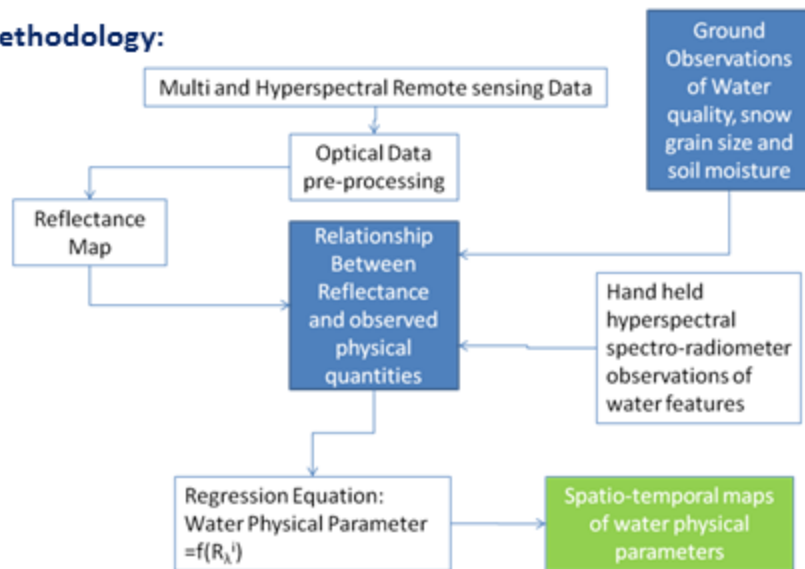


TDP: Geophysical Parameter Retrieval using Hyper Spectral Remote Sensing Data

Objectives:

Retrieval of water quality parameters (mainly water supply lakes)
 Mapping of different snow types and snow grain size
 Wetland Mapping

Methodology:



Snow Cover Area (SCA)

$$NDSI = \frac{\text{Reflectance (Green)} - \text{Reflectance (SWIR)}}{\text{Reflectance (Green)} + \text{Reflectance (SWIR)}}$$

Grain Size Index (GI)

The snow grain size map was generated using the GI method proposed by Negi et al. (2010) based on the field collected hyperspectral reflectance data.

$$GI = \frac{\text{Reflectance (590nm)} - \text{Reflectance (1050nm)}}{\text{Reflectance (590nm)} + \text{Reflectance (1050)}}$$

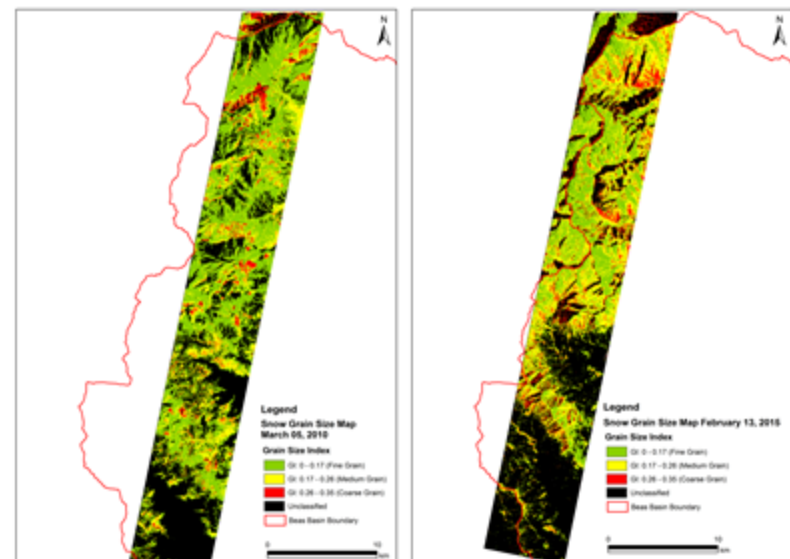
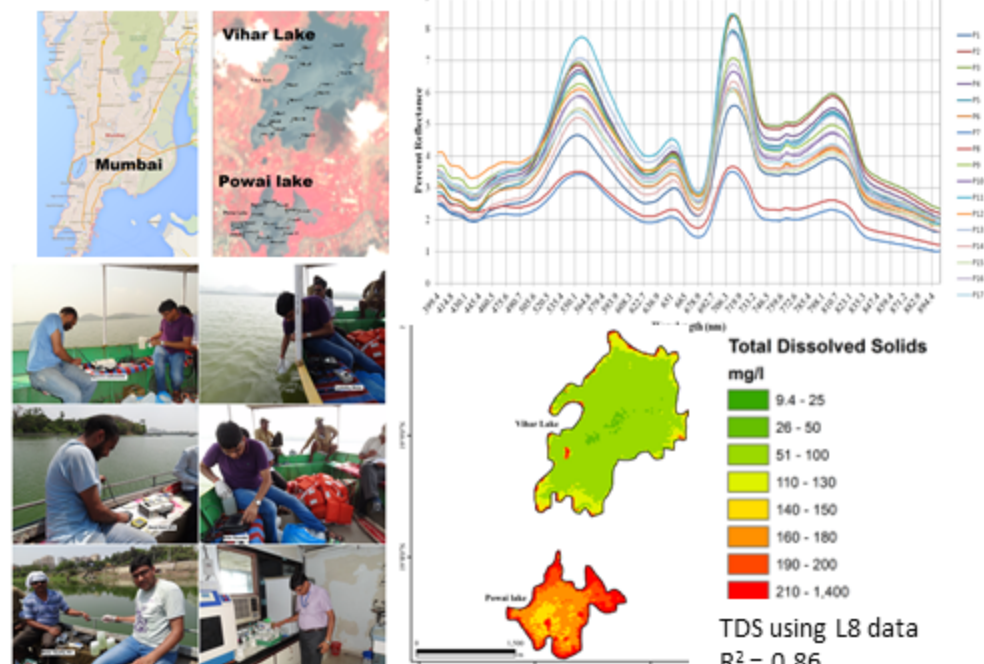


Fig. Snow Grain Size Mapping in Part of Himachal Pradesh using GI



Water Quality Study Powai and Vihar Lakes, Mumbai using Hand Held Spectroradiometer