IAIA17 Conference

Climate Change, Desertification and Land Degradation in Nigeria: The Role of Impact Assessment

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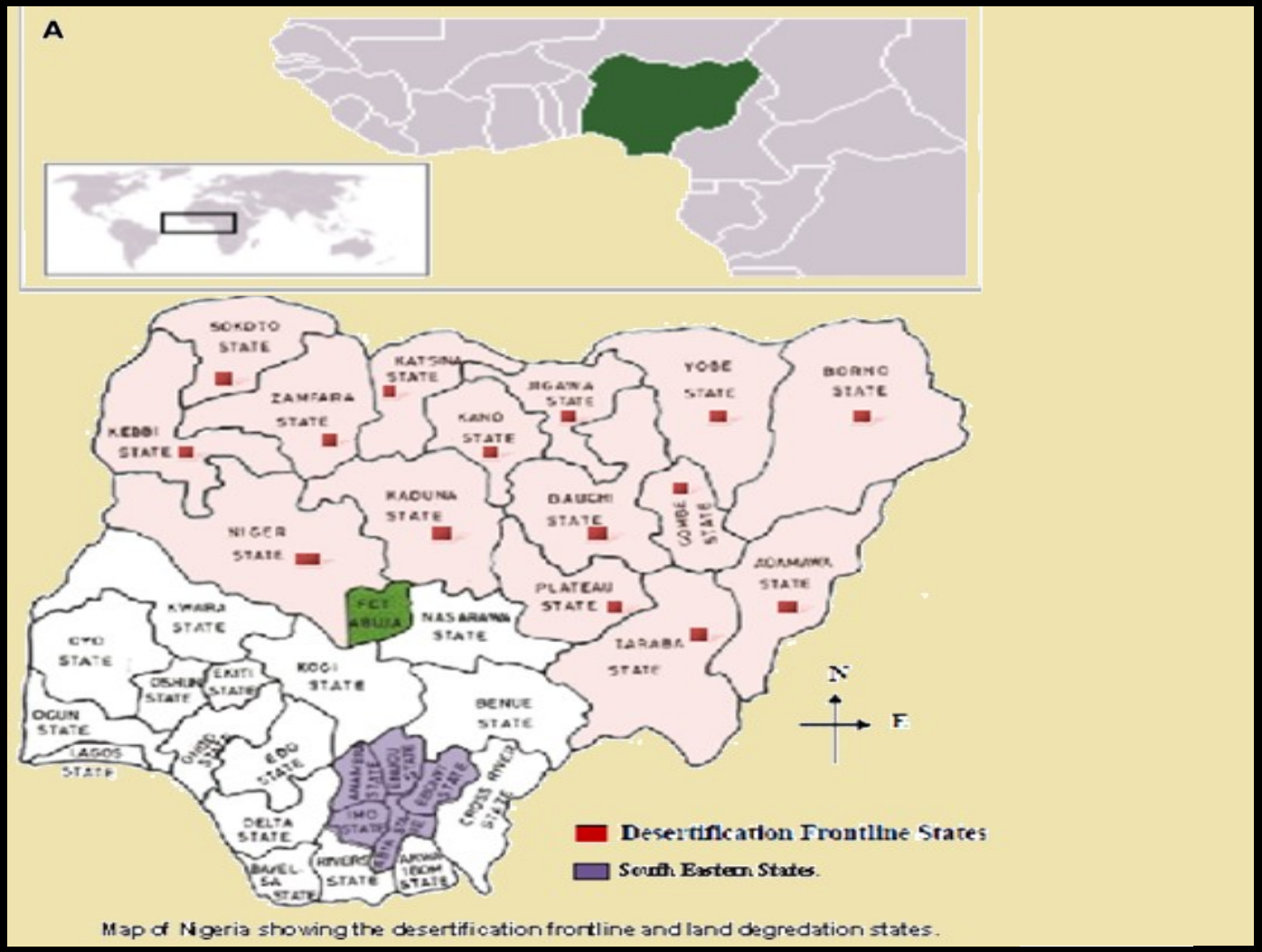
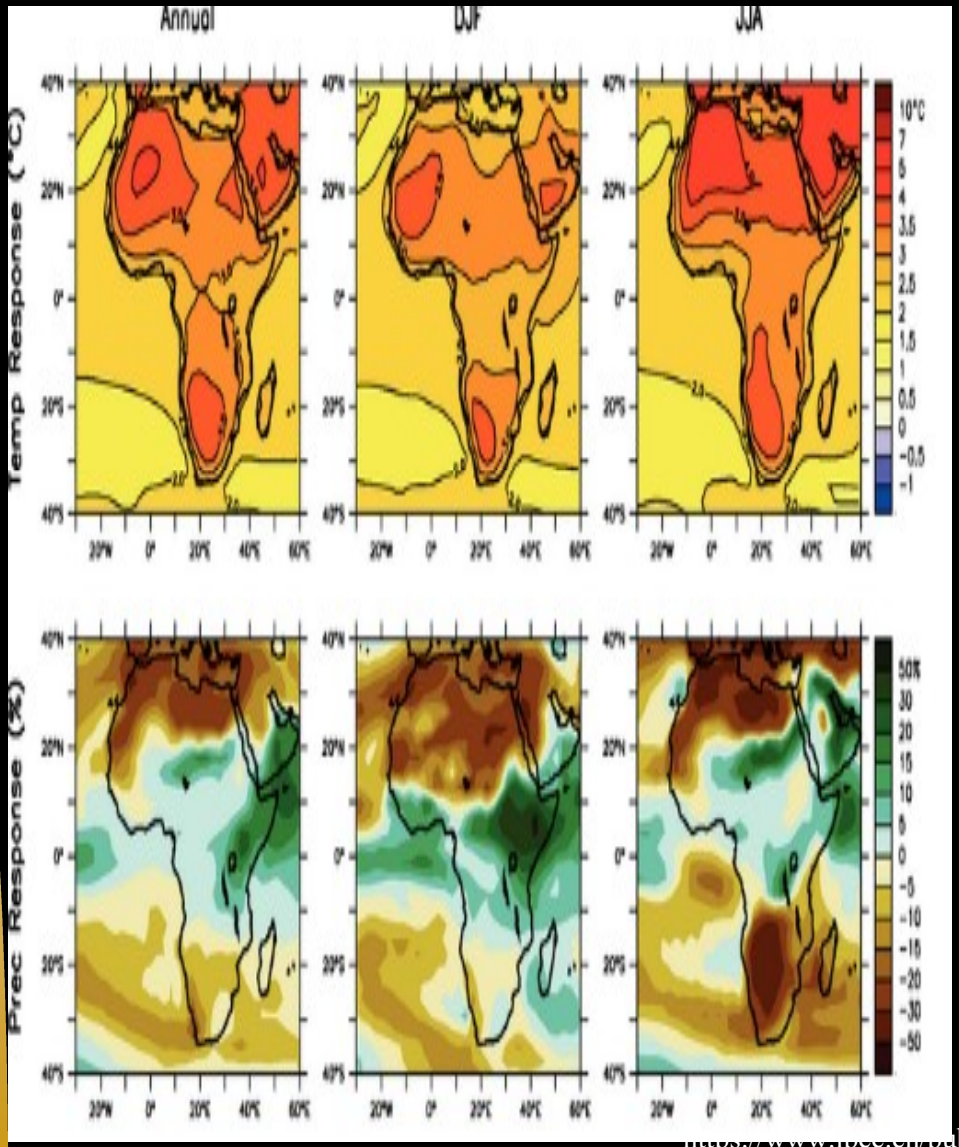
Study area



