

DROUGHTS

Their impacts - loss of vegetation:

Introduction to droughts:

A drought occurs when an area receives less rain than it normally does. This can cause problems like crop failure, leading to a reduced amount of food available. Droughts can also lead to drinking water being less available, which can lead to dehydration and death.



Northern China Drylands (DNC) 2000-2018:

- The DNC has annual droughts because of its arid (dry) landscape.
- The problems caused: Farmland failure and loss of habitats.
- China used 'Irrigated farmland' to combat the effects of droughts.

Process of Droughts:

Increase in temperature



Decrease in rainfall



Soils dry up



Crops die/ can't grow

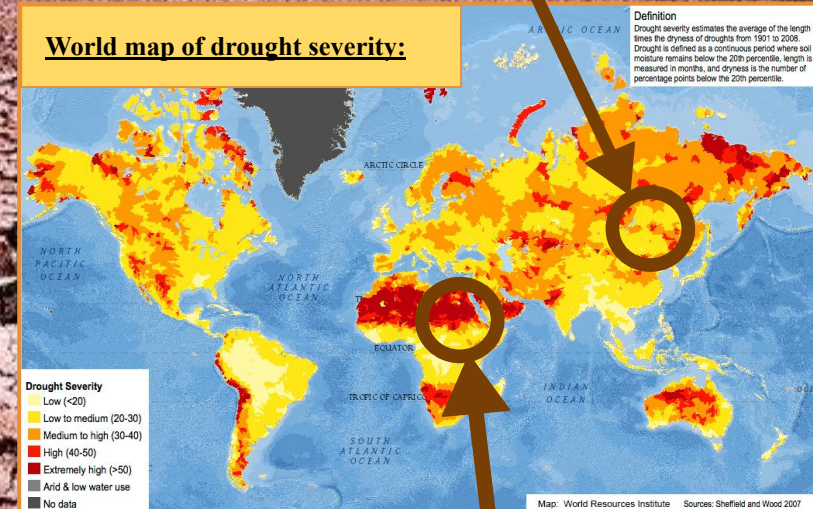


Less food

Climate changes impact on drought:

- It is increasing the number of droughts and the intensity of them.
- It is making droughts happen in more countries all over the world.

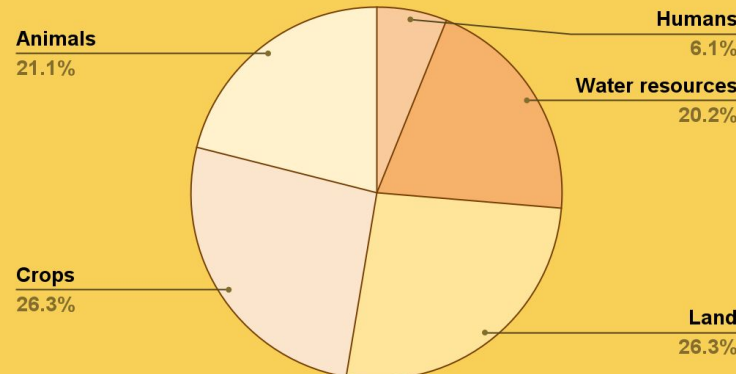
World map of drought severity:



Ethiopia drought 2015:

- The drought caused a big loss of crops and farm animals because of the lack of rainfall.
- 10 million people went hungry.
- Drought is a growing concern in Ethiopia because climate change is making them worse and happen more often.

What do droughts effect?



What are 3 things you have learnt from this poster?

What stood out most to you in the poster?



GLACIERS & CLIMATE CHANGE

WHAT IS A GLACIER?

A glacier is a flow of ice which slowly moves downwards over time. The ice is formed by snowfall which is squashed together over many years.



The same glacier just 6 years apart!

WHY IS CLIMATE CHANGE A PROBLEM?

Climate change is causing an increase in global temperatures which is causing many glaciers to shrink. This is bad as glaciers are the **largest source of water on Earth** and if all the water melts sea levels will rise and many will be left without a source of fresh water.



TOURISM UNDER THREAT

Many communities that rely upon glaciers for tourism e.g. skiing & snowboarding will find it more difficult to make money with rising temperatures melting the snow and causing the glacier to shrink.

VIDEO QUESTIONS:



CLICK THIS IMAGE
FOR VIDEO

1. What is a glacier?
2. What is the most important resource glaciers provide?
3. Why is it important to slow down global warming to protect glaciers?

MORE HAZARDS

Rising temperatures have also been attributed to more rockfall and avalanches which pose a greater threat to both tourists and residents.



