



Mangrove Forest Cover along the coastline of Ghana

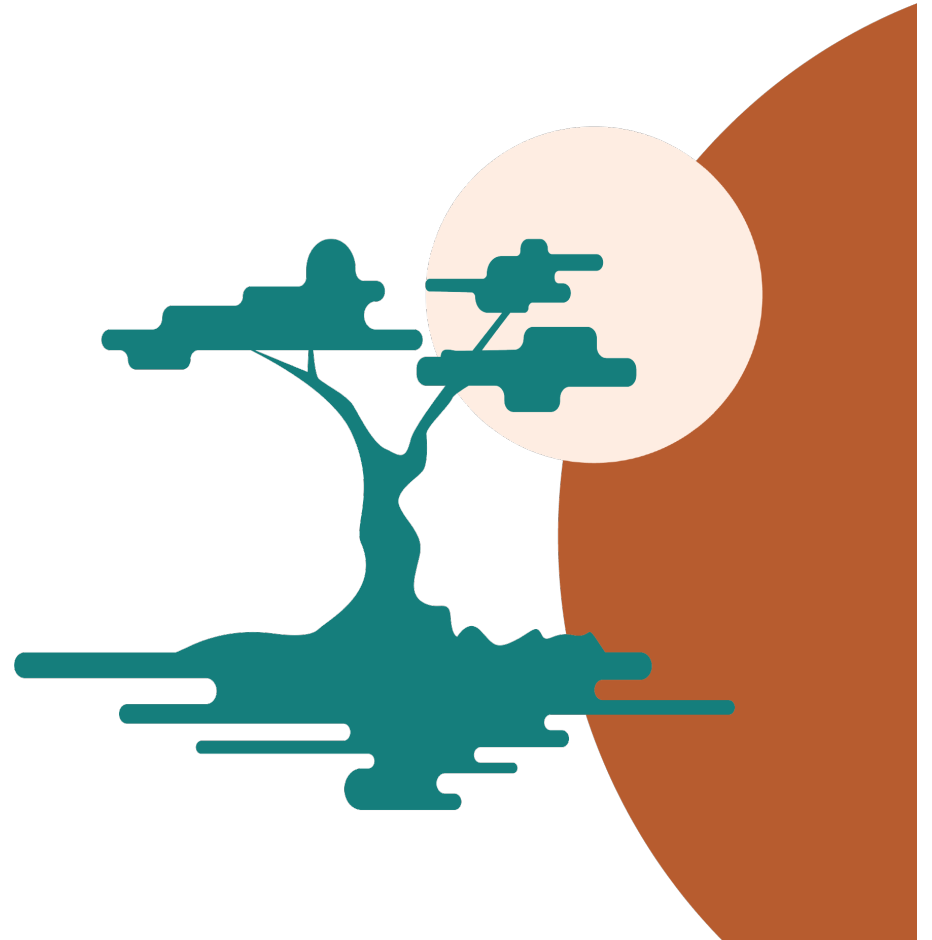
Presented by:
Benjamin Apraku Gyampoh
KNUST, Kumasi, Ghana





Presentation outline

- Mangrove distribution in Ghana
- Background and Problem
- Aim and Objectives
- Methodology
- Results
- Conclusion
- References