Map of Nigeria showing the desertification frontline and land degredation states.

- Nigeria lies between latitude 4^0 and 14^0 North of the equator and longitude 2^0 2' and 14^0 30' East of Greenwich Meridian in West Africa.
- The total land area is about 909,890km^2

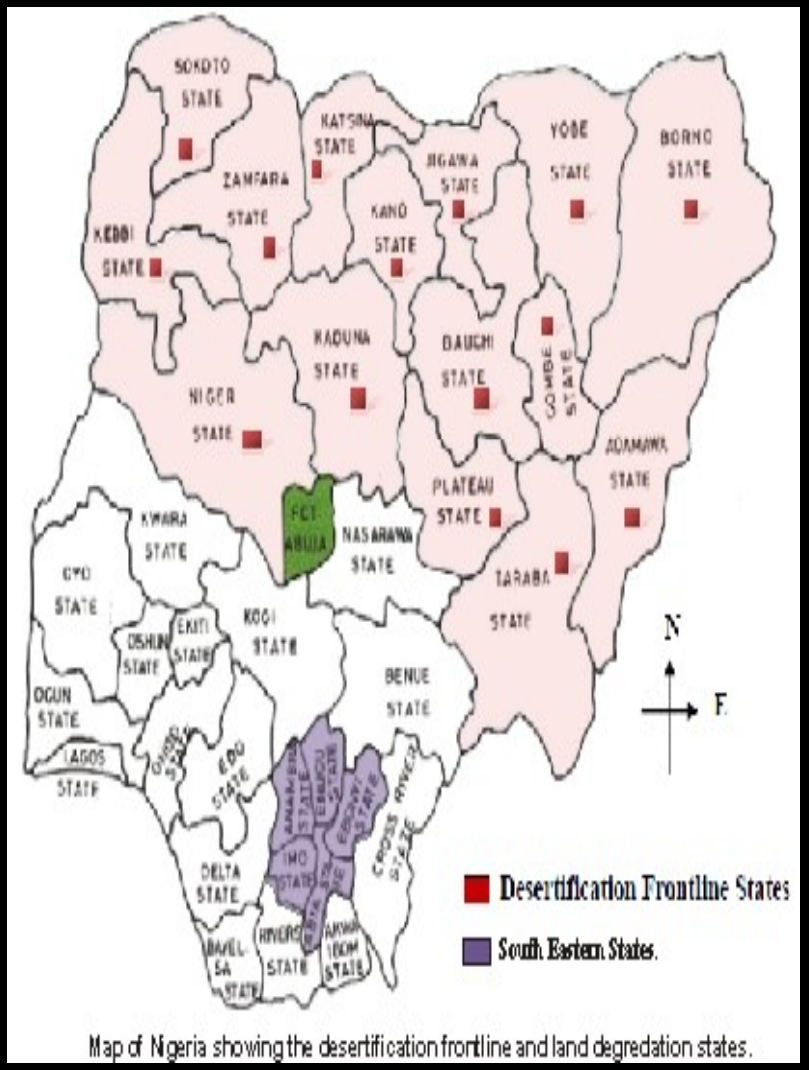
Driver: Climate Change 2007: Working Group I: The Physical Science Basis



Projections from IPCC: Temperature and precipitation changes over Africa from the MMD-A1B simulations. Top row: Annual mean, DJF and JJA temperature change between 1980 to 1999 and 2080 to 2099, averaged over 21 models. Middle row: same as top, but for fractional change in precipitation

https://www.ipcc.ch/publications_and_data/ar4/wg1/en/figure-11-2.html
https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch11s11-2-3-2.html

