

Examiners' Report
June 2012

GCSE Geography 5GB1H 01

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Introduction

This report covers responses from the Higher tier paper of GCSE Geography Specification B. The unit one paper was one hour long. The paper comprised of four compulsory sections and two optional sections. Each section starts with a resource based activity, followed by one or two extending questions. The question paper was designed to be progressively more difficult.

The aim of the paper was to provide candidates with a broad and varied understanding of the natural environment. Question paper completion required candidates to apply a range of skills. Candidates need to be able to interpret and read maps, diagrams and charts.

Question 1 (a)

The vast majority of candidates produced accurate answers to this question. As the command word was 'state' candidates only needed to name a potential danger. As there was no requirement for a description, candidates who had included incorrect/confused extending statements were not penalised on this occasion, however the number of mixed up responses suggested this aspect of the specification could have been better understood. Some candidates lost marks by referring to indirect impacts, such as 'job loss' or 'homelessness'.

SECTION A – INTRODUCTION TO THE DYNAMIC PLANET

Answer ALL questions.

Topic 1: Restless Earth

1 Study Figure 1.

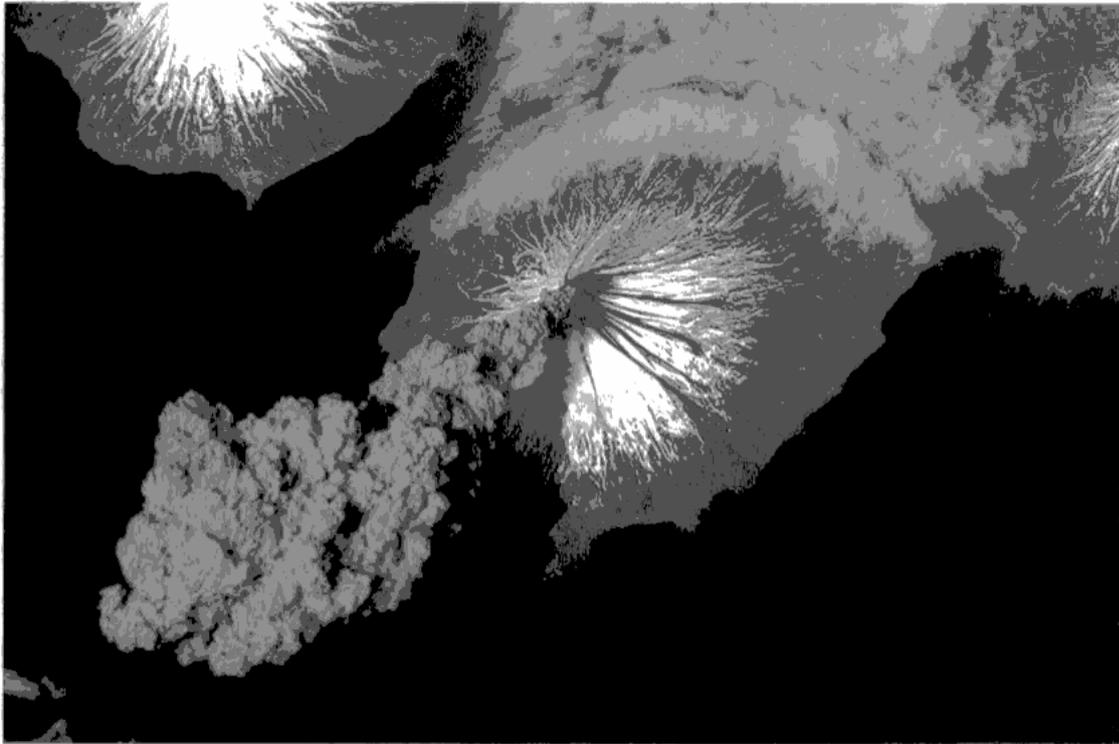


Figure 1 – Aerial photograph of a volcanic eruption

(a) State **two** ways in which a volcanic eruption can endanger human life.

(2)

1 It can make temperatures rise

2 It can cause global warming



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Examiner Comments

As the focus of the question was threats to human life, responses which referred to global change were not credited as the potential problems associated with climate change are long-term.

SECTION A – INTRODUCTION TO THE DYNAMIC PLANET

Answer ALL questions.

