Expansion of Ameri Ice Shelf (AIS)

- The National Centre for Polar and Ocean Research (NCPOR) predicts that there would be a **24% increase in the expansion of Ameri Ice Shelf (AIS) boundaries by 2021** and another 24% expansion by 2026 from its 2016 positions.
- **The floating sheets of ice** called the ice shelves play a multi-faceted role in **maintaining the stability of a glacier**.
- **Ice shelves connect a glacier to the landmass**.
- The **ice sheet mass balance, sea stratification, and bottom water formation** are important parameters for the balancing of a glacier.
- Latent and sensible heat processes do play important roles here.

The AIS is one of the largest glacier drainage basins in the world, located on the east coast of Antarctica, at about 70ºS Latitude, 70ºE Longitude. The AIS dynamics and mass balance help in understanding the changes in the global climate scenario.

- The NCPOR scientists observed a spatio-temporal change in the ice shelf as reflected by the extension of the Pridze and Mackenzie and the extension of a 200-km stretch between Mackenzie Bay (68.5ºS Latitude; 70.2ºE Longitude) and the Sandefjord Bay (69.65ºS Latitude; 74.3ºE Longitude), which is a part of the AIS.
- It becomes clear from the study that the AIS is losing its stability owing to the impact of a downstream giant glacial drainage system over the past 19 years, thereby advancing the ice shelf boundaries due to higher freezing rates than basal melting.