

Examiners' Report
January 2012

GCSE Geography 5GA2H 01

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January 2012

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Introduction

Once again this paper was well received by most centres; many candidates coped well with the content. Candidates are becoming more accomplished at describing distributions and explaining the formation of landforms, yet struggled on the more simplistic questions requiring description of landforms or accurate graphical techniques. Explanation of case study material has once again improved especially on Part B topics however candidates are still finding it difficult to apply a range of examples to the Part A case study questions.

Many candidates completed the paper in good time and few left significant gaps in their answers. Equally many centres have followed advice and advised their candidates on the use of extra space for their answers, particularly advising the use of asterisks and arrows to direct examiners to extra work.

The popularity of questions remained consistent with past examinations; Tectonic and Coastal Landforms proved most popular, yet less well answered, while River Landscapes increased in popularity. The Glacial Landscapes questions are arguably in decline (like many of the glaciers around the world). However, centres who show a specialism for this often see a good return in student performance.

Question 1 (a) (ii)

Although candidates have shown significant improvement in landform explanation, it is clear that they are not well practised at the simple *description* which was required in this question. A majority of answers focused on *explanation* of the formation and these could not be awarded credit. Candidates could improve by practising landform description using photographs or images which place them in their natural context. They should aim to describe the features of the landform such as shape, orientation and where possible use a scale - a rarely used method of describing. An alternative way could have been to describe the location of the landform relative to other landforms.

When the sea hits the bottom of the cliff, corosions, pebbles and rock been thrown against it, cause there to be a wave cut notch. Eventually because of Gravity the cliff face falls into the sea, causing a wave cut platform. This process is ~~the~~ always repeated.



ResultsPlus

Examiner Comments

This answer was awarded no marks since it comprises explanation rather than description. Although good on process, the candidate omits descriptive detail such as steepness, size or location.



ResultsPlus

Examiner Tip

When you are asked to describe a landform, focus on just the shape, size and relative position of the landform.

Question 1 (a) (iii)

There were a variety of answers ranging from those who believed that examples of physical weathering were hydraulic action, abrasion and corrosion to those who successfully negotiated freeze-thaw weathering. Some candidates had great success with the application of salt crystal growth. The concept of root action was accepted as, although it is generally accepted as biological weathering, the mechanical action on the rocks by root growth is physical.

The majority of those who understood physical weathering and thereby chose an appropriate answer scored at least 2 marks, however to get the third mark candidates were required to make the link between the process and the outcome. Many candidates did this as part of their explanation.

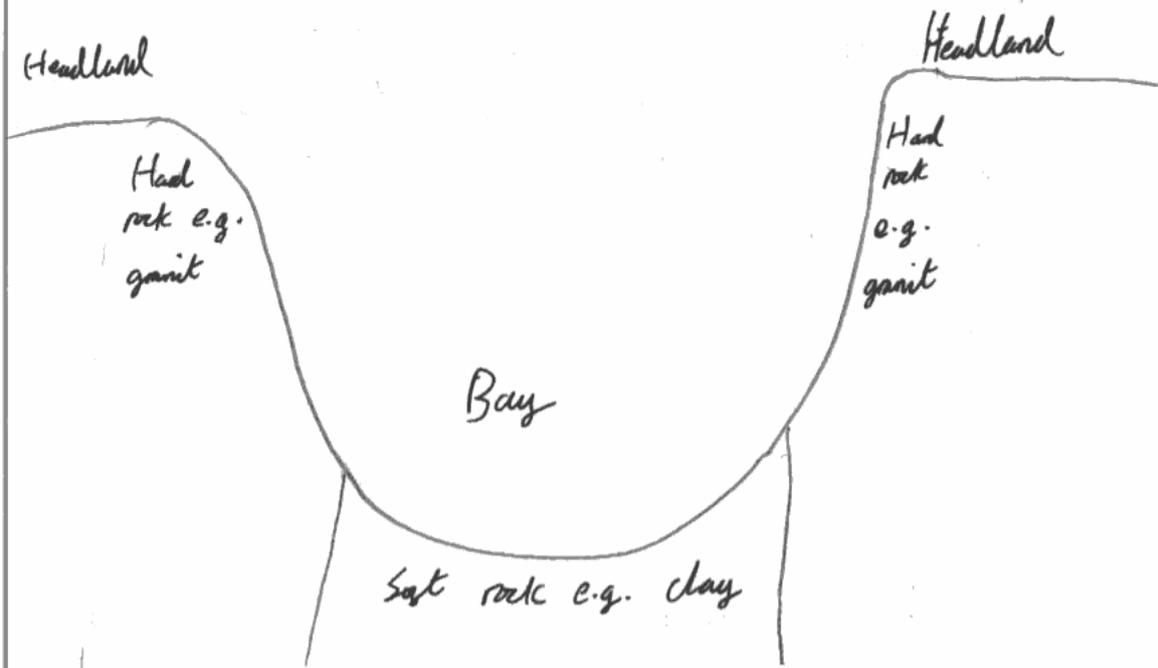
Question 1 (a) (i) (v)

Many candidates were able clearly to describe the formation of the headland and bays. Those candidates whose responses were awarded the higher marks were either able to clearly explain the processes of erosion, such as hydraulic action, or to give detail about the development of the headland/bay formation such as wave refraction or bay beach formation

(iv) Explain the formation of headlands and bays.

You may use a diagram(s) in your answer.

(4)



The cliff is made of different types of rock, the soft rock is eroded first, probably by corrosion which is where acids in the sea dissolve the rock, as the soft rock is eroded it eventually breaks away, ~~then~~ where the soft rock used to be is now a bay, now the soft rock is further away from the hard rock so the hard rock now gets most of the force of the waves so it too is now eroded faster. At the end each cliff is the same distance from the sea and this process repeats.



ResultsPlus
Examiner Comments

Here the candidate gains full marks through a clear explanation of corrosion and some explanation of the landform development (over time).



ResultsPlus
Examiner Tip

An explanation of the process is a good way to gain access to the 3 or 4 mark range. Annotations onto a diagram can often be a good way to explain features you mention in the landform explanation.

Question 1 (a) (i) (X)

Many candidates were able to recognise overhang or cliff as the correct response, though there was confusion over whether the landform was a headland. Candidates should not make *assumptions* based on the image and should opt for the more likely answer based on what is actually shown in the image.

Question 1 (a) (i) (Y)

Most candidates recognised the landform as a wave cut platform. Some simply repeated wave cut notch which was already included on the paper.

Question 1 (b) (i)

The majority of candidates scored well on this question and have grasped the concept of graphical description. Many good habits, including describing the overall trend, anomalies to the pattern and use of data, were apparent as students accessed full marks. Some good answers also included reference to changing rates of data e.g. steep rises. Some candidates limited themselves by not using data, which in this case was the eroding coastline length (km).

Question 1 (b) (ii)

This was a well answered question, although for some lower scoring candidates there was the inevitable confusion with hard engineering techniques. Some candidates were limited by a lack of outline but those who had a clear understanding of the techniques were often able to offer some development. The best answers came from those candidates who related their answers to named techniques, such as beach nourishment or afforestation, as this resulted in less tenuous generic answers.

Question 1 (c)

It is clear that many candidates were anticipating a question on coastal management as many erosional case studies were prominent. However, such candidates were self-limiting as they needed to instead focus on methods to prevent or predict flooding. Equally, lower scoring candidates tended to generalise responses without clear reference to organisations who had undertaken either prediction or prevention. Better answers gave specific points on named organisations such as the Met Office, or the work of DEFRA to deal with coastal flooding. Candidates are advised to learn a range of examples to help them as opposed to learning one case study which fits all the points.

various engineering techniques for example sea walls & groynes would stop coastal flooding because, sea walls stop the waves from going past as they crash against them, groynes stop the beach being destroyed as it stops the sea from removing and depositing the sand further up the coastline. If you predict that there could be a flood this gives you time to prepare, places like websites & weather forecasts would keep you updated in floods & gives you some indication of when & how serious the flood will be.



ResultsPlus

Examiner Comments

This response was awarded 2 marks. Answers which focused on coastal erosional methods, such as groynes, were limited to Level 1. Here the candidate has incorrect focus in the first part and then generalises a response on forecasting.



