

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, 1990, 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 Vegetation Index (NDVI)	Red and Near Infrared Bands
4	Normalized Canopy Index (NCI)	Green band and Short wave infrared band
5	Developing approach for land cover creation by combining NDVI and NCI	Unsupervised classify by iso cluster algorithm to create 50 classes
6	Classify 5 classes: aquaculture, mangrove, plant, bare soil, water.	Supervised classify from 50 classes to 5 classes by maximum likelihood algorithm
7	Change detection analysis	Characteristic difference of pixel change between images from two dates