in Central Europe.

- **Economic & Commercial Relations:**

- **Export:**

- Poland is **India's largest trade partner and export destination in the Central European region**, with bilateral trade growing almost seven-fold over the last ten years.
- As per Indian statistics, the overall value of **bilateral trade in 2019 was USD 2.36 billion**.
 - India's export to Poland contributed to 0.48% of overall India's export. Only 0.15% of India's import was covered by Poland in 2019.
 - As per the statistics, the increase of bilateral trade by 2.5% was visible in 2019 in comparison with previous years.

- **Investment:**

- Indian investments in Poland are valued at over **USD 3 billion**.
- Total Polish investment in India is estimated at **USD 672 million**.

- **Foreign Direct Investment (FDI):**

From April 2000 to March 2019, India recorded over **USD 672 million of FDI from Poland**, 0.16% of its total FDI inflows in that period.

- **Sectoral Collaboration:**
 - **Agro and Food processing sectors:**
 - Poland possesses world class food processing including preservation/storage technologies while India is one of the largest producers for many fruits, dairy and agro products.
 - An MoU on agriculture for technical and institutional cooperation was signed between both countries in April 2017.
 - **Information Technology (IT) Sector:**

Around **thirteen Indian IT companies, employing more than 10,000 professionals, are currently active in Poland** and are also operating their Europe operation from here.
 - **Textile Sector:**
 - India has presently a share of only **3.73% overall in the Polish Textile and Apparel Imports (valued at USD 400 million)**.
 - There is of course, much potential for increase in its exports, provided conducive circumstances are created for Indian Exporters.
 - Presently, about 30-40% of goods exported by India to Poland are re-exported to other EU Countries.
 - **Mining/Energy Sector:**
 - Poland possesses reputed **clean coal technologies** and Polish public sector companies have played a substantial role in development of mining and power sectors in India.
 - India and Poland signed a **Memorandum of Understanding (MoU)** in 2019 to enhance **bilateral cooperation in the coal and mining sector**.
 - **Pharmaceutical and Chemicals Sector:**

Given Poland's strategic location, shortages in healthcare personnel and 25% growth in the pharma market in the last 5 years, there are **good opportunities for Indian exporters and investors**.
- **Cultural and Educational Relations:**
 - There is a strong tradition of Indology studies in **Poland, with Polish scholars having translated Sanskrit into Polish as early as in the 19th Century**.
 - Polish Mission organised the **150th anniversary of Mahatma Gandhi** in 2019.
 - Polish Post (Poczta Polska) **issued a Commemorative Stamp on the 150th Birth Anniversary of Mahatma Gandhi** which was released on the occasion.
 - On the occasion of 550th Prakash Purab of **Guru Nanak Dev ji**, Mission and Gurudwara Sahib of Poland **jointly organised functions at Gurudwara Sahib, Poland**.
 - The first **International Day of Yoga** was organized in 21 cities in Poland on June 21, 2015. An estimated 11000 people participated in public events.

- **Indian Community:**

Estimated at approximately **10,000**, the **Indian community in Poland consists of traders (textiles, garments and electronics)** who came after the collapse of communism, and professionals with multinational or Indian companies and software/IT experts, including a rising number of Indian students.

Source:TH

South China Sea Dispute

Why in News

Recently, **China warned off a USA warship** sailing near contested **Paracel islands in the South China Sea (SCS)**.

Key Points

About

- **China's Claim:**

- **China lays claim to nearly all of the South China Sea**, including the Paracel Islands.

However, Taiwan, Philippines, Brunei, Malaysia and Vietnam also claim parts of the region, **believed to hold valuable oil and gas deposits**.

- It has alleged that the USA warship broke into China's *Xisha* (Paracel) island's territorial waters without the permission of the Chinese government and **accused USA for "seriously violating China's sovereignty" and "harming regional peace."**

- **USA's Stand:**

- The USA has argued that such exercises are in line with international law and help **defend the right of passage** through the region amid competing claims by China and other governments.
- It is in sync with the USA's continuous efforts to counter China's assertion in SCS. Recently the USA Navy sent an aircraft carrier group into the South China Sea.

- **South China Sea**

- **Location:** South China Sea is **an arm of western Pacific Ocean** in Southeast Asia. It is south of China, east & south of Vietnam, west of the Philippines and north of the island of Borneo.