ResultsPlus

Examiner Tip

Try to clearly differentiate between coastal flood management and coastal erosion management.

Question 2 (a) (ii)

Candidates found the description of landforms a slight challenge, and tended to score marks based on their relative positions. However there was a general lack of reference to the features of the landforms, such as flatness or size, which would have gained marks. Candidates need to learn that descriptions are different from explanations, which were common and self-limiting. Many opted to explain the flood process and not describe the landforms in the image.

In future when describing, candidates should focus on relative positions of the landforms, or the scale or defining features of the landform, such as shape.

When a river floods onto the flat piece of land which is a floodplain it deposits its load - ~~as~~ ^{the} material - as it retreats back to the river channel because it loses energy. This forms natural banks of material by the side of the river which are levees. Silt is left on the flat floodplain too. This can make the soil fertile.



ResultsPlus Examiner Comments

The candidate includes a good deal of explanation in their answer, but also weaves in descriptive comment. Comments on the 'flat...land', the 'natural banks by the side of the river' and 'silt' enable this response to score the full 3 marks.



ResultsPlus Examiner Tip

Ensure that the description is clearly distinguished from the explanation. Practise this skill with pictures of landforms in their natural context.

Question 2 (a) (iii)

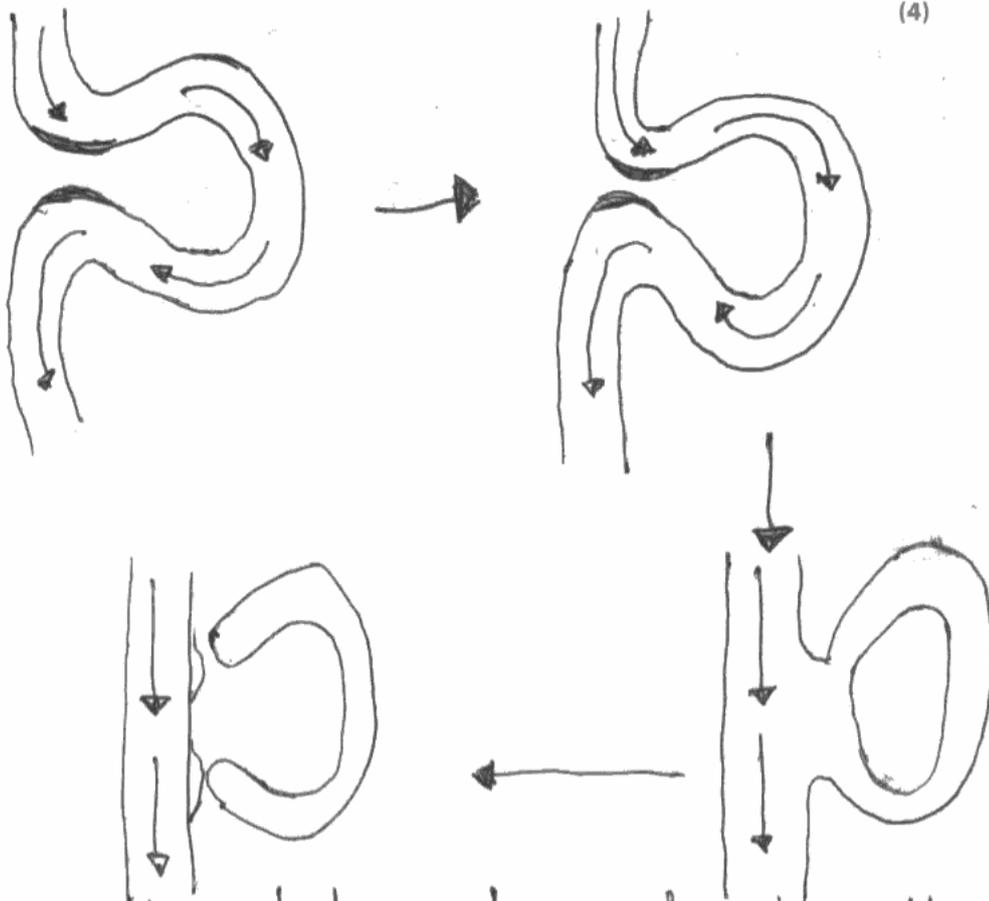
Of those candidates who understood the concept of mass movement, many showed sound process and gained near full marks. Some did not develop a cause effect link and could not access the highest marks. A large minority of candidates confused the slope processes with river transportation and subsequently spoke about processes such as traction and saltation. It is important that candidates distinguish clearly between transportation and mass movement processes.

Question 2 (a) (iv)

Many candidates were able confidently to describe the formation of a meander and subsequent development into an ox-bow. Most could also link to the reason for meander migration being tied into differing velocities around the bend; few, however, developed the link which helped to explain why the meander neck was overcome or how the subsequent ox-bow became a lake through deposition. Candidates need to be clear on process and many gained a mark through reference to deposition, but failed to explain its occurrence.

(iv) Explain the formation of an ox-bow lake.

You may use a diagram(s) in your answer.



An ox-bow lake is formed when the flow of the river ~~erodes the bank~~ erodes the land cutting of the meander. This happens because the velocity of river erodes the bank so it is able to get to the mouth of the river quicker. Eventually you are left with an ox-bow lake.



ResultsPlus

Examiner Comments

This response was awarded 2 marks. The candidate shows clear evidence of sequence, through good use of a diagram. However they fail to develop this in their explanations and are subsequently descriptive. In order to gain 3 or 4 marks more is needed on how the meander neck breaks or how the neck subsequently silts up.



ResultsPlus

Examiner Tip

Use of diagrams to show sequence is effective. Development of this sequence with clear annotations would further improve the response.

Question 2 (a) (i) (X)

The majority of candidates recognised this as a levee or bank.

Question 2 (a) (i) (Y)

The majority of candidates recognised this landform as a floodplain, though some did not give the full name and instead used the term plain, which was not accepted.

Question 2 (b) (i)

The majority of candidates performed well on this question and were able to use data in support of their answers. Some tended to give a story of the figures instead of focusing on the changes, while some excellent answers focused on rates of change between the data. Candidates should look for trends or patterns where possible and the anomalies to these. Some candidates did limit themselves by talking about small parts of the graph, when a summary across the years was needed for maximum marks.

(b) Study Figure 2b.

It shows the cost of river flood damage in the UK between 2004 and 2010.

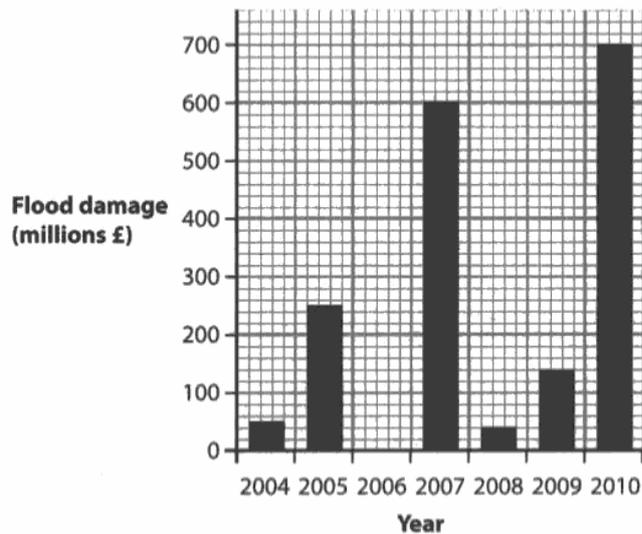


Figure 2b

(i) Describe the changes shown on Figure 2b.

Use river flood damage data in your answer.

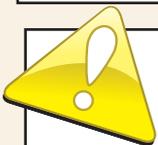
(3)

The ~~rate~~ damage is low at £50m at 2004 and increases to £250m in 2005. There is then a blank of £0m in 2006. After that it rapidly increases to £600m in 2007 and rapidly decreases again to £40m in 2008. It then increases up to 2010. In 2009 there is £140m damage and in 2010 £700m.



ResultsPlus
Examiner Comments

A clear answer with good use of data and rates of change between years clearly referenced.



ResultsPlus
Examiner Tip

When describing changes between years on graphs, think about by how much it rises or falls, is it steep or gradual? This way you will describe the rates of change.