Topic 1: Restless Earth

1 Study Figure 1.

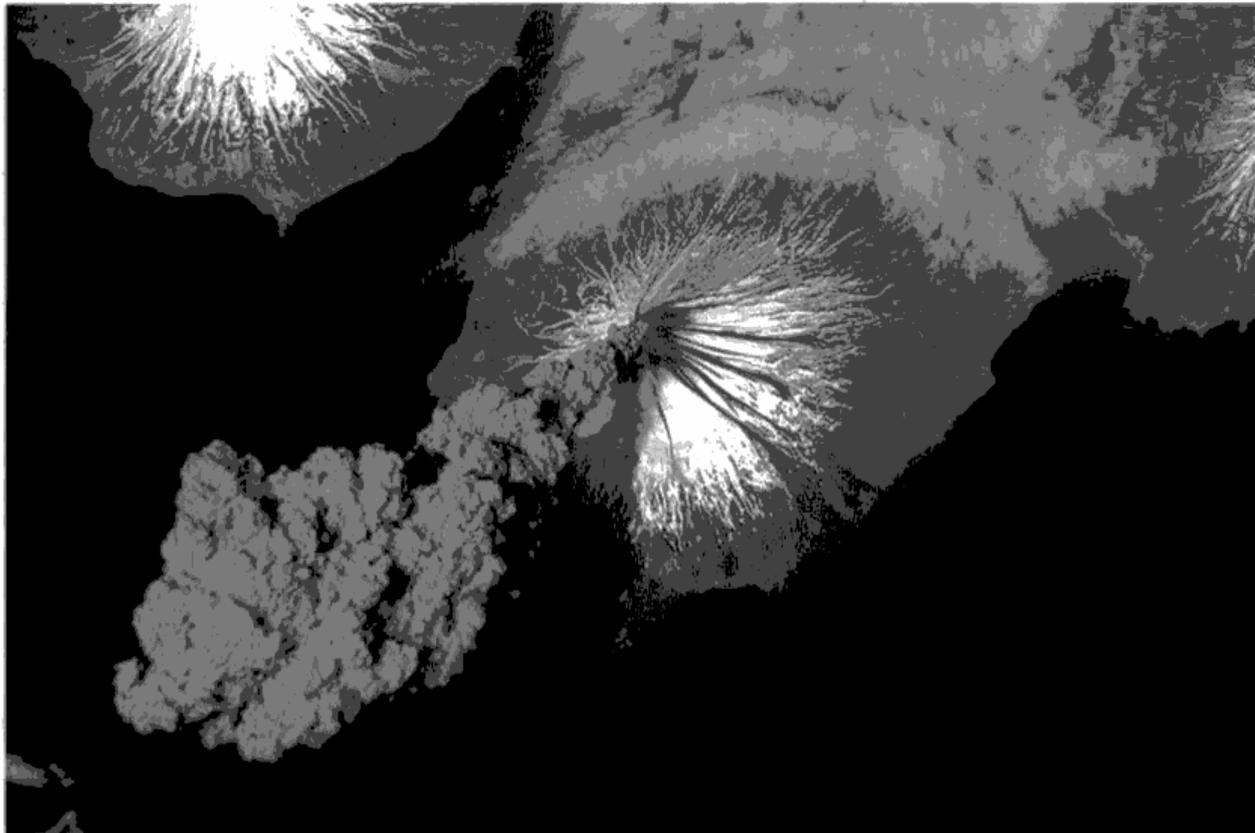


Figure 1 – Aerial photograph of a volcanic eruption

(a) State **two** ways in which a volcanic eruption can endanger human life.

(2)

1. It can lead to migration, so people moving out of the country.
2. All of the toxins and harmful gases hang around the atmosphere.



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Examiner Comments

This candidate received a mark for identifying harmful gases but the first statement described a long-term impact rather than an imminent danger (threat) to human life.

Question 1 (b)

This was another strong question for the majority of candidates. A wide range of prediction methods were referred to and most responses included clear and relevant extension. As the command word was describe, some candidates carelessly lost marks by listing two methods rather than providing any extension. Some responses also went off focus. These answers tended to suggest strategies for predicting how powerful an eruption might be rather than when it is likely to happen.

(b) Describe **one** method that can be used to predict when a volcano is likely to erupt.

(2)

Seismometers, which measure vibrations in the ground near the volcano, and when they become abnormally high, an eruption is imminent.



ResultsPlus
Examiner Comments

The candidate identified the use of seismographs as a means of monitoring a volcano and explained that these measure vibrations, also stated that the larger the vibrations the more likely an eruption. A clear and well developed response.

Question 1 (c)

Overall, candidates performed well on this response. The most common response referred to drills of some sort and earthquake proof buildings. The command word was again 'describe' so at least one point needed to be developed for full marks. Some candidates lost marks by referring to responses (e.g. evacuations) rather than preparations. Some candidates identified a valid preparation but provided weak extension, e.g. simplistic statements such as 'this will decrease deaths' or 'reduce damage'. These extensions were not sufficient for the additional development mark. In line with previous years, an appropriate example was accepted as an extension; however, very few candidates included examples in their responses.

(c) Describe how people can prepare for earthquakes.