It is **connected by Taiwan Strait** with the East China Sea and by **Luzon Strait with the Philippine Sea**.

- **Bordering states & territories (clockwise from north):** the People's Republic of China, the Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.
- **Strategic Importance:** This sea holds tremendous strategic importance for its location as it is the **connecting link between the Indian Ocean and the Pacific Ocean (Strait of Malacca)**.

According to the **United Nations Conference on Trade And Development (UNCTAD)** one-third of the global shipping passes through it, carrying trillions of trade which makes it a significant geopolitical water body.



Reasons For Dispute in the South China Sea:

- **Contesting Claims Over Islands:**
 - **The Paracel Islands** are claimed by China, Taiwan and Vietnam.
 - **The Spratly Islands** are claimed by China, Taiwan, Vietnam, Brunei and Philippines.
 - **The Scarborough Shoal** is claimed by Philippines, China and Taiwan.
- **China's Assertion:**
 - Since 2010, **China has been converting uninhabited islets into artificial islets** to bring it under **UNCLOS** (examples would include Haven Reef, Johnson South Reef and Fiery Cross Reef).
 - **China has been changing the size and structure of the reefs** by modifying their physical land features. **It has also established airstrips on Parcel and Spratly.**
 - Chinese fishing fleets are engaged in paramilitary work on behalf of the state rather than the commercial enterprise of fishing.
 - The US is very critical of this building of artificial islands and terms these actions of China as building a '**great wall of sand**'.
- **Other Issues:**
 - **Undefined geographic scope** of the South China Sea.
 - **Disagreement over dispute settlement** mechanisms.
 - Undefined legal status of the **Code of Conduct (COC)** add to it.
 - The different histories of distant, largely uninhabited archipelagos of the sea make the matter more complicated and multifaceted.



India's Stand:

- India has maintained that it is not a party to the SCS dispute and its presence in the SCS is not to contain China but to **secure its own economic interests, especially that of its energy security needs.**
- However, China's increasing ability to decide and expand its role in the South China Sea has compelled India to reevaluate its approach on the issue.
- As a key element of the **Act East Policy**, India has started **internationalizing disputes** in the **Indo-Pacific region** to oppose China's threatening tactics in SCS.
- Further, India is using its Buddhist legacy to make a strong bond with the Southeast Asian region.
- India has also deployed its navy with Vietnam in the South China **Sea for protection of sea lanes of communication (SLOC)**, denying China any space for assertion.
- Also, India is part of **Quad initiative (India, US, Japan, Australia)** and lynchpin of Indo-Pacific narrative. These initiatives are viewed as a containment strategy by China.

Source:TH

UN Human Rights Council

Why in News

Recently, the **United States announced that it would rejoin the United Nations (UN) Human Rights Council** that it left in 2018.

The USA will return to the Council as an observer with the aim of seeking election as a full member.

Key Points

- **About:**

The Human Rights Council is **an inter-governmental body within the United Nations system** responsible for strengthening the promotion and protection of **human rights** around the world.

- **Formation:**

- The Council was **created by the United Nations General Assembly in 2006**. It **replaced the former United Nations Commission on Human Rights**.
- The **Office of the High Commissioner for Human Rights (OHCHR)** **serves as the Secretariat** of the Human Rights Council.
- **OHCHR is headquartered in Geneva, Switzerland.**

- **Members:**

- It is made up of **47 United Nations Member States** which are elected by the UN General Assembly (UNGA).

The UNGA takes into account the candidate States' contribution to the promotion and protection of human rights, as well as their voluntary pledges and commitments in this regard.
- The Council's Membership is based on equitable geographical distribution. Seats are distributed as follows:
 - African States: 13 seats
 - Asia-Pacific States: 13 seats
 - Latin American and Caribbean States: 8 seats
 - Western European and other States: 7 seats
 - Eastern European States: 6 seats
- Members of the Council **serve for a period of three years** and are **not eligible for immediate re-election after serving two consecutive terms**.

