

SWOT

SURFACE WATER & OCEAN TOPOGRAPHY

MONITORING NIGERIA SHORELINE CHANGE USING REMOTE SENSING AND GIS

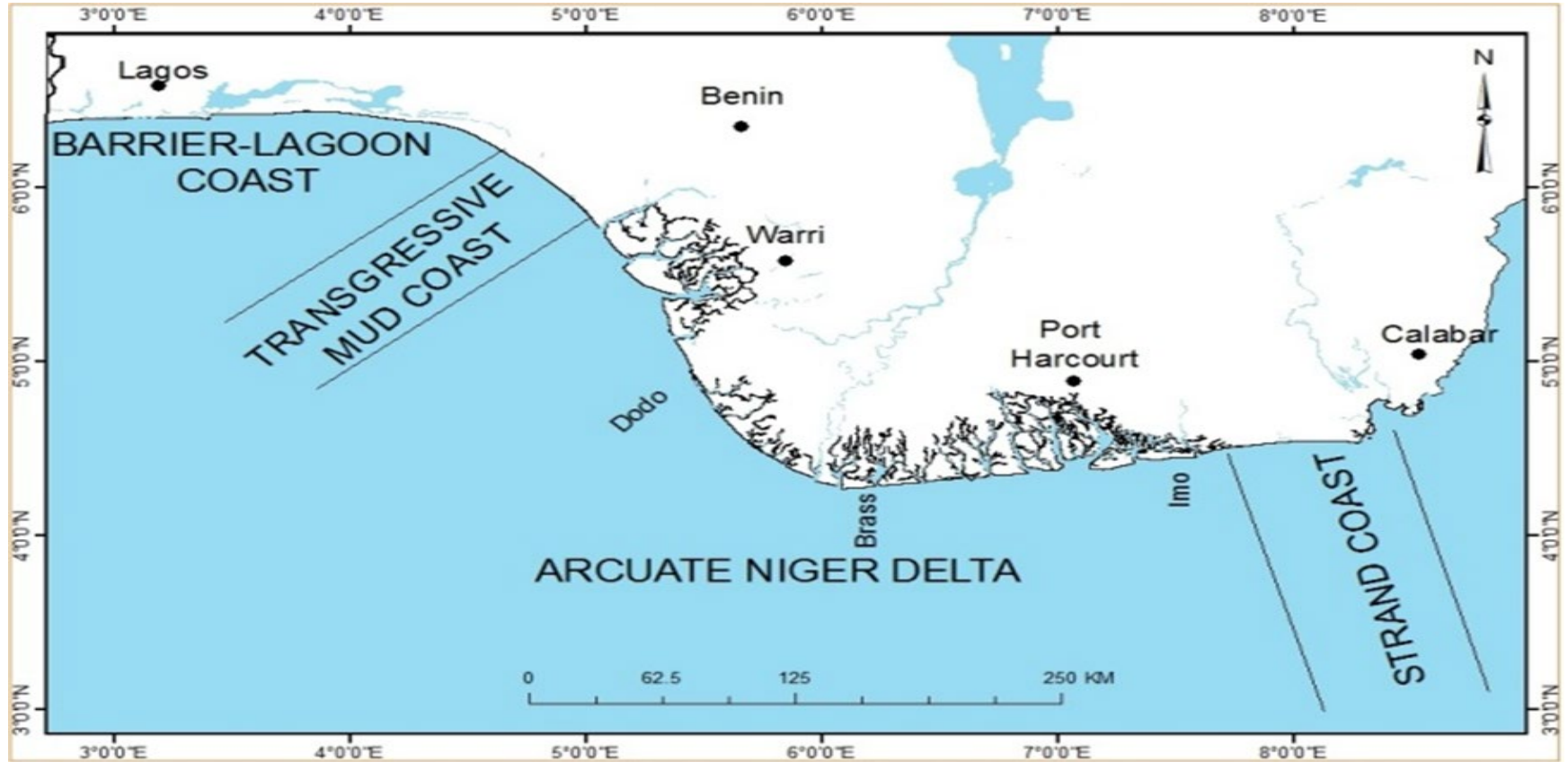


