

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)