Molecular methods have been well established now for the characterization of complex actinobacterial communities associated with various environments and are revealing the extent of their diversity. Further, no information is available on the actinobacteria of the ecologically sensitive areas such as Neil island of the Andamans with regard to their diversity, occurrence and distribution which are largely dependent on the physico-chemical parameters prevailing in their immediate environment. In this direction, to gain a better understanding of the marine actinobacterial diversity, culture-dependent and culture-independent study was undertaken, using sediment samples collected from different coastal habitats of the Neil island, the Andamans, with the following objectives.

- Selective isolation of actinobacteria from the different coastal habitats (Mangrove, Coral reef and Beach) of the Neil island
- Enumeration of the actinobacterial density and its interactions with the physico-chemical parameters of the different coastal habitats (Mangrove, Coral reef and Beach) of the Neil island
- Isolation and identification of culture-dependent actinobacteria to find out their diversity in the different coastal habitats (Mangrove, Coral reef and Beach) of the Neil island
- Exploration of the culture-independent actinobacterial diversity in the different coastal habitats (Mangrove, Coral reef and Beach) of the Neil island, using pyrosequencing