RAINFORESTS AS AN ECOSYSTEM AND WHY THEY ARE AT RISK

WHAT IS AN ECOSYSTEM

A community of **interacting organisms** and their surrounding **environment**.

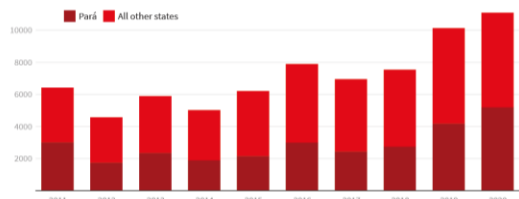
Ecosystems can exist in many forms, such as **rainforests** and deserts. They each have distinctive features and varying **climates**.

WHAT IS DEFORESTATION

Deforestation is the process of intentionally removing trees to clear an area. It has **increased significantly** over the **last 50 years**.

A decade of deforestation in the Brazilian Amazon

Clear cutting of primary forest in kilometres squared within the Brazilian Legal Amazon. Years are seasonal and run Aug-July e.g. 2020 runs from Aug 2019-July 2020.



The Amazon Rainforest is the biggest landmass rainforest in the world and suffers from **deforestation** and **biodiversity** loss on a greater scale.



An example of where deforestation has had a detrimental impact on the ecosystem is the **Amazon rainforest**. The most common technique is **Slashing and Burning**, where trees are cut down and the surrounding area is burnt.

Deforestation pushes animals out of their habitats, decreasing **biodiversity** and putting many species in danger within the Rainforest.

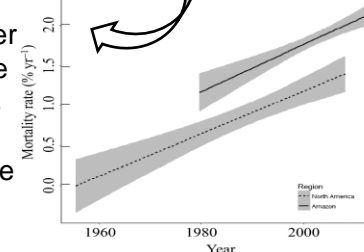


WHY DOES IT MATTER

That's the same weight as **281,000 Tyne Bridges!**

With more people living on earth, **deforestation** is becoming a much bigger concern to both humans and animals. Deforestation releases **2 billion tonnes of Carbon Dioxide** into the atmosphere per year.

More tree deaths over a long period of time has resulted in less **Carbon Dioxide** being taken in by the rainforest!



Deforestation in Rainforests threaten animal species and may even cause **extinction**. It also has been found to be linked to higher **disease** rates in humans. This highlights the importance of protecting these ecosystems in the future to prevent further negative effects on **both humans and animals**.

BIODIVERSITY

Biodiversity means the variety of plants and animals from all sources, including land, sea and air.

WANT TO KNOW MORE

Interested in Rainforests? Scan the QR code to find out more!



HOW ARE WORMS BEING AFFECTED?

- Tillage is the process of turning soil to prepare for planting crops, decreasing anecic worms' population due to injuries, destruction of burrows and exposure to predators. Endogeic worm increase in numbers through tillage due to more food supply.
- Fertilizers such as animal manure and sewage waste have been shown to have a positive effect on earthworm numbers, some populations doubling or even tripling in a single year. Vermicomposting is the process of worms been used in sewage waste to decay germs into organic fertilizer.
- Pesticides are sprayed onto crops to help them grow. Earthworms living in fields where pesticides are used will only grow half their normal weight and will not reproduce as well. Epigeic worms are the most affected as they are found closest to the surface.

WORMS



DID YOU KNOW!

- Cutting an earthworm in two exact halves will not make two new worms. Both halves will eventually die.
- They do in fact eat the soil as well as leaves/compost.
- Worms spend most of their lives underground creating burrows.



Q&A!

Why are Earthworms important?

- Earthworms contribute to soil structure which is important for plant growth.

What are the key roles of earthworms?

- Earthworms break down dead organic matter
- Earthworms increase water movement through burrowing.

How can farmers adapt to benefit earthworms?

- Select crop rotations with earthworm-friendly crops.
- Farmers should reserve patches of land to serve as sources of earthworms

Epigeic

EPIGEIC FACTS:

- Found in leaf litter on the soil surface.
- Don't usually make burrows into the soil. They feed off the leaf litter on the surface of the soil.
- They are a deep red/ dark colour.

ANECIC FACTS:

- They can be found in leaf litter and burrowing vertically into the soil.
- They collect leaves from the soils surface and take them into their burrows to feed off of them.
- They are dark red and often darker towards the head.

Anecic

ENDOGEIC FACTS:

- They can be found burrowing horizontally into the soil, they live and feed off the soil.
- They sometimes reuse their burrows.
- They are usually a pale colour.

Endogeic