



**GMES  
AND AFRICA**



Global Monitoring for Environment and Security and Africa (GMES & Africa)



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Study Area Keta lagoon Ramsar site in the Volta Region of Ghana

**Topic : COMPARISON OF DIFFERENT VEGETATION INDICES FOR ASSESSING MANGROVE DENSITY IN GOOGLE EARTH ENGINE( GEE )CASE STUDY KETA LAGOON COMPLEX RAMSAR SITE**

### **SUMMARY OF THE RESEARCH TOPIC**

Mangroves in West Africa represent about 13 percent of mangrove forests worldwide and cover more than 2.4 million hectares in 19 countries, including Nigeria and Guinea Bissau which are two of the world's most mangrove-rich countries.

Over the years several indices have been developed in remote sensing in mapping the different vegetation types, but the still persist some difficulties in differentiating mangroves from other vegetation especially in areas where the vegetation types are mixed. The main of this research focuses on:

- ▶ Finding the best index or indices to measure the density of mangrove and get an accuracy of at least 70%
- ▶ And secondly if possible develop a vegetation index to map out the mangroves the case study being the Keta Lagoon Complex Ramsar site Ghana.

This research is going to use Optical Satellite images Sentinel 2 which resolution is 10m for the year 2019 for all the analyses in Google Earth Engine some indices that will be explored are NDVI, CMRI, MMRI.