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Examiners' Report
January 2013

GCE Geography 6GE04 01

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Introduction

There were many excellent, well-structured and scrupulously researched reports in this January entry. Many centres are confident of what they are trying to achieve and have systems in place to guide candidates through what can be a daunting prospect.

There are, of course, more ways than one to produce a convincing report but most successful answers share a number of common features. In this examiners' report these themes will be touched on with reference to specific questions with practical advice as to how candidates can be helped to achieve better results. The obvious difference between the pre-release materials and the examination questions is just that: the examination demand is in the form of a question. It is something of a truism to observe that weaker candidates do not respond to this question – they simply present the findings that they have gleaned in the weeks of preparation and leave it to the examiner to sort out the relevance of their, sometimes, prodigious amounts of case-study knowledge. Some candidates are challenged by the report writing in different ways and in every case there are routes to helping them do better.

So, although it is dangerous to generalise, there are a number of common types of 'problem' reports. The table below identifies four of the commonest 'types' with symptoms, diagnosis and, most importantly, suggested treatments added. Needless to say some reports combine several of these features.

Problem	Symptoms	Diagnosis	Treatment/Cure
Heavily descriptive.	A long list of case studies, models and methodologies but very little exploration of the question and no development of an argument.	The apparent problem is a very predictable structure but the real problem is that it lacks any critical engagement with the title.	Practice guessing titles from extracts. Use past papers and examiners' reports and ask candidates to guess the question. Use just the analysis and conclusion sections.
Some analysis but lacking organisation and direction.	Shifts about especially in the analytical section with sudden changes of direction. Typically the product of a candidate who simply doesn't know either how to develop an argument or how to organise a response. A number of these reports are really essays with no research programme evident at all.	The apparent problem is the poor structure but in reality it is more likely to be confusion about what the candidate is actually trying to say. Thus they 'see' the topic and maybe the 'focus' but have no direction in what they are attempting to show, rather hoping that a 'view' will emerge.	This requires a 'take a view' approach to the preparation after the pre-release material appears. Candidates should brainstorm the possible theses that might emerge.

Analytical but either lacking evidence or making errors.	There are two sub-types here. The first are quite thoughtful reports flawed because they are based on misconceptions so they much exaggerate an anomaly or an exception. The second have a defensible thesis but cannot substantiate it with evidence suggesting a rather relaxed preparation period – many arguments are simply unsupported assertions.	Unpersuasive reports either use evidence with jaunty breeziness and often highly selectively or they fail to substantiate their 'view' so despite legitimate analytical statements being made they fail to provide any evidential support.	Continual practice in recognising what constitutes an unpersuasive argument. To get them beyond the; 'Why?' – 'Because I say so' approach that too many candidates adopt.
Poorly written	These reports usually exhibit several of the above tendencies but also have many hard-to-read sentences that are either largely meaningless as in 'There are many different aspects to this question' or contorted and simplistic statements that may contradict previous sentences.	Contorted writers have often adopted a few phrases that they think might buy a little 'time' and believe, mistakenly, that academic writing is about inflated phrasing. Simplistic writers tend to use absolutes as in 'Everyone knows….' – 'it is natural to believe…' phraseology.	Contorted writers profit from reading back their own work and trying to make their written work as clear as spoken work. Simplistic writers need 'models' of good practice.

A large minority of candidates remain reluctant to deconstruct titles. Given the parameters set by the pre-release information it is no doubt common practice for centres to end their preparation with a review of past questions and the need to give every word in the titles equal weight. Given that they know the topic and have a very strong steer about the focus what remains is:

1. sensitivity to the command word(s)
2. sensitivity to the various restrictions that might limit the range of evidence that they could, and should, deploy.

One other tip, that many candidates are naturally used to doing in their daily lives, is to argue a case with a clear view of where the 'argument' is taking one. As soon as they see the question for the first time they should 'take a view'. This should be incorporated in their plan and they should keep it in front of them both literally and metaphorically. The sensible habit of including 'mini' conclusions after presenting evidence would be all the more useful if a reference was made to the general direction of the argument. This would then permit the conclusion itself to be, as it should be, a drawing together of these threads.

