



Digital Earth
AFRICA

The future of global river health monitoring

***Perspective on digital
solutions***

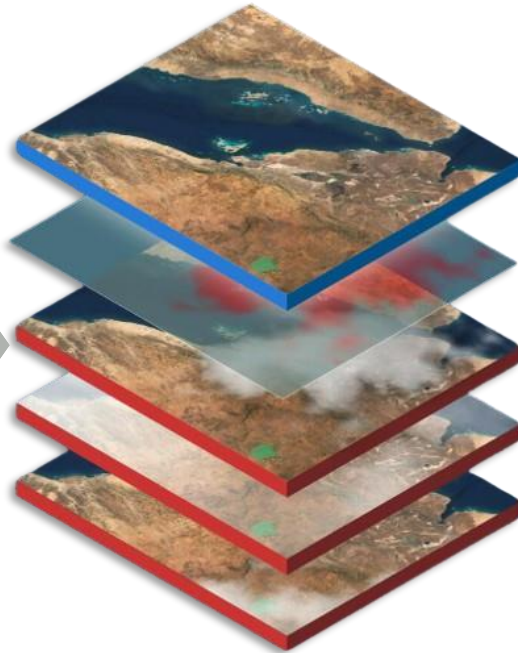
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EO for river health monitoring

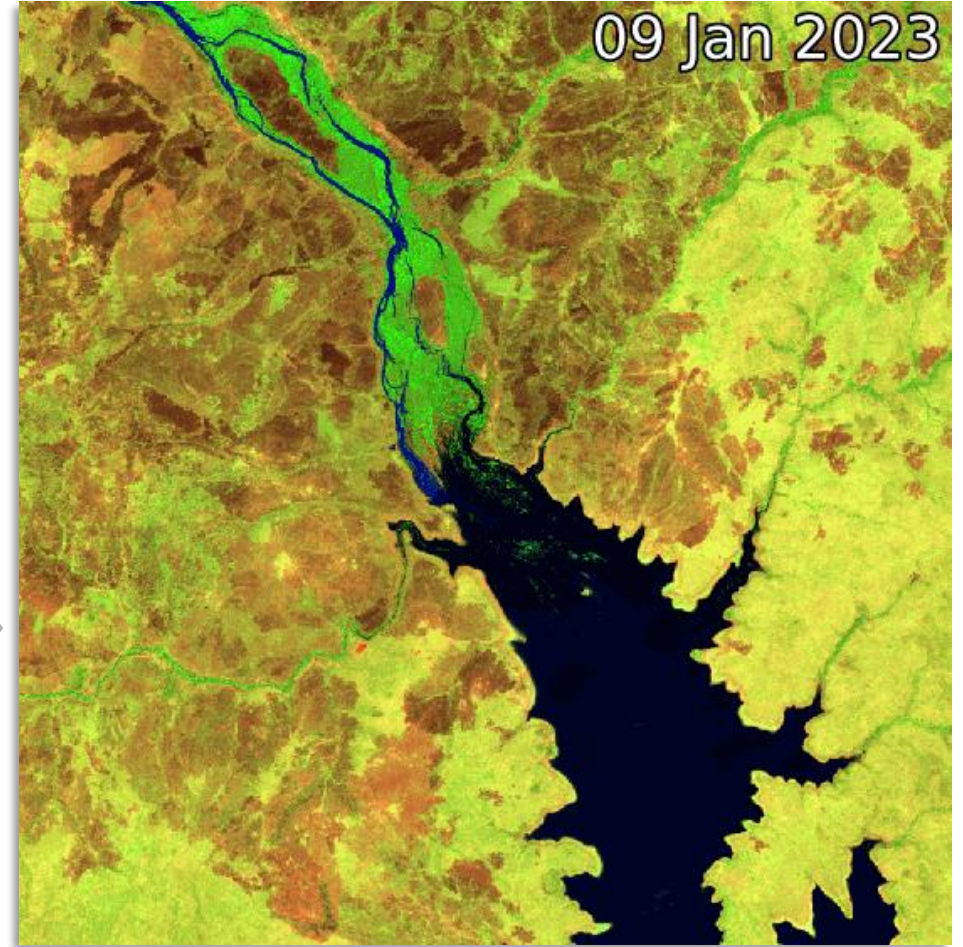
- EO fills gaps where in-situ data is limited or unavailable.



