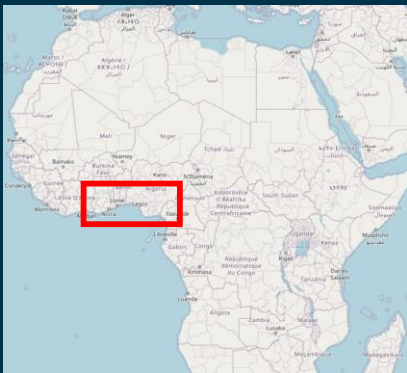


West Africa Lake Monitoring System (WALMOST)



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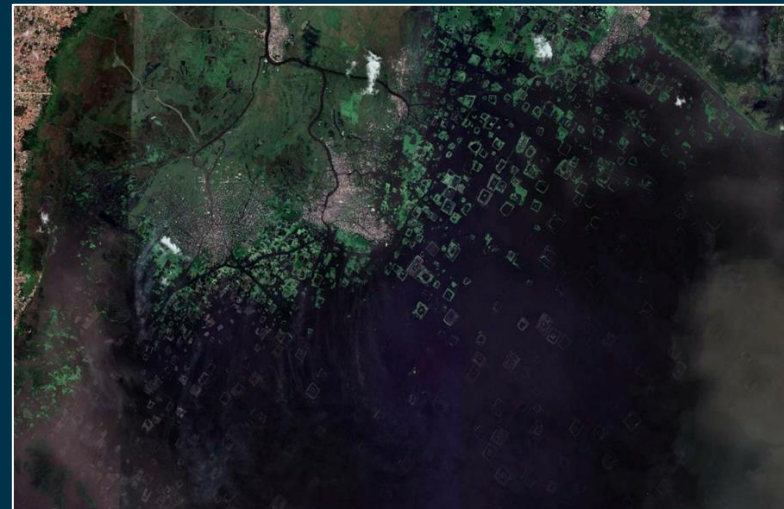
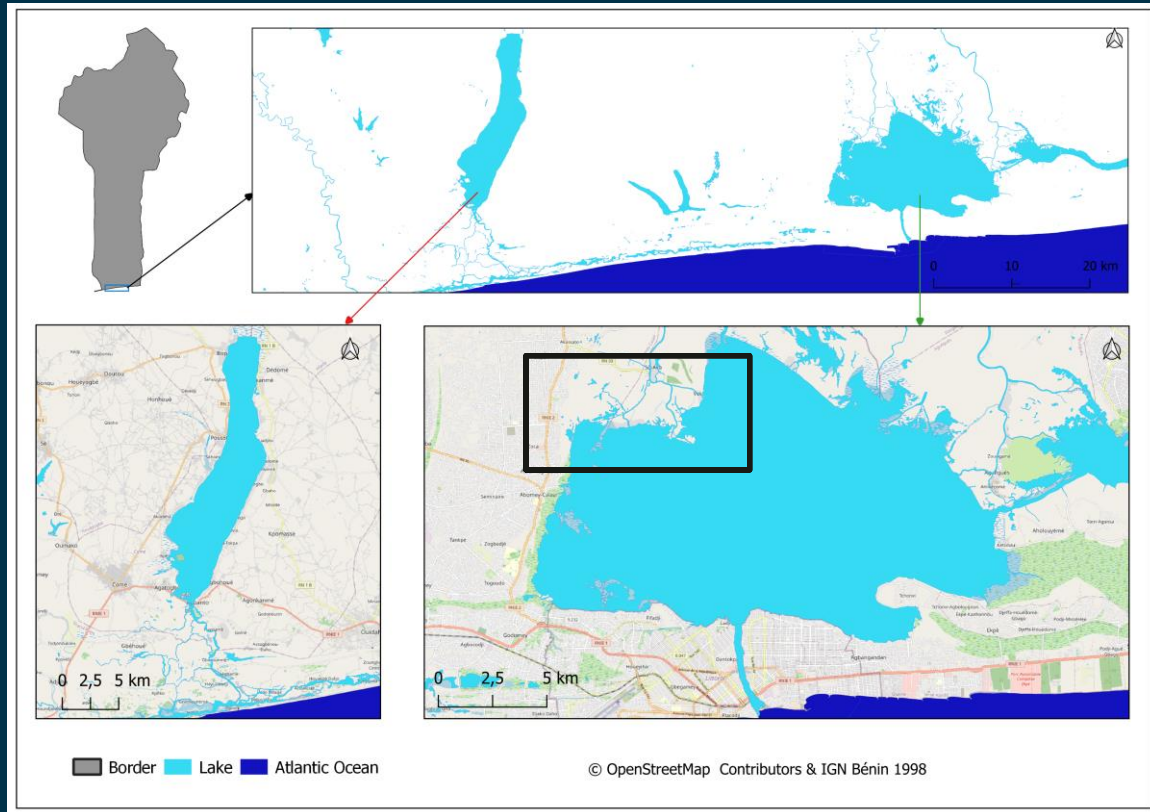
Scientific Background and Objectives



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- The study sites are lake Ahémé and lake Nokoué (Benin)
- Representative area of the conditions in West Africa lakes
- Two main phase with different environmental conditions
 - *High water period* (Sep to Nov) : - high nutrient input, high Chl-a - high water hyacinth - low use of acadja
 - *Low water period* : (Dec to Jul) : - internal nutrient recycling - low Chl-a - low water hyacinth - high use of acadja.



Development of the monitoring system (dashboard) includes 4 major points

- Detection of water hyacinth
- Detection of acadjas
- Detection of Chl-a
- Mapping of fish habitats

Supervised classification using Sentinel 1 and 2 images

Develop a qualitative fish habitats indicator, combining the 3 components

- Combining both SAR and optical data. SAR backscatter because :
 - not hampered by clouds and
 - has the potential to separate water from other objects in lakes
- Including indices : NDVI and others
- Based on previous research on the lake

Data source

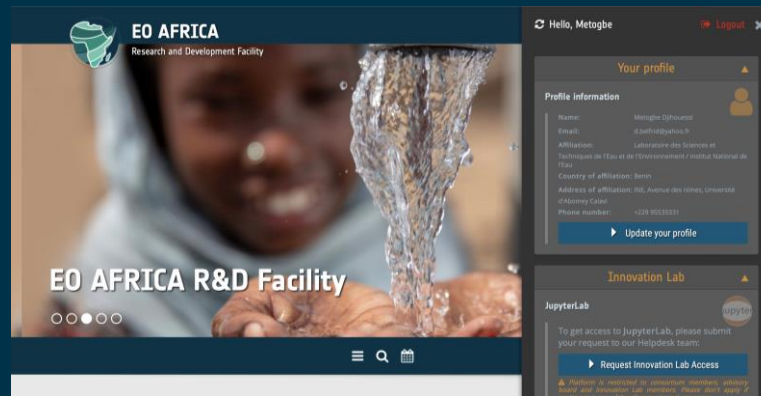
- Historical data from local institutions
- Additional field data will be collected

Calibration / validation / coding

- Innovation lab (calculation infrastructure)
- Coding in Jupiter Note

Dashboard development

- Innovation lab
- Involvement of stakeholders in the design of the dashboard





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