Present and Future directions of Polar research by India

This pa per gives an insight about how a floating laboratory [i.e., Polar Research Vessel] is designed and built to meet the mission requirements for the Indian Polar Research Programmes. Observations in Polar Regions are essential for understanding climate change and the changing weather patterns. The cold remote Polar Regions remain difficult places for humans to live and work, and are places where governments maintain small but expensive research stations. The logistics of polar research (including transport, food, fuel, hardware, safety and communications) also require extraordinary efforts and cooperation at all levels. Various aspects with respect to challenges and emerging trends in designing a Polar Research Vessel to minimise the impact and foot print of vital scientific research in the sensitive polar environment and the cost–benefit studies for chartering vs. owning a Polar Research Vessel are discussed explicitly.