(4)

People can prepare for earthquakes by having regular practice drills and the emergency services should be trained to know what to do in the conditions of an earthquake. The people should also have an emergency first aid kit in their homes consisting of: water, a torch, emergency food and first aid kit. The Buildings should also be built to withstand earthquakes. So it is safer.



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Examiner Comments

This was a strong response, the candidate referred to practice drills, emergency kits and construction methods. The first two actions were also developed.

(c) Describe how people can prepare for earthquakes.

(4)

People can prepare for earthquakes by practicing drills in local schools, this will decrease the chance of child deaths when an earthquake hits. Another way to prepare for earthquakes is structuring buildings with things like windows that fall into the building or a bird cage structure to prevent it ~~toppling~~^{falling} over.



ResultsPlus

Examiner Comments

This answer scored full marks through the 3 + 1 route. The candidate described the need for earthquake proof buildings and then gave two developments (special windows and cage structure). The final mark came from the first statement which referred to drills in schools.

Question 2 (a)

This question proved challenging for some. Correct answers tended to refer to Manchester's larger population and greater car ownership. A common incorrect response suggested different levels of development/wealth in Manchester and Cumbria.

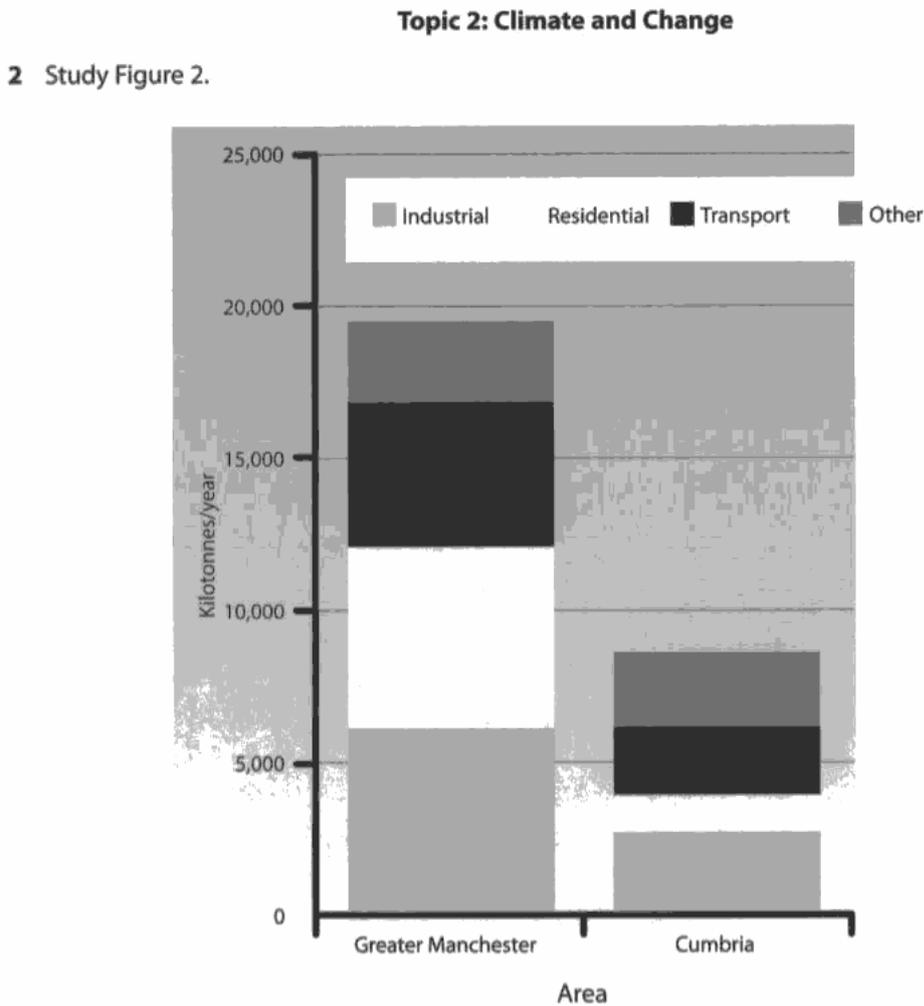


Figure 2 – Carbon dioxide emissions in selected areas of north-west England

(a) Suggest **two** reasons why carbon dioxide emissions are higher in Greater Manchester than in Cumbria.

- (2)
- Greater Manchester is a more urbanised area meaning that there are more people and so more residential emissions from ^{houses} houses.
 - Also there is more industry in Greater Manchester resulting in higher emissions from industrial sources.



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Examiner Comments

The candidate referred to Manchester's larger population and greater industrial activity.

Question 2 (b)

The vast majority of candidates scored both marks on this response. The most common correct response referred to driving cars and burning fossil fuels and linked these activities to higher greenhouse gas emissions. Some candidates failed to read the questions correctly, describing the impacts of climate change rather than the causes. A considerable number of candidates lost marks by simply referring to 'pollution'.