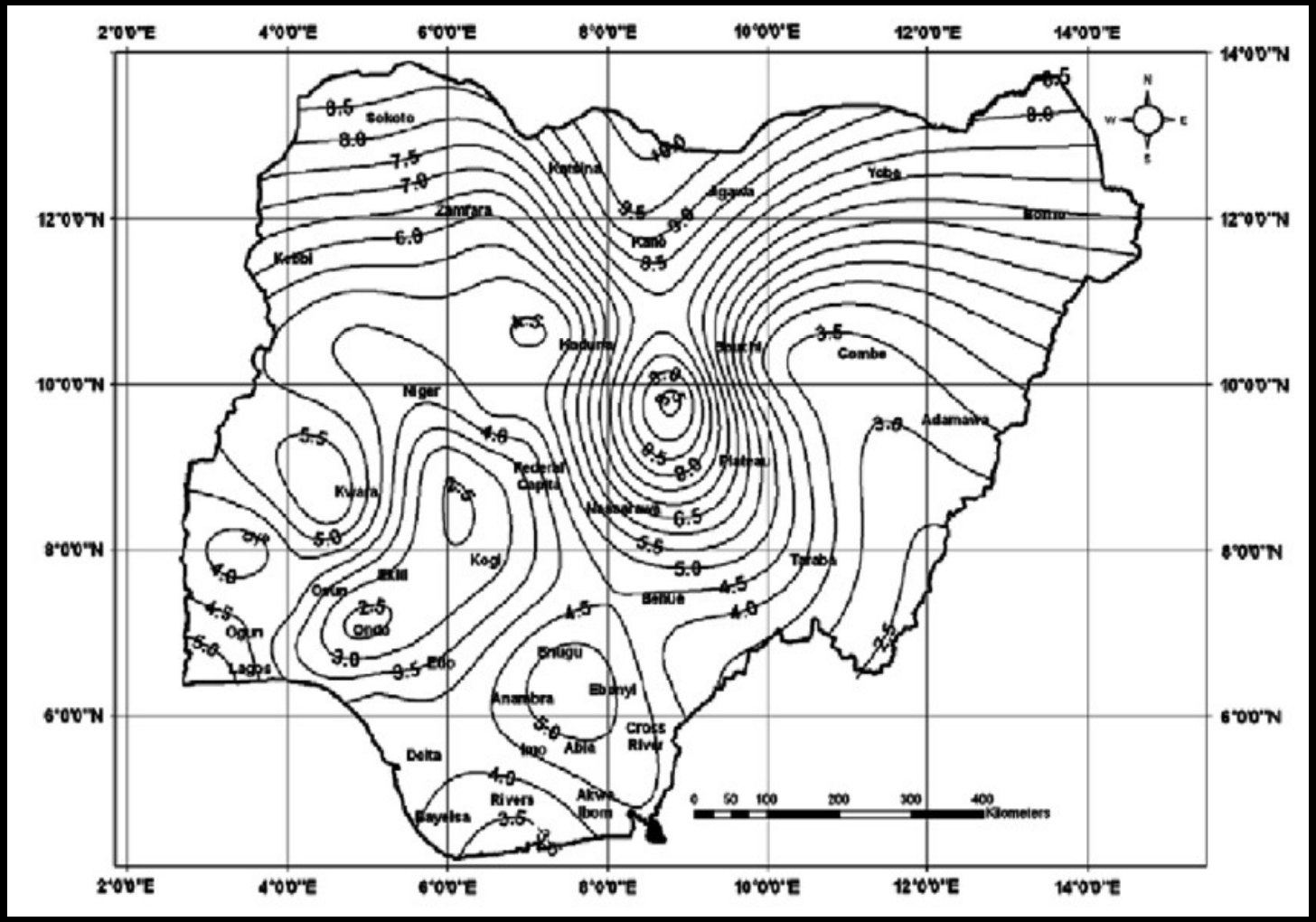
Pressure: drought/desertification



Map of Nigeria showing the desertification frontline and land degredation states.

- The mean annual rainfall in the shale region is less than 600mm, some times 400mm.
- About 351,000 km^2 of 909,890 km^2 are lost to desertification., at the rate of about 0.6km per annum.
- There are 15 desertification frontline states in Nigeria out of the 36 states and the Federal Capital Territory; which accounts for 63.83% of the country's total land area.

Pressure: Wind index



State: Soil moisture

Poor physical conditions of soils and vegetation

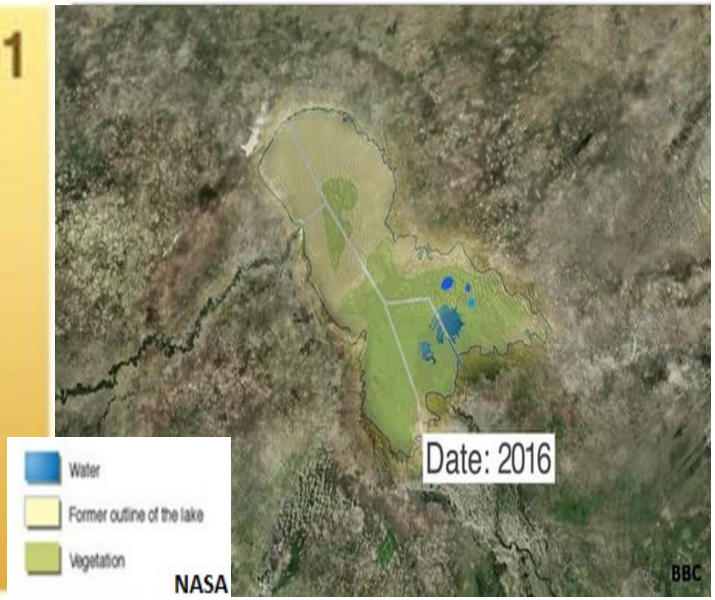
Impacts: Natural - Wind storm/Sand dunes

