

Y9 End of Unit Exam: Sustaining Ecosystems

Feedback

Question 1

'D' is the definition of habitat

EBI: An ecosystem is made up of 4 ***interconnected, interdependent*** components [p110]

Tethering:

Name those 4 **components**

State which are biotic and abiotic

Question 2

TIP: Read statements carefully. Some are just facts, not explanations!

Nutrients are essential vitamins & minerals for plants. Nutrients are made from dead plant material and weathered rock. They are stored in the soil, litter or the biomass. [p111]

Tethering:

In TRFs nutrients are mostly stored in the ? because [24/7/365]

How are trees in TRFs adapted to 'grab' these nutrients?

Question 3a

The question says **grassland** ecosystem

- a) Coarse grass, some shrubs, scattered trees
- b) Deciduous trees, shrubs and ferns
- c) Large trees with buttress roots, vines, mosses, ferns and orchids
- d) Low growing shrubs with short roots, mosses and lichens

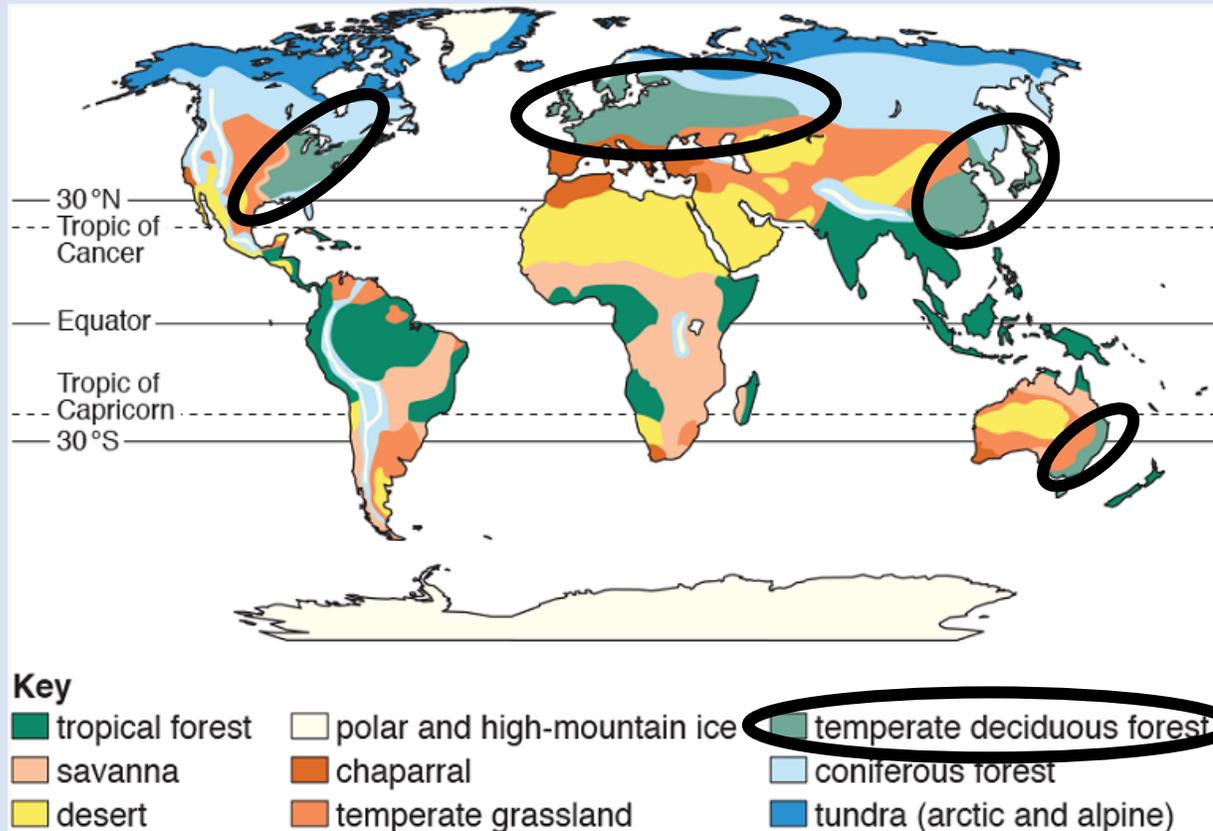
Tethering:

Which ecosystems are the other 3 statements describing?

Question 3b

The question says describe the pattern of **global distribution** of temperate forest ecosystems

Impressive Geographers say 'distribution' = ? translated into our speak



2 x 1 marks

In a  from eastern _____ to J _____ [1]

 of the T of C [1]

Mostly in the  h _____ with the exception of _____ [1]

Question 4

Flora = plants!!!! [p128] ANY 2 from

Short roots; slow growing; small leaves; short/low to ground; compact; **adapted to** a short growing season; can survive with limited nutrients; can survive with limited water; can cope with being covered in snow

Take Care.....