(b) Describe **one** way in which human activity is contributing to climate change.

(2)

Deforestation is contributing to climate change, as the fewer trees there are, the less carbon dioxide will be taken in from them. Also the transport needed to get to the forest causes pollution.



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Examiner Comments

This was a good response, the candidate identified deforestation and linked this action to a lower carbon sink and greater transport emissions.

Question 2 (c)

This question was clearly challenging to a significant percentage of the cohort. To attain full marks candidates must have referred to changes in both orbits/tilt and solar output (sunspots). Candidates often attempted to answer the question by simply repeating information given to them in the question, such as "changes in the Earth's orbit can result in climate change". There were also a number of common incorrect responses suggesting that this aspect of the specification could be better understood.

(c) Describe how orbital changes and varying solar output can lead to climate change.

(4)
The Sun spot theory states that the number of 'spots' on the sun ~~changes~~ varies, which changes the amount of UV rays it emits. The more spots, the more output, which will heat up the earth. The earth's axis moves, it can tilt and spin like a spinning top. This change effects the distance the earth is from the sun, and the amount of sunlight certain parts of the earth gets. Therefore it can reduce or increase temperature.

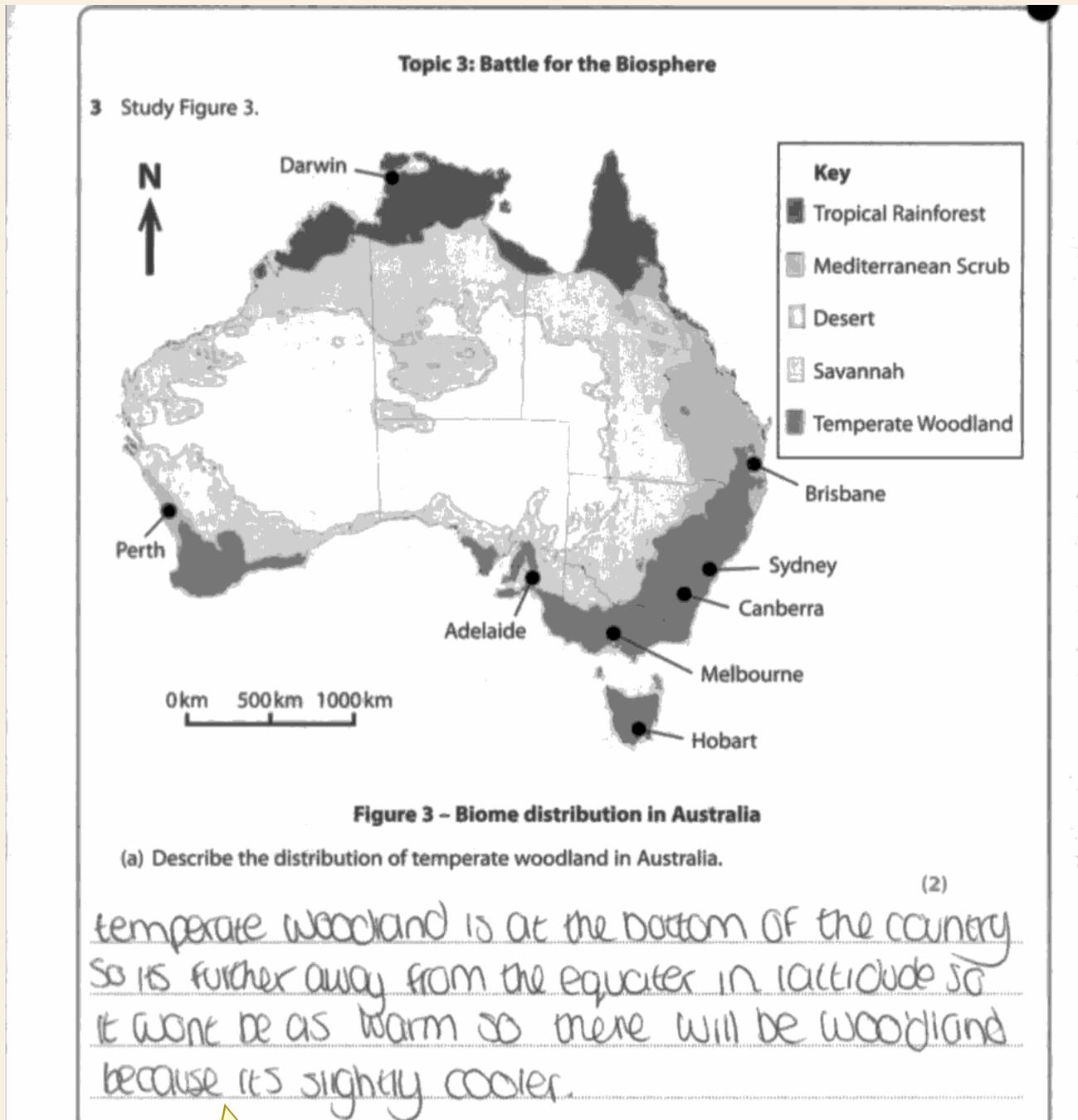


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Examiner Comments

A strong response. The candidate described the impact of both sunspot theory and orbital changes. Changes in temperature result from the amount of energy we receive from the sun, not the distance we are away; this was a common misunderstanding.