Roland Prince Ovbiebo

Scripps Institution of Oceanography, University of California San Diego

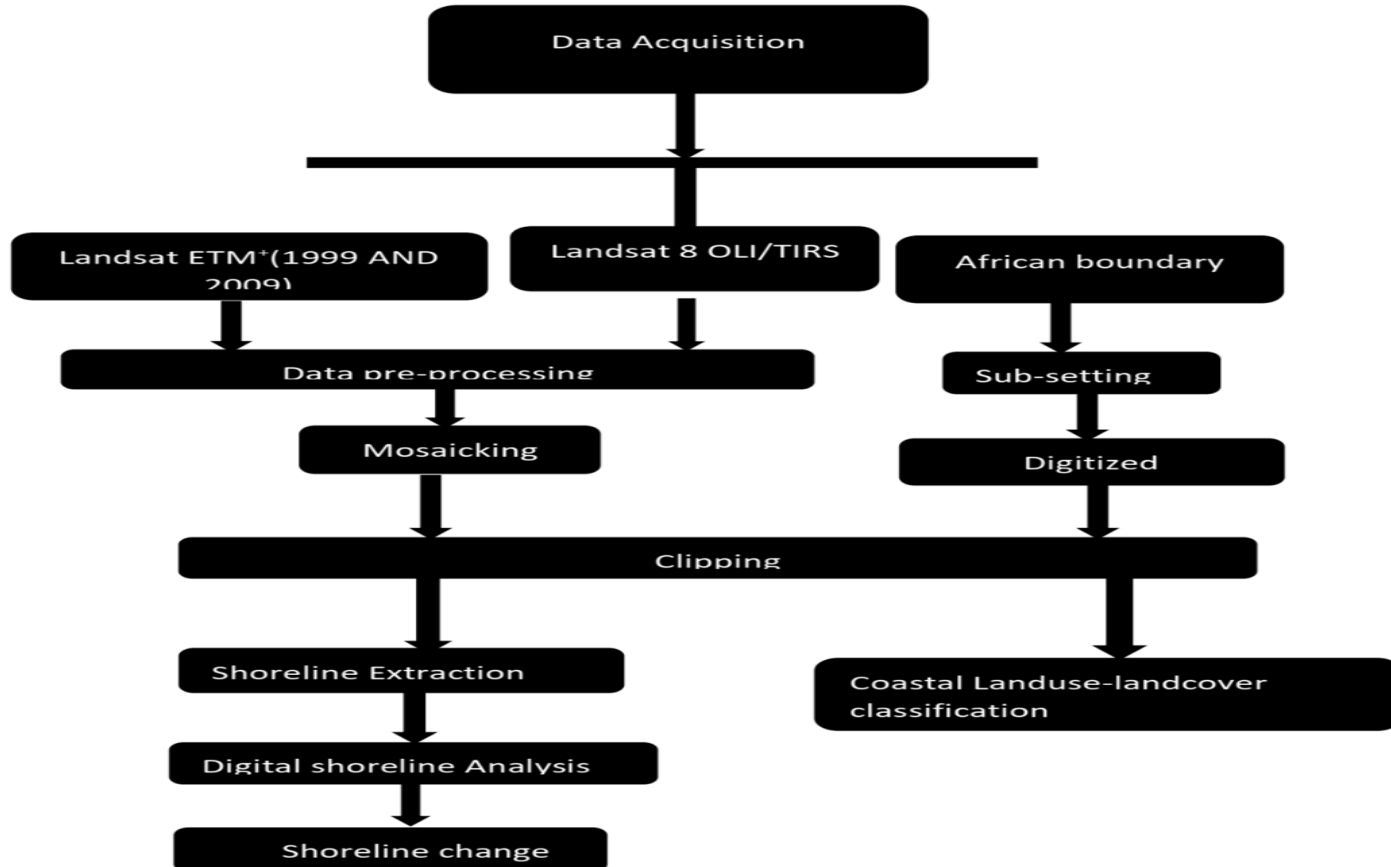
(rovbiebo@ucsd.edu)