Mangrove Distribution in Ghana

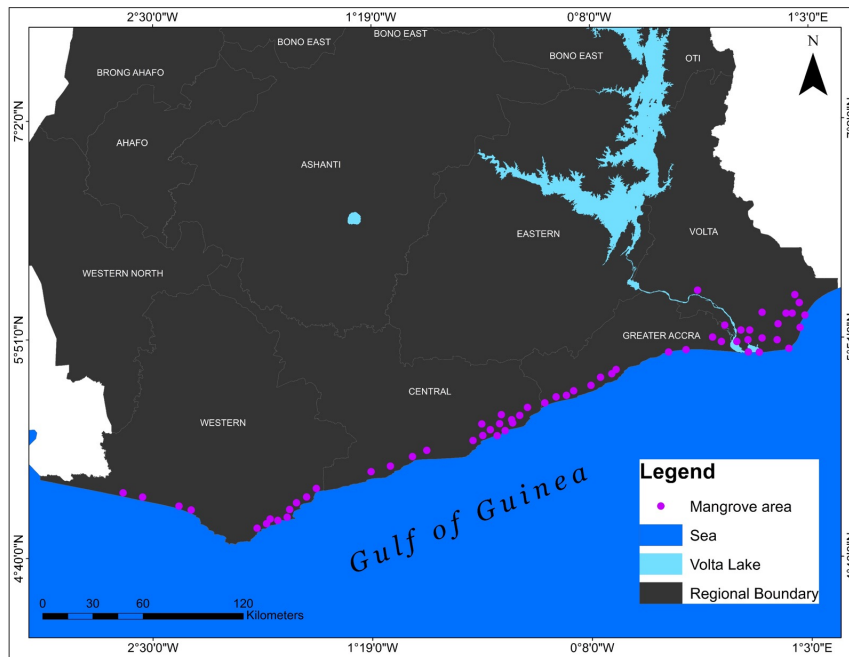


Figure 1. Map of the coastal regions of Ghana showing the location of mangrove area





Background and Problem

- Mangroves declining worldwide; driven by human activities (Yevugah *et al.*, 2016)
- Studies in Ghana have identified similar problem (Yevugah *et al.*, 2017; Ashiagbor *et al.*, 2021; Kutir *et al.*, 2022)





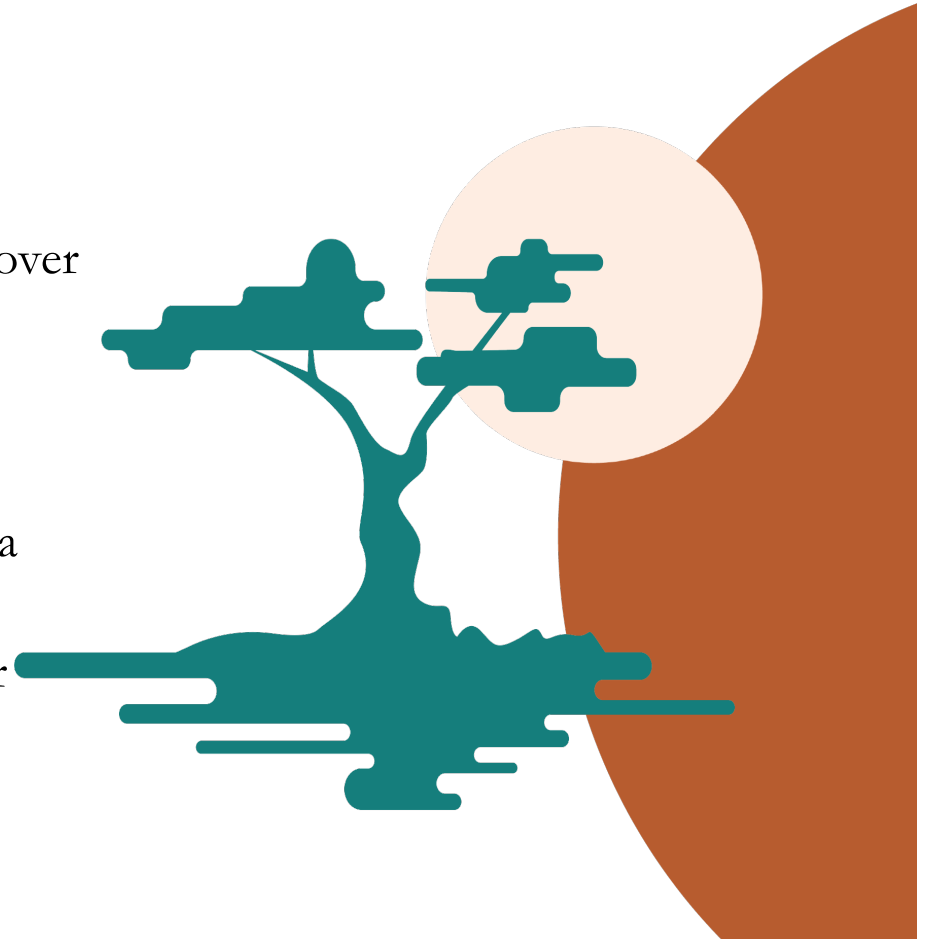
Aim and Objectives

Aim

- To establish the trend in changes in mangrove cover of Ghana between 2015 and 2021

Objectives

- To map mangroves along the coastline of Ghana using RS and GIS.
- To estimate extent of change in mangrove cover along the coastline of Ghana.



