

Welcome to GCSE Geography



Where will it take us today?

Topic 4: Sustaining Ecosystems

Life on Earth is supported by global ecosystems and the link between human wellbeing and ecosystem wellbeing is vital.



This is what we will be exploring in this session

- Human impacts upon the tropical rainforest biome

LO: HOW HAVE HUMANS 'EXPLOITED' TROPICAL RAINFORESTS AROUND THE WORLD?

SUCCESS CRITERIA: I CAN...

- IDENTIFY... (1-2)
- DESCRIBE... (3-4)
- ASSESS... (5+)

...HOW HUMANS HAVE 'EXPLOITED' THE TROPICAL RAINFOREST
THE IMPACTS THIS HAS HAD.

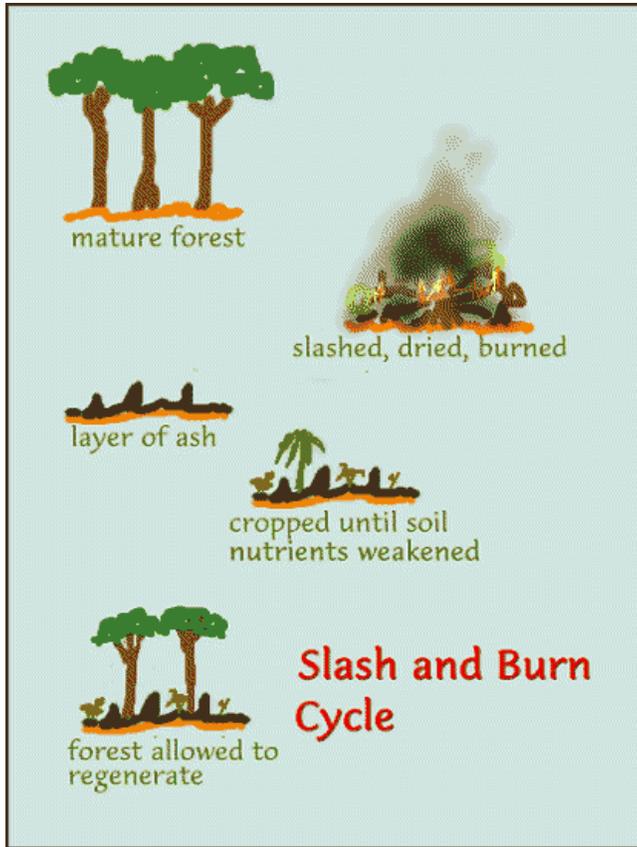


Geo-lingo

DEFORESTATION: the clearing of trees to transform forest into cleared land.

EXPLOIT: the action of making use of and benefiting from resources.

Humans in harmony with the forest?



Which S-C process is shown here?
Why does this sort of deforestation not harm the environment?



What's the question?

- 60 (globally)
- Thousands of years
- Hunting, gathering, fishing
- Homes and boats
- Everyday items

Know: how indigenous people use the rainforest to support their daily lives

Understand how it is possible to live in harmony with the environment

Unfortunately.....



<https://www.youtube.com/watch?v=hIU9NEcJyg>

More people



And that's not all

Most rainforest countries are LIDCs and EDCs which means

Plots have to be farmed for

Plots are returned to more

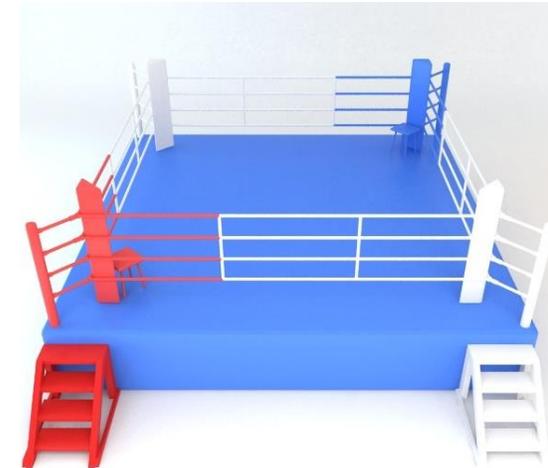
Which means that

The trees.....

