

Hot Desert: Case Study Thar Desert - India/Pakistan	
The Thar Desert is located on the border between India and Pakistan in Southern Asia. With India soon becoming the most populated country in the world in the next five years. With this, more people will plan to live in the desert.	
Opportunities	Challenges
<ul style="list-style-type: none">There are valuable minerals for industries and construction.Energy resources such as coal and oil can be found in the Thar desert.Great opportunities for renewable energy such as solar power at Bhaleri.Thar desert has attracted tourists, especially during festivals.	<ul style="list-style-type: none">The extreme heat makes it difficult to work outside for very long.High evaporation rates from irrigation canals and farmland.Water supplies are limited, creating problems for the increasing number of people moving into area.Access through the desert is tricky as roads are difficult to build and maintain.

Climate of Hot Deserts
<ul style="list-style-type: none">Very little rainfall with less than 250 mm per year.It might only rain once every two to three years.Temperatures are hot in the day (45 °C) but are cold at night due to little cloud cover (5 °C).

Adaptations to the desert	
Cactus	<ul style="list-style-type: none">Large roots to absorb water soon after rainfall.Needles instead of leaves to reduce surface area and therefore transpiration.
Camels	<ul style="list-style-type: none">Hump for storing fat (NOT water).Wide feet for walking on sand.Long eyelashes to protect from sand.

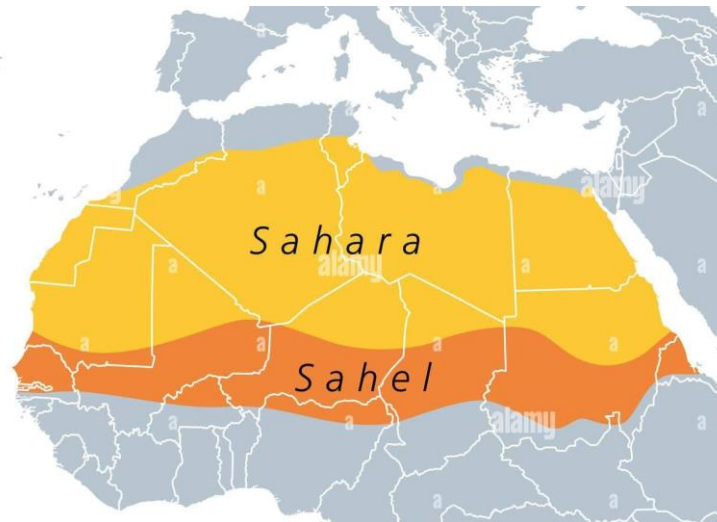
Causes of Desertification	
Desertification means the turning of semi-arid areas (or drylands) into deserts.	Climate Change Reduce rainfall and rising temperatures have meant less water for plants.
Fuel Wood People rely on wood for fuel. This removal of trees causes the soil to be exposed.	Overgrazing Too many animals mean plants are eaten faster than they can grow back. Causing soil erosion.
Over-Cultivation If crops are grown in the same areas too often, nutrients in the soil will be used up causing soil erosion.	Population Growth A growing population puts pressure on the land leading to more deforestation, overgrazing and over-cultivation.

Strategies to reduce Desertification
<ul style="list-style-type: none">Water management - growing crops that don't need much water.Tree Planting - trees can act as windbreakers to protect the soil from wind and soil erosion.Soil Management - leaving areas of land to rest and recover lost nutrients.Technology - using less expensive, sustainable materials for people to maintain. i.e. sand fences, terraces to stabilise soil and solar cookers to reduce deforestation.



9.3 Hot deserts

The Sahel is a big area in Africa, right below the Sahara Desert. It's a place where the desert meets grassy lands, so it's very dry but still has some plants and animals. People who live in the Sahel often take care of animals like goats and sheep. The weather can be very harsh with long dry seasons, making it hard to find water and grow food. The Sahel is important because it connects different parts of Africa and is home to many different cultures and communities. This area is now extremely vulnerable to desertification.



Tasks...

Describe the distribution of hot deserts.

Describe the location of the Thar desert.

Describe the climate of hot deserts.

How is a cactus adapted to survive?

How are camels adapted to survive?

What are the opportunities that exist within hot deserts?

What are the challenges that exist within hot deserts?

Define desertification.

What are the main causes of desertification?

What are the main solutions to desertification?



The Great Green Wall is an amazing project in Africa where many countries are working together to plant a huge line of trees and plants. This "wall" stretches across the entire width of Africa, from the west coast to the east coast, through the Sahel region. The goal is to stop the desert from spreading, bring back green spaces, and help people who live there by making the land better for farming and giving them more water. By planting millions of trees, the Great Green Wall helps fight climate change and creates a better future for everyone living in the area.

The Great Green Wall has had some successes. Here's how it has helped so far:

1. For the locals - improved land, more water and increased jobs and income.
2. Globally - it has reduced climate change and increased biodiversity.



Prepare for your extended write.

Question: "Desertification is largely caused by poor land management."
Use evidence from a case you have studied to discuss this statement.

1. BUG the question by boxing the command word and underlining the content you need to write about.
2. List the key vocabulary you will use.
3. Create a plan of what you would write in each paragraph.
4. Practice writing your answer from memory.