Methodology

- Field data collection and observation was done to collect GPS location of individual classes.
- Satellite image used was Sentinel 1 data (Ashiagbor et al., 2021).
- Google earth engine cloud base software was used (Gorelick et al., 2017).
- The classification was done using Otsu thresholding (Akagic et al., 2018).

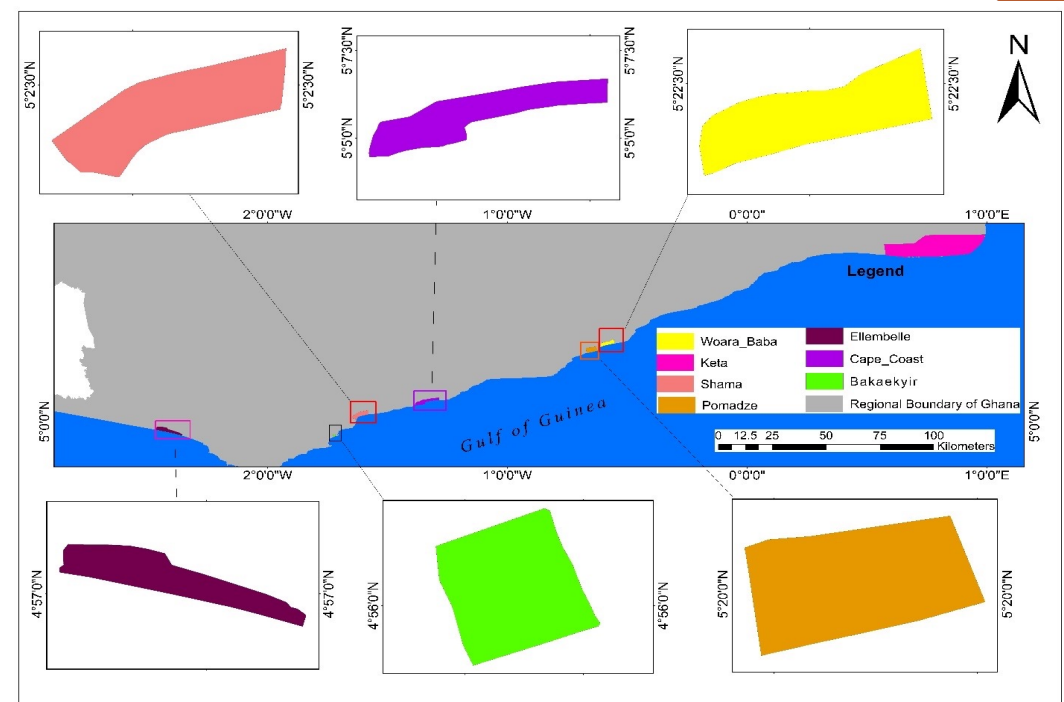
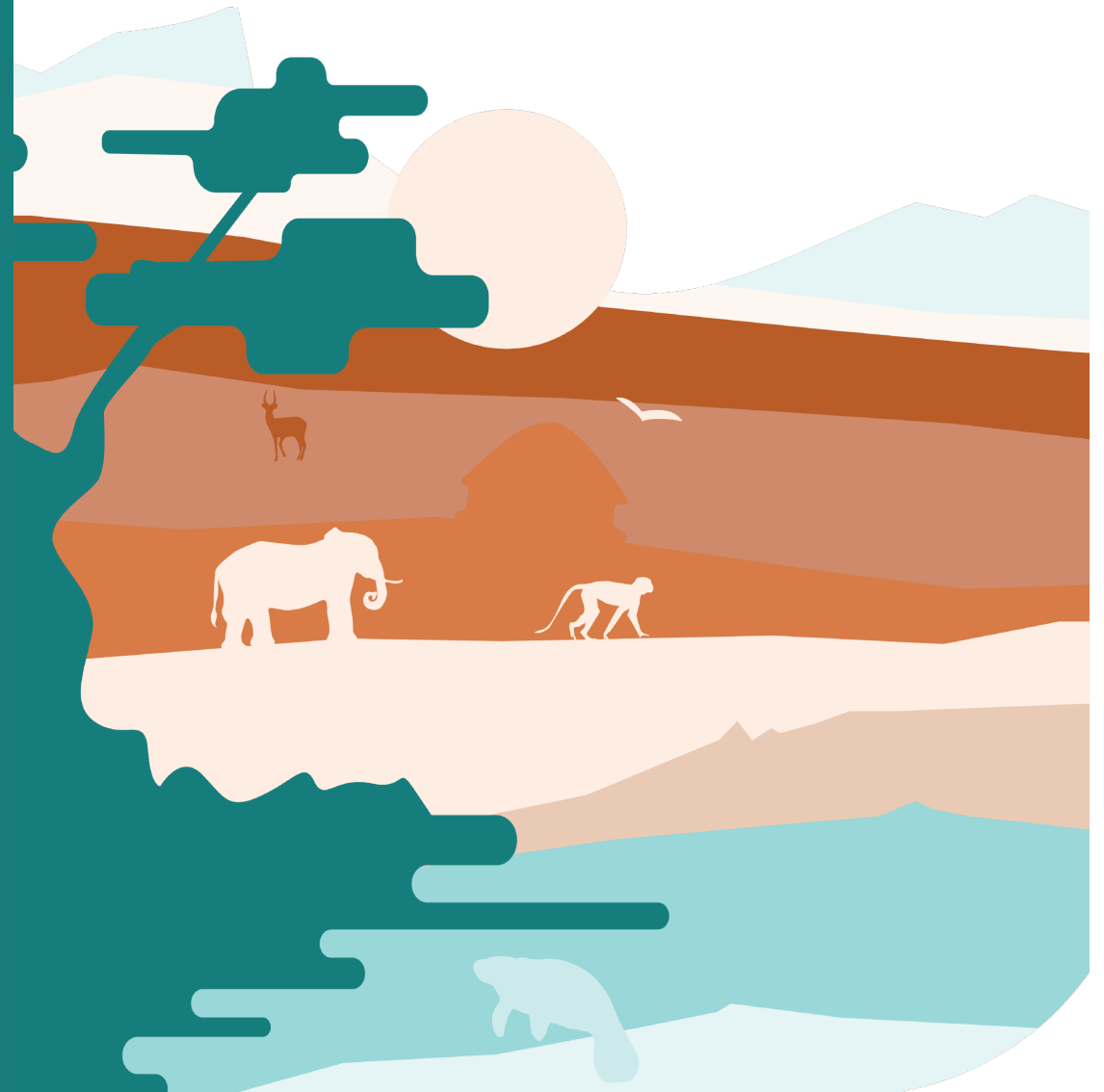


