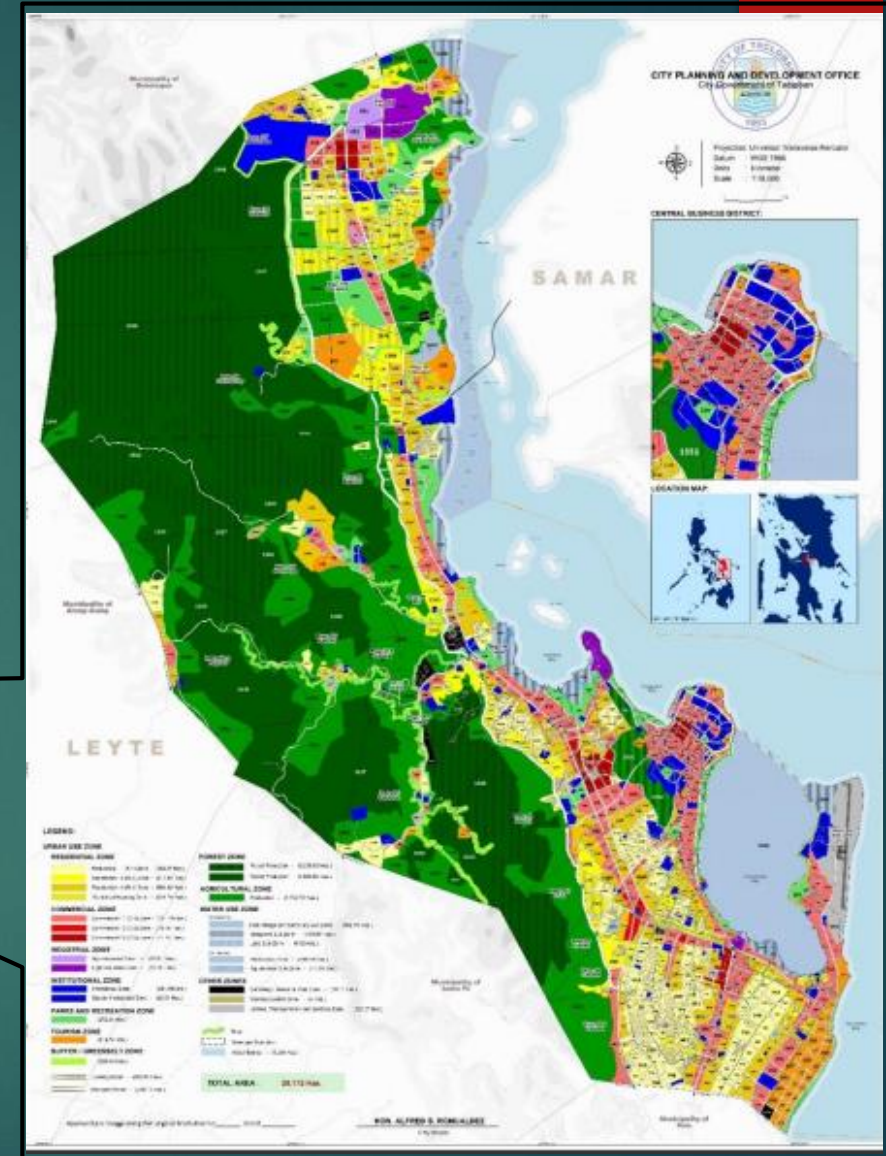


# **LOCAL GOVERNMENT INITIATIVE TO RESTORING MANGROVE FOREST AFTER SUPER TYPHOON HAIYAN**

## **INTERNATIONAL CONFERENCE ON FOREST AND LANDSCAPE RESTORATION PROJECT**

**New World Hotel  
Makati City  
February 25-27, 2019**

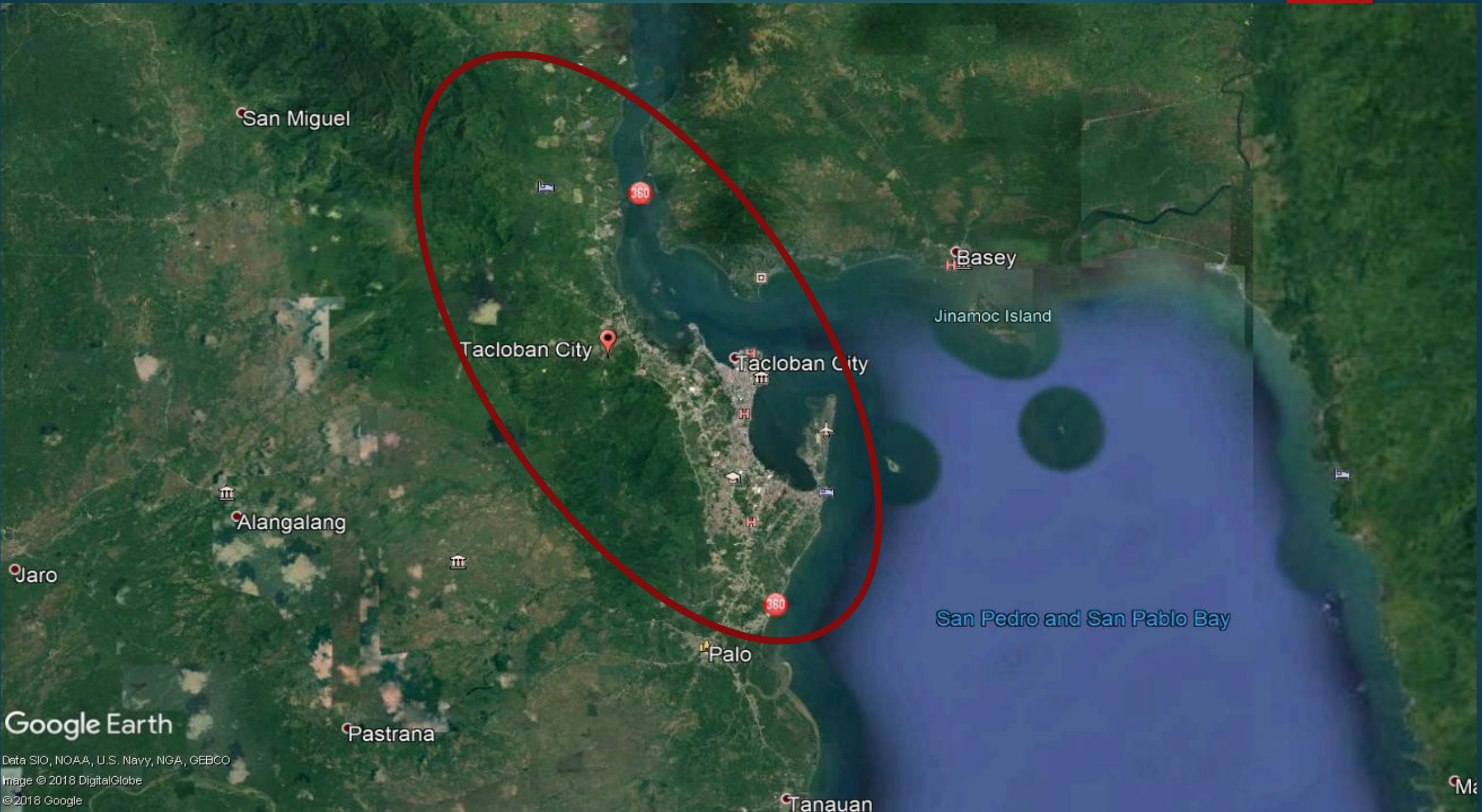
## Regions of the Philippines



## Environmental quality issues:

- ✓ Deforestation and soil erosion in upland and mangrove forest
- ✓ Unsustainable farming systems
- ✓ Increase migration and pop'n growth in coastal areas
- ✓ Improper disposal of domestic waste and industrial effluents
- ✓ Unsustainable fishing practices
- ✓ Disposal of waste from ports and harbors
- ✓ Conversion of coastal areas thru reclamation for commercial, tourism functions and among others





Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image © 2018 DigitalGlobe  
© 2018 Google













Damaged mangrove in Brgy. Anibong  
(*Rhizophora* and *Avicennia* sp.)