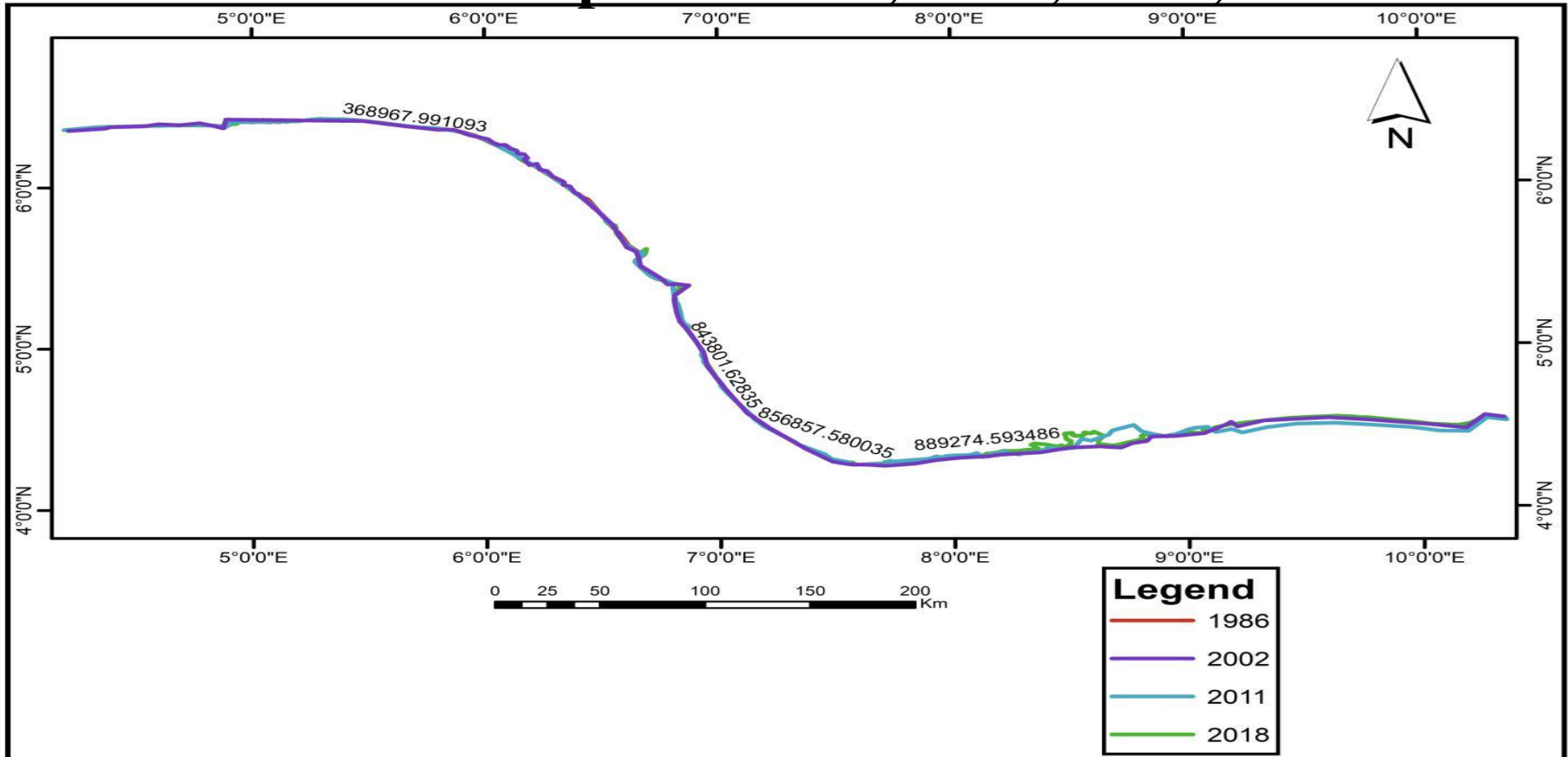


Map of the Nigeria coastal areas, showing the main geomorphic units (Modified from Ibe, 1988)