Near-global coverage



Time series data



Track river dynamics

Credit: Black Volta River, Ghana - Contains modified USGS Landsat data, processed by Digital Earth Africa. 2

River health proxies

EO cannot directly measure biodiversity, but can assess conditions and environmental factors



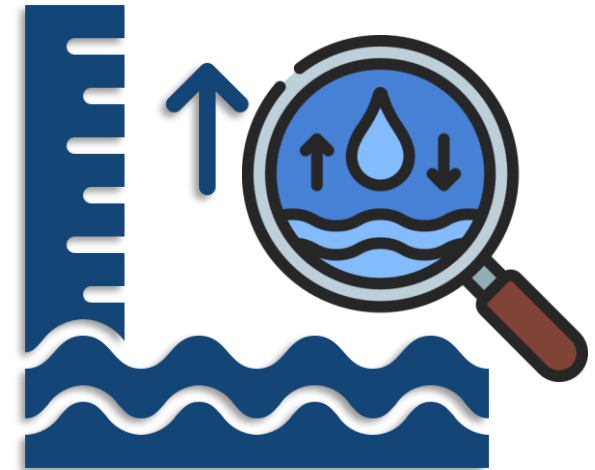
Water quality indicators

Chlorophyll
Turbidity
Temperature



Physical habitat indicators

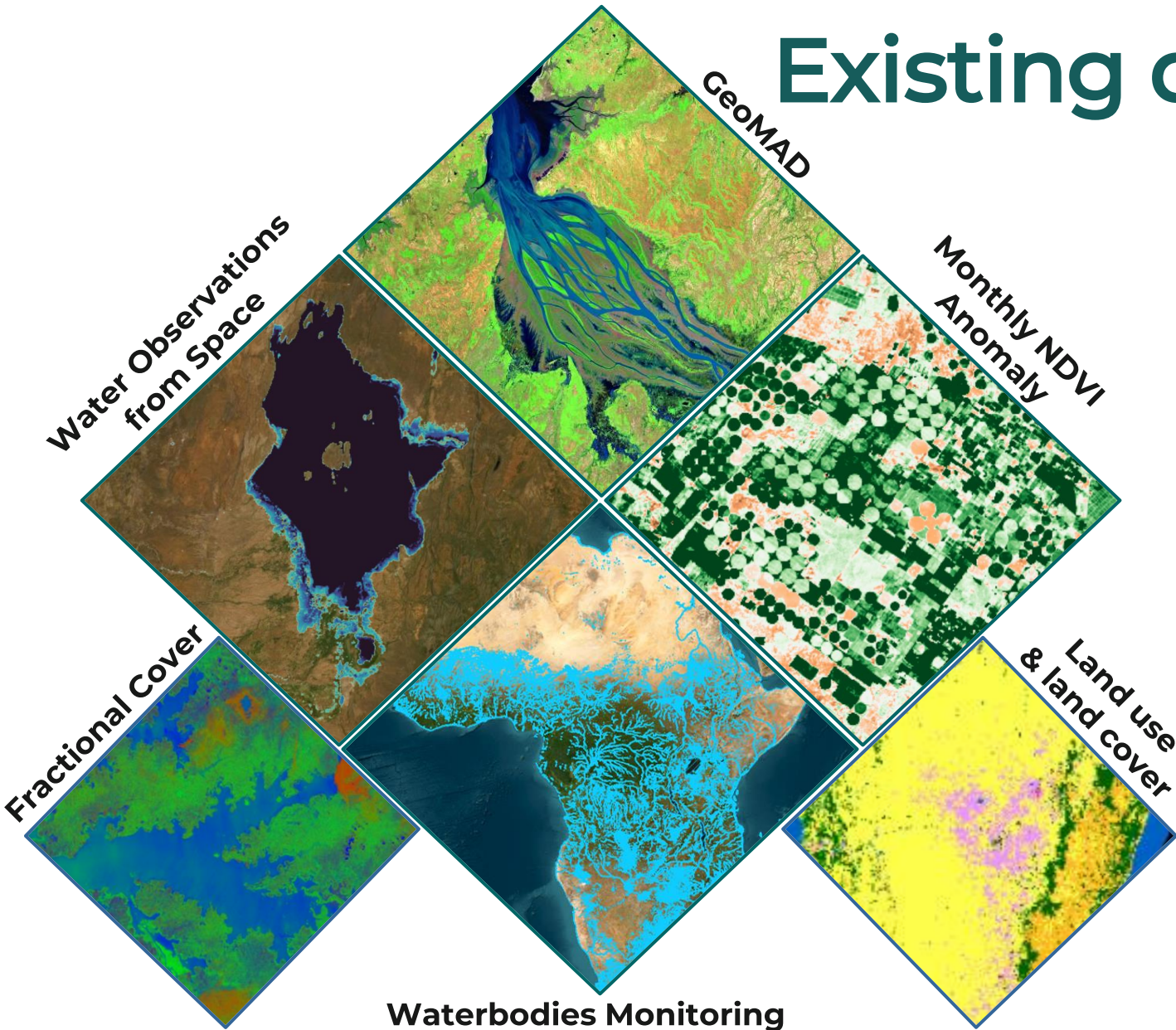
River channel morphology
Riparian vegetation cover
Land use & land cover change