Damaged mangrove in Brgy. Paraiso  
(*Rhizophora* sp.)







The aftermath of typhoon Yolanda in Brgy. 75, San Jose, Taclobn City: 65-70% damaged



Impact of typhoon Yolanda and rampant extractions and harvesting of mangroves in Barangay 83: 90-92% damage

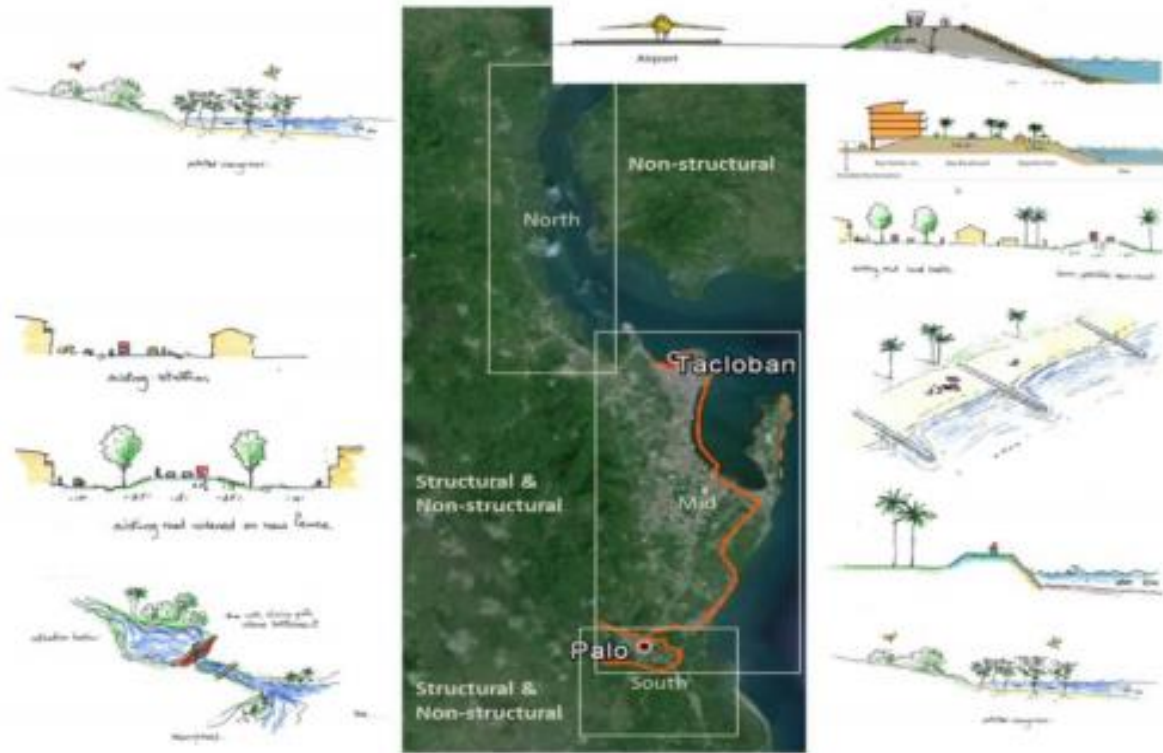


Scenes after the typhoon in Bagacay and Nula-Tula. Estimated damage 75-80%.