Methodology Flowchart



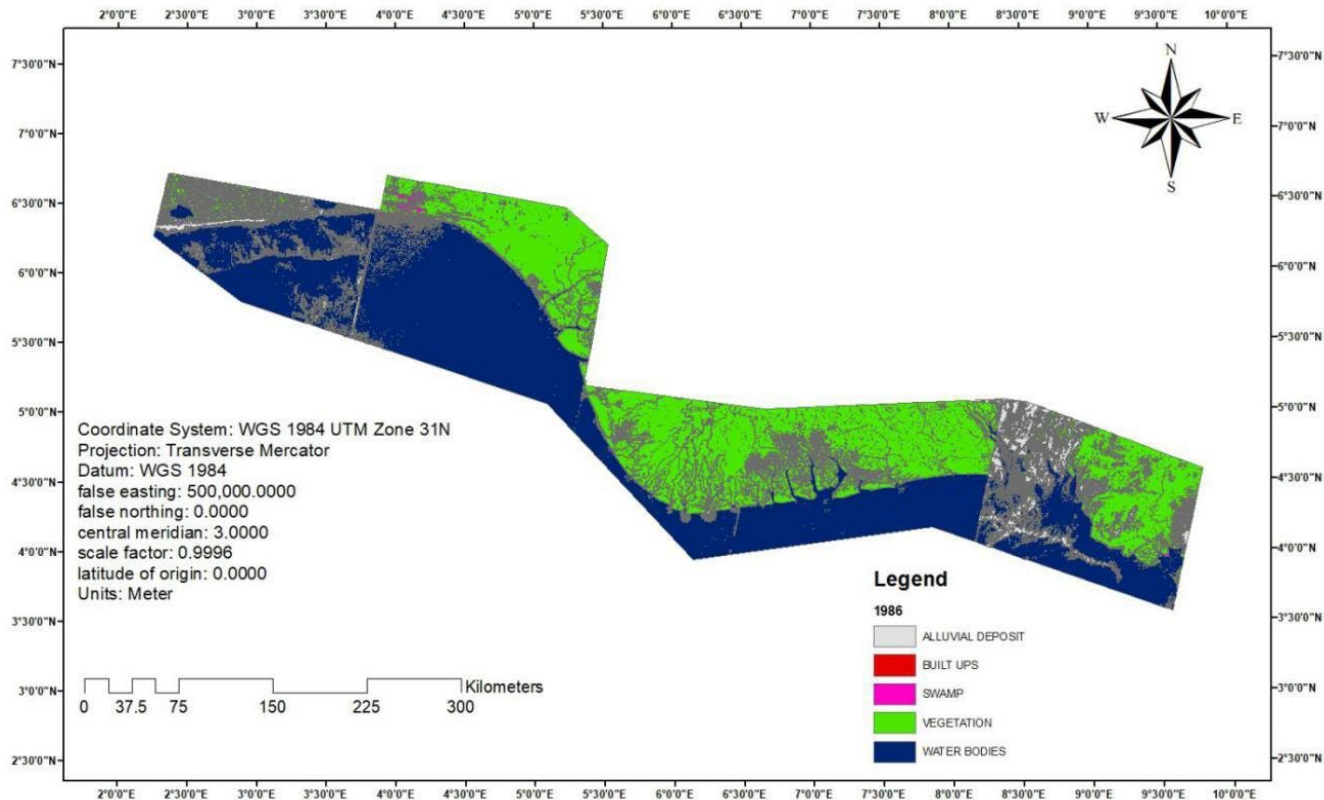
The shoreline maps for 1986, 2002, 2011, and 2018



