

Deserts

A wide-angle photograph of a desert landscape featuring rolling sand dunes. The dunes are a warm, golden-brown color, and their smooth, undulating forms are highlighted by the soft lighting. In the foreground, several thin, curved tracks are visible in the sand. The sky above is a clear, deep blue, creating a sharp contrast with the warm tones of the sand. The word "Deserts" is centered in the middle of the image in a clean, white, sans-serif font.







Structure

- Definiton
- Global distribution
- Why do deserts exist?
- Climate
- Abiotic factors
- Plants and animals
- Survival of the fittest (adaptation)
- Natives and the Tuaregs
- Desertification and causes + Challenges and opportunities Development
- How do we can reduce desertification?
- Impact of the humans
- Sahara

Vocabulary

- heat – Hitze
- formation - Entstehung
- crumbel- zerbröseln
- resist - standhalten
- impact - Auswirkung
- huts - Hütten
- lack – Mangel
- droughts - Dürren
- wide – weit / groß
- arable – Ackerbau / bewirtschaftbar
- overgrazing - Überweidung
- encouraging (people) - ermutigen
- grazing animals – Weidetiere
- manure - Dünger
- fertilise – befruchten / etw. fruchtbar machen
- irrigate - bewässern
- water supply - Wasserversorgung
- inaccessibility - Unzugänglichkeit
- approximately - ungefähr

Definition

- Deserts are areas of the earth characterized by dryness, heat and often a complete lack of vegetation, completely covered by sand and stones





