

I chose the Horn of Africa, in the East African Rift, as my location. The reason I chose this location is that its coasts are washed by the Red Sea and the Indian Ocean, and its mainland is the fourth-largest peninsula in the world <sup>[1]</sup>. It is also a place of great geopolitical importance because of its Southern boundary, the Red Sea. It is also a vital oil trade checkpoint with much vessel traffic from the Middle East <sup>[2][3]</sup>.

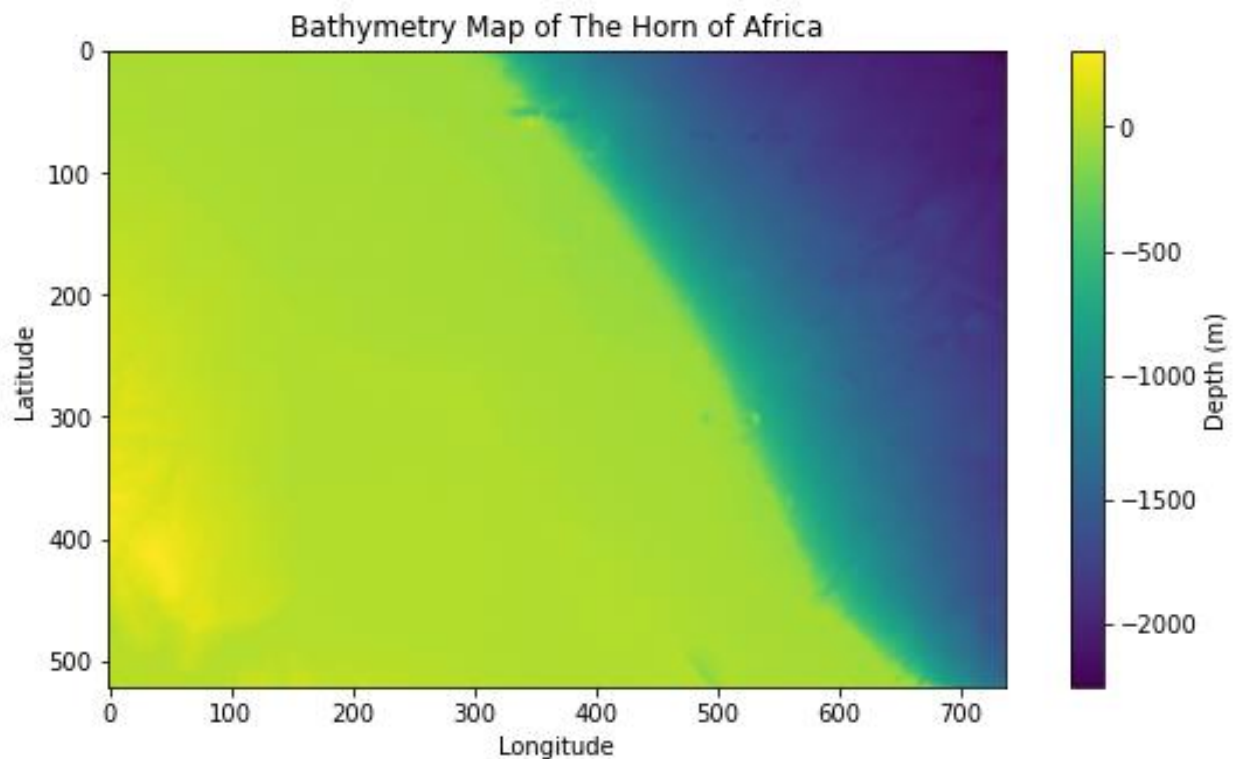


Figure 1. Bathymetric map of the Horn of Africa in the East African Rift.

1. "Three important oil trade chokepoints are located around the Arabian Peninsula - U.S. Energy Information Administration (EIA)". [www.eia.gov](https://www.eia.gov). Retrieved 6 April 2024.
2. "Red Sea chokepoints are critical for international oil and natural gas flows - U.S. Energy Information Administration (EIA)". [www.eia.gov](https://www.eia.gov). Retrieved 6 April 2024.
3. "Horn of Africa | Countries, Map, & Facts | Britannica". [www.britannica.com](https://www.britannica.com). Retrieved 6 April 2024.

