Prelim Bits 18-02-2019

660 km Boundary

- Usually p & s waves of earthquake are used to study the earth's inner layers.
- Earthquakes that are of magnitude 7.0 or higher send out shockwaves in all directions that can travel through the core to the other side of the planet.
- Just as light waves can reflect off a mirror or refract when passing through a prism, earthquake waves travel straight through homogenous rocks but reflect or refract when they encounter any boundary or roughness.
- Thus the scattering waves carry the information about the inner layer's roughness.
- Scientists used such data from a magnitude 8.2 earthquake that happened in Bolivia to find mountains and other topography that separates the upper and lower mantle around 660 km straight down.



- Lacking a formal name it is simply called "the 660-km boundary" for now.
- The layer is found to be rougher than the surface layer that we all live on i.e stronger topography than the Rocky/Appalachians is present at the 660-km boundary.
- These mountains could also be bigger than anything on the surface of the Earth.
- Also, just like the presence of both the smooth ocean floors and massive mountains in the crust, the 660-km boundary has rough areas and smooth patches.
- The boundary will have significant implications on our understanding of how our planet was formed and evolved.

LADIS Portal

- Inland Waterways Authority of India (IWAI) launched a new portal called Least Available Depth Information System (LADIS).
- It was designed to facilitate the day to day operations of inland vessels plying on National Waterways and to avoid any hindrance in service and operation.
- It will enhance credibility and efficiency of information sharing to achieve seamless operations on National Waterways, besides pre-empting problems that may occur during movement of vessels.

- Vessel operators/ cargo owners will prepare their sailing plans strictly as per applicable waterways related information (Hydrographic survey reports, River Notices etc.) .

National Security Act

- National Security Act (NSA) empowers the Centre or a State government to detain a person to prevent him from acting in any manner prejudicial to national security.
- As per the National Security Act, the grounds for preventive detention of a person include:

a. Acting in any manner prejudicial to the defense of India, the relations of India with foreign powers, or the security of India.
b. Regulating the continued presence of any foreigner in India or with a view to making arrangements for his expulsion from India.
c. Preventing them from acting in any manner prejudicial to the security of the State or from acting in any manner prejudicial to the maintenance of public order or from acting in any manner prejudicial to the maintenance of supplies and services essential to the community it is necessary so to do.

- The maximum period for which one may be detained is 12 months, but the term can be extended if the government finds fresh evidence.
- In the normal course, if a person is arrested, he or she is guaranteed certain basic rights, these include the right to be informed of the reason for the arrest, right to bail, and arrested person has to be produced before a court within 24 hours of arrest.
- Additionally, Article 22(1) of the Constitution says an arrested person cannot be denied the right to consult, and to be defended by, a legal practitioner of his choice.
- But none of these rights are available to a person detained under the NSA.
- The proceedings of the NSA related cases are handled by an advisory board constituted by the government.

Appointment of Election Commissioner

- Under article 324 Election commission (EC) consist of Chief election commissioner and such number of other election commissioners (fixed by president time to time), as of now the EC consist of one CEC and 2 Election commissioners.
- Chief Election commissioner and other election commissioners are appointed by the President of India.
- Chief Election commissioner is the chairman of election commissions, the CEC and other Election Commissioners have equal powers and receive equal

salary and other emoluments similar to those of a Supreme Court judge.

- The Chief Election Commissioner or an Election Commissioner shall hold officefor a term of six years or until they attain the age of 65, whichever is earlier.
- Recently Supreme Court directed that the appointment process of Central Information Commissioner (CIC) is on the "same terms" of appointment of Chief Election commissioner.

Source: PIB, The Hindu