Arctic Ocean

NORTH
AMERICA

Atlantic
Ocean

EUROPE

ASIA

Pacific
Ocean

AFRICA

Indian
Ocean

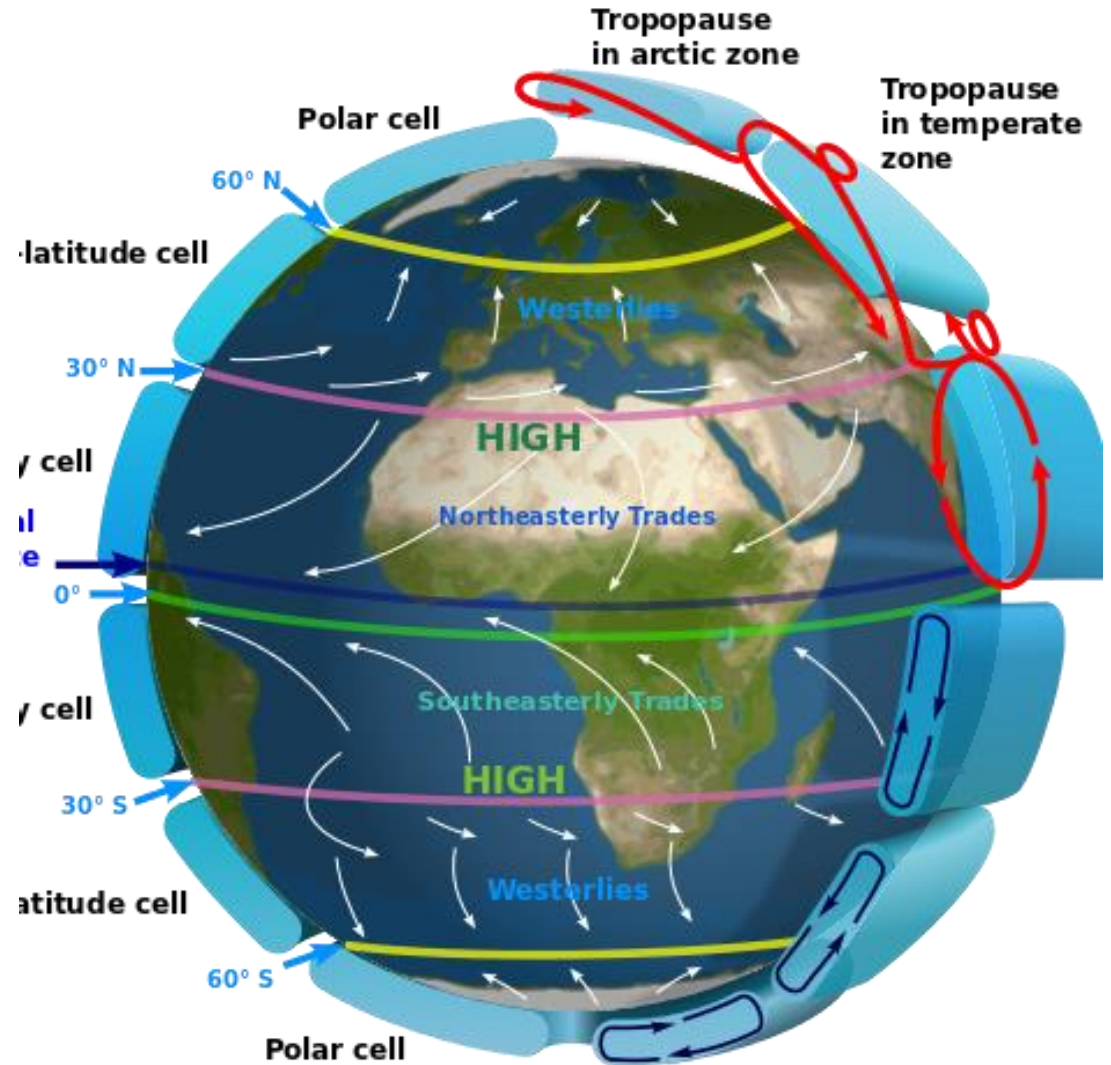
SOUTH
AMERICA

AUSTRALIA

Global
distribution

Why do deserts exist?

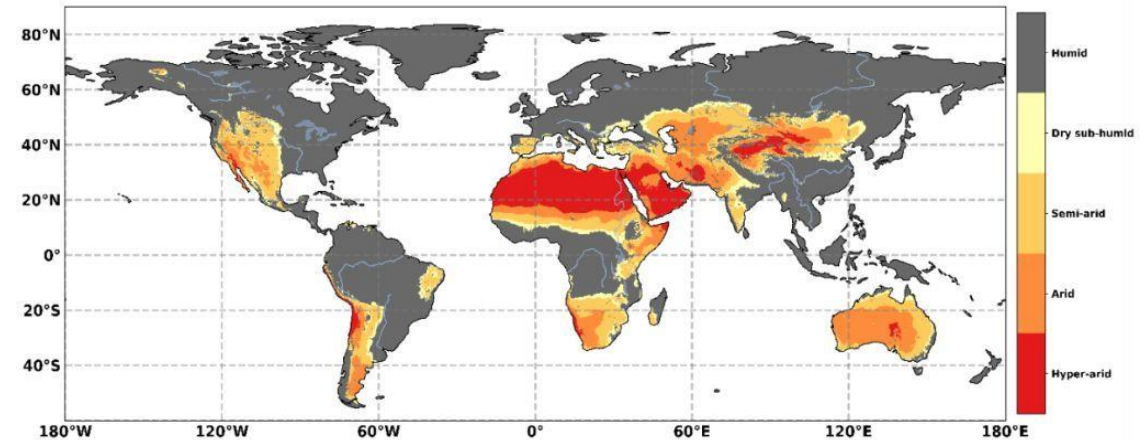
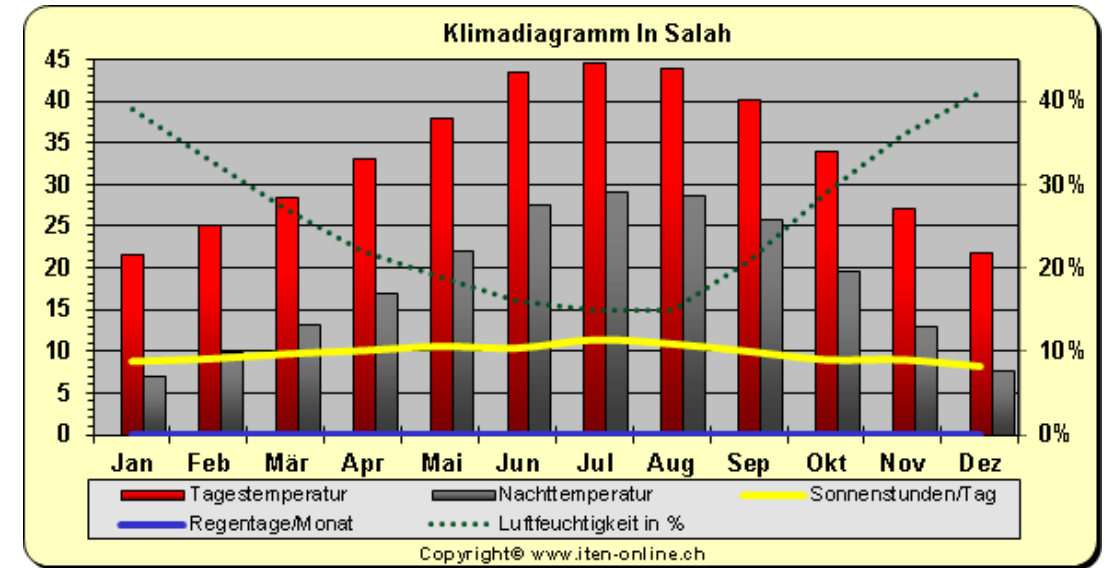
- Deserts exist because no wet winds reach them.
- Deserts are dry or arid areas that receive less than 250 mm of rain each year. They can be found because of different abiotic factors
- Different weather conditions (warm/cold/rain/sun= forming of sand out of stone)