- Air quality

- Desert encroachment 0.6km/annum

A hut threatened by an active sand dune

Impacts: Natural - drought



Impacts: Natural - drought

A degraded oasis

Impacts: Socio-economic - Conflict

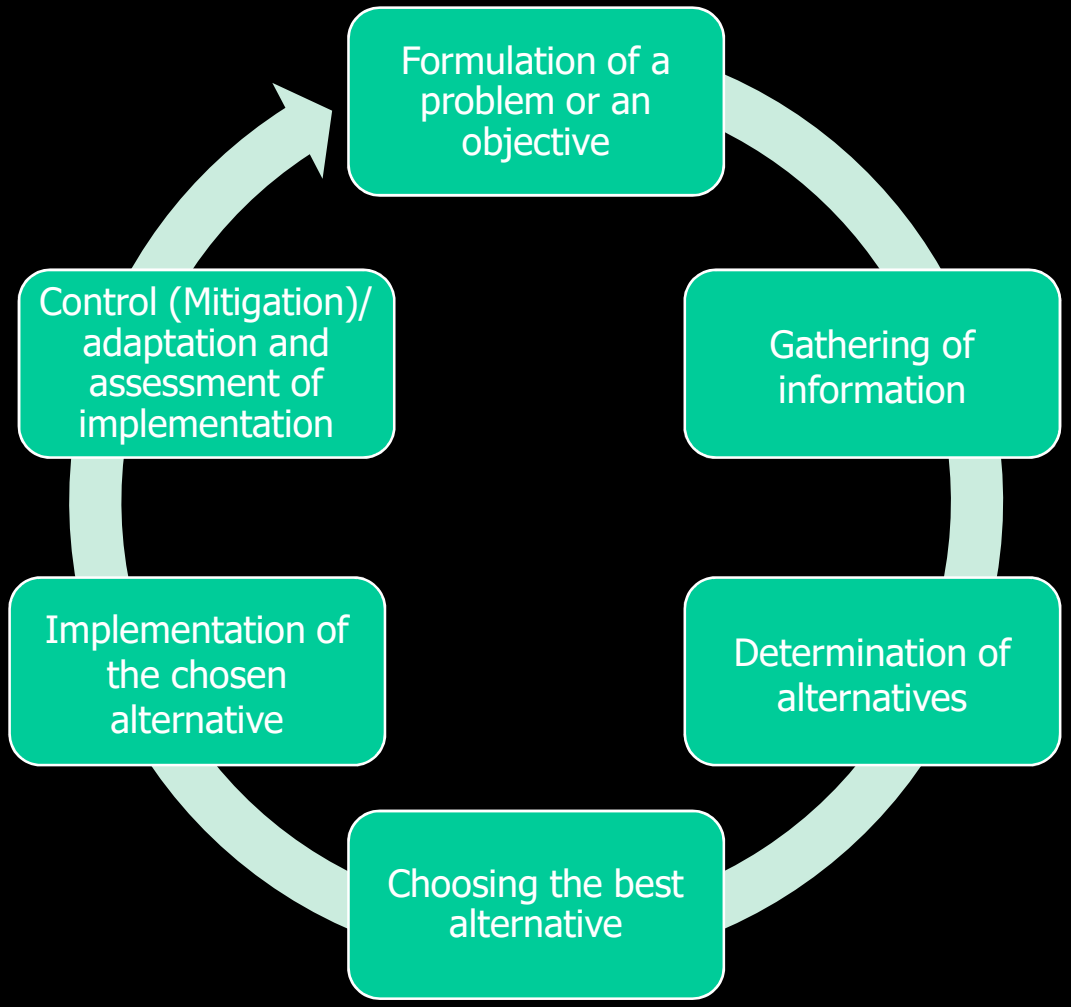
Impacts: Natural–Gully erosion

- Land degradation

Impacts: Relevant data

- Relevant data that can inform impact assessment and resettlement comprise:
  - Population (62,061,067 people in desertification states and appxo. 4.1 million people in land erosion prone states) demography, migration statistics
  - Household statistics (type, size, etc.)
  - Ecosystem and Biodiversity loss/SLM statistics
  - Agriculture and food statistics, including data on agricultural/pastural production
  - Local/International trade statistics
  - Economic (Nigeria losses $1.5 billion/yr to drought and desert encroachment) and business statistics, including GDP, income, employment, output, etc.

Response: Development of Strategy



Response: Policies – NAP/CAP

- National Policy on Environment
  - FME (Department of Drought and Desertification Amelioration – DDDA/ Environment al Assessment Department - EA)
- Nigeria's National Action Plan to Combat Desertification
- Drought Preparedness Plan
- Drought and Desertification Policy
- National Agricultural Policy
- National Energy Policy
- National Forestry Policy & Action Plan
- National Conservation Strategy and
- National Resources Conservation

&

- Community Actions – traditional knowledge

Response: Shelterbelt

Shelterbelt establishment

Response: Regional – GGWSSI Pathway

FME NSAP Report 2012

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