Question 2 (b) (ii)

Candidates who showed a clear grasp of the soft engineering techniques and avoided generalisations scored better than those who did not, with many scoring 3 marks. Some statements such as 'cheap' were meaningless as they did not have a context. Therefore, if generalising such an answer put 'cheaper than hard engineering' so that the point is clear. Reference to a named type helps to focus an answer, though the stated advantages or disadvantages must be correct relative to the named method. Some candidates did confuse hard and soft engineering methods and many candidates could not or did not name methods.

Question 2 (c)

For those candidates who were able to access the correct case study material the result was often a Level 2 or Level 3 score. Some candidates find the request to 'refer to examples in your answer' difficult as they have learnt only one case study for management. It is advisable to learn a series of smaller examples which are applicable to different methods of prevention and prediction. Some good information in reference to the work of the Met Office and DEFRA scored well as did references to the various methods employed along the River Nene.

Some candidates focused only on defense structures, such as embankments and dams, therefore limiting their marks due to a lack of range.

Effects of flooding can be prevented by creating embankments and dams to contain the water. The effects can also be reduced by flood plain zoning which means that the land around the river does not contain anything that will be damaged.

An early warning system can give people time to prepare for a flood. The early warning system looks at the water levels and predicts when it is going to overflow. This reduces the impacts for example ^{Northampton} ~~the~~ updated their early warning system in 2003 to predict flooding from River Nene.

People living in a flood prone area should have their electric sockets and wires higher up the walls to prevent them from water damage.

Planting trees by the river bank helps to control the water levels by soaking the water up. Helping to prevent future floods.



ResultsPlus

Examiner Comments

This answer was awarded 5 out of the possible 6 marks. The response includes a range of methods to prevent the effects of river flooding some of which are explained. However, the single reference to a specific point, in Northampton, meant that this could not score the highest mark.



ResultsPlus

Examiner Tip

Ensure you learn at least 2 or 3 specific points, from a range of examples if possible to be able to access the highest Level 3 marks.

Question 3 (a) (ii)

Many candidates attempted to *explain* the formation of landforms resulting in a disappointing performance on this question. Of those candidates who did score well, many picked up features of the U-shaped valley, namely the steep sides or flat bottom. A small minority of candidates used the scale to help measure dimensions of the landforms. However, some did describe the relative position of the arete (between the two backwalls of corries) to gain credit.

An ~~arete~~ Arete is a knife sharp edge caused by two corries eroding away. Its sides are very steep.

A U-shaped vally is a vally shaped as a U it starts off as a V-shaped vally but when a glacier erodes the sides and vally floor it becomes a U-shape. It is very wide and has ~~the~~ steep sides and a flat bottom.



ResultsPlus Examiner Comments

Although this candidate hints at explanation, they have much in the way of description to gain full marks. The reference to an arete as 'knife edged' along with the u-shape valley described as 'wide and steep sided' helps this get to 3.



ResultsPlus Examiner Tip

Practise describing glacial landforms in their natural context from photographs and images, so that you are familiar with their features.

Question 3 (a) (iii)

The majority of candidates were able to access full marks as many showed a clear grasp of freeze-thaw weathering. Many even included detail on the rate of expansion (9%) and the subsequent pressure exerted after a temporal change. It was pleasing to see the depth of understanding.

Freeze-thaw is the process of ice melting and the water created running into cracks in a rock. As the temperature lowers to 0°C and below, the water will freeze into ice which expands its volume by 9%. This increase in volume puts pressure on the surrounding rock causing it to crack. Rocks/scree are then carried by the glacier is one is present and is used for abrasion.



ResultsPlus Examiner Comments

This candidate gives a clear explanation of the process and develops their answer with the cause effect linkage. The response was awarded the full 3 marks.



ResultsPlus Examiner Tip

Ensure that all processes e.g. plucking and abrasion, are learnt in the same level of detail shown in the understanding of freeze-thaw.

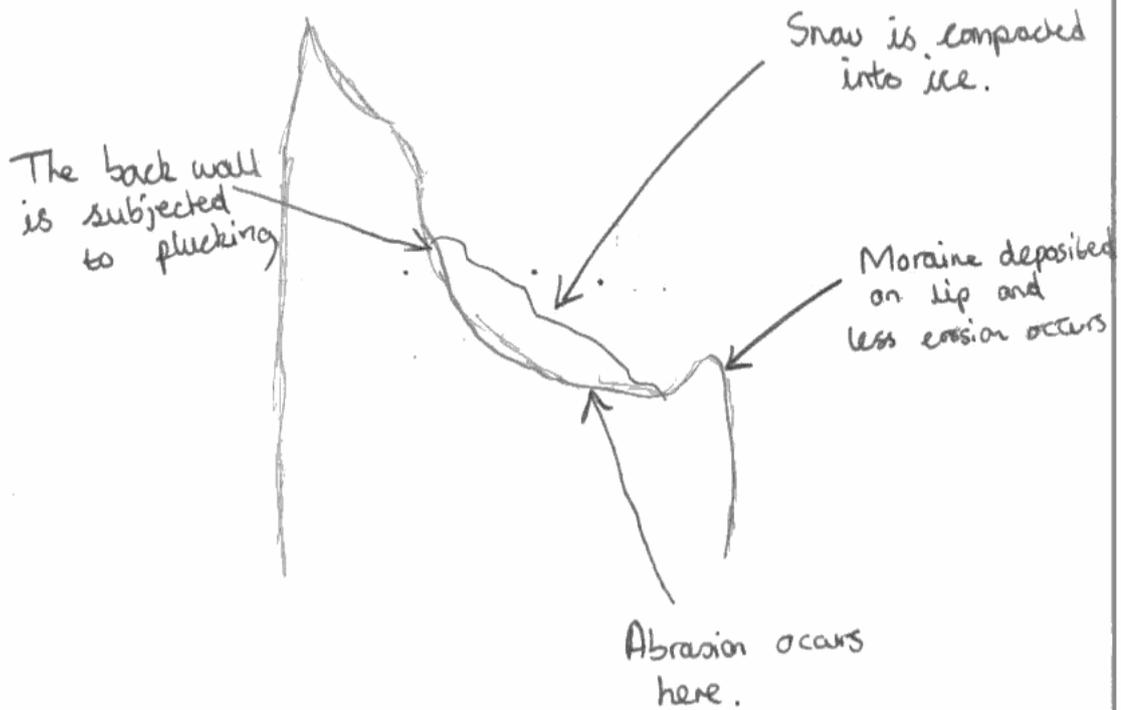
Question 3aiv

Many candidates were able to clearly describe a corrie and many its formation. Understanding of how the corrie develops over time was less strong. Good answers made reference to ice accumulation and rotational movement of ice to develop plucking and abrasion. Many of the best responses had a clear temporal link in their answer. Candidates would be advised to make better use of their diagrams where possible to ensure that stages of landform formation are shown.

(iv) Explain the formation of a corrie.

You may use a diagram(s) in your answer.

(4)



As snow accumulates in an indent on the mountain side it is compacted into ice. As the ice moves down the mountainside (by gravity) the back wall plucking occurs on the dip's back wall causing it to grow. Abrasion occurs in the dip as the ice moves. The rocks it carries are used like sandpaper to erode the valley surface. As the ice moves over the lip it slows down, causing it to drop some of its moraine, helping it gain in size. Also, less erosion occurs here.



ResultsPlus

Examiner Comments

This candidate explains clearly and makes good reference to process (plucking, abrasion, deposition). Although the temporal change is not explicit, evidence is given. This has good annotation of process around the diagrams to assist in the explanation. 4 marks



ResultsPlus

Examiner Tip

When using diagrams adopt a step by step approach to show transformation over time. If you can add annotations as you go along it could help your overall explanation.

Question 3 (a) (i) (X)

Many candidates recognised the landform as an arete.

Question 3 (a) (i) (Y)

Many candidates recognised the landform as a U-shaped valley/valley floor, but some chose to repeat the landform already given, a truncated spur.

Question 3 (b) (i)

The majority of candidates identified '5' as the correct response.

Question 3 (b) (ii)

Many candidates easily scored two with clear references to the changes, or reference to 'no pattern'. However many frustratingly limited their answers by omitting data which would have easily gained them a third mark.

When referring to changes, try to encourage candidates to describe the rates of change to gain extra credit.

