

### Spatial cover

The study area which is coastal zone of Mekong Delta extends for about 600 km length and lies between 8°32'-10°22' N latitude and 104°26'-106°47'.

### Temporal scale

Multitemporal remote sensing data of Landsat Multispectral Scanner (MSS), Landsat Thematic Mapper (TM), Landsat Enhanced Thematic Mapper (ETM+) and Landsat Operational Land Imager (OLI) from 1973, 1979, 1990, 1995, 2000, 2010, 2015 is archived on U.S. Geological Survey (<http://earthexplorer.usgs.gov>). Due to coastline length of 600km, five adjacent Landsat images (path 124, 125, 126 and row 53, 54) are needed to cover entire Mekong deltaic coast.

### Methodology

Process Step	Process Name	Description
1	Download and Extract Images	USGS EROS DATA CENTER
2	Atmospheric correction	Sun + radiometric correction
3	Normalized Difference Water Index (NDWI)	Green and Near Infrared Bands
4	Tasseled Cap (Brightness, Greenness, Wetness)	Some bands depending on types of Landsat images
5	Developing approach for Land and Sea creation by combining NDWI and Tasseled Cap (10 classes)	Unsupervised classify by maximum algorithm to create 10 classes
6	Classify Land and Sea (2 classes)	10 classes to 2 classes
7	Create Shore Boundary	Majority filtering, contour and smooth line commands
8	Tidal Correction	Mean Sea Level
9	Shorelines Change Detection	Digital Shoreline Assessment System (DSAS Tool)