Figure 2. Seven study areas along the Ghanaian coastline



Results



Results – mangrove cover between 2015 and 2021

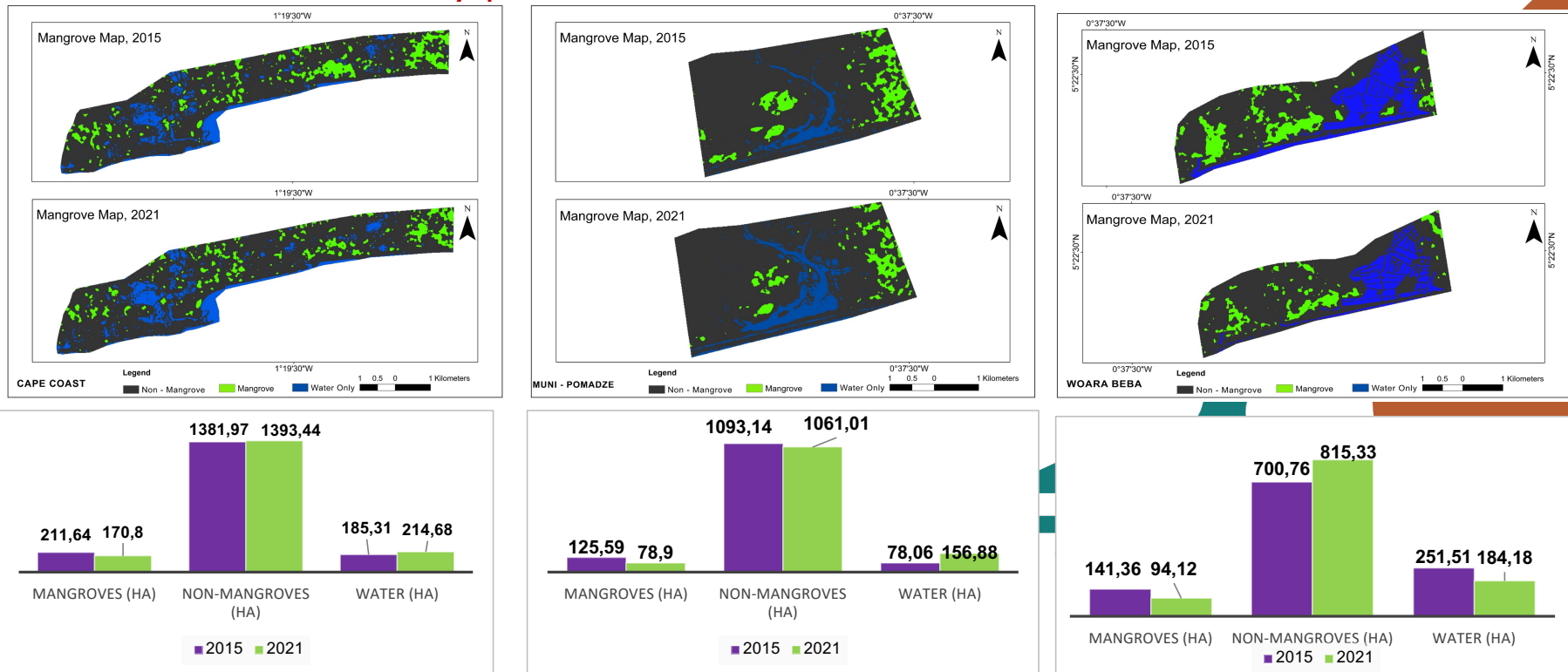


Figure 3a. Extent of mangrove cover along coastline of Ghana for 2015 and 2021

Results – mangrove cover between 2015 and 2021

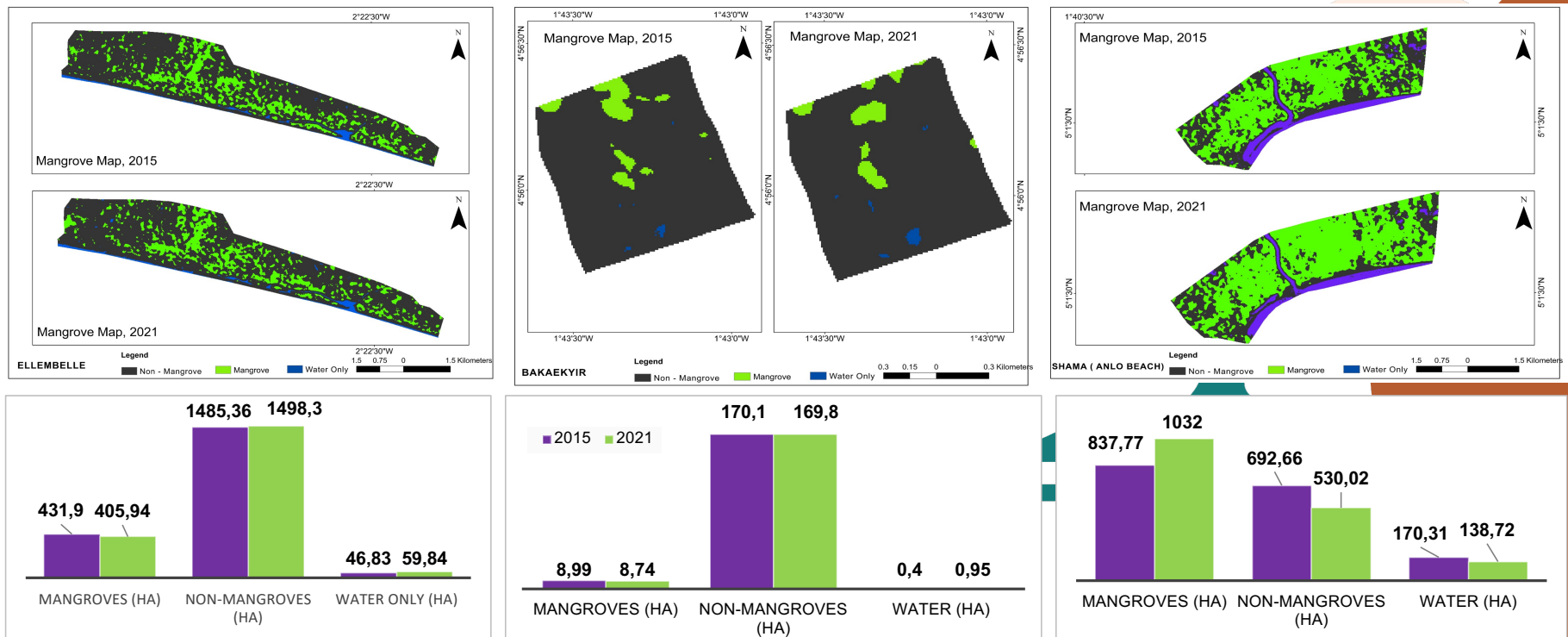