Question 3 (b) (iii)

Candidates received this question well and had much to say, with many scoring full marks. Some were restricted by mentioning only the effects on the people or the environment, but some good answers made reference to examples to give their answer clear focus. Candidates should try to think of three *different* effects and not get preoccupied by referring only to deaths and injury.

The Galtur avalanche in February 1999 killed 31 people, 26 tourists & 5 locals. It also severely damaged 11 buildings and buried 40! Trees were destroyed in one avalanche destroying the habitat of animals. ^{there was} over £7.5 million pounds worth of damage!



ResultsPlus

Examiner Comments

The candidate scores their points quickly by using the Galtur case study as a guide for their answer. Although there was no credit for use of specific data the examples give the answer clear focus and help the candidate to refer to effects on both people and the environment.



ResultsPlus

Examiner Tip

Ensure that you answer all parts of the question, for example mention effects on both people and the environment. It is easy to miss one!

Question 3 (b) (iv)

In many cases candidates found it easy to make reference to a range of prevention and prediction methods, many of which were explained, enabling access to Level 2. However many found it a challenge to find specific points in their answers. Good answers tied the prevention/prediction methods into those found at specific resorts. Lower scoring candidates simply recited the effects of case studies learnt. Some candidates did cleverly weave their 'effects' specific data into an answer which gave context to the methods of prediction and prevention.

Outcomes would be significantly improved if centres were not wholly reliant on the case study examples and instead found their own methods of prediction and prevention, or organisations who aid in this process.

(iv) Explain how the effects of avalanches can be reduced by prediction and prevention.

Use examples in your answer.

(6)

There are many ways for predicting and preventing the effects of an avalanche. In Switzerland (the Alps), computer systems have been put in place that monitor several things such as the amount of snowfall, however they are not that accurate. Another way of predicting an avalanche is by digging down into the snow. Specialists can then assess how compact the snow is along with the rate at which thaw is occurring. Being able to predict an avalanche is difficult but if we can people can be evacuated to minimise deaths.

A way of preventing an avalanche & from having a devastating effect is by planting trees (afforestation) as they can reduce or even split up the avalanche as well as holding/anchoring the snow in place so one does not occur. On the 9th February 1999 at 2:40 pm approx 15m by 300m block of snow fell down the eastern side of the Chamonix valley. Many believe that a main cause of this was deforestation which disrupted the snow. Another way is to carry-out controlled avalanches which will be set-off by explosions. However, this can be dangerous.

Another way is by having signs to stop people in areas of high avalanche risk in areas as people will not ski on it or interpret the snow (new in place in Montroc, Chamonix valley). Overall there are many ways you can predict and prevent an avalanche occurring.

(Total for Question 3 = 25 marks)



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Examiner Comments

This candidate cleverly uses a series of known methods of prediction and prevention and is able to apply them to examples, enabling them to get the specific points and access Level 3 marks.



ResultsPlus
Examiner Tip

Ensure that you have a range of specific points, across a range of examples for the prevention and prediction of avalanches.

Question 4 (a) (i)

The vast majority of candidates recognised that 'Krakatoa' was the correct answer.

Question 4 (a) (ii)

Many candidates showed a general improvement in performance when describing distributions, and used words to describe the active volcanoes such as 'linear' or 'clustered'. Most candidates were able to use map evidence in their answer; some made reference to 'Pacific Ring of Fire' which was included in the stem of the question and therefore did not gain extra credit in their answer. Some lower scoring candidates were limited by giving a tour of the various plate boundaries without clearly describing the distribution. Good candidates recognised the distribution along plate boundaries as well as those located mid-plate.

(ii) Describe the distribution of volcanoes shown in Figure 4a.

Use evidence from Figure 4a in your answer.

(4)

The ~~volcanic~~ volcanoes on the map are mostly along the world's tectonic plate boundaries. ~~the~~ Most of them are situated around the 'Ring of Fire' which is ~~set~~ in the Pacific Ocean. Some volcanoes are found along the ~~the~~ Nazca plate & the South American plate, & volcanoes are found around the Indo-Australian plate, ~~there~~ there is the exception of Kilauea which is in the centre of the 'Ring of Fire' this is most likely to be a hotspot. ~~the~~ The volcanoes are most likely to be along destructive plate boundaries such as the Cocos plate and the North American plate boundaries.



ResultsPlus

Examiner Comments

This candidate makes a link to plate boundaries, and gives plenty of evidence of plates along which volcanoes are found. There is a recognition that some volcanoes occur in the middle of plate and a fourth mark is found for the point about their being mostly on destructive plate boundaries.



ResultsPlus

Examiner Tip

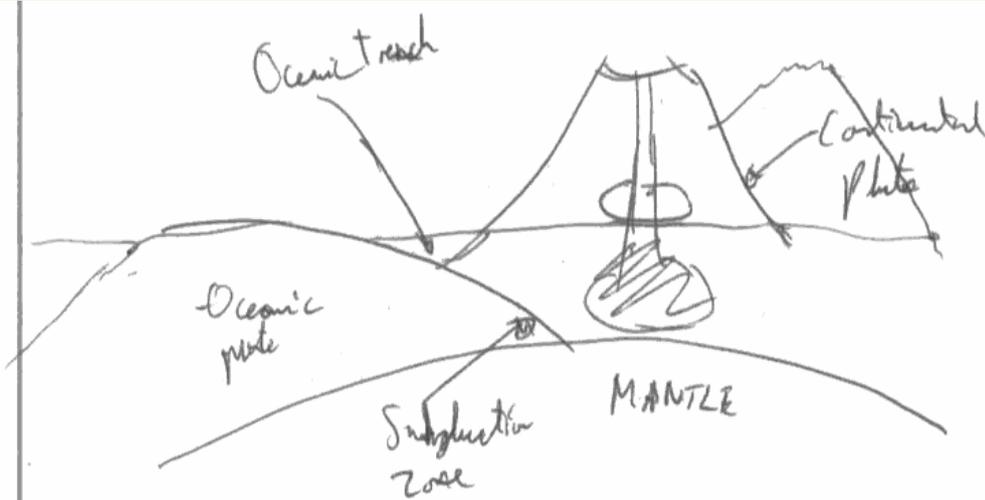
Ensure that you do not *just* give lots of *examples* of where the volcanoes occur, try to describe the distribution by referencing the patterns e.g. linear.

Question 4 (a) (iii)

Many candidates recognised that mid-plate volcanoes are known as hotspots. However, allowance was made for the volcano type, for example a shield volcano.

Question 4 (a) (iv)

Many candidates were able to recognise that on convergent plate boundaries the plates moved together. This showed that candidates had a clearer understanding of plate movement. However, fewer candidates were able to explain what happened to magma after it was subducted, and even fewer, how the rising magma passed through the continental crust. Candidates need to be able to differentiate the type of volcanic activity found along the different plate boundaries and to recognise that the process is not generic.



At a convergent plate boundary, a the denser plate normally oceanic, is subducted under the less dense continental plate. When the oceanic plate is subducted at the subduction zone the plate melts due to high temperatures in the mantle and friction between the plates; this creates magma. This magma eventually will create pressure in the crust and will eventually erupt out of the crust. This is when the magma cools it will form solid rock. * Due to convection currents in the magma mantle the magma will create lots of pressure in the crust. The crust will succumb to the pressure and will erupt.



ResultsPlus

Examiner Comments

This answer includes clear explanation with reference to denser plate subducting and increased pressure forcing material to rise. The response also gives detail of the full sequence. Candidates must ensure that explanation is clear and relevant to the volcanic setting.



ResultsPlus

Examiner Tip

Try to use diagrams which show the full sequence of events in the lead up to an eruption. Use of annotation on the diagram is helpful to aid explanation.