Question 3 (a)

Most candidates produced strong responses to this question. Candidates who identified regions on the map by referring to the top/bottom or left/right were not credited. Candidates should use compass directions when describing the location of regions on a map. A significant number of candidates dropped marks by explaining rather than describing the pattern of biome distribution. Some candidates located other biomes rather than focusing on Temperate Forest.



ResultsPlus Examiner Comments

This candidate made all the classic errors - referring to the 'bottom' and attempting to explain the distribution rather than describing it. One mark for stating it was further away from the equator.

Topic 3: Battle for the Biosphere

3 Study Figure 3.

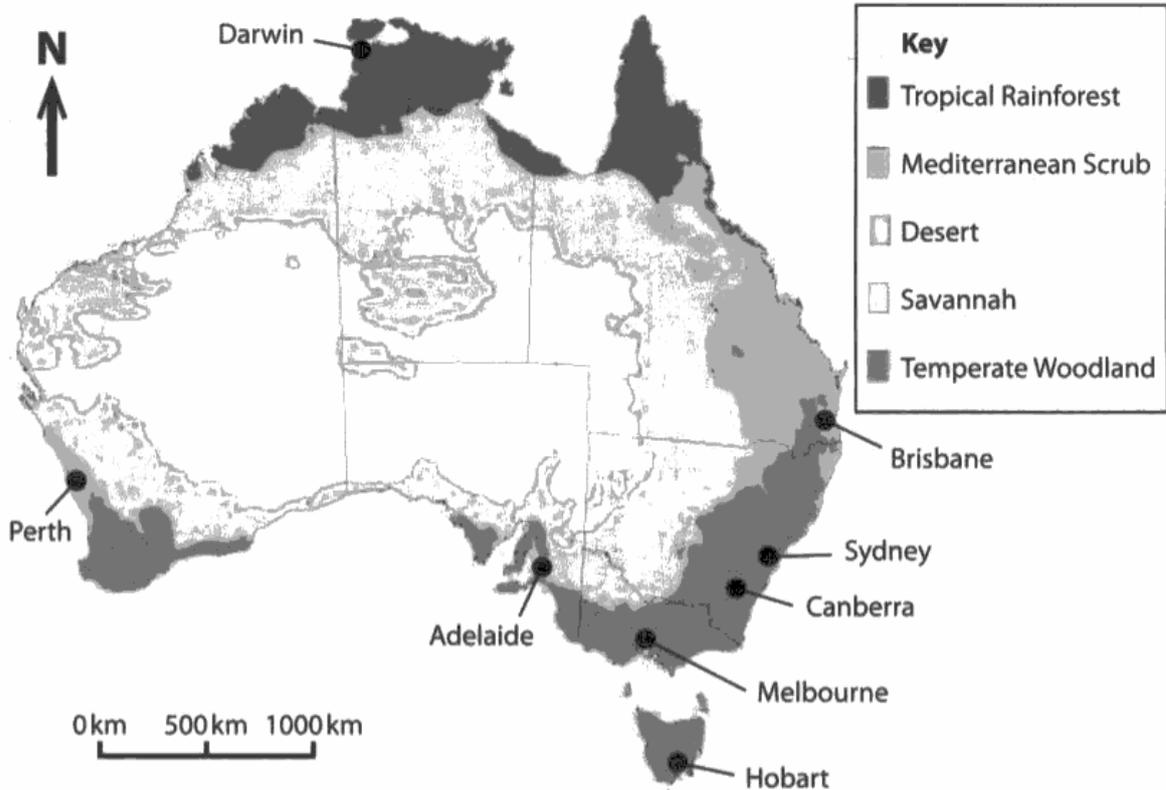


Figure 3 – Biome distribution in Australia

(a) Describe the distribution of temperate woodland in Australia.

(2)
A ~~wood~~ temperate woodland is mainly located in the southern ~~coasts~~ south west and south east coasts of Australia, as it is cooler here and it rains more



ResultsPlus
Examiner Comments

This was a clear and focused response which correctly used compass directions and identified the proximity to the coast.