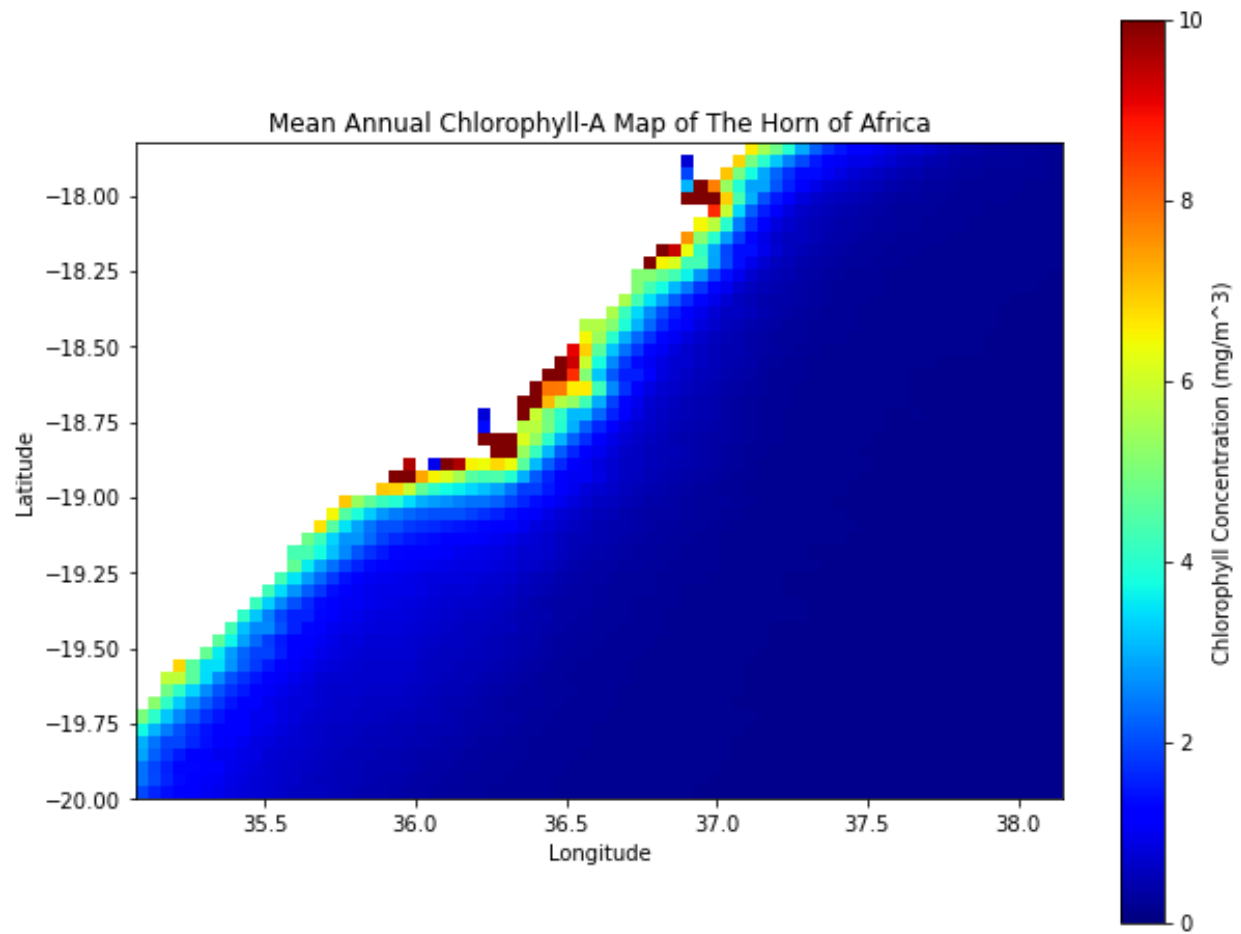


Figure 2. Mean annual chlorophyll-a levels along the Horn of Africa coastline in the East African Rift