Climate

What is special about this climate graph and the climate in the desert?

- There are two main seasons
- Winter – climate is very cold – coldest month is January with 12°C
- Summer – climate is very warm – warmest month is July with 35°C



Abiotic factors

Discuss together with your partner:

Which abiotic factors can be found in the desert? And which role do they play (What impact do they have)

- Precipitation in Deserts is very low --> droughts --> desertification --> 12 arid months
- Low water content + High climate = The growth of plants is nearly impossible --> Nearly no animals to find + only some villages with people
- A high content of minerals can be found in the soil



Abiotic factors

- Desert soils are thin, sandy, rocky and generally grey in color
- Desert soils are very dry
- The surface of the soil may appear crusty



Plants and animals

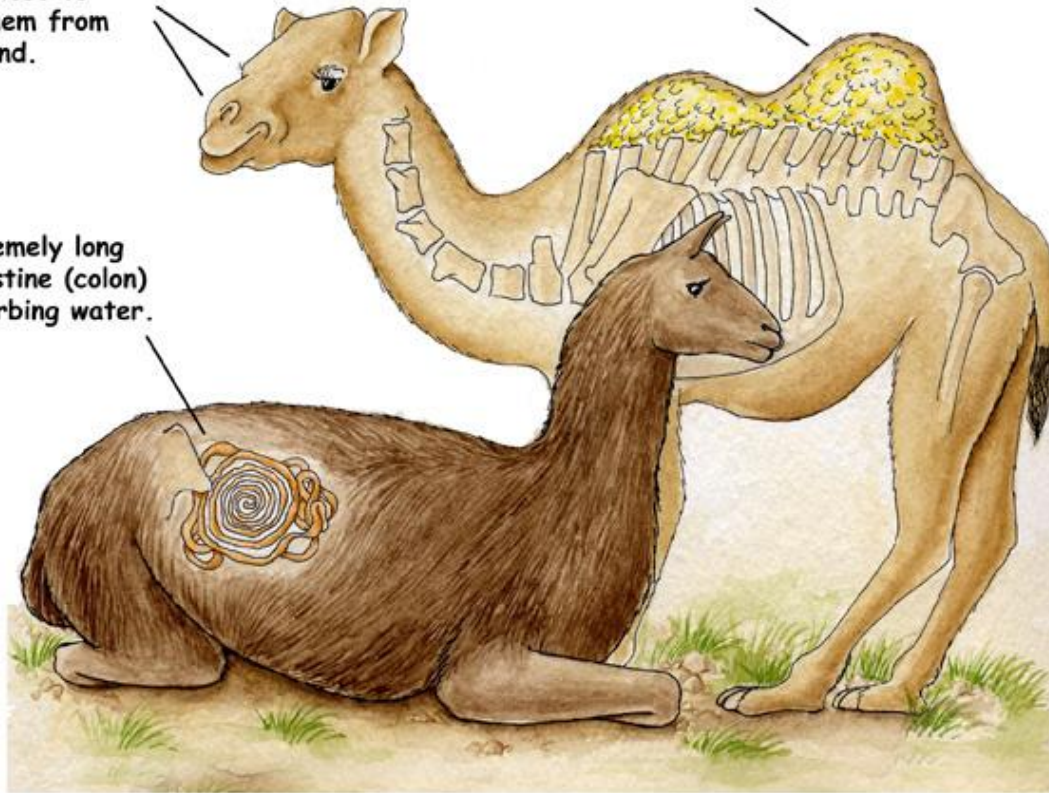


- Deserts have distinct characteristics
- Plants and animals have developed adaptations
- Camel, Snake, Mesquite Tree, Coyotes