The soil

Flood risk is

L _ _ _ _ _
O _ _ _ C _ _ _ M _ _ _ _
C _ _ _ _ _ R _ _ _ _ _
T _ _ _ _ _



Know: why the future of the rainforest biome is under increasing threat
Understand the dilemma of environmental protection vs economic development

LO: HOW HAVE HUMANS 'EXPLOITED' TROPICAL RAINFORESTS AROUND THE WORLD?

'The Sumatran rainforest will mostly disappear within 20 years'

In only a few years, logging and agribusiness have cut Indonesia's vast rainforest by half. The government has renewed a moratorium on deforestation but it may already be too late for the endangered animals - and for the people whose lives lie in ruin



EXPLOITATION OF THE SUMATRAN RAINFOREST

Work in pairs, one listens and looks out for 'uses' the other for 'impacts'

Uses of the rainforest	Impacts

SUCCESS CRITERIA: I CAN...

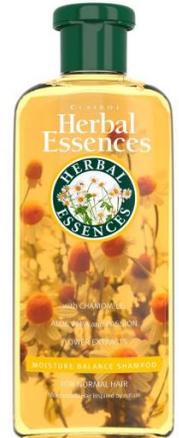
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...HOW HUMANS HAVE 'EXPLOITED' THE TROPICAL RAINFOREST AND THE IMPACTS THIS HAS HAD.

1. List the products

2. Do you consume/use any of these? Y/N

3. Link to our learning?



BONUS: How might you classify these items into groups?

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<https://www.youtube.com/watch?v=LR9Ma6gmKRA>

<https://www.youtube.com/watch?v=pSi8uBDLhZI>

<http://www.bbc.co.uk/news/science-environment-18483647>

<https://www.youtube.com/watch?v=9YE5FbHWgn8>



Geo-detectives always watch carefully and consider who produced the film clip and why (15-30 mins)

Over To You:

1. Which countries are being affected?
2. How?
3. By whom?
4. Why?

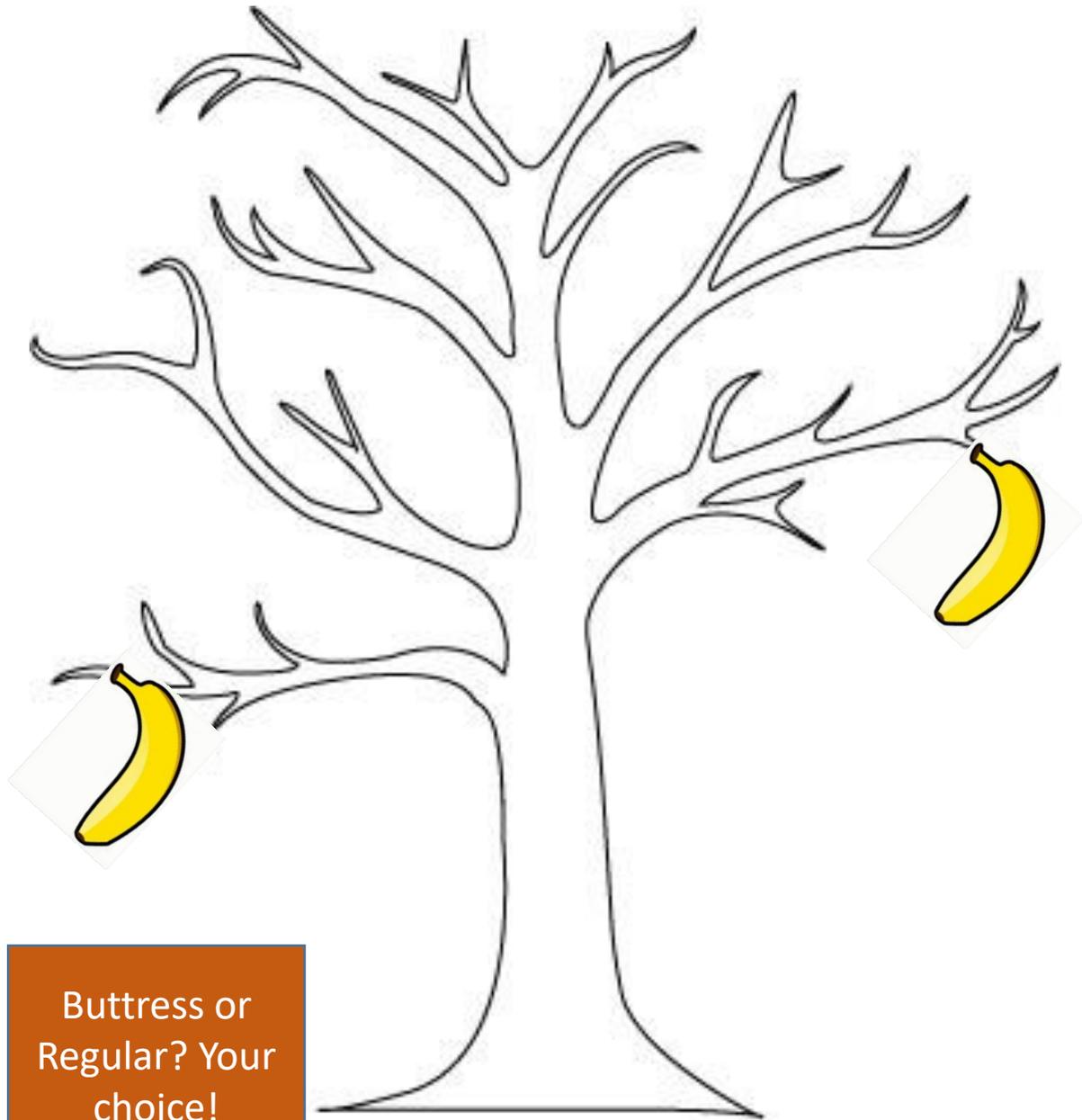


Talking Point

If the forests are so important – why are they being destroyed?

Human impacts upon the forest: Mix 'n' Match

Reason	<u>Detail</u>
Farmland for the poor	<ul style="list-style-type: none"> In 27 tropical countries, one quarter of all the money they earn from exports is used to repay debt to banks and governments in the rich countries of the North (MEDCs).
Cattle ranches	<ul style="list-style-type: none"> Huge hydroelectric power (HEP) projects, funded from countries in the rich 'North' (MEDCs) have flooded large areas, killing animals, drowning forest and poisoning rivers.
Repaying debt	<ul style="list-style-type: none"> Enormous quantities of tropical hardwoods are shipped to industrial countries, especially from South East Asia to Japan.
Selling timber	<ul style="list-style-type: none"> Cattle ranchers growing meat for their own home markets and for export, e.g. the 'beef burger' market of North America, have cleared huge areas of the tropical rainforests.
Finding minerals	<ul style="list-style-type: none"> Poor families, e.g. from the dry North East of Brazil have a choice between moving to overcrowded cities, clearing forest for farmland or starving to death!
Building HEP Dams	<ul style="list-style-type: none"> It is estimated that more than 200,000 gold miners are working in the Brazilian Amazon rainforest. The Carajas iron ore project (partly funded by the World Bank) will destroy 16% of the Amazonian rainforest.



Buttress or
Regular? Your
choice!

Tree Roots – CAUSES of
deforestation

Tree Branches – EFFECTS
of deforestation

Tree Fruit/Decorations –
Management SOLUTIONS

LO: HOW HAVE HUMANS 'EXPLOITED' TROPICAL RAINFORESTS AROUND THE WORLD?

Page 121

	Trees	Soil	Water	Atmosphere	Environmental impact score
Logging					
Cattle ranching					
Palm oil plantations					
Mineral extraction					
Tourism					
Dam building & HEP					
Road construction					

ENVIRONMENTAL QUALITY ASSESSMENT:

- Make a copy of the table opposite. For each human activity in the first column, give a score from 0-5 for its impact on the trees, soil, water and atmosphere. (0 is no impact and 5 is a major impact.)
- For each activity, add the scores together in the sixth column to work out an environmental impact score from 0 to 20.
- Rank the 7 activities according to their environmental impact.



CHALLENGE: EXAM QUESTIONS

- Describe the impacts of logging on the rainforest environment (4 marks)
- To what extent could road construction in tropical rainforests such as the Amazon bring economic benefits? (5 marks)

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Pages 118 to 120

EASIER (Grade 1-4):

“EXPLOITING THE RAINFOREST DOES MORE HARM THAN GOOD” DISCUSS

- Write a **minimum 200 word** response to the above statement. In your answer you need to refer to **at least three** ways the rainforest is exploited and include the **positive and negative** impacts of each activity.

