12.6 Is there a future for the Sahel?

Learning objectives

- To identify the causes and consequences of desertification in the Sahel.
- To explore solutions to desertification in the Sahel.

Last lesson you were introduced to the Sahel region in North Africa, see Map A. 'Sahel' is an Arabic word meaning 'edge' or 'shore'. It lies at the southern edge of the Sahara Desert. This is one of the most vulnerable places to drought on Earth. A drought is a period of abnormally dry weather that lasts long enough to lead to a serious lack of water, and crop failure. This region is known to the world for its frequent famines which have led to the death of millions of its inhabitants.

Desertification in the Sahel

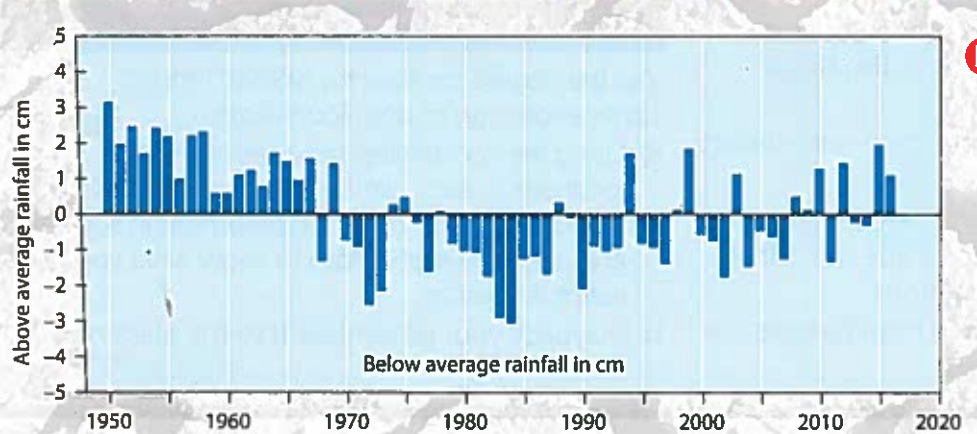
Droughts have occurred here when the normally short rainy season is delayed or does not occur.

As you can see in Graph B, rains are very erratic in the Sahel. There are also strains on the land. The population is increasing rapidly and too many people have cleared the vegetation for firewood, shelter and farming. Livestock have also overgrazed the vegetation. The removal of vegetation exposes soil to wind and water erosion. All of these things have caused the desert to spread southwards. This process is called **desertification**.

Erratic rainfall

In the 1950s, higher levels of rainfall persuaded many people to move northwards into the region as the desert retreated, creating farmable land. Farmers made the most of these years of good rains, but did not let the soil recover its nutrients by rotating crops and giving the soil rest. Unfortunately, the rains failed in the late 1960s. The soil was exhausted and would not grow crops. Famine on a large scale occurred.

A The location of the Sahel region

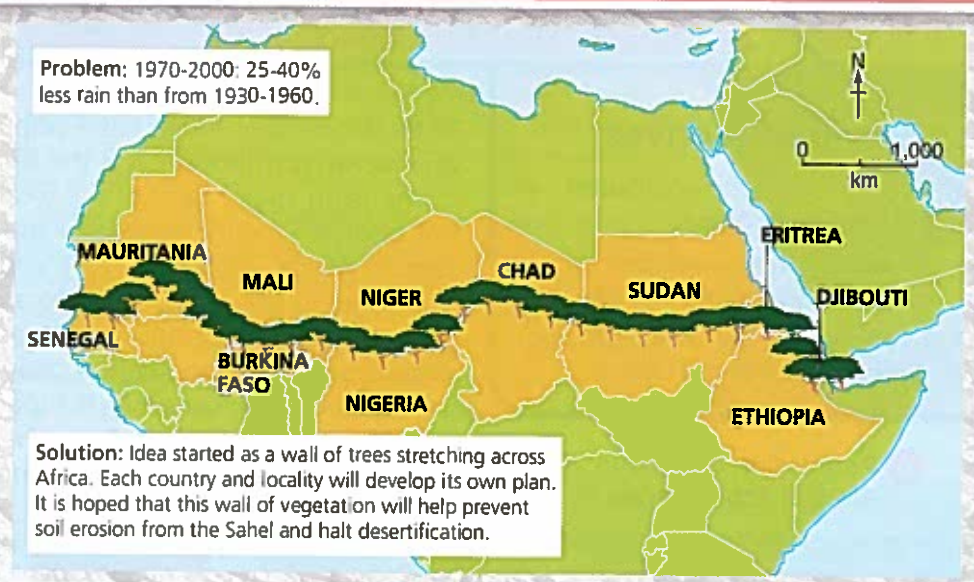


B Above and below rainfall averages in the Sahel region, 1950–2017

C Article from *Inter Press Service*, 19 October 2011

The man that stopped the desert

Yacouba Sawadogo, a peasant farmer from Burkina Faso, is famous as the 'man who stopped the desert'. Thirty years ago the land had become barren and many were giving up farming and migrating to urban areas. 'The traditional farming method used in my village allowed the rainwater to be easily washed away leaving the crops to dry up within a short space of time. That's why I thought of a technique that would counter this problem,' said Sawadogo. His technique, called Zai, is based on traditional African farm practice. He dug holes in the soil and filled them with manure and compost. Seeds were planted in the holes at the start of the rainy season. These attracted termites which built tunnels in the hard ground, helping retain the rain. He planted trees, to hold back the desert. He chose trees with medicinal properties because at the time there were no health clinics in the area. Sawadogo's community thought him mad but he persisted, and today he has a forest covering 25 hectares (62 acres).



D Plans for the Great Green Wall of Africa

Africa's Green Wall, aims to restore land and hope

The Sahel is the focus of efforts to build a 'Great Green Wall' to hold back the desert and provide jobs, says Elvis Paul Tangam, who is leading the programme. It's about providing jobs and money to keep people in their communities and able to thrive in a harsh climate. Tangam says it's a matter of life or death for millions, particularly young men who have no work and have seen crops and animals die and face terrible choices. They might join terrorist groups, or join the exodus [mass departure] of desperate migrants trying to cross the Mediterranean on rickety boats to find work in Europe. Estimated to cost about $8 billion, the project, funded by the World Bank, United Nations, African Union, and the UK Botanical Gardens, is not expected to be completed until 2030.

E Article from DOGO news.com

Activities

1 Write definitions of desertification and drought.

2 Look carefully at Map A.
- **a)** Name the 11 countries that are part of the Sahel.
- **b)** Use the scale to measure the Sahel to calculate the approximate area of the region. (Remember: area = length x width.)
- **c)** Between what latitudes does the Sahel lie?

3 Look back at A and C from last lesson. Describe the climate of the Sahel, and explain why winds blow across the region from the Sahara Desert southwards.

4 Study Graph B. When was:
- **a)** the highest above average rainfall?
- **b)** the longest spell of above average rainfall?
- **c)** the longest spell of below average rainfall?
- **d)** Count the number of years below average and then above average, levels of rainfall.
- **e)** Write a paragraph to explain why this rainfall pattern makes life so difficult for people in the Sahel.

5 Write a list of the physical and human causes of desertification in the Sahel.

6 Read Article C.
- **a)** Who is Yacouba Sawadogo?
- **b)** Identify and explain two approaches to farming he developed that stopped desertification on his farm.
- **c)** Why do you think these approaches have worked?

7 Look at D and E. Write a paragraph to explain how the Great Green Wall offers hope for the future in the Sahel.