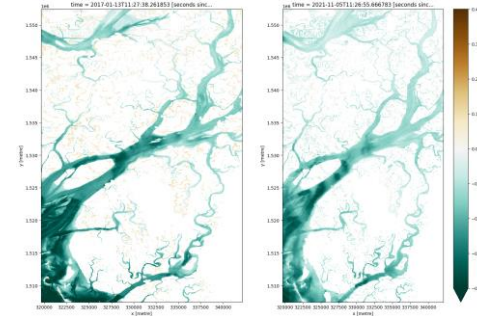
Hydrological indicators

Surface water extent
Flow regime

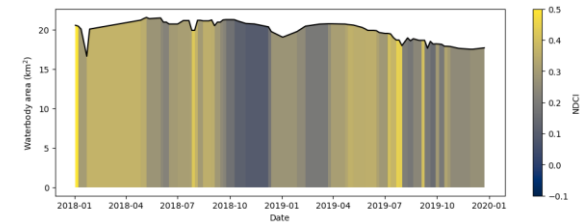
Existing datasets



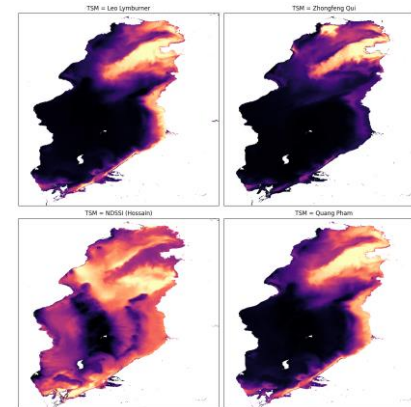
Turbidity



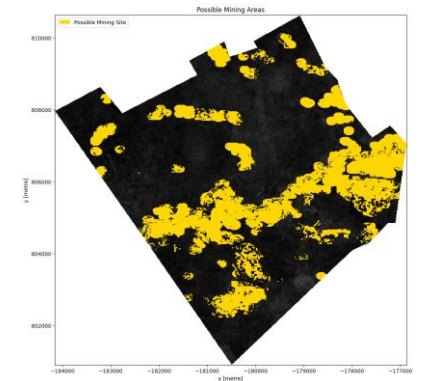
Chlorophyll-a



Suspended matter

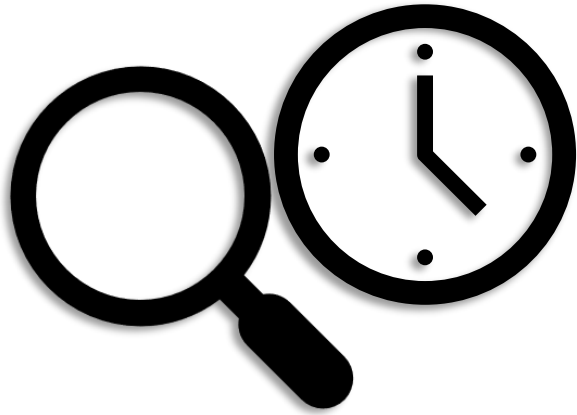


Surface Mining Screening



Limitations of EO

Understanding limitations of EO data is essential for effective river health monitoring



Spatial & temporal
resolution



Cloud cover and weather
interference



Validation required

Thank You!

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