Question 4 (b) (i)

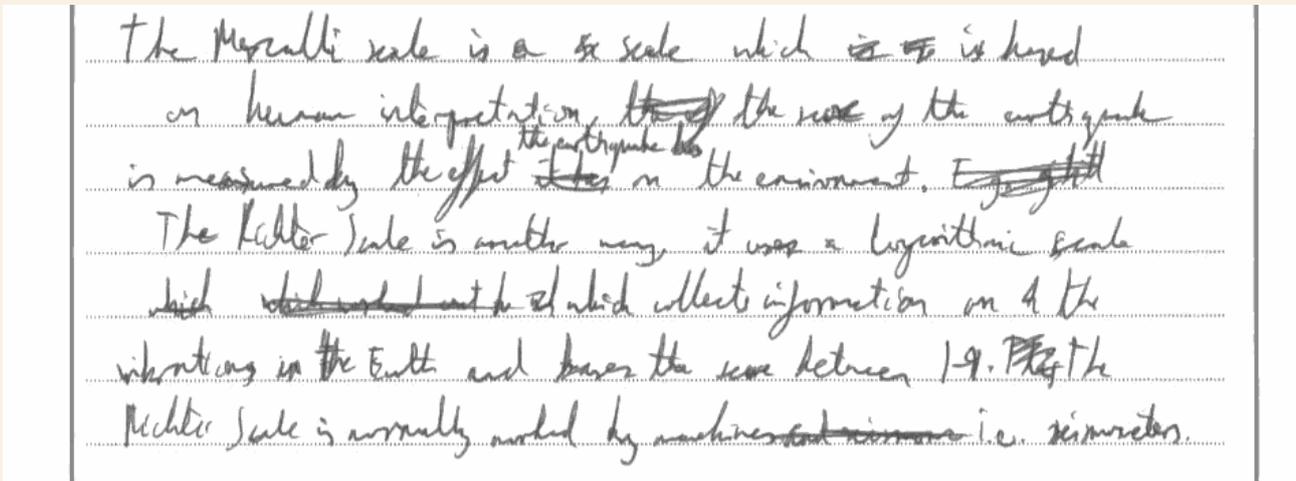
The majority of candidates recognised that the answer '9' was correct.

Question 4 (b) (ii)

The majority of candidates recognised that the answer '5' was correct.

Question 4 (b) (iii)

The majority of candidates were able to recognise that Mercalli and Richter were the two scales used for measuring earthquakes. However there was confusion with some candidates who mixed the two scales around. Some were able to recognise that seismometers are responsible for actually measuring seismic waves, and therefore were able to gain extra credit.



ResultsPlus Examiner Comments

A clear understanding of the Mercalli and Richter with some interesting links to Richter being logarithmic. The candidate also recognises that the Richter scale was measured with seismometers. As the candidate has given information on both scales they are able to obtain full marks.



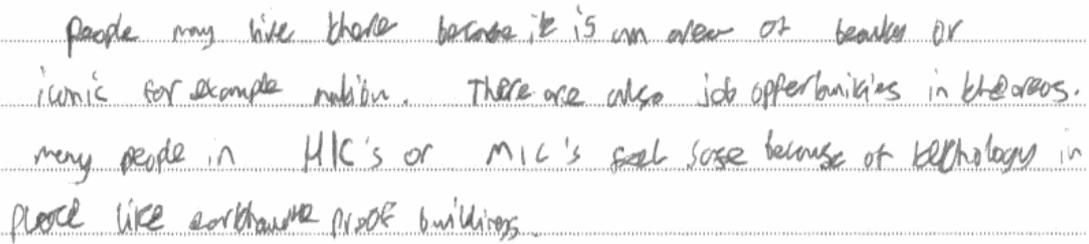
ResultsPlus Examiner Tip

Candidates must ensure that they are able to differentiate between the two earthquake measuring scales and not confuse which measures magnitude and which intensity.

Question 4 (b) (iv)

Candidates were able to give a range of reasons for which people still live in areas affected by earthquakes and therefore were able to pick up some credit. However one common mistake was to make reference to reasons which were more applicable to areas suffering from volcanic eruptions or tectonically active areas. Reasons such as tourism, scenic beauty or mining were not accepted as these are not directly related to earthquake zones - indeed many people would not wish to go on holiday if there was the threat of a large earthquake - so as these were coincidental reasons they were not given credit.

Candidates commonly scored credit by referring to building design, highly paid jobs, inability to move or apathy. Candidates would benefit from a clear distinction between those reasons which are linked to earthquakes and those linked to volcanic areas.



people may live there because it is an area of beauty or
iconic for example malin. There are also job opportunities in the areas.
many people in HIC's or MIC's feel safe because of technology in
places like earthquake proof buildings.



ResultsPlus

Examiner Comments

This candidate has confused the reasons for staying near earthquakes and volcanic regions. However, good points are made on job opportunities and earthquake proof buildings and the answer scores 2 marks.



ResultsPlus

Examiner Tip

Ensure you have at least *four* different reasons for living near both earthquake affected areas and volcanic ones.

Question 4 (c)

Many candidates found this question straightforward; they found it difficult, however, to apply specific points and Level 2 responses were common. Some low scoring candidates failed to write about reasons relevant to reducing the effects of volcanoes, instead focusing on earthquakes. The specification clearly sets out that centres need to learn examples of how to reduce the effects of both volcanic eruptions and earthquakes.

Among higher scoring candidates many found it difficult to use a specific point, instead referring to the effects of the eruption. Centres would benefit from making reference to local organisations that have helped out in reducing the effects such as the USGS, or IAVCEI. Many of the good examples focused on eruptions including Mt St Helens, Monserrat (Chances Peak), or the Eyjafjallajokull eruption.

The effects of a volcanic eruption can be reduced ~~as~~ through prediction methods such as looking back at records of previous eruptions, like at Mt. Etna where eruptions have been predicted to occur every 10 years or so. ~~¶~~ Because of watching volcanoes and monitoring gas levels / changes and watching if the volcano is swelling, people can be evacuated to safe distances so the number of deaths and injuries because of lava, pyroclastic flows and ash can be reduced. Like in Monserrat the volcano showed signs that an eruption was close from steam and smoke so people could be evacuated to the north of the island. Cattle can be moved so people won't starve if they were destroyed.



ResultsPlus

Examiner Comments

This candidate mentions a range of methods, some of which are explained. However there is a lack of specific detail which is truly applicable to the places mentioned. This answer would reach Level 3 were these specific facts included.



ResultsPlus

Examiner Tip

Ensure you learn, from a range of examples, clear detail on how the effects of eruptions have been reduced. This could include *names* of organisations helping with the preparation or *numbers* of people evacuated.

Question 5 (a) (i)

This question required candidates to complete, in choropleth style, a diagram of the UK carbon footprint. Although, on face value, the question was straight forward, many candidates failed to gain full marks. Many scored one mark for the shading of the 'toe' however fewer pupils were able to use a ruler to draw straight lines to get the second mark for commuting.

Candidates must remember that when there is a pre-determined key that they should follow the symbols used as closely as they can, and this includes the spacing of lines and use of a ruler to draw straight lines. This was for many a simple mark dropped.

5 (a) Study Figure 5a.

It shows a choropleth diagram of a carbon footprint for the United Kingdom.