Question 3 (b)

Candidates were required to include a named biome in their response. A number of candidates lost marks by naming countries or regions rather than a biome. Brazil, Australia and the Amazon were common inappropriate names. When no biome was identified, the maximum mark available was 1. The most common correct response referred to the rainforest, deforestation and habitat loss.

(b) For a named biome, describe **one** way it has been damaged by human activity. (2)

Named biome: Tropical Rainforest

Tropical Rainforests are being severely affected by deforestation. Due to all the trees being cut down this is having an impact on the eco-system of the rainforest, animals can't get food and their habitats are being destroyed.

(c) Describe the management methods that can be used to conserve the biosphere



ResultsPlus Examiner Comments

The classic correct response - biome was identified, human activity highlighted and impact described.



ResultsPlus Examiner Tip

The relatively large number of candidates who failed to identify an appropriate biome, suggests the term is still not widely understood.

(b) For a named biome, describe **one** way it has been damaged by human activity. (2)

Named biome: Coniferous forest

The human activity of deforestation has badly damaged this biome, as many of the trees have been cut down and used in construction.



ResultsPlus Examiner Comments

This response only scored 1 mark as the statements were repetitive. The candidate identified deforestation and then stated what it was.

Question 3 (c)

This question was answered well by most candidates. Some candidates lost marks by making repetitive statements, e.g. afforestation, this involves the planting of trees. Most candidates were able to identify a range of management methods and offer some development. Although national parks were a common response, relatively few candidates were able to offer meaningful development.

(c) Describe the management methods that can be used to conserve the biosphere.

(4)

A national method that could be used is through the use of National parks, these would not only ~~protect~~ protect it from deforestation and poaching, it would provide a tourist attraction that will give the place more income. A local method could be through the use of BAP's (Biodiversity action plans) to conserve the biosphere. A Global method could be making laws about extracting amounts of goods from biomes.

(Total for Question 3 = 8 marks)



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Examiner Comments

This was a strong response which identified both National parks and BAPs. The answer included clear development and demonstrated a solid understanding of both management methods.

Question 4 (a)

A number of candidates produced answers focused on water quality rather than reliability; statements referring to water pollution were not credited. As the command term was 'outline', full marks could be achieved by either stating two problems or developing one. Perhaps not surprisingly, considering the resource, most candidates linked unreliable water to baked soils and/or crop failure.

Figure 4 – Photograph showing the impact of unreliable water supply

(a) Outline why an **unreliable** water supply can cause problems for farmers.

(2)

It means that farmers do not know if their crops will have the correct amount of water to grow properly and can mean that crops fail causing less income and food shortages.



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Examiner Comments

The answer linked unreliable water supply to crop failure and food shortages. This response was awarded 2 marks.

Question 4 (b)

A surprisingly small number of candidates managed to score full marks on this item. Although most were able to identify an appropriate human activity, few included a suitable extending statement. Too many candidates wrote overly simplistic statements, such as 'rivers being polluted' or 'dumping in rivers'. To be awarded the mark, candidates were required to identify the type or source of the pollution. A considerable number of candidates on this question failed to score by referring to water reliability rather than quality.

(b) Describe **one** human activity that can lead to a reduction in water quality. (2)

Intensive farming methods, so using chemicals like fertilisers and pesticides can lead to a decline in water quality as the runoff into rivers can contain toxins that kill animals, or lead to eutrophication.



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Examiner Comments

This was a clear answer which linked farming and fertiliser/pesticide use to toxins in the water and eutrophication.

Question 4 (c)

Candidates who selected a large scale project usually went on to score well on this response. Unfortunately, a number of candidates failed to score as they focused their response on an unsuitable small scale scheme, such as wells. Candidates who identified a large scale action (e.g. dam construction) but failed to identify a specific example could only score a maximum of 3 marks. As the question asked for both costs and benefits to be described, answers which listed impacts but offered no extension, received a maximum mark of 2.

(c) For a named large-scale water management project, describe **one** cost and **one** benefit.

(4)

Named project Hoover Dam

One benefit from the Hoover dam is that we can get hep (hydro electric power).

One cost from the Hoover dam is that different types of fish would become extinct from the area.



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Examiner Comments

The candidate identified a benefit and drawback but offered no extension.



ResultsPlus

Examiner Tip

When the command word is 'describe', responses must be developed.

(c) For a named large-scale water management project, describe **one** cost and **one** benefit.

(4)

Named project Gibe III, Ethiopia

A benefit of building the dam is it creates a reservoir which can be used for hydroelectric power, which can be used in the country to aid farming and increase technology availability or it can be sold to other countries for a profit. However, as it is a large-scale project it is very expensive to build and it can leave the country in a lot of debt which will be hard to pay off.



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Examiner Comments

A thorough and well developed response. The benefits of HEP and the potential of crippling national debt were identified and described.