Shoreline Change

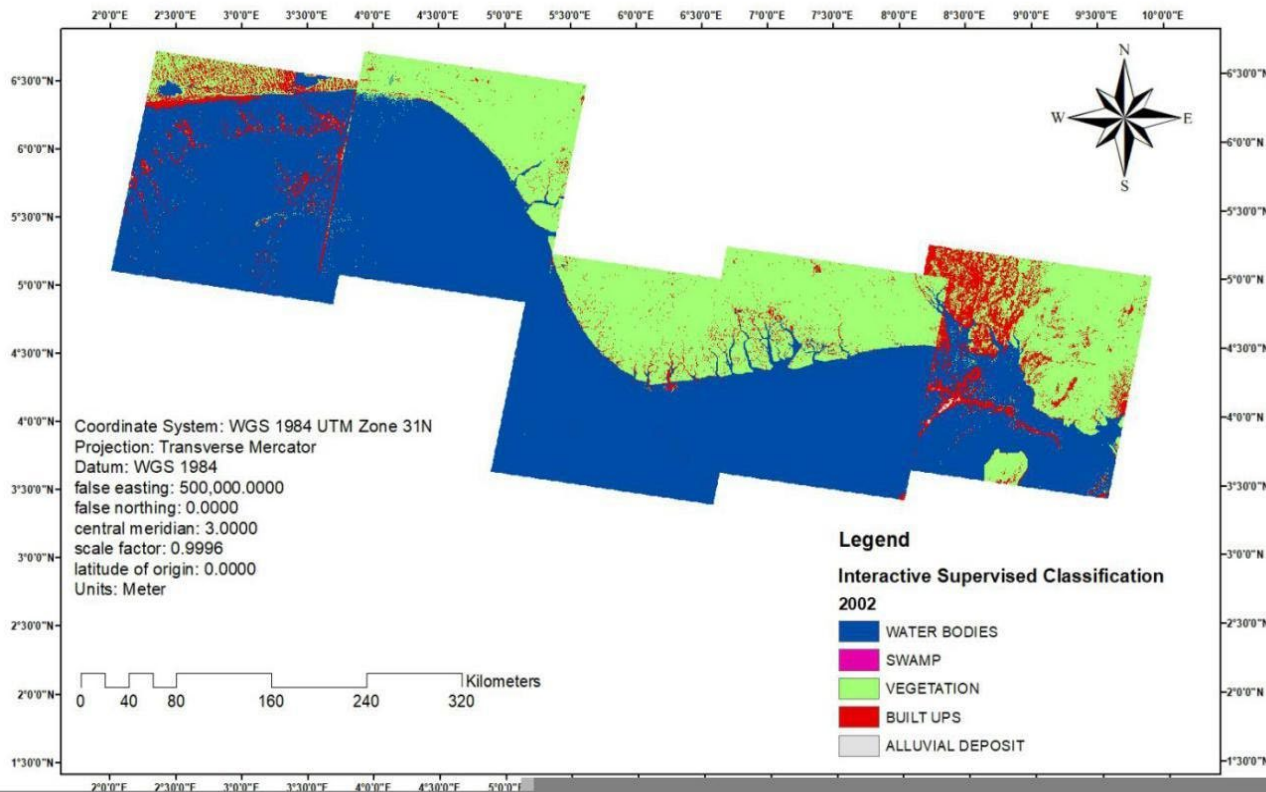
Period	Advanced Gain (Sq km)	Retreat (Loss) (Sq km)	Total (Sq Km)	Shoreline Difference (Sq Km)	Percentage Loss or Gain (%)
1986-2002	419.31	1793.24	2212.55	-1793.24	-81.04
2002-2011	1200.43	1246.46	2446.89	-46.03	-1.88
2011-2018	2460.3	2450.03	4910.33	-2548.22	-59.72