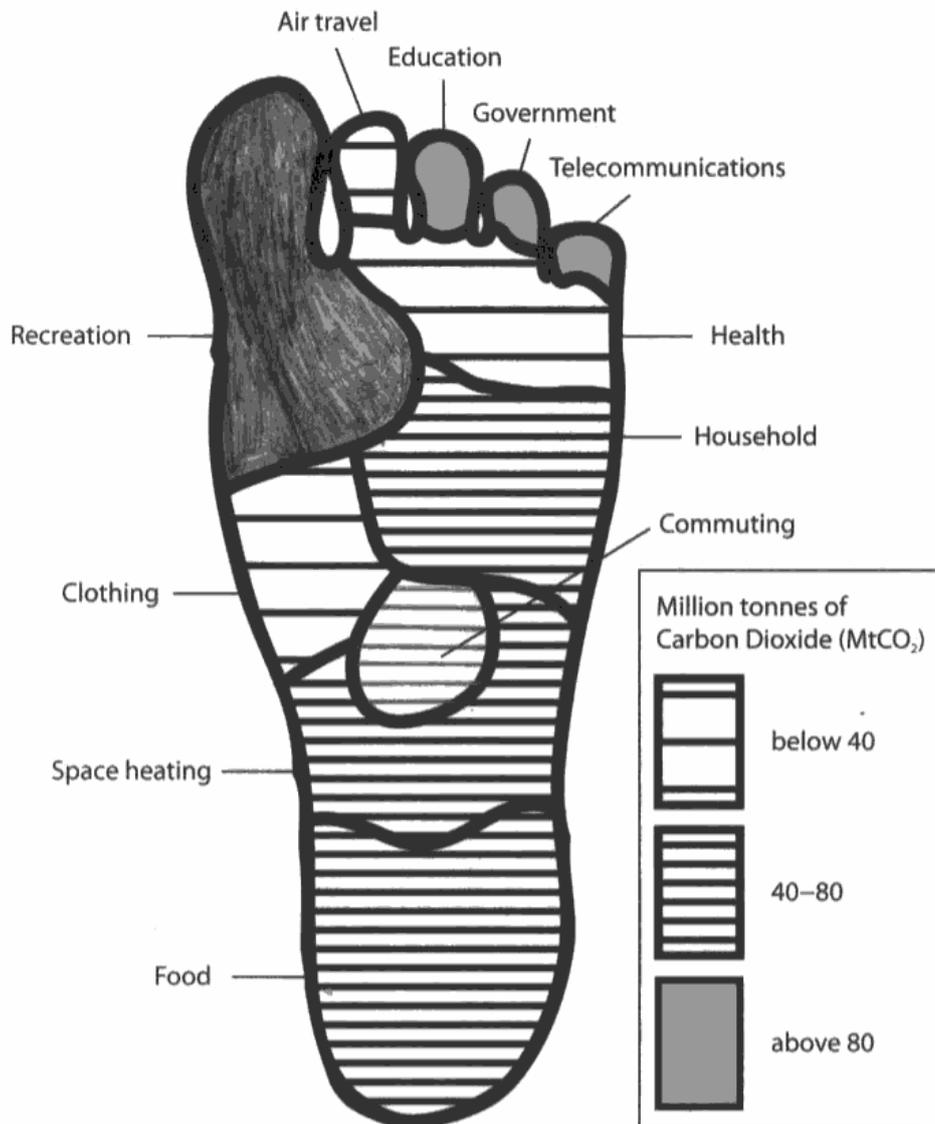


Figure 5a



ResultsPlus
Examiner Comments

This is a good example of a candidate who has excellent graphical skills and completed the diagram accurately.



ResultsPlus
Examiner Tip

Remember always to use a ruler in your exam for drawing graphical lines.

Question 5 (a) (ii) (1)

Many candidates achieved the correct answer and interpreted the graph well.

Question 5 (a) (ii) (2)

Many candidates achieved the correct answer and interpreted the graph well.

Question 5 (a) (iii)

It was pleasing to see that candidates had a wide range of knowledge regarding reducing transport carbon footprints; some applied their study of Unit 1 well. Credit was given for any feasible answer; however, only direct reductions were accepted. Therefore increasing fuel tax was not accepted as it does not guarantee a reduction in carbon emissions.

Question 5 (a) (iv)

Definitions of carbon footprints can be tricky to pin down, as there are so many different interpretations of a similar theme. Credit was principally given for candidates who recognised a reduction in carbon (carbon dioxide), and development of this, e.g. per capita, or per country, afforded the second mark. Some confused the idea with a reduction in overall energy without specifying carbon.

Question 5 (a) (v)

The concept of reducing energy use was well understood by the majority of candidates and hence this item scored well. Some candidates were self limiting by not developing their answers, and others due to repetition of ideas, e.g. giving detail on how a variety of different appliances should be switched off and not left on stand-by. Good answers focused on a range of ideas both domestically and at school; for example double glazing, cavity wall insulation and use of energy efficient light bulbs. The highest scoring candidates were able to fully develop their answers and clearly state how these methods can reduce energy wastage.

References to recycling, renewables or water saving methods were not credited as these do not help to reduce energy use.

Question 5 (b) (i)

The majority of candidates recognised 'France' as the correct response.

Question 5 (b) (ii)

Description of the changes in waste were made well by many candidates who could recognise that HICs generally produced more than LICs. Supporting data helped students gain a further mark and, again, many used this. However only some students were able to recognise the anomaly to the trend shown and therefore could not score above 2 marks. In this case either Morocco or Egypt were classed as anomalies because as MICs, Egypt had a low value; Morocco could have been considered to have a high value.

(ii) Describe the differences in waste production shown on Figure 5b.

Use waste production data in your answer.

(3)

You can see from figure 5b that the more northern countries have the biggest amount of waste, eg Uk is 5 million tonnes, and France is 55 million tonnes. You can also see that most southern countries have lesser amounts of waste eg Zambia around 2 million tonnes of waste. An anomaly is present in the middle part of the graph (northern africa) is supposed to be in the middle of waste in million tonnes but egypt is 2nd to bottom when looking at waste

(iii) HICs have been described as 'throw away' societies



ResultsPlus Examiner Comments

Here the candidate makes the implicit recognition that HICs produce more waste, and this is supported with data. In addition the candidate identifies Egypt as an anomaly therefore gains full marks.



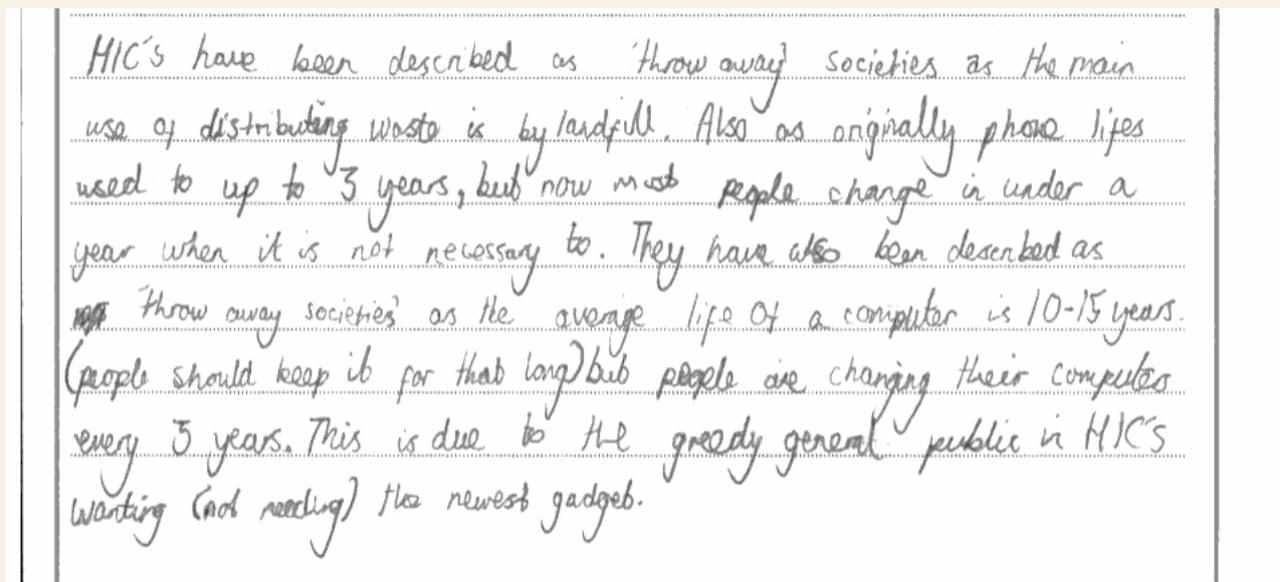
ResultsPlus Examiner Tip

When describing graphical differences try to give the overall trend, any anomalies to the trend and supporting data.

Question 5 (b) (iii)

This question differentiated well with some candidates struggling to grasp the concept of a 'throw away society'. Lower scoring candidates were generally descriptive in their responses and gave statements to support the view that HICs were more wasteful. Higher scoring candidates were able to develop links between the wealth of people in HICs, the excessive use of food/products and their brazen approach to recycling. Some excellent answers developed examples such as mobile phones being used with a much shorter life cycle than that for which they were designed.

Some centres were concerned over the use of the term 'throw away society', but this is found in the detailed guidance and description of HICs generating more waste due to their greater wealth.



HIC's have been described as 'throw away' societies as the main use of distributing waste is by landfill. Also as originally phone lifes used to up to 3 years, but now most people change in under a year when it is not necessary to. They have also been described as ~~not~~ 'throw away societies' as the average life of a computer is 10-15 years. (people should keep it for that long) but people are changing their computers every 3 years. This is due to the greedy general public in HIC's wanting (not needing) the newest gadget.