Question 5 (a)

On this question candidates could achieve full marks by two routes: (a) they could identify two changes and include one point of explanation (e.g. the cave will become an arch. Erosion of the arch will then form a stack) or identify just one change but make two points of explanation (e.g. the stack could become a stump. Erosion, abrasion and hydraulic action, will break it down). Some candidates lost marks by referring to attrition - this process reduces sediment size, it does not cause landscape change. A small number of candidate lost marks by referring to landforms not present on the photograph (e.g. spit) and others mixed up terminology.

5 Study Figure 5.



Figure 5 – Photograph of coastal landforms.

(a) Explain how **one** landform shown in Figure 5 is likely to change in the future.

(3)

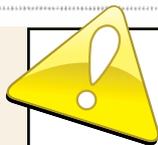
Chosen landform Stack

The Stack in the picture will eventually turn into a stump, this is due to erosion, the waves will erode the lower part of the stack so the top collapses, this makes the stack smaller so it is classified as a stump.



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Examiner Comments

An accurate and clearly structured response.



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Examiner Tip

On this question a relatively small number of candidates demonstrated a solid understanding of coastal processes. The different types of erosion were frequently mixed up, as were longshore drift and the types of waves.

Question 5 (b)

The key factor for moving between levels was explanation. A Level 2 response needed to include some clear explanation. For Level 3, candidates needed to have demonstrated a solid understanding of the term holistic in their response. Candidates who identified a range of management measures and explained their benefits, but failed to outline how these actions create a holistic approach were limited to Level 2. As the question asked for 'examples', candidates needed to include location specific information in their answer.

This question asked candidates to EXPLAIN THE BENEFITS of coastal management. Unfortunately, many candidates produced detailed responses which referred to a range of management actions but explained 'how they worked' rather than their benefits. It often looked as though individuals had prepared answers before the examination and were determined to write them regardless of the question. Answers more commonly referred to drawbacks than benefits.

*(b) Using examples, explain the benefits of using **modern holistic** (wide ranging) approaches to coastal management.

(6)

There are many ways to protect the coast such as sea walls. These are built to protect cliff faces from being eroded and are the most effective approach. However, these do not look very nice ^{cost a lot of money} and may result in a loss of tourism. An environmentally friendly way of managing the coast is beach rebuilding. This is where new sand is placed on the beach where some has been eroded and is the most attractive. The benefits of using modern holistic approaches to coastal management is that no coastline is the same or has the same problems, so there are many different cheap and expensive ways to overcome it.



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Examiner Comments

The candidate failed to focus their response on the question. The candidate outlined how the various techniques worked, mentioned the odd disadvantage and when benefits were referred to they were not developed. As explanation was needed for Level 2, this answer only scored 2 marks.

Question 6 (a)

As with 5(a),

candidates could achieve full marks by two routes: (a) they could identify two changes and include one point of explanation (e.g. the waterfall will retreat because of erosion. This backwards movement will create a gorge) or identify just one change and make two points of explanation (e.g. the waterfall will retreat as erosion breakdowns the soft rock causing the overhang to collapse). A number of candidates lost marks by incorrectly using key terms. The classic sequence of soft rock erosion, overhang development and waterfall collapse/retreat was surprisingly uncommon.

6 Study Figure 6.



Figure 6 – Photograph of 'High Force' waterfall

(a) Explain how the waterfall shown in Figure 6 is likely to change in the future.

(3)

The waterfall is likely to change and move further back up the river. As the water falls over the cliffs, it erodes the soft rock (limestone) underneath the hard rock, forming a ledge of hard rock (whinstone), this would then crumble and the process would start again and the waterfall will move backwards.

ResultsPlus Examiner Comments

This was a good answer, clear and accurate.

ResultsPlus Examiner Tip

River processes and landforms remains an area of weakness for a significant number of candidates. Candidates rarely demonstrated a solid understanding of the waterfall retreat process.

Question 6 (b)

As with 5(b) the main level 'elevator' was explanation. Level 2 responses were required to include explanation. For Level 3, two or more human actions must have been explained. As the question asked for examples, located actions were required for Level 3, whilst for full marks detailed place specific information was needed.

Answers referring to coastal flooding from climate change were accepted on this occasion as the question didn't specify 'river' flooding. However, in the future, similar questions will be worded to avoid the legitimacy of these responses as the topic is 'River Processes and Pressures'.

*(b) Using examples, explain how human actions can result in an increased risk of flooding.

(6)

urbanisation can increase flooding because the rainwater can't penetrate the ground. ^{meaning it will stay on the ground.} Deforestation can increase the risk of ^{the} flooding because the trees would normally ~~had~~ intercept the water meaning there would be less ~~#~~ water to flood and but they can't



ResultsPlus
Examiner Comments

The candidate identified urbanisation and deforestation, but only provided basic explanation. A Level 2 response so 3 marks awarded.

