GS-III: MOSAiC Mission

News

Vishnu Nandan, a 32-year-old polar researcher from Kerala, will be the only Indian among 300 scientists from across the world aboard the MOSAiC expedition.

MOSAiC

- MOSAiC stands for Multidisciplinary drifting observatory for the Study of Arctic Climate.
- It aims for studying the impact of climate change on the Arctic and how it could affect the rest of the world.
- MOSAiC is the largest ever Arctic expedition in history, will be the first to conduct a study of this scale at the North Pole for an entire year.
- Previous studies have been of shorter periods as the thicker sea ice sheets prevent access in winter.

Key highlights:

- Under it, the German research vessel Polarstern has been anchored on a large sheet of sea ice in the Central Arctic.
- They will allow the water to freeze around them, effectively trapping themselves in the vast sheet of white that forms over the North Pole each winter.
- They will build temporary winter research camps on the ice, allowing them to perform tests that wouldn't be possible at other times of the year or by satellite sensing.

Significance:

- The results of MOSAiC mission will contribute to enhance understanding of the regional and global consequences of Arctic climate change.
- It will be helpful in understanding the reasons behind the sea-ice loss and improve weather and climate predictions.
- Its expeditions will support safer maritime and offshore operations, increase coastal-community resilience, contribute to an improved scientific basis for future traffic along northern sea routes.