Challenges during Construction of Bharati: lessons learned

Construction of a multipurpose structure needed to meet diverse requirements, has its own constraints, more so when the site is located at one of the most inaccessible and hostile locations of the world. Construction in Antarctic has to abide by strict environmental protocols and adhere to the Comprehensive Environmental Evaluation (CEE) approved by the Antarctic Treaty Consultative Meeting (ATCM). Though the site selected for Bharati station had several advantages in terms of logistics, such as absence of ice shelf, proximity to an ice runway and comparatively better weather conditions, the transportation of heavy equipments and manpower and abiding to the legal terms and conditions of the construction firms were a challenge. To add to these constraints, the working days at the site were limited to good weather days during the summer- a highly rare ‘commodity’ in Antarctic.

In spite of the involvement of two different firms, one for the preparation of foundation and the other for the superstructure, a perfect coordination and synergy between the firms, NCPOR –the nodal agency at Headquarters and the logistic personnel at site, helped in attainment of the target within a strict time schedule. The construction of the station that commenced in Austral season 2009-10 was completed by 2012-13 enabling a maiden wintering of team of scientists and logistic personnel- a record achievement.

Some of the major issues that required in-depth planning as also on-site decision making, such as wind tunnel test, minor changes to approach of station, attempts to place a barge at the entry point, placing heavy Mantis crane at the construction site, intake of potable water etc were tackled successfully.