Prelim Bits 06-05-2024 | UPSC Daily Current Affairs

Look-Out Circular (LOC)

The Bombay High Court has held that public sector banks (PSBs) cannot recommend or request the issuance of Look out Circulars (LOCs) against loan defaulters.

- **Issue** – A *2018 clause* that empowered the head of all Public Sector Banks (PSBs) to request immigration authorities to issue LOCs against default borrowers in the economic interest of India.

  The default borrowers included not only the borrowers but also the guarantors for repayment of loans, and the principal officers or directors of corporate entities in debt.

- **Observations of High Court** – It quashed LOCs issued to restrain PSB debtors from travelling abroad.
- It says that they are "*strong-arm tactics*" used to get around legal processes, and *violative of fundamental rights* guaranteed under Articles 14 and 21 of the Constitution.

  ***Article 14** deals with 'Equality before law or equal protection of the laws within the territory of India' and **article 21** deals with 'Protection of life and personal liberty'.*

- The fundamental right to travel abroad cannot be curtailed by executive action without any government statute and inclusion of only PSBs violates right to equality.
- It also clarified that its order would *not affect any existing restraint order* issued by a competent authority, court, Debt Recovery Tribunal, or investigative or enforcement agency.

Look out circular (LOC)

- **Need** – To make sure that an individual who is absconding or wanted by law enforcement agencies is not able to leave the country.
- It is mostly used at immigration checkpoints at international airports and seaports by the immigration branch.
- **Issuing authority** – By a large number of authorised officers
  - An officer not below the rank of deputy secretary
  - An officer not below the rank of joint secretary in the state government
  - A district magistrate or superintendent of police

    - Designated officers of various law enforcing agencies
    - A designated officer of Interpol
    - An officer not below the rank of additional director in the Serious Fraud Investigation Office, and the Ministry of Corporate Affairs.
    - An officer not below the rank of chairman/managing director/chief executive of any public sector bank can make a request (currently quashed by Bombay HC)
- It can be *modified/deleted/withdrawn by the Bureau of Immigration only* on the specific request of the authorised originator on whose request the LOC was issued.
- **Actions** – It can seek to merely *stop a person from travelling* outside the country or from entering the country.
- It can also contains a request to *detain the individual at the local police/investigation agency,* which generally leads to arrest.

References

1. The Indian Express| Court quashes down LOCs by PSBs
2. The Indian Express| Look Out Circulars

Nepal currency notes

Recently, Nepal announced the printing of a new Rs 100 currency note with a map that shows the controversial territories of Lipulekh, Limpiyadhura and Kalapani.

- **Bone of contention** – Territorial dispute over ***Lipulekh, Kalapani and Limpiyadhura,*** together cover about 370 sq km.
- India claims to own these 3 areas.
- Nepal's territorial dispute with India over Lipulekh came to the limelight in 2015 when India and China agreed to develop the region for trade and transit.
- In 2020, Nepal updated its political map by incorporating these three areas.

- **Lipulekh pass** – It is a strip of land on the northwestern edge of Nepal, lodged between Nepal, India, and Tibet.
- It connects the Indian state of Uttarakhand with the Tibet region of China and is a far western point near Kalapani.
- **Kalapani** – It is at the tri-junction between India, China, and Nepal.

Development Activities in Lipulekh
• In 2020, India inaugurated the *80km road* to facilitate pilgrims visiting Kailash-Mansarovar in Tibet in China, which is *around 90km from the Lipulekh pass*. • It will be the 1st to provide *connectivity to the Indian troops* deployed on the Line of Actual Control with China in Uttarakhand. • The road originates from Ghatiabgarh and terminates at Lipulekh Pass, the *gateway to Kailash-Mansarovar*.

Nepal shares a border of over 1,850 km with 5 Indian states Sikkim, West

Bengal, Bihar, Uttar Pradesh and Uttarakhand.

References

1. The Indian Express| Nepal currency note to have Indian territories
2. Eurasian Times| Indo-Nepal Border Dispute

GOLDENE

Sweden's Linköping University involves in development of goldene.

- **GOLDENE** – A ***sheet of gold that is only one atom thick.***

  Since the 2004 development of graphene, the atom-thin material made of carbon, scientists have identified hundreds of 2D materials.

- **Technical difficulties** – Due to metals' tendency to cluster together to make nanoparticles.
- **Manufacturing** – The following steps were done to create goldene
- An atomic monolayer of *silicon was sandwiched* between layers of *titanium carbide*.
- Gold were deposited on top of this sandwich structure, thus gold atoms diffused into the material and replaced the silicon atoms, forming a *trapped monolayer of gold atoms*.
- Subsequently, the titanium carbide layers were etched away to create a free-standing, one atom thick layer of gold.
- **Technique used** – A *Japanese technique* used to forge katanas (Knives), using a chemical popularly known as Murakami's reagent.