Figure 3b. Extent of mangrove cover along coastline of Ghana for 2015 and 2021



Results – mangrove cover between 2015 and 2021

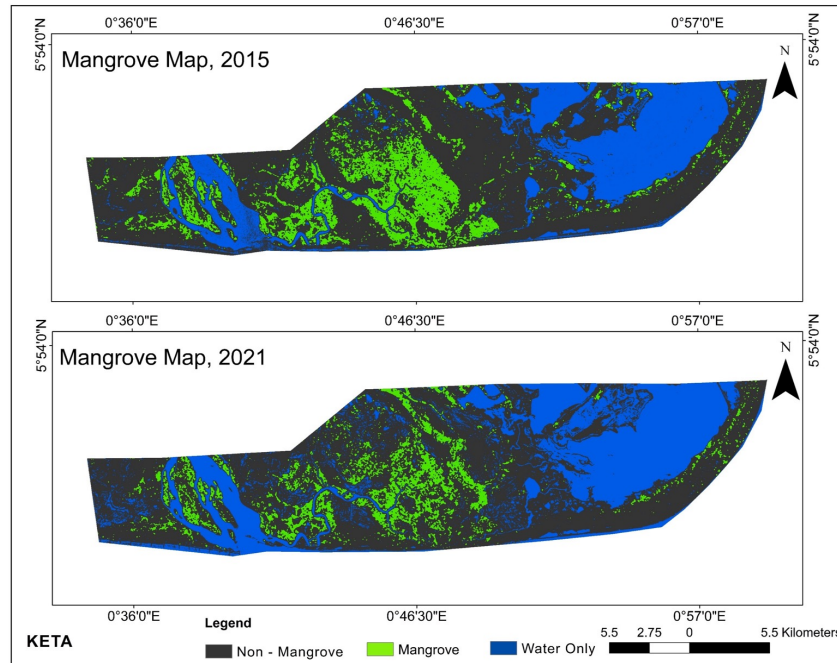


Figure 4a. Extent of mangrove cover at Keta, Ghana, 2015 and 2021

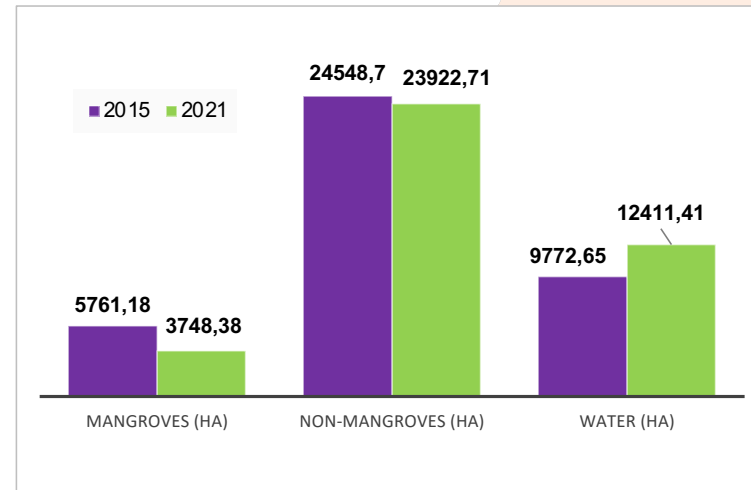


Figure 4b. Area coverage of mangrove at Keta, Ghana, 2015 and 2021.



