Erosion and Climate Change Challenges: Anambra State Nigeria, Case Study

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Anambra State lies between latitude 5° 42’ and 6° 47’ North of the equator and longitude 6° 37’ and 7° 23’ East of Greenwich Meridian.

The total land area is about 44,116km².
Climate Change Challenges in Anambra State

- **Heavy rains**
The mean annual rainfall varies from 1,856mm to over 3,500mm

- **Floods**
Extreme hydrological (runoff) events due to heavy rains

- **Erosions**
Soil erosion due to climate-induced flooding constitutes the major ecological challenge of the state
The topographic features of the area distinctly influence erosion potential. The region has most areas with pronounced rolling highly terrain, with long steep slopes that enhance runoff velocity which gather momentum to produce force that speedily detach and transport soil particles, which results in gullies.

Emmanuel et al 2015
The soil type of the study area is porous, with the soil particles being loose not compacted, thus making them easily detachable. The nature of the soil accelerates the process of erosion when exposed to external forces such as flooding and human disturbances.
- 1769.52 km² of the land area or 40.1% are severely gullied
- 1316.58 km² or 27.8% are moderately gullied
- 1416.12 km² or 32.1% are mildly gullied
- The state constitute 65% of the gully erosion incidence in the country
Major/Active Gully Erosion Sites

A displaced community in Nanka

A section of Nanka Gully site

Highway cut off by gully erosion at Ekwulobia

Erosion site at Obosi
Anthropogenic Factors: Population

Anambra State has one of the highest population density in Nigeria and sub-Saharan Africa.
Anthropogenic Factors

Deforestation

Logging

Laterite mining

Intense farming
THANK YOU

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