- **Properties** – These sheets are roughly 100 nanometres (nm) thick (nm – A billionth of a metre), approximately 400 times thinner than the thinnest commercially available gold leaf.
- Each gold atom in 2-Dimensional form has only 6 neighbouring atoms, compared to 12 in a 3-dimensional crystal.
- **Potential applications** – This *super thin, super light* material can revolutionise the electronics industry, which use gold for its *electrical conductivity*.
- It can potentially use lesser amounts for the same purpose.
- **Future applications** – In carbon dioxide conversion, hydrogen-generating catalysis, selective production of value-added chemicals, hydrogen production, water purification, etc.
- **Significance** – While gold sheets sandwiched between other materials have been previously produced, goldene is the 1st free-standing 2D metal that is only one atom thick
- It's much more economically viable than thicker 3D gold.

Gold the 1st metal to be formulated into (freestanding) 2D sheets. Scientist are also working to make 2D sheets of iridium and platinum.

References

1. The Indian Express| Development of Goldene
2. The Nature| Synthesis of Goldene

Boeing's Starliner

A team of 2 astronauts sitting inside a crew capsule called Starliner is scheduled to be launched on 7th May 2024.

- **Starliner** – It is a spacecraft more than 4 m wide and can house up to 7 astronauts.
- **Built by** – Boeing, global aerospace company.
- **Launch by** – Atlas V rocket, operated by United Launch Alliance, a joint venture between Boeing and Lockheed Martin.
- **Crew capsule** – It houses the astronauts which will be able to survive re-entry and return to the ground.
- **2 crew members** – Astronauts *Barry Wilmore and Sunita Williams*.
- **Service module** – It provides *air and temperature control, water supply, sanitation*, etc., for the survival of astronauts plus the engines and fuel required to manoeuvre the spacecraft.
- This module won't be reusable.
- **Mission** – It will carry the astronauts *to the International Space Station* (ISS) in low earth orbit, where the duo will stay *for 8 days*.
- The capsule will return and descend to the ground, probably at a location in New Mexico.
- **Significance** – It is capsule's 3rd test flight and the 1st with astronauts on board.
- If successful, U.S. will for the *1st time in its history have 2 spacecraft (SpaceX and Boeing)to launch astronauts* to space.

NASA shut its Space Shuttle programme in 2011 and before SpaceX's Dragon capsule got ready in 2020. Each crew's expedition lasts up to 6 months, until the ISS is decommissioned next decade.

Reference

The Hindu| Boeing Starliner's first Space Crew Mission

Swell Waves

The Indian National Centre for Ocean Information Services (INCOIS) had forecasted Swell

waves likely to hit several coastal areas in India over the weekend.

- **Forecast** – It may hit the coastal areas of Goa, Maharashtra, West Bengal, Odisha, Tamil Nadu, Kerala, Lakshadweep, Karnataka, Gujarat, and Andaman & Nicobar Islands.

  *To forecast swell waves, INCOIS launched the **Swell Surge Forecast System** in 2020 which can give forewarning seven days in advance.*

- **Swell Waves** – It is a *series of Ocean surface waves* that propagate along the interface between water and air and are often referred to as ***surface gravity waves***.
- They are formed by an ocean swell, hence the name swell surge.
- **Formation** – Swells (series of waves) are generated over the open ocean ***by a distant storms*** like hurricanes, or even long periods of fierce gale winds and *not by any local wind*.
- During such storms, huge *energy transfer takes place from the air into the water*, leading to the formation of very high waves.
- Many ocean swells originate in the oceans around Antarctica where there is high winds with nearly infinite duration and fetch.

Wind Waves	Swell Waves
• Generated by *local wind*. • It tend to be *irregular*. • They are *not self-sustaining* and will die out when the wind stops. • Relatively *lesser speed* and cover *lesser distances*.	• Generated by *distant storms*. • *Regular* series of waves. • They are *self-sustaining*. • Larger wavelength and period. • *Travels faster* than small waves and travels *greater distances*.

- **Impacts over India** – Usually, states like *Kerala witness swell waves as a result of strong winds in the southern part of the Indian Ocean*, where an ocean swell is generated, and the waves then travel north to reach the coast in 2 or 3 days.
- **2024 swell waves of Kerala** – They were generated after a low atmospheric pressure system moved over the region from the South Atlantic Ocean — 10,000 kilometres off the Indian coast.
- It resulted in strong winds, forms swell waves of up to 11 metres in height.

  The swell waves flooding events are called Kallakkadal in Kerala.

Features of Tsunamis in comparison with Swell Waves

• Unlike Swell waves, it is *created by an underwater disturbance* like earthquakes occurring below or near the ocean.
• They are around *10 times faster than swell waves*.
• Although both swell waves and tsunamis slow down near the coast, the latter *hit land at 30–50 km/h*.

Reference

The Indian Express| Swell Waves may hit Indian coastal areas

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