ResultsPlus Examiner Comments

Although this candidate develops a point well, they only focus on *one* reason and therefore score 3 marks. However there is good evidence of explanation in the answer.



ResultsPlus Examiner Tip

Try to use conjunctions in your answer to link different ideas together as this adds clarity.

Question 5 (c)

This question, appearing as a case study question, was well received by many candidates. Most candidates were able to access Level 2 and could describe in good detail and with specific points their local recycling schemes. Some candidates did fall foul of the trap of generalising their response, and omitting specific points, especially as many local recycling schemes are similar in undertaking. Candidates need to try to include specific detail e.g. an organisation or a fact to support their points in case studies.

The high scoring candidates often made reference to how the recycled items were processed and remade. They could often refer to the names and locations of reprocessing plants and the Bracknell scheme was one that scored well. References to Germany or other national schemes were held at Level 1.

Centres must remember that the quality of written communication is assessed in Part B case study questions and they should therefore organise their answers in logical, coherent sentences.

* (c) Choose **one** study of recycling on a local scale.

Explain how waste is recycled and recycled material is used.

(6)

Chosen local study Bracknell Forest Council

Bracknell Forest Council have provided local households with different coloured bins for different recyclable goods.

The bins include brown, blue and green for goods such as paper, plastic and tins. These are then collected once every two weeks.

Also, this council has joined with Reading council and Wokingham council to try and increase the amount they recycle. They have come up with re3 which has helped to encourage local people to recycle.

There are recycling centres down Longshot Lane in Bracknell and another in Smallmead, Island Road in Reading. Other smaller sites have been placed around like in local supermarkets and there are now over 150 of them within the 3 council areas.

Once the goods have been collected from the kerbside, they are distributed and sent to different places to be recycled. An example of this would be paper and cardboard. When ~~they~~ it has been collected, it is sent to the Severnside Recycling ~~Unit~~ Facility in Maidenhead where all of the chemicals and waste are removed. It then gets sorted and ~~sorted~~ baled. After this, it is sent to the St Regis Paper Mill ~~where it is~~ in Kent where it is made into new packaging.



ResultsPlus

Examiner Comments

This is a detailed response, well written, that has clear use of specific points to support the answer. There is evidence of explanation throughout which enables it to access a top Level 3 mark.



ResultsPlus

Examiner Tip

Remember to include specific points at relevant places in your answers in order to make your case studies less generic.

Question 6 (a) (i)

This question required students to complete a choropleth style map for two countries in Europe and Africa. The response by many was a little disappointing, as there were frequent inaccuracies, particularly in the Zambia space. Some candidates did not attempt the question which meant two marks were given up.

Candidates must remember that when there is a pre-determined key they should follow the symbols used as closely as they can, and this includes the spacing of lines and the use of a ruler to draw straight lines. Many failed to gain a mark because of inaccurate drawing.

Topic 6: A Watery World

If you answer Question 6 put a cross in this box ☒

6 (a) Study Figure 6a.

It is a map showing the percentage of the population with safe drinking water in some High Income Countries (HICs), Middle Income Countries (MICs) and Low Income Countries (LICs).

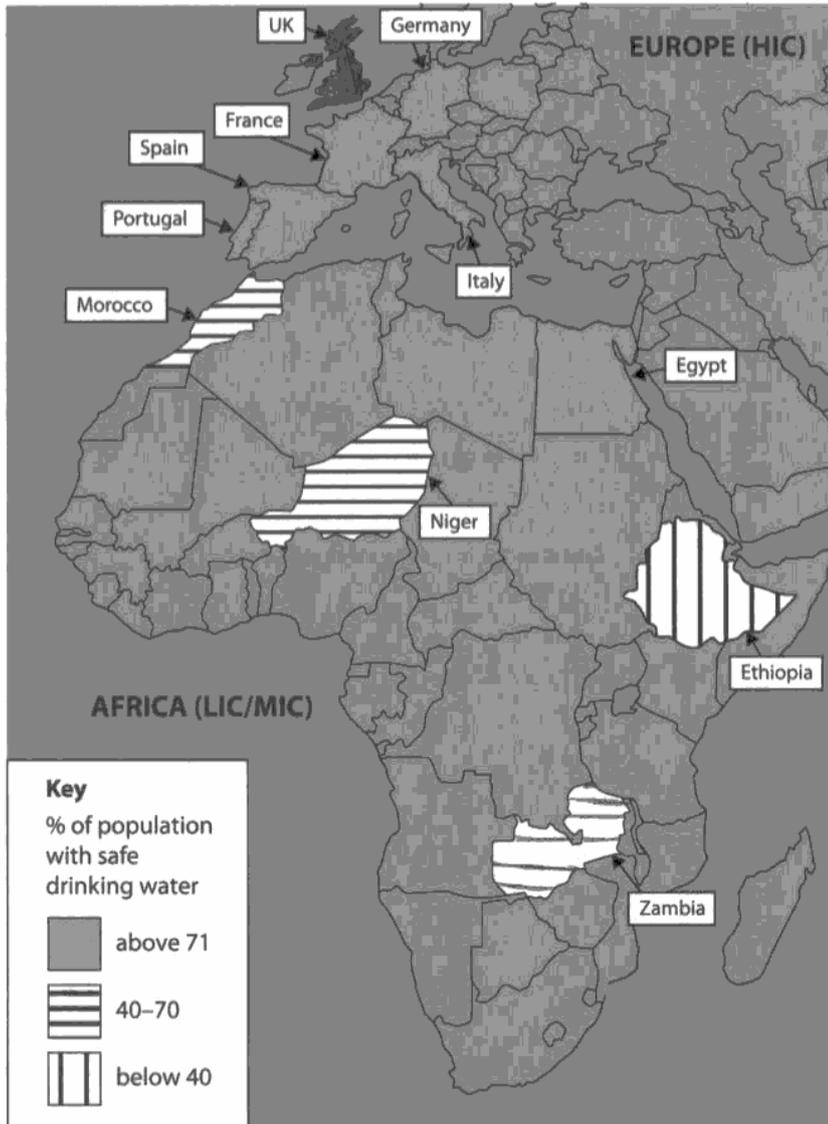


Figure 6a



ResultsPlus
Examiner Comments

This candidate has both the correct shading for the UK and uses lines which are similar in distribution to the key, and straight, therefore achieving full marks.



ResultsPlus
Examiner Tip

Remember to use a ruler when drawing lines.

Question 6 (a) (ii)

Most candidates were able to identify 'Ethiopia' as a correct answer.

Question 6 (a) (iii)

Most candidates were able to access 2 marks easily as the use of data was notably better than in the Waste topic. The main differentiator was the ability of candidates to identify the anomaly to the trend, in this case Egypt, who had a large water access.

Candidates must remember, when describing trends, to identify the overall trend, the anomalies to the trend and the use of data. This would help gain full marks.

(3)

In Europe the UK, Germany, France, Spain, Portugal have ~~are~~ above 71% of safe drinking water with the UK at 99% where as Morocco, Nigeria and Zambia have 20-70% of the population with safe drinking water. Ethiopia has the least population having access with safe drinking water below 40%. Egypt is the only place in Africa with above 70% of the population with access to safe drinking water.



ResultsPlus
Examiner Comments

This candidate gives a good answer with clear identification of pattern, supported by data, and in the last sentence the implicit recognition that Egypt is an anomaly.



ResultsPlus
Examiner Tip

Do not forget your anomalies.

Question 6 (a) (iv)

This question proved quite a challenge for many candidates as they tended to use mirrored/opposite statements which gained no extra credit. Good answers developed the links between wealth of a country and access enabling people to waste more water and be a 'showering society'. Some centres were unfamiliar with the term and therefore students were misguided in their approach, with answers relating to water management techniques and variation in rainfall.

HIC's ~~are~~ are very wealthy and have full access to safe water. So they can afford luxuries like dishwashers, washing machines and ^{regular} baths and showers. There are also very high standards of ~~showering~~ ^{hygiene} and sanitation also with very good sewage systems. Because hygiene standards are so high, people shower very regularly, some can be 2 or 3 times a day. People in HIC's do not have to save water and so are free to use as much as they like, whenever they want. This makes them get described as 'showering societies'. They are countries that maintain their high hygiene standards by showering very often.