Structure your response using the following sub-questions:

1. What negative impacts do different activities have on the environment?
2. What positive impacts do different activities have on people and the economy?
3. Are the negative or positive impacts more significant?

HARDER (Grade 5+):

WHO IS MOST TO BLAME FOR THE EXPLOITATION OF RAINFORESTS?

- Write a **400-600 word report** that assesses the role of **at least four stakeholders*** in the exploitation of the world's rainforests.

Structure your report using the following sub-questions:

1. How and why is the rainforest exploited by different stakeholders?
2. What negative impact does each activity have?
3. Do any of the activities have positive social, environmental or economic impacts?
4. Which stakeholder/activity has the most significant negative impact and why?

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**stakeholders are individuals or organisations who have a viewpoint or involvement in something.*

	AO1	AO2	AO3
Comprehensive <i>Grade 8-9</i>	A range of detailed and accurate knowledge that is fully relevant to the question.	A range of detailed and accurate understanding that is fully relevant to the question.	Detailed and accurate interpretation through the application of relevant knowledge and understanding. Detailed and accurate analysis through the application of relevant knowledge and understanding. Detailed and substantiated evaluation through the application of relevant knowledge and understanding. Detailed and substantiated judgement through the application of relevant knowledge and understanding.
Thorough <i>Grade 6-7</i>	A range of accurate knowledge that is relevant to the question.	A range of accurate understanding that is relevant to the question.	Accurate interpretation through the application of relevant knowledge and understanding. Accurate analysis through the application of relevant knowledge and understanding. Supported evaluation through the application of relevant knowledge and understanding. Supported judgement through the application of relevant knowledge and understanding.
Reasonable <i>Grade 3-5</i>	Some knowledge that is relevant to the question.	Some understanding that is relevant to the question.	Some accuracy in interpretation through the application of some relevant knowledge and understanding. Some accuracy in analysis through the application of some relevant knowledge and understanding. Partially supported evaluation through the application of some relevant knowledge and understanding. Partially supported judgement through the application of some relevant knowledge and understanding.
Basic <i>Grade 1-2</i>	Limited knowledge that is relevant to the topic or question.	Limited understanding that is relevant to the topic or question.	Limited accuracy in interpretation through lack of application of relevant knowledge and understanding. Limited accuracy in analysis through lack of application of relevant knowledge and understanding. Un-supported evaluation through lack of application of knowledge and understanding. Un-supported judgement through lack of application of knowledge and understanding.

