**Abstract**

Climate change is a topic of worldwide concern and the impacts of global warming are felt first and most severely at the Polar Regions. To understand the role and response of the Cryosphere in climate change, Ministry of Earth Sciences established the National Centre for Antarctic and Ocean Research (NCAOR) at Goa. The prime objective of NCAOR is to plan, promote, co-ordinate and execute scientific research in all three poles (Antarctic, Arctic and Himalaya) and its surrounding oceans. The present status of India’s polar research activities on various themes such as Atmospheric, Cryospheric, Oceanic, biological and solid earth sciences, in all three poles, including future directions will be presented. Also, the key scientific questions to be addressed by India from India’s Polar research will be presented. Augmenting Polar research vessel, Renew/Build new Maitri station, strengthening observations in all three poles, Implementing southern ocean sea-ice modeling and Arctic regional ocean model, reconstruction of high resolution past climate from Antarctic/Arctic/ Himalaya sediments and Ice core, Understanding the variability and physical processes of the ocean and sea ice, tele-connection between poles and tropics, are some of the key areas where India will focus in the future.