Question 7 (a)

Candidates scored well on this response. Two changes were needed for full marks. Some candidates lost marks by suggesting reasons for the reef's changes rather than describing them.

Question 7 (b)

The question asked candidates to identify a global action; therefore there was no need for development or description. Candidates simply stating 'the laws of the sea' were credited. Any action which was international (e.g. has been implemented by several national governments) were accepted. A relatively large number of candidates lost marks by identifying local rather than global actions.

Question 7 (c)

Again, the key level 'elevator' was explanation. At least one point of view needed to have been explained for Level 2. Level 3 responses had to be location specific; generic answers with unnamed or vaguely located ecosystems, such as 'coral reefs', were limited to Level 2. Most of the responses which reached Level 3 took the route of explaining both sides of a point of conflict.

(c) For a named marine ecosystem, explain why people may disagree about its management.

(6)

Named marine ecosystem: Coral Reef

People in the tourism industry may have very different views to environmentalists about how to manage the coral reef, because their primary aim is to use the reef to generate an income, through ways such as fish taking boats out for tourists to see the reef, or fishing for fish to serve in restaurants. ~~Businesses may also see~~ Local people may want to try and protect the reef, or may feel that they should be allowed to use it as they have always done. While councils will want to use the reef to generate ~~and~~ an income through tourism, they will want to protect the reef to ~~some~~ ^{a certain} degree to ensure that the tourism (Total for Question 7 = 9 marks) opportunity is sustainable. If the reef is destroyed, there will be nothing for people to see.



ResultsPlus

Examiner Comments

A solid response including several explained points of view. The answer scored only 4 marks as the response wasn't located. For Level 3 the candidate needed to have identified a specific coral reef and included location related information in their response.

Question 8 (a)

The vast majority of candidates scored full marks. Candidates could either list two design features or identify and explain one.

Question 8 (b)

The question asked candidates to identify a global action; therefore there was no need for development or description. Candidates simply stating the 'Kyoto protocols' were credited. Any action which was international (e.g. has been implemented by several national governments) was accepted. A considerable number of candidates failed to score by naming local rather than global actions.

Question 8 (c)

'Explanation' was again the main elevator. Level 3 responses needed to be focused on a specific location. A significant number of candidates failed to answer the question, describing how locals cope in extreme environments rather than how their lives have recently changed. The best answers to this question often referred to polar rather than hot arid climates. Many candidates were able to produce detailed and well explained responses which considered the changing lives of Inuit people in Canada or in Alaska.

* (c) For a named area with **either** a hot arid **or** a polar climate, explain how life is changing for its peoples.

Named area: ^{Siberia} ~~Antarctic~~ ~~Alaska~~ (6)

Life is changing because the snow and ice is melting due to the rise in temperature and the native people who live out in the snow, are having problems with the temperature as they are always on the move with their herds of reindeer taking them to slaughter house, they only have the tipis and their cloths to keep warm. They have to ~~send~~ travel some place's on snow mobiles when going to ~~do~~ the slaughter houses because the thick snow slows them down.



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Examiner Comments

Although the candidate began the answer by referring to environmental changes in the Siberia region, when they moved onto the peoples of the area, they outlined how they cope with their extreme climate rather than explaining how their lives are changing. As no changes in lifestyle had been identified or explained the candidate failed to score.

*c) For a named area with **either** a hot arid **or** a polar climate, explain how life is changing for its peoples.

(6)

Named area: Alaska

The Inuit tribes of Alaska are having their lives changed ~~to~~ due to cultural dilution, their traditions and way of life are being changed due to the influx of westerners.

Global warming and climate change means that the people of Alaska have to find new animals to hunt as their main sources of food move to different waters. Some of their oldest traditions, such as the whale hunt, are becoming more and more restrained due to ~~environmental~~ activists trying to protect endangered species.

(Total for Question 8 = 9 marks)



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Examiner Comments

A detailed and place specific response, focused on lifestyle change.

Paper Summary

The general level of response was of a pleasing standard. It was clear that lessons have been learnt from earlier examination series, with previously common errors now rare. Responses were also more varied than in previous examinations, suggesting that teachers are using a wider range of resources and case studies in their lessons. This probably reflects a better understanding and growing confidence with the new specification.

Candidates have the choice of answering either sections 5 or 6, 7 or 8. Similar to the previous paper, the most popular topics were 'Coastal Change and Conflict' and 'Extreme Climates'. The breakdown in both cases was approximately one third, two thirds.

Candidates completing the 'Extreme Climate' topic are given the choice of focusing on either a hot arid or arctic region. Hot arid locations, in particular Australia, proved most popular but didn't necessarily provide the best answers. There were many excellent answers focused on Iceland, Alaska and Siberia.

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