For this examination paper, the most appropriate, most frequent and certainly most defensible views were:

Question 1 – Very significant but not overwhelmingly so with some important historic and actual exceptions.

Question 2 – There is a wide variety of values and attitudes but their role in determining management is largely a question of who holds political power – some interest groups are likely to be ignored even if their 'case' is legitimate.

Question 3 - Much depends on the definition of 'drylands' but in a globalised world this is not easy to prove given the role of poverty and other socio-economic factors in determining food insecurity.

Question 4 – There are many different factors but the spread of a globalised culture is probably the strongest factor impacting on cultural landscapes today.

Question 5- The relationship is complex but broadly a big 'yes' qualified by some comments about diseases of development from diabetes to obesity.

Question 6 – Different strategies are used because (i) managers have different objectives and (ii) the problems vary greatly and thus require different strategies.

It should be added that many other views are defensible and many excellent answers pursued different lines but all provided some evidence to support their view. It is about priority – the argument should come first with evidence used as the support structure. Showing that, for example, many tectonic hazards occur at destructive margins, in an absolute sense is only meaningful in the context of this title if a relative point is also made – as in, more than anywhere else. It was encouraging to read answers that 'took a view' for that is what the structure of this Unit is about. Here is a topic, here is an issue, now here is a view about that issue – do you think it is defensible?

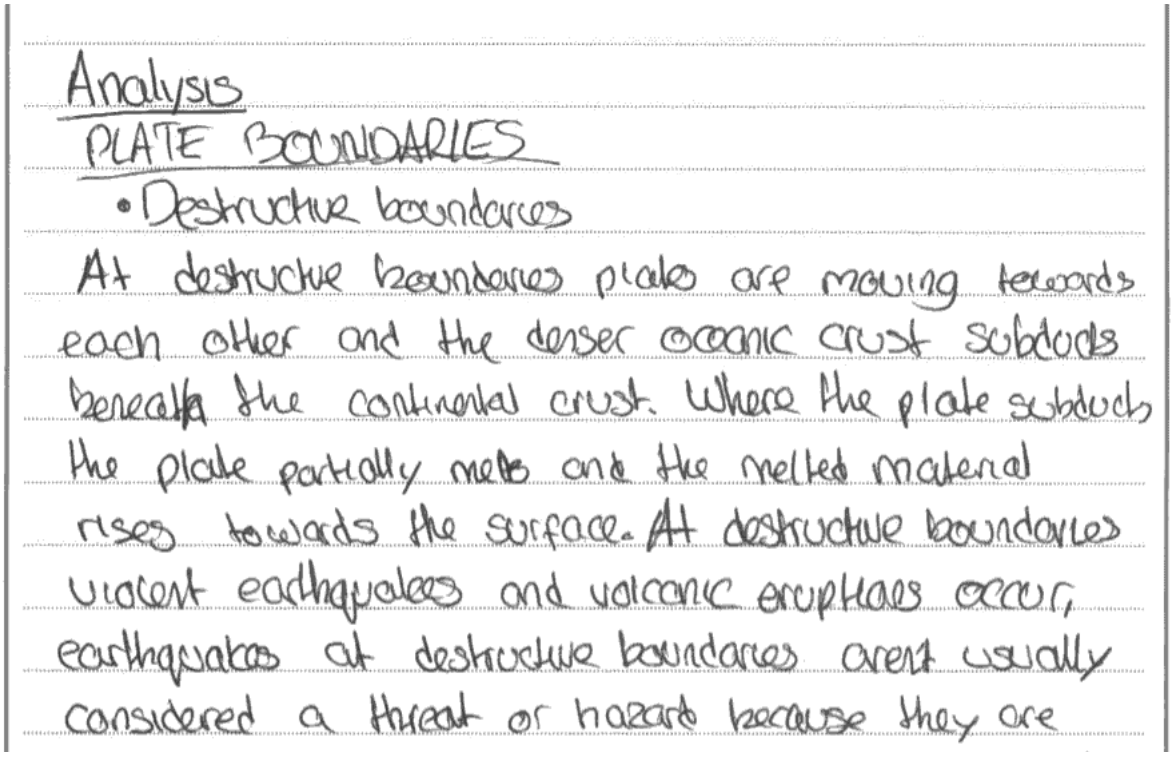
Finally, it would be helpful if candidates could be clear about the difference between 'models' and 'theories' which many use as though they are synonymous. Models do not, of course, explain anything at all but are often very useful ways of describing reality. Theories, by contrast, need to satisfy two conditions: they need to be testable and they need to be predictive. A failure to make this distinction can lead to significant issues for some candidates as in 'Such and such a country is currently in Stage 2 of the Clark-Fisher model so it will soon….' or 'according to the Butler model what will happen next is…'.