Don't have long roots – they can't due to the permafrost layer!

Tethering:

Give two features of arctic soils

How nutrient rich is the soil?

Explain how soil affects plant growth in the Arctic

Question 5

Read the question carefully,
goods [products] are not the same as **services** [jobs the forest does for people] [p119]

EBI: Use full sentences to clarify your ideas eg **TRFs reduce flood-risk when trees intercept rainfall**

Take Care.....

Plants absorb CO₂ and use it for photosynthesis which releases O₂ back into the air

Natural carbon sink, helping to reduce the amount of ? in the atmosphere

Act as the lungs of the Earth through the process of ?

Popular with tourists due to

Provides a habitat for

Filters water to make it

Acts as a sponge to reduce

Tethering/Challenge

Describe how TRFs provide valuable goods

Question 6

Why are forest soils considered to be amongst the **poorest** in the World? [3]

3 x 1 marks

Tethering/Making Links

Soils in the Arctic are also very poor but for a different reason [p129]

1: Demand for nutrients is ? so they aren't in the soil for very long as they are in the ?

2: Most of the nutrients are in the ? layer, not the soil

3: Heavy rainfall can ? the nutrients out of the soil

4: Soil is deep, so the rock below takes longer to weather so nutrients are added very ?

Question 7

Small scale example of sustainable management in the Arctic OR Antarctic

[p133]

6 markers and case studies are LEVEL marked.

Level 1: 1-2 marks, Level 2: 3-4 marks Level 3: 5-6 marks

The question says **evaluate the success** so MUST consider whether it achieved what it set out to do. [totally/partially]

Need **Place Specific Detail (PSD)** to get to 3 or more /6. This could be details about the number of whales; Inuit; the river, the island

Question 7

Small scale example of sustainable management in the Arctic OR Antarctic

[p133]

success evaluate [opinion, justify, counter-argument, conclusion]

The MWS at BI in northern C was extremely successful.

☺ It was set up to conserve the w? population, whose numbers had dropped. 2000 b? whales stop off here each year. Deep offshore t? contain ? which is a major food source. The whales get to f_____ and b_____ here and as they cannot be h?, their numbers have ?. Other species benefit like PBs, S, F and G. This is environmentally sustainable.

☺ The 1000 Inuit population who live here are still allowed to kill whales as this is necessary for a varied d? and s?, however they only remove a very small number, so the whale numbers are not ? affected. This is s? and e? sustainable.

☹ Some argue it was only partially successful as ? continued to whale, claiming it was for r? purposes

☺ In conclusion, the MWS was extremely successful, especially s? and e?

Question 8ai

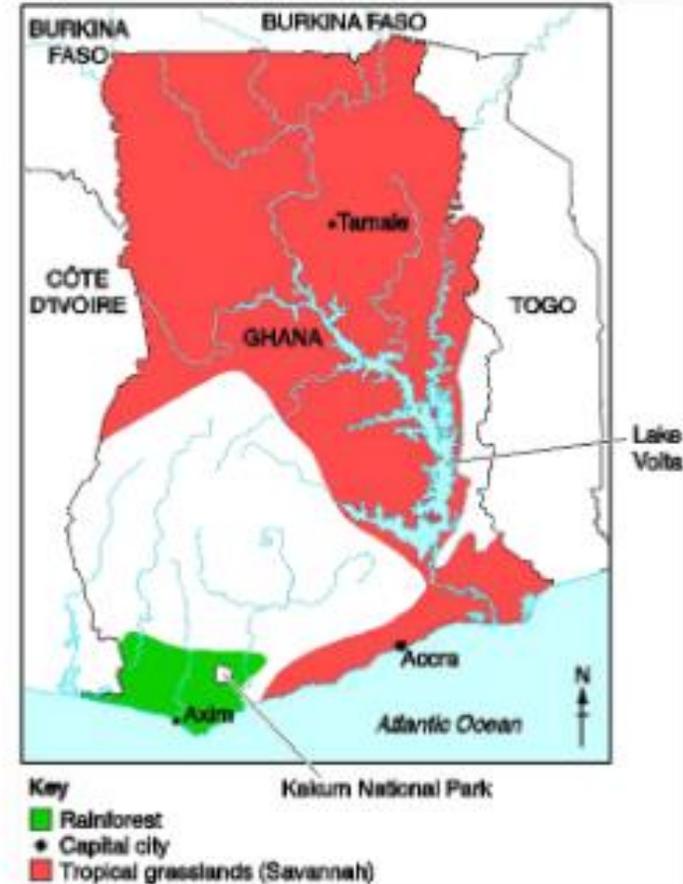
Describe the location of Kakum national park [3]

3 x 1 marks

CLOCC!!!