- **Procedures and Mechanisms:**
 - **Universal Periodic Review: UPR** serves to **assess the human rights situations in all United Nations Member States.**
 - **Advisory Committee:** It serves as the Council’s “think tank” providing it with expertise and advice on thematic human rights issues.
 - **Complaint Procedure:** It allows **individuals and organizations to bring human rights violations to the attention** of the Council.
 - **UN Special Procedures:** These are **made up of special rapporteurs**, special representatives, independent experts and working groups that monitor, examine, advise and **publicly report on thematic issues or human rights situations in specific countries.**
- **Issues:**
 - **Related to the Membership:** A key concern for some critics has been the **composition of Council membership**, which sometimes **includes countries widely perceived as human rights abusers.**
 - **China, Cuba, Eritrea, Russia and Venezuela**, all of which have been accused of human rights abuses.
 - **Disproportionate Focus:** USA pulled out of the Agency in 2018 due to its disproportionate focus on Israel, which has received by far the largest number of critical council resolutions against any country.
- **India and UN Human Rights Council:**
 - Recently, a group of **Special Rapporteurs to the United Nations (UN)** has written to the Indian government **expressing concerns over the draft Environment Impact Assessment (EIA) notification 2020.**
 - In 2020, India’s **National Human Rights Commission** submitted its mid-term report to the Council as a part of the third round of the **Universal Periodic Review (UPR) process.**
 - India **was elected to the Council** for a period of three years beginning 1st January 2019.

Source :TH

UAE’s Hope Mars Mission

Why in News

Recently, the **United Arab Emirates' (UAE’s) first-ever interplanetary Hope Probe mission** has successfully **entered orbit around Mars.**

Key Points

- **Hope Probe Mission:**

- **About:**

- The UAE's Mars Mission called 'Hope' was announced in 2015 with the aim of creating mankind's first integrated model of the Red planet's (Mars) atmosphere.
 - 'Hope' was developed by UAE scientists in the USA and was launched in July 2020 from the Tanegashima Space Centre in Japan.

- **Specification:**

- The Mars Hope Probe **weights just 1.5 tonnes**, about the same size as an SUV. It is **expected to complete one orbit around the planet every 55 hours**.
 - The **overall life of UAE's Mars mission is around one Martian year**, which is about 687 days on Earth.

- **Scientific Instruments:** The Probe carries three scientific instruments:

- **Emirates eXploration Imager (EXI):** A high-resolution camera.
 - **Emirates Mars Ultraviolet Spectrometer (EMUS):** A far-UV imaging spectrograph.
 - **Emirates Mars InfraRed Spectrometer (EMIRS):** It will examine temperature profiles, ice, water vapor and dust in the atmosphere of Mars.

- **Expected Benefits:**

- UAE's mission will collect data on Martian climate dynamics and help scientists understand why Mars' atmosphere is decaying into space.
 - The instruments will collect different data points on the atmosphere to also gauge seasonal and daily changes.
 - Together, this will shed light on how energy and particles, like oxygen and hydrogen, move through the atmosphere of Mars.

- **Significance:**

- With the successful Mars orbit insertion, the **UAE becomes the fifth entity to reach the Red Planet, joining NASA**, the Soviet Union, the European Space Agency and India.

- Success of this mission will help UAE in building a knowledge-based economy, leading to **more investment in Science, Technology, Engineering and Mathematics (STEM)** for young Emiratis.

The probe reached Mars in the year the **UAE celebrates its 50th anniversary**.

- 'Hope' mission is not only important for UAE, but also for the whole of Arab world, as it is the **Arab world's first interplanetary mission**.

- **Other Missions to Mars:**

Apart from the UAE's 'Hope Probe', two more unmanned spacecrafts from the USA and China are set to arrive at Mars over the next several days.

- All three missions **were launched in July to take advantage of the close alignment of Earth and Mars.**
- A **combination orbiter and lander from China** is scheduled to reach Mars, which will circle Mars until the rover separates and attempts to land in order to look for signs of ancient life.
- A **rover from the USA named 'Perseverance'** is also set to reach Mars soon. It will be the **first leg in a decade-long USA-European project** to bring Mars rocks back to Earth to be examined for evidence the planet once harbored microscopic life.

- **Objectives Behind Mars Exploration:**

- Scientists and researchers around the world are pretty much curious about Mars because of the possibility that the planet was once warm enough to allow water to flow through it, which means life could have existed there too.
- Despite being starkly different in many ways, the Red Planet has several **Earth-like features**— such as clouds, polar ice caps, volcanoes, and seasonal weather patterns.