Question 1

There was a wide variation of performance on this, the most popular question. Stronger candidates identified a clear framework that was adapted to the set question and clearly recognised that whilst plate boundaries are indeed very important:

1. Some plate boundaries are more important than others and...
2. Not all tectonic hazards are found at plate boundaries both…
3. … because the impact is occasionally displaced over long distances and…
4. …there are other causes of crustal movement, not all of which are very well understood

They managed to write in an interpretive manner conscious of what is meant by 'assess'. They married the aspect of plate margins to spatiality, weaving in case studies to argue whether or not plate margins are indeed significant in determining the spatial distribution of tectonic hazards. They agreed with the statement without forgetting to use examples that were not associated with plate margins. In addition, they also had references within the text to show that they had actually read the sources as part of their research. Weaker candidates tended to have a very broad focus, much of which sometimes appeared to be pre-prepared and consequentially lost sight of what they were trying to argue. They overlooked the word 'assess'. A significant number of candidates also had a separate section on plate tectonics/continental drift but often this was not applied to the question in any meaningful way. Most candidates attempted a framework based on concept rather than case studies. The most common, and most rewarding, framework was based on the four types of plate margin to which they added references to hotspots, 'old' fault lines and hydraulic fracturing. Weaker candidates tended to have a list-like approach based on case studies that were unrelated to any spatial pattern with the weakest not even attempting any empirical evidence. A significant number of candidates showed no assessment whatsoever. Most candidates made some attempt to go beyond plate boundary activity. However, for some this was just an add-on, with no assessment of the significance of what they were stating. The most common case studies mentioned were Iceland, Haiti, various Japanese examples, the San Andreas, and Indonesia.



Analysis

PLATE BOUNDARIES

• Destructive boundaries

At destructive boundaries plates are moving towards each other and the denser oceanic crust subducts beneath the continental crust. Where the plate subducts the plate partially melts and the melted material rises towards the surface. At destructive boundaries violent earthquakes and volcanic eruptions occur, earthquakes at destructive boundaries aren't usually considered a threat or hazard because they are

deep seated. this is unless the quake happens beneath an ocean and triggers a tsunami.
// In 2011, a 9.0 magnitude earthquake struck under the ocean which triggered the Tohoku Japan tsunami. As the quake took place under the water when the plates released the pressure huge waves were formed. The tsunami killed 16,000 people and is an example of how hazardous earthquakes at destructive boundaries can be. Earthquakes and volcanos at destructive boundaries dont erupt often but whenthey do release large amounts of pressure that has been building up over time.

At destructive boundaries volcanos can be found which are capable of huge eruptions, at this boundary andesitic magma can be found from the partial melting of subducting plates, this creates viscous lava.
In 1995, Montserrat in the Caribbean started erupting after being dormant for over 300 years, the worst eruptions happened in 1997 and 19 people were killed after 11,000 were evacuated.

At destructive boundaries mountain ranges such as the Andes can be found where the Nazca and South American plates converge, ~~as~~ here ~~earthquakes~~ earthquakes are also a threat.

- Constructive Boundaries

At constructive boundaries plates are moving apart, where this happens basaltic magma rises through the

gap and cools forming new land and ridges that tear as the plates continue to move. At constructive boundaries earthquakes and volcanoes are again a hazard but here events are more frequent but typically less destructive as pressure can easily be released without a build up.

Where the Eurasian and North American plates are moving apart the Mid Atlantic ridge is formed, here there are frequent earthquakes but usually of low magnitude and volcanic eruptions. Where the volcanoes rise from the ocean, volcanic islands are formed such as Iceland. In Iceland there is frequent tectonic activity but usually not very explosive or of high magnitude but the potential for a large eruption is there.