Results – changes between 2015 and 2021

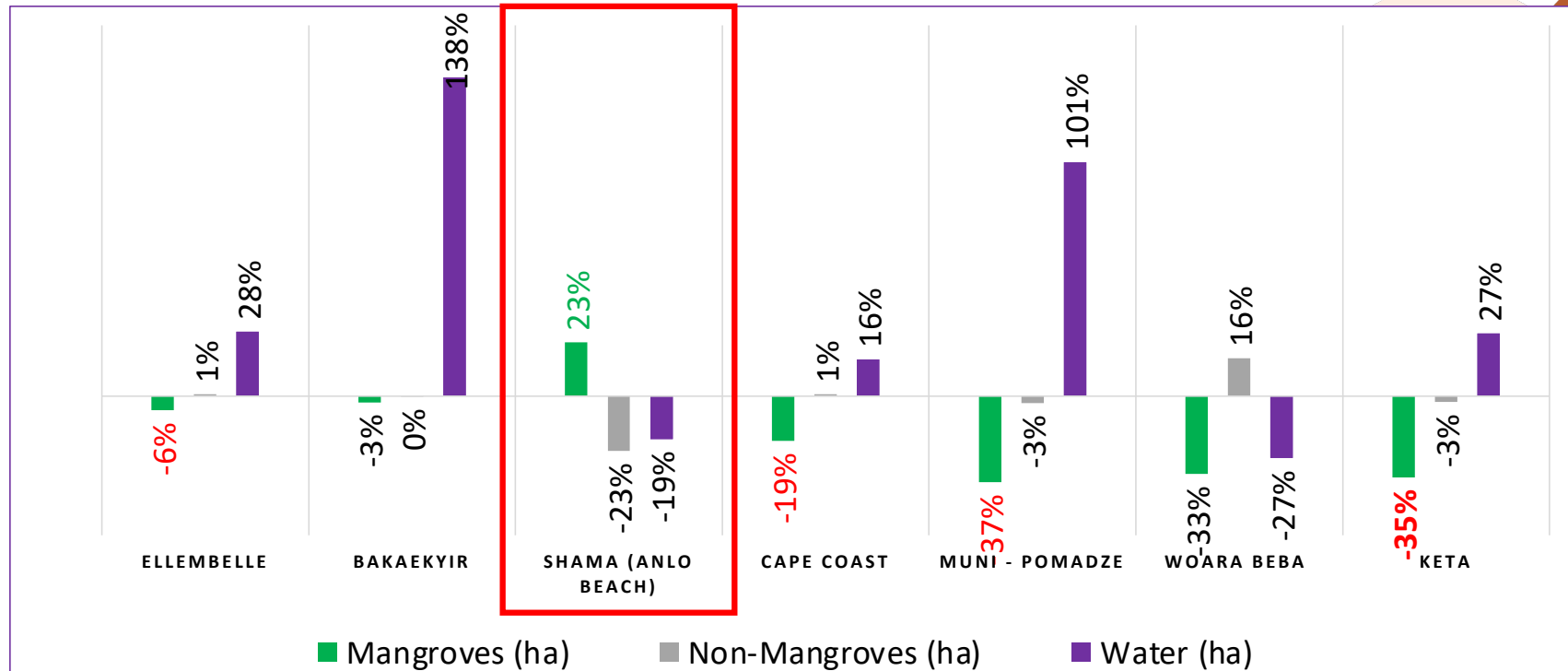
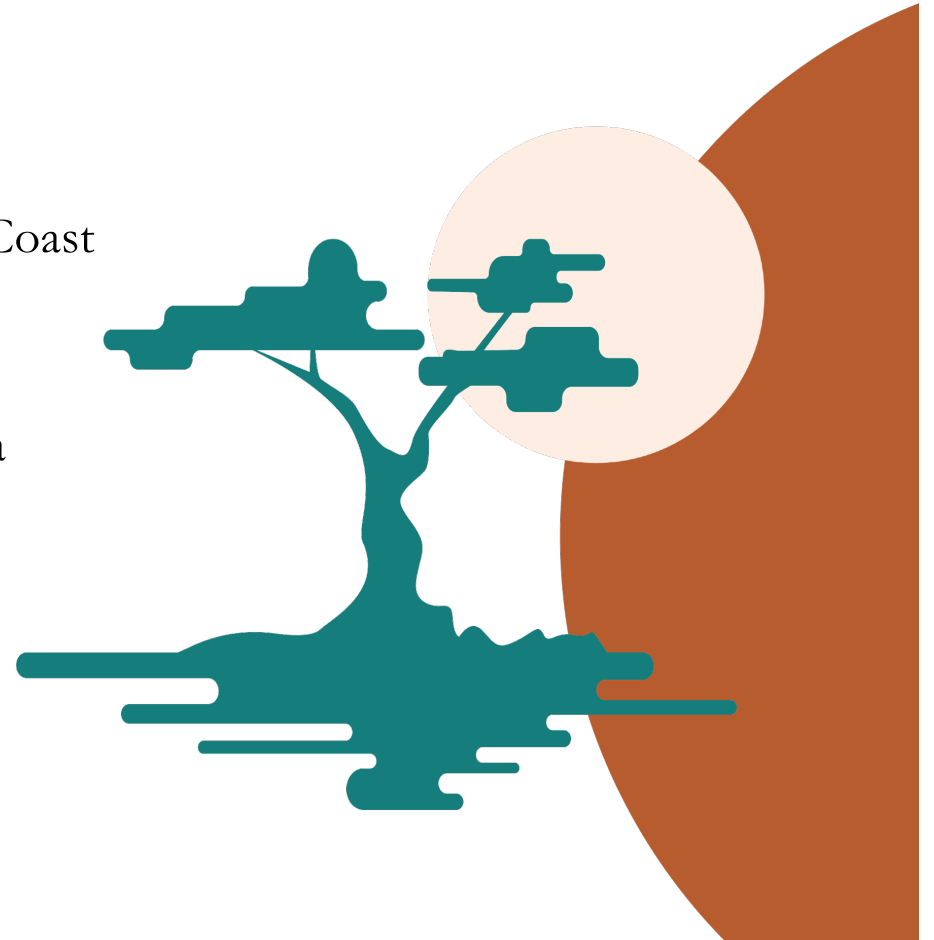


Figure 5: Percentage change in mangrove cover, 2015 and 2021



Conclusion

- Significant decrease in mangrove cover in Keta, Ellembelle, Woara Beba, Muni Pomadze, Cape Coast
 - Human activities driving the decline
- Moderate increase in mangrove cover in Sharma
 - Restoration projects being implemented by NGOs





References

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