<i>GRADE AWARDED:</i>
<i>WWW:</i>
<i>EBI:</i>

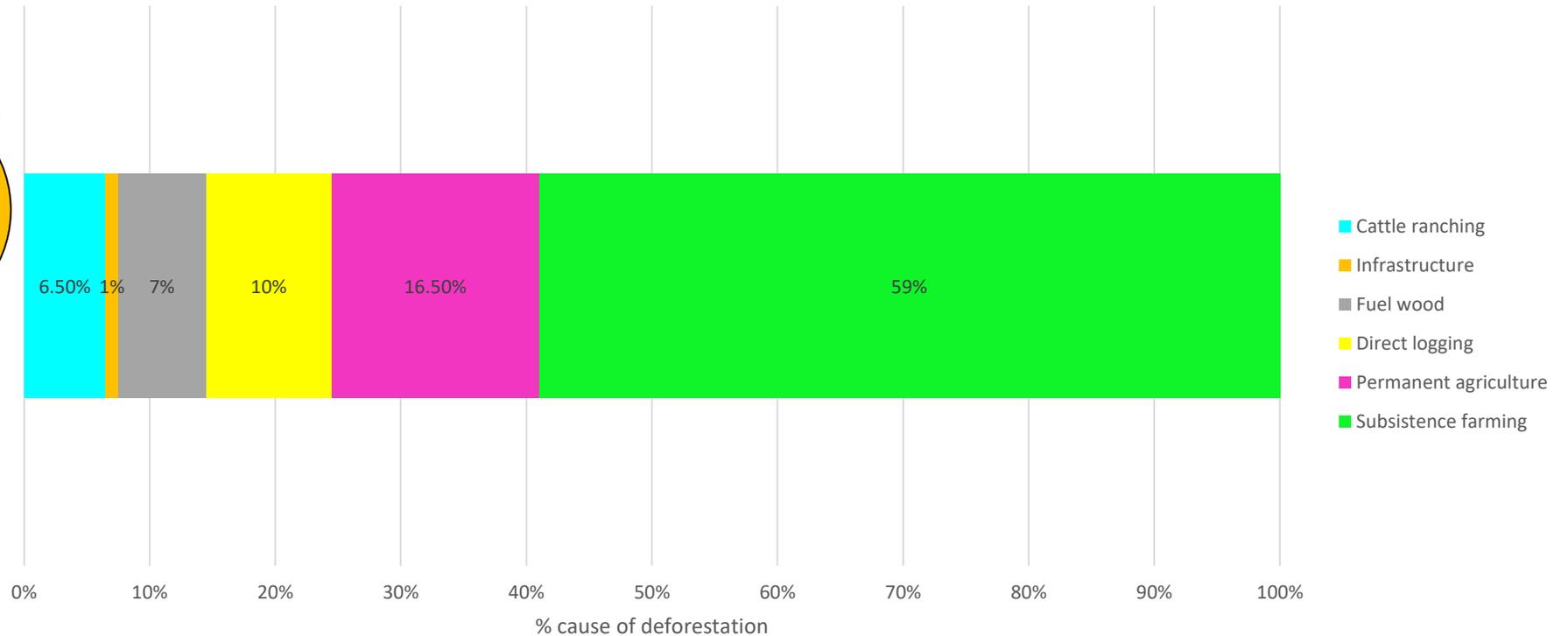
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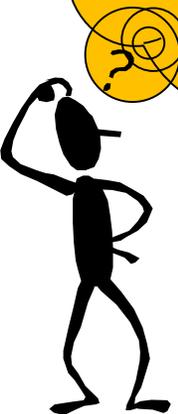
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Skills check

A compound bar graph to show the main causes of deforestation



What other type of graph could we use to present this data?

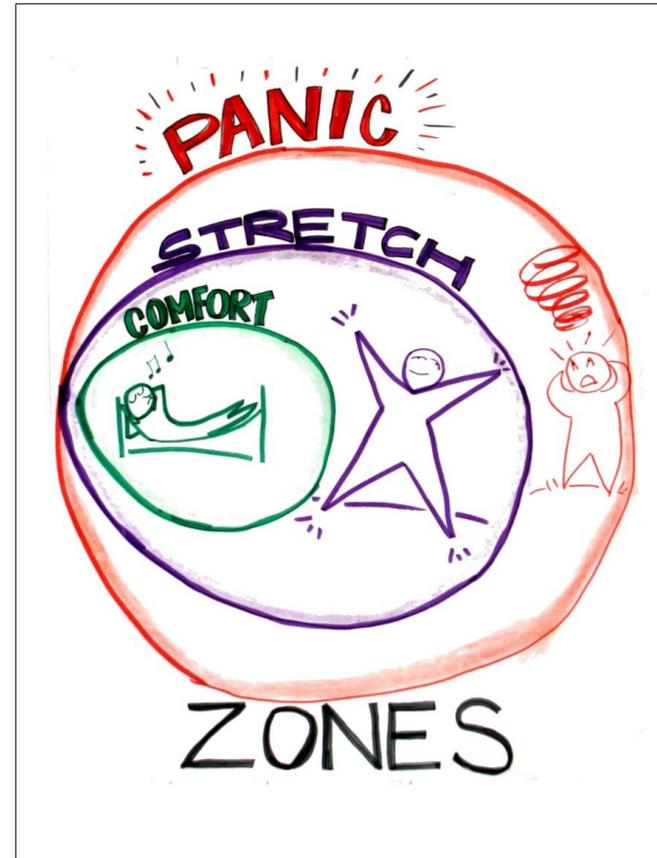


COMFORT - STRETCH - PANIC

COMFORT: I feel OK with what we have been learning and think that I understand everything.

STRETCH: I felt challenged in my learning, but think I understood most of the content.

PANIC: I feel out of my depth. The content was difficult, and I need some help to understand it.



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It doesn't have to be this way



- What does the image opposite suggest?
- Is this achievable?
- What 'c' (10 letter word) needs to happen?
- What role will AC's play in this?