Long eyelashes and thin, slit nostrils that can close to protect them from blowing sand.

Fat-filled humps will break down to supply them with the energy (and moisture) they need to survive long treks in the desert.

An extremely long large intestine (colon) for reabsorbing water.



Long, muscular legs for walking.

Wide, padded feet allow walking on rocks and hot sand.

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www.exploringnature.org

Survival of
the fittest
(adaptation)

Natives and the Tuareg people



Desertification and causes

- Def: The transformation of arable or habitable land to desert, by a change in climate or destructive land use
- Is one of the greatest environmental challenges + major barrier to meeting basic human needs in drylands



Desertification and causes



- Population growth
- Overgrazing
- Soil erosion
- Climate change
- <https://www.youtube.com/watch?v=WwhAdu0m61k>



Challenges and opportunities of the Development

- Opportunities: Mining, Energy generation, Farming, Tourism
- Challenges: Extreme temperatures, water supply, Inaccessibility, Infrastructure
- Global warming
- <https://www.internetgeography.net/topics/what-is-the-impact-of-humans-on-desert/>

How can we reduce desertification?



Planting more trees



**Improving the quality of
the soil**



Water management



How to prevent
desertification in the
desert countries

Impact of humans

- There are five main causes of desertification. These are:
- Climate Change
- Removal of trees for fuel
- Overgrazing
- Over-cultivation
- Population growth

Sahara

- Largest desert in the world
- Located in Africa
- Is bordered in the west by the Atlantic Ocean, in the north by the Atlas Mountains and the Mediterranean Sea, in the east by the Red Sea, and in the south by the Sahel
- Sand sheets and dunes cover approximately 25 percent of the Sahara's surface.
- Got his name from an arabic man



Crossword puzzle



Enter the searched words

(5-8 Minutes)

Tasks (Together with your partner)

- Oasis (Group 1)
- Caravan (Group 1)
- Forming of sand (Group 2)
- Sand dunes (Group 2)
- Sand storms (Group 2)
- Cactus (adaptation) Quiz



Websites

- <https://aneyefortexas.wordpress.com/2011/03/29/mesquite-the-wonder-tree/>
- <https://www.thefreedictionary.com/desertification>
- <https://www.internetgeography.net/topics/what-is-the-impact-of-humans-on-desert/>
- <https://kalaharidesertbiome.weebly.com/ecological-problems.html>
- [The importance of Deserts and Plants > GEF Guyana](#)

[Importance - All About: Deserts](#)

<http://www.thegefgyana.org/the-importance-of-deserts-and-plants/>

<https://sciencing.com/animals-tropical-desert-6297767.html>

<http://factsanddetails.com/world/cat52/sub331/item1182.html>

<https://medium.com/@georgeannsack/where-does-sand-come-from-cd348b2d8f5b>

Pictures

- https://www.google.com/search?q=desert&client=firefox-b-d&sxsrf=ALeKk01A1EafR-PIEi_MlrAPm4OTtEKQ8A:1605196883351&source=Inms&tbm=isch&sa=X&ved=2ahUKEwj8pqwsP3sAhUI-hQKHQosB68Q_AUoAXoECA4QAw&biw=1536&bih=727#imgsrc=6rX0e9luakKnoM
- https://www.google.com/search?q=why+do+deserts+exist&client=firefox-b-d&sxsrf=ALeKk03ubfMKiieQ6ONxQoVHqrcdUkp7A:1605198746088&source=Inms&tbm=isch&sa=X&ved=2ahUKEwj7p7eot_3sAhU-BGMBHSbYALAQ_AUoAXoECBsQAw&biw=1536&bih=750#imgsrc=0cRP8zdkpxgPSM