Kingdom of the Netherlands



## Coastal Protection Strategy

City of Tacloban and Municipality of Palo

final  
21<sup>st</sup> July 2016



## Partners in the project

Philippine Reclamation Authority



Royal HaskoningDHV



Deltares



Arcadis



Wetlands International



Red Cross



Rebel Group



Van Oord



Financed by the Government of the Netherlands



Government of the Netherlands





51 P 714849 1246450  
accuracy: 12m

06/06/2014



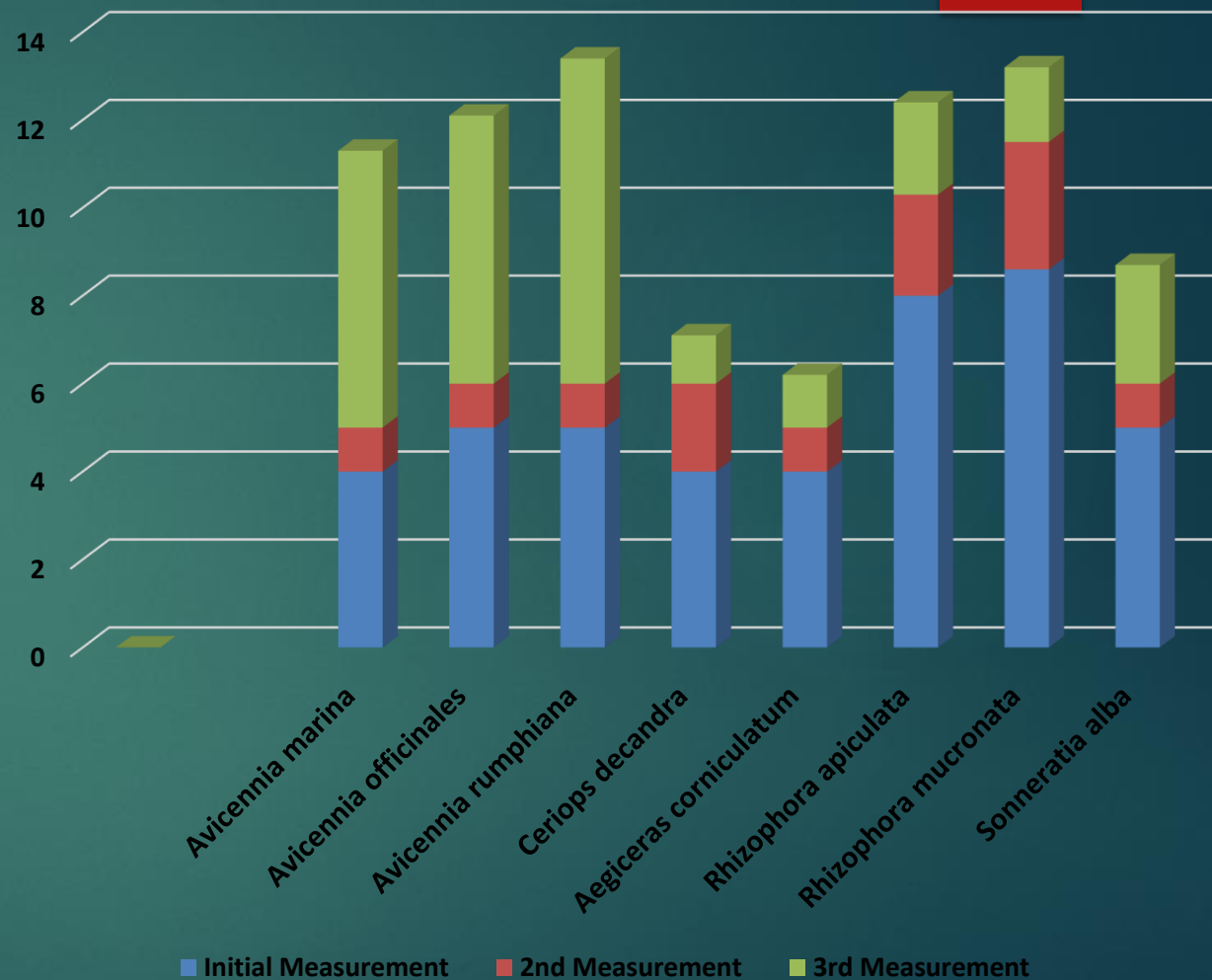




Ave. height growth (in centimeter)