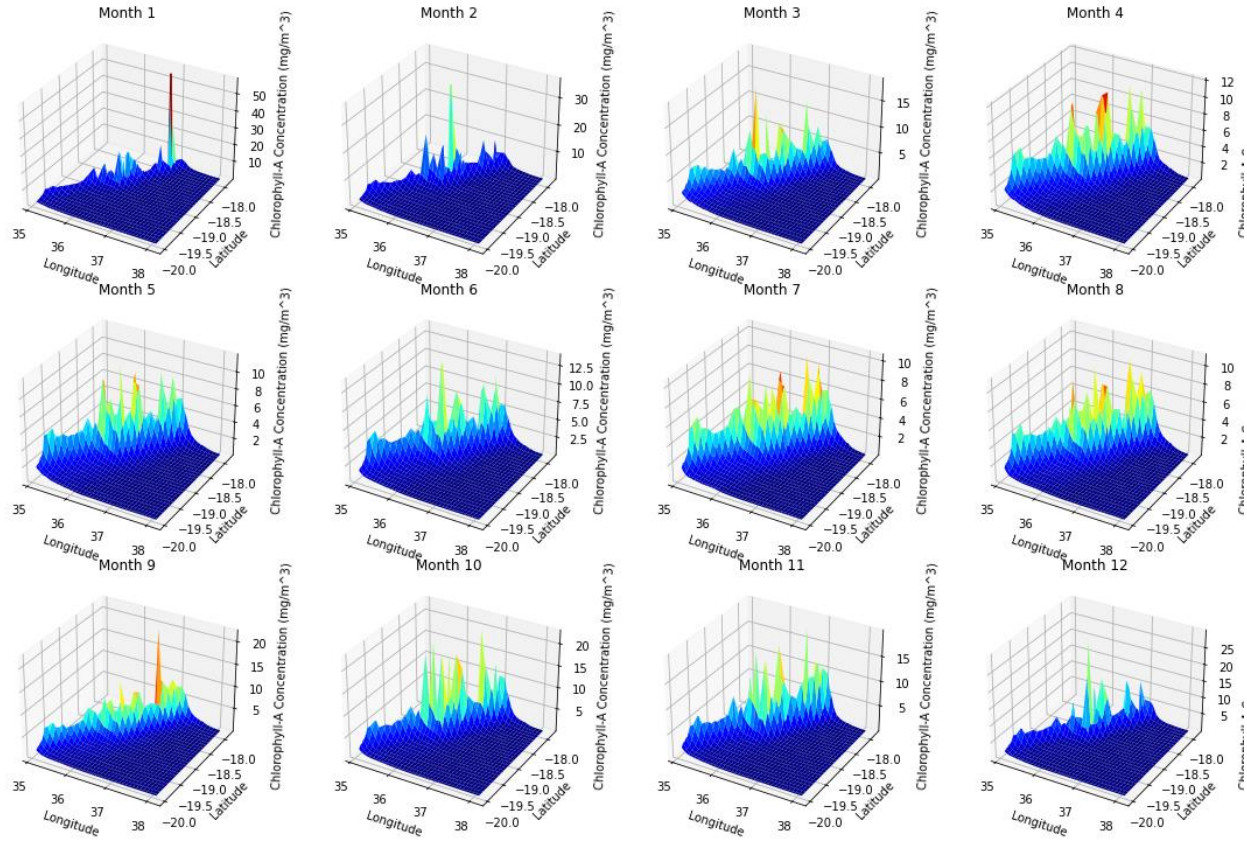


Figure 3. Representation of the annual chlorophyll-a concentration levels ( $\text{mg}/\text{m}^3$ ) along the coastline of the Horn of Africa in the East African Rift,

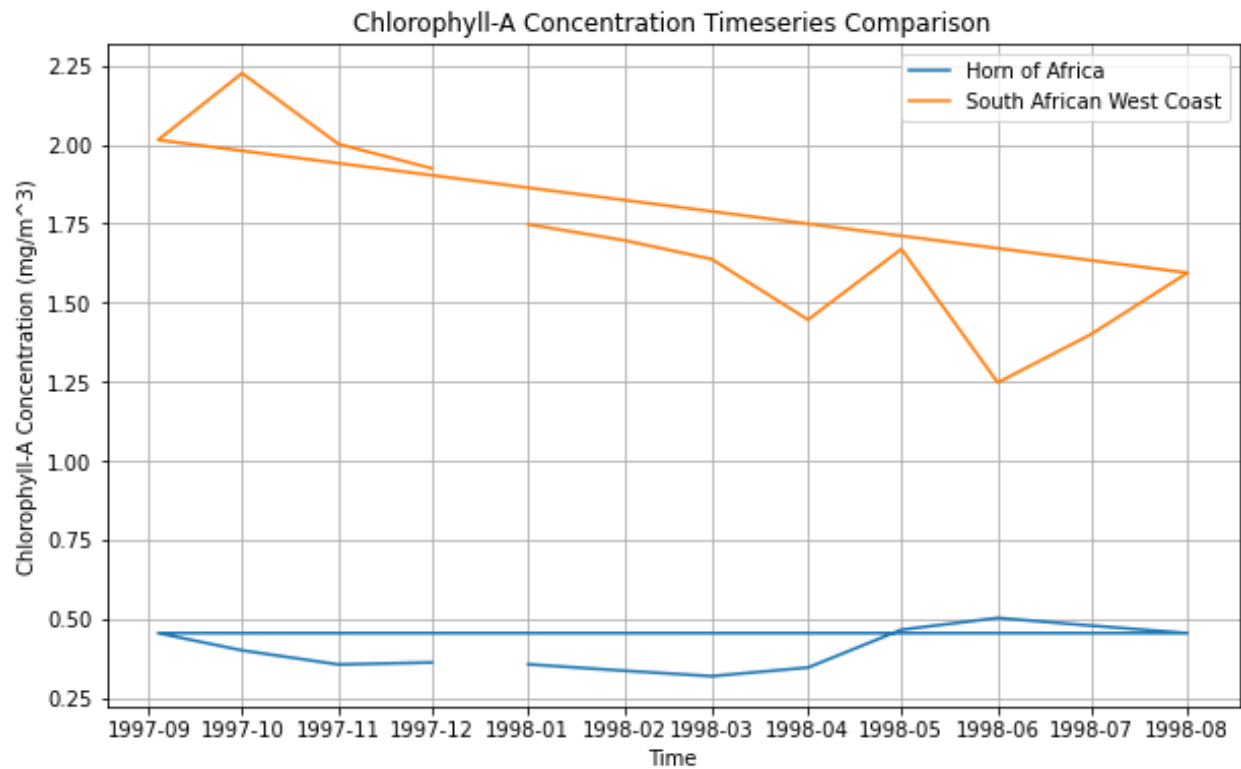


Figure 4. A time-series representation of the mean seasonal cycle of the entire region in the Horn of Africa in the East African Rift compared with a point in the Benguela region along South Africa's West Coast, looking at chlorophyll-a concentrations ( $\text{mg/m}^3$ ).