However, no human has set foot on Mars yet because the atmosphere on Mars is very thin, consisting of mostly carbon dioxide with no breathable oxygen, making it difficult for astronauts to survive there.

India's Mars Orbiter Mission

- Also known as Mangalyaan, it was launched from the Satish Dhawan Space Centre in Andhra Pradesh by **Indian Space Research Organisation (ISRO)** in November 2013.
- It was launched on board a PSLV C25 rocket with aim of studying Martian surface and mineral composition as well as scan its atmosphere for methane (an indicator of life on Mars).

Source: IE

Eco-Sensitive Zone Around Wayanad Wildlife Sanctuary

Why in News

The **draft notification of the Ministry of Environment, Forest, and Climate Change (MoEFCC)** on an **Eco-Sensitive Zone (ESZ)** which runs around the **Wayanad Wildlife Sanctuary (WWS)** has triggered protests in Wayanad (Kerala).

Key Points

- **Draft Notification:**

- The 118.5 sq km area has been earmarked as an Eco-Sensitive Zone (ESZ), of which 99.5 sq km is outside the sanctuary and the remaining 19 sq km comprises revenue villages within the sanctuary.
- There will be **restrictions on several human activities in ESZ**, including a ban on all new and existing mining, stone quarrying and crushing units and new industries causing pollution.

It also includes a ban on establishment of major hydroelectric projects and setting up of new sawmills, brick kilns and commercial use of firewood within ESZ.

- Besides, **no new commercial hotels and resorts shall be permitted** within 1km of the boundary of the protected area or up to the extent of ESZ, whichever is nearer.
- It also **bars felling of trees in private lands without prior permission of the competent authority** in the state government.

- **Purpose of the Notification:**

It is **an important step towards ensuring the safety of people** around the Wildlife Sanctuary, because the lives of farmers on the forest fringes is miserable owing to the **increasing incidents of wild animal attacks**.

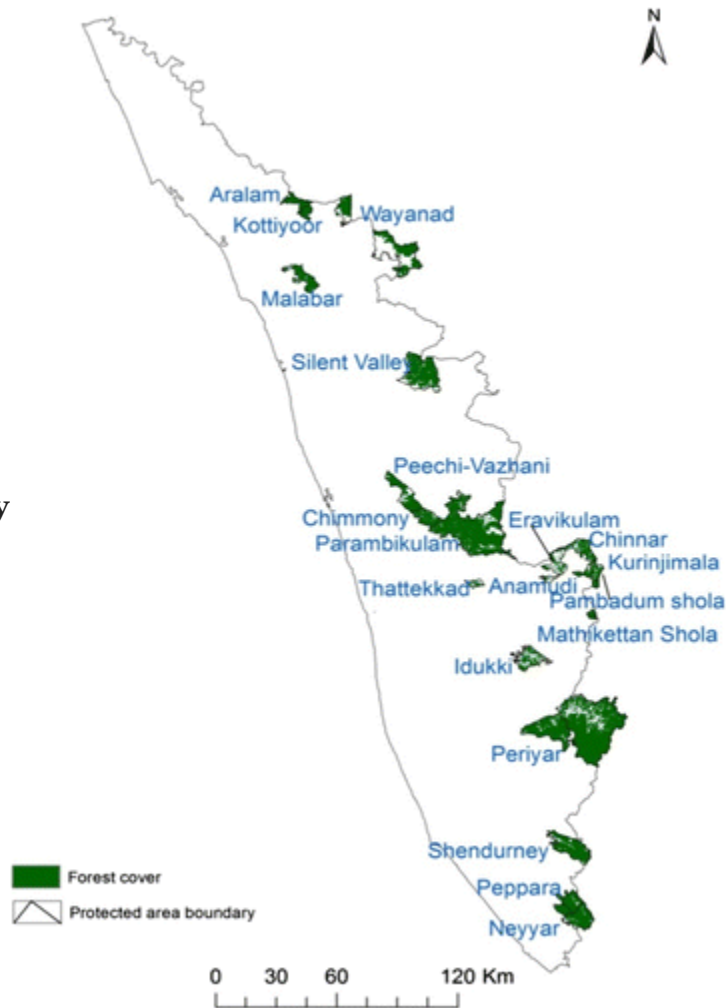
As many as 147 persons were killed in wildlife attacks in the district in the past 38 years.