Coastal land-use map and table showing the coastal classes for 1986



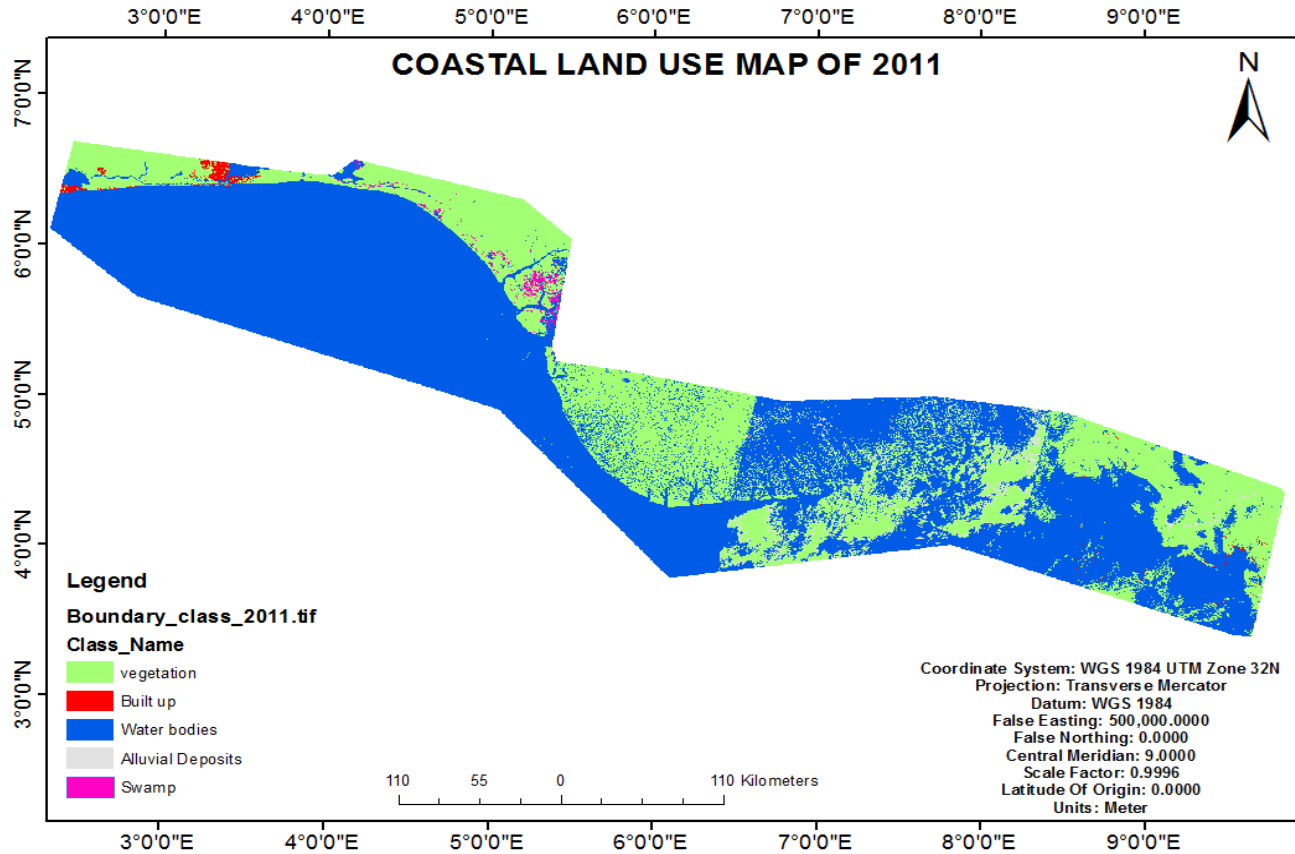
Classes (1986)	Area Extent (Km)
Waterbodies	45843.0
Vegetation	39287.6
Swamp	1253.2
Alluvial deposit	7832.3
Built-ups	322.6

