

CLIMATE

- A savanna or semi-arid climate, hot all year with summer temperatures > 30 C
- Low annual rainfall, variable rainfall, unreliable rainfall
- Seasonal rainfall, 90% in the summer months
- Periodic droughts common

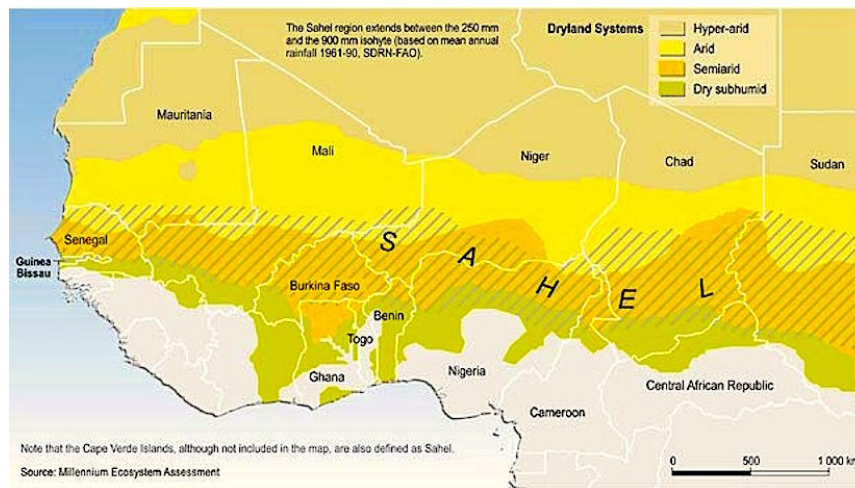
CLIMATE CHANGE

- Human induced global warming leads to greater rainfall variability, more droughts
- Rainfall is now 100-200 mm less than 1970
- Temperatures are up by 1 C since 1970
- In the last 25 years the desert margin has moved 50 km south in Sudan, over 60 million hectares of land has been degraded

POPULATION GROWTH / OVERPOPULATION

- There has been a population boom in the sub-Saharan countries as they move through stages 2 and 3 of the Demographic Transition Cycle
- Birth rates are high and death rates are falling leading to a very high growth rate
- In Sudan the growth rate is 2.8% and in many countries the fertility rate is above 5
- These growing and youthful populations lead to population pressure and overpopulation
- This puts a strain on resources and leads to poverty, conflicts and famine (Sudan, 2019 and 2011)
- This population pressure is the main driving force leading to increased vulnerability, unsustainable developments and the problems with **DEFORESTATION**, **OVERGRAZING** and **OVERCULTIVATION**

The Sahel is a semi arid region south of the Sahara desert stretching across countries like Mali, Niger, Chad, Sudan,. Here the Sahara desert is moving south leading to desertification, and soil degradation



DEFORESTATION

Why?

- opens up more land for farming
 - fuelwood
 - building materials
- Impacts
- Opens up the land for more wind and water erosion, loss of soil, soil erosion, soil degradation
 - Less interception of rainfall, less evapotranspiration gives more overland flow. Less water recycling, lower humidity, lower rainfall

OVERSTOCKING / OVERGRAZING

- Reduces the vegetation cover and opens up the ground to allow soil erosion
- Lack of vegetation to protect the soil or hold it together leading to wind and water erosion
- Greater numbers of cattle per hectare / greater intensity, may eventually exceed the carrying capacity of the land

OVERCULTIVATION / POOR FARMING METHODS

- Shortening of the fallow period in rain fed agricultural areas can lead to crop failure and soil degradation
- Excessive irrigation may lower the water table and can lead to water shortages and falling crop yields
- Poor irrigation methods may lead to water logging and the salinisation of soils