Ave. diameter growth (in mm)



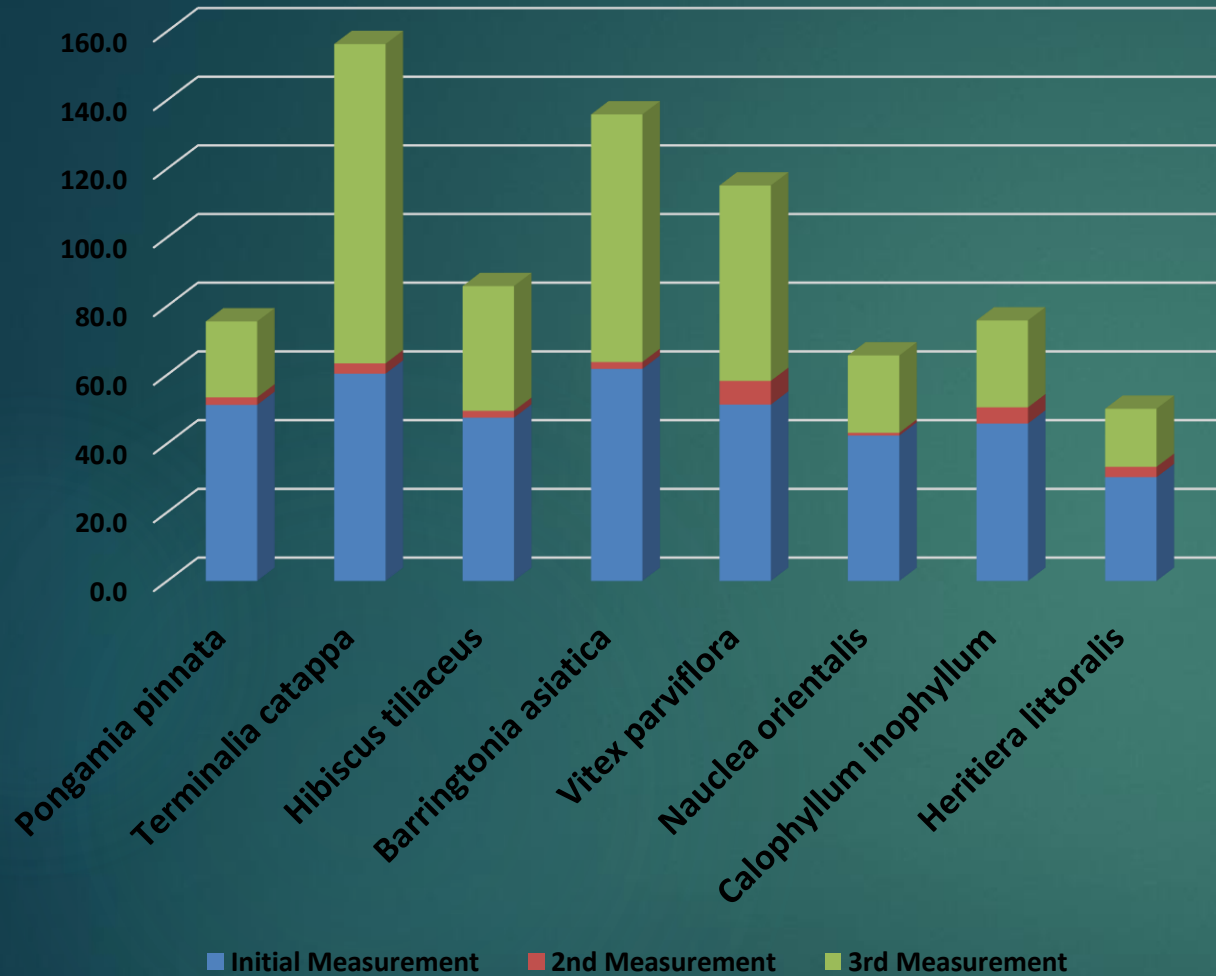
Mangrove species



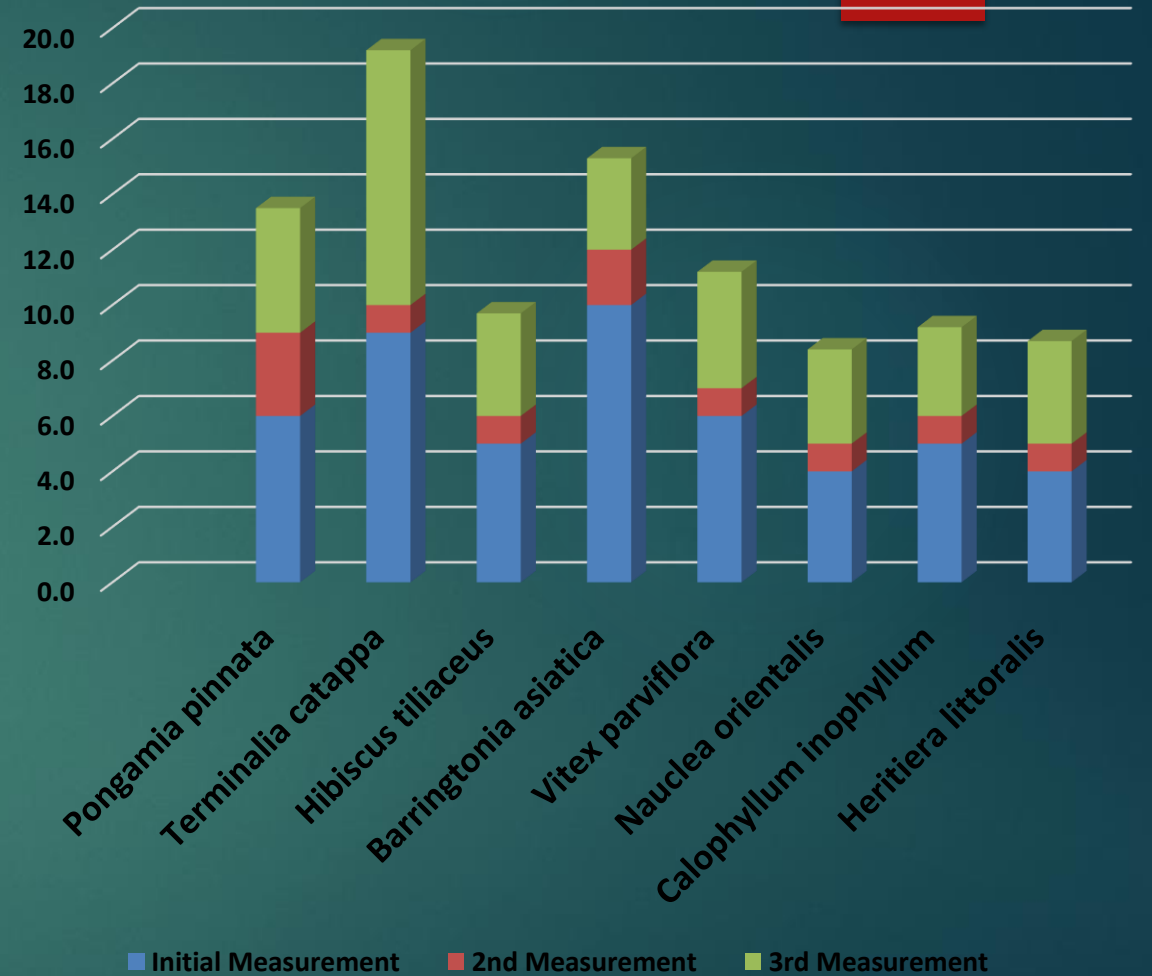




Ave. height growth (in cm)



Ave. diameter growth (in mm)



Beach forest species

























*The end...*