ResultsPlus Examiner Comments

This candidate gives a range of reasons and makes links between their points to enable them to access the marks for explanation. Good references to ideas such as luxury appliances, good access, high hygiene standards which lead to a high demand for water.



ResultsPlus Examiner Tip

Remember to link points together with conjunctions to show the examiner the explanation in your answers.

Question 6 (b) (i)

Candidates who focused on the environmental aspects often scored well on this question as a description was required. However candidates often went off on a tangent, referring to social and economic effects. Good answers commonly made reference to the flooding upstream, the loss of land, landsliding behind the dam and lower discharges downstream.

There is a lose of land as an area has to be flooded. ^{-e.g. the area behind the dam.} Less water that contains minerals can be transferred down stream ^{ag stream} so things like crops dont grow as well. There are high risks of landslides e.g. high hilly areas around the dam. ^{e.g. little water gets through the dam}



ResultsPlus

Examiner Comments

This answer starts well with a couple of ideas related to environmental impact. This is followed by a socio-economic impact, yet the candidate restores order at the end, making the point about landsliding, and scores 3 marks.



ResultsPlus

Examiner Tip

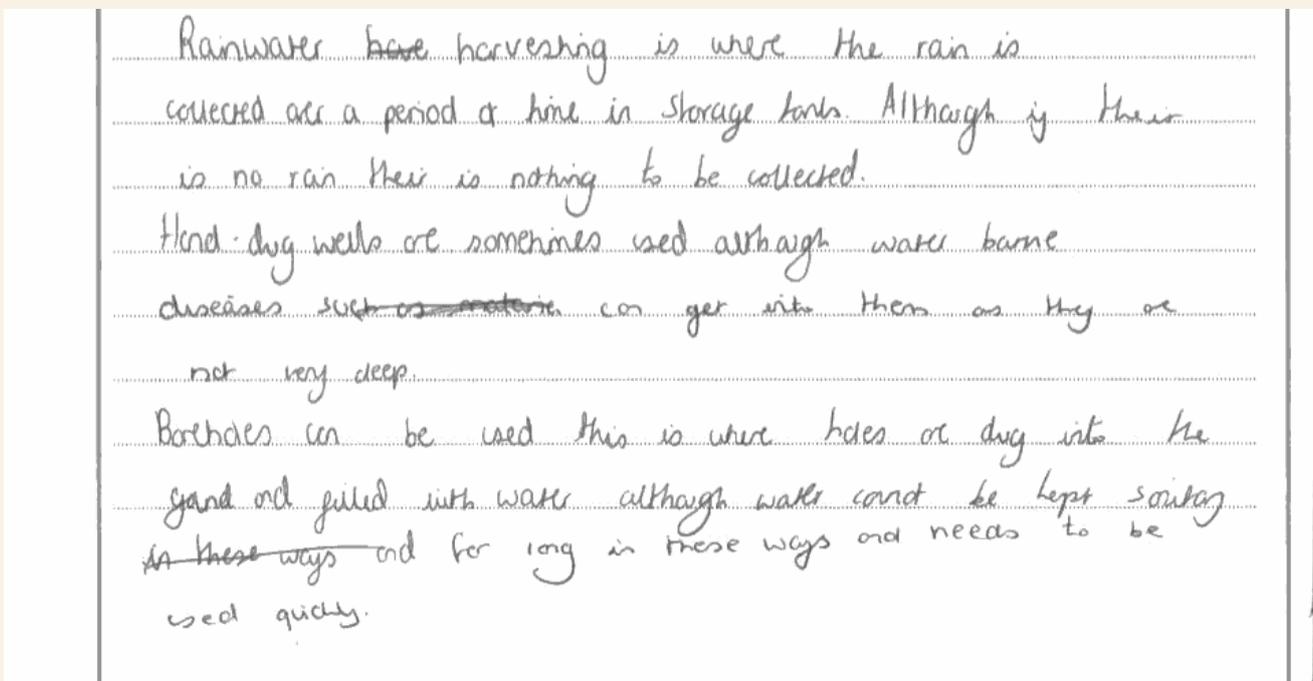
Ensure you understand the difference between social, economic and environmental reasons.

Question 6 (b) (ii)

Candidates found the term "appropriate technology" difficult to define although many had an idea of its meaning. Common errors arose from the confusion with high cost and low sustainability alternatives such as dams, but many candidates understood that appropriate technology involved local communities and low costs. Some good answers used examples to back up their point.

Question 6 (b) (iii)

Although many candidates had some understanding of appropriate technology techniques few were able to fully develop more than one method to explain how water is managed. The candidates who scored well achieved their marks by explaining how the technology was set up to help manage water, e.g. a borehole being concrete lined to limit contamination, or by explaining how the method helped the local community to manage water, e.g. hand pumps stop people having to walk long distances to obtain water. Many candidates often gave the same reasons for each method, and therefore gained no credit for the repetition.



ResultsPlus Examiner Comments

Here the candidate identifies a range of methods, but does not fully explain any one of them and therefore only scores 2 marks. Clearer explanation would help here.



ResultsPlus Examiner Tip

Use of *examples* of appropriate technology adds focus to an answer, and reduces the likelihood of generalisation.

Question 6 (c)

The case studies of Tigris and Colorado helped candidates access Level 3 marks most frequently as they were more focused on the conflict of the water transfer. Candidates who gave detail on the water transfer but did not focus on the conflict were often restricted to Level 2 answers. Some candidates, however, focused on conflict over water storage rather than water transfer, for example those who gave the 3 Gorges Dam or Kielder Dam as examples.

Candidates must remember that quality of written communication is assessed in this part of the exam. Therefore answers written in clear coherent sentences with good use of geographical terminology are likely to access the top of each level.

* (c) Choose a case study of water transfer which has caused conflicts between two or more areas.

Explain how water transfer can cause conflicts.

(6)

Chosen case study Tigris-Euphrates

In Turkey the GAP project devised a plan to create 21 dams in Turkey area and 17 hydroelectric dams. These dams were to be placed along the Tigris ~~to~~ river and Euphrates river. These rivers both flow to the Syria and Iraq. ~~But~~ the dams to be built to maintain water flows, as this didn't happen. ~~But~~ Syria is the next country to harness the river, Syria had used the river for a lot of its water ~~as~~ for its country now Syria can only use 16% because Turkey have restricted flow.

Iraq is the final country to and ~~to~~ use the services of the river for their usage. Before, ~~but~~ excessive water consumption by Syria and Turkey, Iraq could use the river to meet 16% of its needs, ~~as~~ at the moment it has been decreased to 5%. ~~that~~ as 90% of water taken is used for cotton farming because there is ~~less water in the area~~ but pollution ~~is~~ in the rivers from Syria and Turkey, farms have died and ~~cannot~~ grow the crops for their livelihood. Since the 1940's the Iraqi people & government have disputed against the Turkish & Syrians about the water ~~transfer~~ for

Iraqi troops ~~to~~ have been sent to Syria on borders to prevent any discussion ~~was~~ to be held. The troops are used to deter people in Syria from collecting the river water ~~as~~ and help to fight the conflict ~~is~~ between the nations.



ResultsPlus

Examiner Comments

This candidate makes good use of specific facts and has clear detail on the water transfer scheme. This is a good example of a top level 3 answer.



ResultsPlus

Examiner Tip

Remember to use the correct case study choice in the Watery World - when it is conflict over water transfer refer to Tigris or Colorado, when it is water management refer to 3 Gorges dam.

Paper Summary

Overall improvements in student performance across the paper are a good sign that centres are working on advice given in these reports. The following recommendations for continued improvement are given:

- Emphasis should be placed on improving landform **descriptions** by practising with photographs and images of a variety of landforms in their natural context.
- When **explaining** the development of landforms or showing processes candidates should try to make good use of clearly annotated diagrams.
- Use of a ruler in graphical questions and use of the correct graphical symbols where a key is given would ensure that candidates do not lose marks through carelessness.
- Candidates should explore a number of different case studies in order to have a wider range of examples to draw on in the examination.
- Encourage research beyond the standard text book in order to equip candidates with specific detail to use when giving examples (e.g numbers, names, dates, precise location).
- Where the quality of written communication is assessed, answers should be written in clear, coherent sentences with good use of geographical terminology.

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