Compass point
Country
Continent

Fig. 5b – Ecosystem map of Ghana



N/A

KNP is located in a
r_____ area in

[1]
in the c_____ of
A, [1] to the _____
_____ of Axim [1]
and is directly _____ of
Accra, the _____
_____ [1].

Question 8a ii

N/A

Says to use Fig 7 AND own understanding so must get at least ONE idea from Fig 7

Look carefully at photos!!!

Explain TWO ways the rainforest could be a source of income for local people [4]

2 x 2 marks

Photo 1: **shows ecotourism**, this could be a source of income for the local people income **because jobs are created in the resorts for locals eg locals work as tour guides or they may sell food/crafts to visitors, like in the SNR in CR**

Photo 2: **shows _____**, this could be a source of income for the local people income because

Photo 3: **shows _____**, this could be a source of income for the local people income because

Question 8b

Says to use the newspaper extract **AND own understanding** so must get at least **ONE** idea from it.

We studied CR!! Apply your knowledge

Evaluate question!!!! [6]

Are the impacts of human activity **all bad?** **all good?** **a mixture?**

3 x 2 mark points

Ghana

25% have been ? This is 😊/☹️

15% have become ? This is 😊/☹️

60% unknown!

Question 8b

Write out, then colour code in PENCIL CRAYON to show where you are covering positive and negative

Since 1990, Ghana has deforested 25% of its rainforest; this could have had both **positive** and **negative** impacts.

Economic benefits include the creation of jobs and trade. The cleared areas could be used for growing crops eg cocoa and the trees could be sold for timber or rubber.

On the other hand removing trees increases the flood risk as trees intercept rainwater. Biodiversity is reduced so species might become ? Furthermore there are fewer trees/plants which means fewer m? products affecting the h? of people locally and globally. On a positive note Ghana has protected ?% of its forests, these could be used to attract tourists like in CR (SNR)

Question 9

[p124]

6 markers and case studies are LEVEL marked.

Level 1: 1-2 marks, Level 2: 3-4 marks Level 3: 5-6 marks

Simple ideas only get you 2/6, even IF you give >2 ideas

Maximum score of 3/6 if there is no PSD (place specific detail) about Samasati

To get a Level 3 (5-6 marks) MUST EVALUATE how effective it is

Level 1: It employs people

Level 2: It employs only local people, this gives those employed a reliable income so allows them to improve their QOL.

Level 3: It employs only local people, this gives them a reliable income so allows them to improve their QOL, making it socially sustainable.

Question 9

Ideally 1 x soc, 1 x ec & 1 x enviro (2 is poss if v.good)

Samasati Nature Retreat. This is an **ecotourism project** which *protects* the *rainforest* whilst still *earning money* for Costa Rica.

It employs only local people, this gives them a reliable income so allows them to improve their QOL, making it socially sustainable.

Economically, the money earned from tourists stays in the local area and is not sent out of Costa Rica to TNCS in ACs, meaning it can be used to improve the local services and infrastructure.

Environmentally, the tourist cabins were built between the trees and additional building materials (logs) came from an afforestation project, meaning no deforestation occurred.

Rainwater is collected to use for toilets and showers, reducing the demand for clean water. Natural light minimises energy use, which reduces CO₂ emissions from electricity generation.

Question 10

Global example of sustainable management in the Arctic OR Antarctic

[p136]

6 markers and case studies are LEVEL marked.

Level 1: 1-2 marks, Level 2: 3-4 marks Level 3: 5-6 marks

The question says **evaluate** so MUST cover good *and* bad points to get beyond Level 2

Need **Place Specific Detail (PSD)** to get to 3 or more /6. This could be details about the Treaty, the Protocol; number of countries involved; rules

Question 10

Global example of sustainable management in the Arctic OR Antarctic

[p136]

The AT has been **totally/partially** successful.

The AT was set up in year? to protect Antarctica. Originally ? countries from around the World signed the agreement, since then the number has ?

The Treaty has ? rules. These are.....

All/Most/Some of these have been followed, showing full/partial success.

The rules mean that h? activity on Antarctica has been limited to SR? and t? SR helps us to understand cc?

The SO? is also protected, f? is controlled to protect and there is a limit on the size of tourist b?

Unfortunately there have been some small issues with wp? caused by o? and breeding of ? species. In conclusion, we have been ? successful in managing the Antarctic.