- **Issues:**

- As many as 57 enclosure villages situated inside WWS fall within the eco-sensitive zone.
- Critics have argued that the draft notification **would cripple both agriculture and business sectors** and will deal a blow to the district as the notification imposes curbs on vehicular traffic.
- It will **badly affect the lives of thousands of farmers** on the fringes of the sanctuary.

As much as 29,291 acres of private land on the fringes of the sanctuary would come under the zone and the development of this area would stop for ever.

Wayanad Wildlife Sanctuary



- **Location:** Located in Kerala, Wayanad Wildlife Sanctuary (WWS) is an **integral part of the Nilgiri Biosphere Reserve**.
 - Spread over 344.44 sq km, WWS is contiguous to the tiger reserves of Nagerhole and Bandipur of Karnataka and Mudumalai of Tamil Nadu.
 - **Kabini river (a tributary of Cauvery river)** flows through the sanctuary.
- **Formation:** It was declared a Sanctuary in the year 1973.
- **Biodiversity:**
 - The **forest types** include South Indian Moist Deciduous forests, West coast semi-evergreen forests and plantations of teak, eucalyptus and Grewelia.
 - Elephant, Gaur, Tiger, Panther, Sambar, Spotted deer, Barking deer, Wild boar, Sloth bear, Nilgiri langur, Bonnet macaque, Common langur, Wild dog, common otter, Malabar giant squirrel etc. are the major mammals.

Eco-Sensitive Zones

- Eco-Sensitive Zones or Ecologically Fragile Areas are **areas within 10 kms around Protected Areas, National Parks and Wildlife Sanctuaries.**

In case of places with sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, **even areas beyond 10 km width can be included** in the eco-sensitive zone.

- ESZs are **notified by MoEFCC**, under **Environment Protection Act, 1986.**
- The basic aim is **to regulate certain activities** around National Parks and Wildlife Sanctuaries so as to minimise the negative impacts of such activities on the fragile ecosystem encompassing the protected areas.

Way Forward

There is a need for rethinking on the impacts of the environmental policies at the local level, the type and prospects of local participation and most importantly the prospects of alternative income generating opportunities for successful conservation initiatives.

Source:TH

Arka Shubha: New Marigold Variety

Why in News

The **Indian Institute of Horticultural Research (IIHR)** has developed a new marigold variety named **Arka Shubha.**

Key Points

- **About:**
 - **High Carotene Content:** Arka Shubha has carotene content of around 2.8% (for all marigolds, it's maximum upto 1.4%) which is the highest among all plant sources.
 - **Used after Spoiled:** This new variety of marigold can be used for extraction of crude carotene even if spoiled after full bloom, unlike that of other varieties.
- **Significance:**
 - **Ornamental & Carotene Extraction:** This new variety not only has ornamental purpose but is also a good source of crude carotene.
 - **Poultry Feed:** Its petals could be used as poultry feed to get quality yolk.
 - **Reduce Import Dependency:** India imports most of its carotene from other countries, including China. This development can significantly reduce import dependency. Therefore, both cultivation area and investment on carotene extraction should be increased.

Carotene

- Carotenes are carotenoid pigments that are oxygen-free. Mostly they are unsaturated hydrocarbons that contain only carbon and hydrogen.
- Their color varies from yellow to orange to red. The color is attributed to the chain of alternating single and double bonds.

Carotene is responsible for the orange colour of carrots.

- α -carotene, β -carotene, and lycopene are examples of carotenes.
- Carotene is used in the pharmaceutical sector, there is always a high demand for it.

Indian Institute of Horticultural Research

- Indian Institute of Horticultural Research (**Indian Council of Agricultural Research**) is an autonomous organization under the Department of Agricultural Research and Education, Ministry of Agriculture & Farmers Welfare.
- IIHR has a **main research station at Bengaluru** and regional experiment stations at Bhubaneswar in Orissa and Chettalli in Karnataka with two Krishi Vigyan Kendras.
- The institute's main research agenda was to increase the yields of horticultural crop varieties by developing high yielding varieties in fruits, vegetables, ornamentals and medicinal products.

Source :TH