Coastal land-use map and table showing the coastal classes for 2002



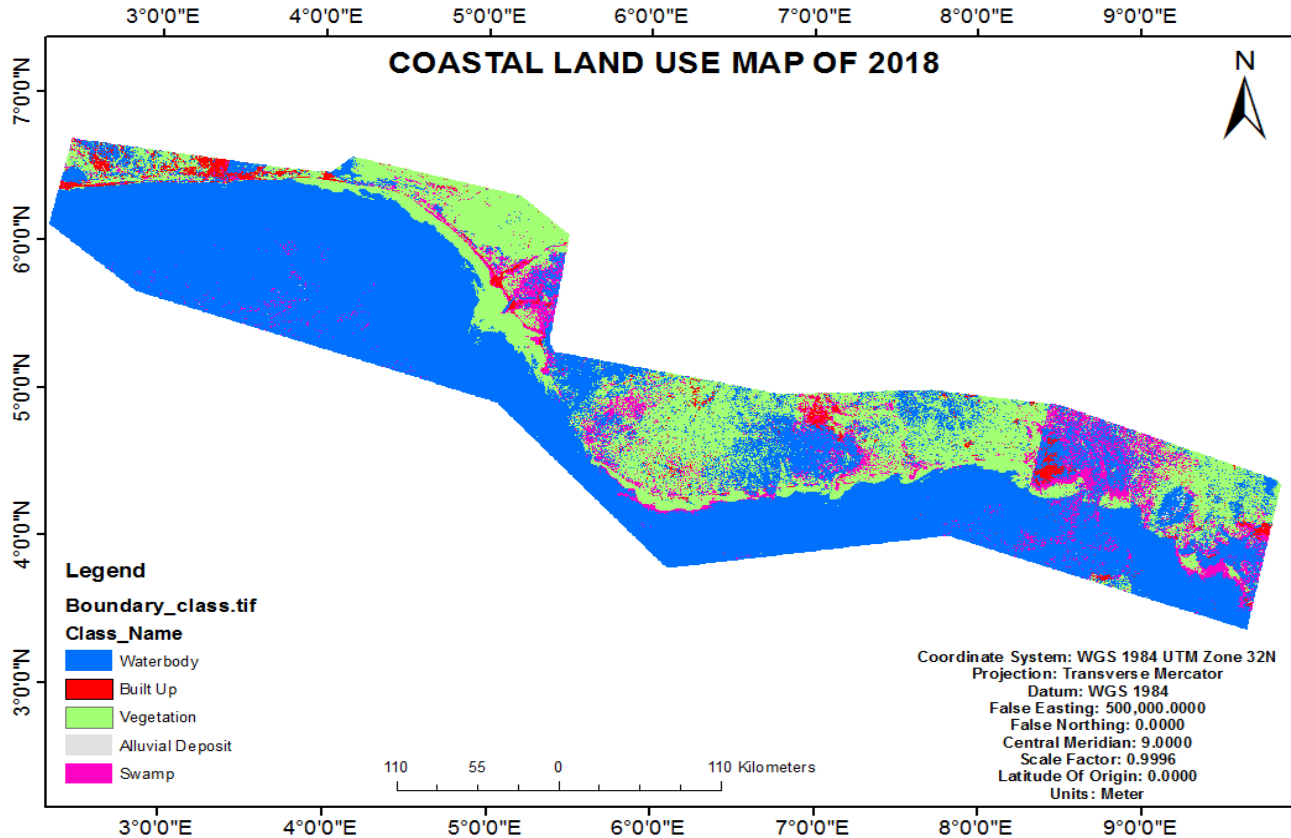
Classes (2002)	Area Extent (in km)
Waterbodies	45843.0
Vegetation	40547.0
Swamp	1414.9
Alluvial deposit	6360
Built-ups	327

Coastal land-use map and table showing the coastal classes for 2011



Classes (2011)	Area Extent (Km)
Waterbodies	67984.6
Vegetation	32229.2
Swamp	406.3
Alluvial deposit	2123
Built-ups	418.8

Coastal land-use map and table showing the coastal classes for 2018



Classes (2018)	Area Extent (Km)
Water bodies	42912
Vegetation	11255.2
Swamp	3452.7
Alluvial deposit	32.0
Built-ups	1725.9



THANK YOU
for your
ATTENTION!

Contributors

- Marine Science and Technology Dept., FUTA (Class 19)
- Remote Sensing & GIS Dept., FUTA (Class 19)