NISAR

- NASA-ISRO Synthetic Aperture Radar satellite (NISAR) is the world’s most expensive earth imaging satellite.
- NISAR is dual frequency RADAR, it is an L-band and S-band RADAR. It is the first such satellite using dual frequency RADAR.
- The S-band is being built by ISRO and L-band by NASA.
- It is expected that the NISAR satellite will be launched in 2021 from India using the Geosynchronous Satellite Launch Vehicle (GSLV).
- One of the main purposes of the mission is to observe Earth and establish a general pathway for future joint missions for Mars exploration.
- It will take weekly snapshots of earth that will provide time lapse images of the motion of tectonic plates, ice sheets and changes in vegetation over land in agriculture and forests.
- NISAR will provide a means of resolving highly spatial and temporally complex processes ranging from ecosystem disturbances, to ice sheet collapse and natural hazards including earthquakes, tsunamis, volcanoes, and landslides.