- Conservative Boundaries

At conservative boundaries plates move in the same direction but at different speeds, here earthquakes are a hazard but volcanoes are not due to the fact no material is created or destroyed. Plates can lock together which can cause a build up in pressure leading to high magnitude quakes or can slide past each other with little resistance and only trigger small earthquakes.

The San Andreas fault in California where the Pacific and North American plates are sliding past each other there is a high frequency of low magnitude quakes but as seen in the past there is risk of a high magnitude quake taking place along the fault line.

In 2010, Haiti, which lies on a conservative boundary, was struck with a 7.0 magnitude quake, which killed 220,000 people and made a million homeless, this was the first eruption of this scale to hit the area for hundreds of years and showed the potential hazard on this boundary.

- Collision Boundary

At collision boundaries plates are moving towards each other but neither subducts creating an uplift with the edge of plates being forced upwards. This movement creates crustal thickening and here earthquakes are a common hazard, but because the crust is so thick the rhyolitic magma at these boundaries is unable to rise to the surface and therefore there isn't a significant risk for volcanoes and no extrusive volcanoes are created.

The Himalayas are formed by the uplift at a collision boundary the land has been lifted over 9000m Here, ~~[illegible]~~ frequent earthquakes of varying strength are found here. In 2005, Kashmir in Pakistan was hit with a 7.5 magnitude quake which led to the death of 75,000 people, extreme pressure had built up triggering the quake.

The different plate margins / boundaries affect the spatial distribution of hazards due to the physical processes at each being different which leads to

different hazards occuring at varying locations but there are other factors which also impact the spacial distribution.

OTHER FACTORS

- Hotspots

Not all tectonic activity occurs along the boundaries of plates, at hotspots activity can be found in the middle of plates. Hotspots are linked to plumes of rising magma which rise to the surface, the location of hotspots is static so as plates move over the spot they become uppected creating a chain of volcanos.

Hawaii is a tectonic hotspot which a chain of volcanoes being created as the magma rises in the same spot as the plates move. At hotspots there is a high frequency of low magnitude ~~eq~~ activity.

- Crustal Thinning

Crustal thinning is linked with hotspots and are caused by the partial melting of plates above rising plumes of magma. Yellowstone in America is above a hotspot and created by crustal thinning, this type of volcano ~~do not~~ erupt extremely rarely and if Yellowstone was to erupt it would have the potential to change the climate with risk of a VEI of 9, the eruption could cause extinction.

Hotspots and crustal thinning create hazards in places not ~~expe~~ along bordes affecting the distribution.

• Intra plate seismicity

Intra plate seismic activity can be caused by tension caused by movement at plate boundaries, the activity can cause a build up of pressure which can lead to tectonic hazards where not usually expected. The UK and other European countries not normally at risk have been affected by earthquakes caused in this way.

• Fracking & Dams

Fracking ~~causes~~ is used to extract materials from the earth but causes pressure which can lead to hazards, Blackpool was hit by earthquakes believed to be caused by fracking.

Dams, particularly in mountain ranges, store large amounts of water which adds weight putting extreme pressure on the plates below and the increased weight could cause earthquakes if the plates move to relieve the pressure.

Other factors can also affect the spatial distribution of hazards with events being caused in areas not along plate boundaries.

• Climate Change

The melting of ice sheets relieves pressure on the plates beneath from the decreased weight allowing the plates to force back upwards which can trigger earthquakes, the lower weight on the plates

allows them to move easier with the potential for more hazards.

CONCLUSION

In conclusion I think that plate margins are the most important and significant factor in affecting the spacial distribution of hazards. Different boundary types cause different amounts and types of hazards such as more frequent hazards at constructive boundaries in Iceland and more powered hazards at destructive margin in Japan. However other factors such as hotspots in Hawaii have an impact on the distribution with hazards and intra plate activity. Other factors have a significant impact on the distribution but overall the plate margins and the movement is the most significant factor in the spatial distribution of tectonic hazards.

ResultsPlus
Examiner Comments

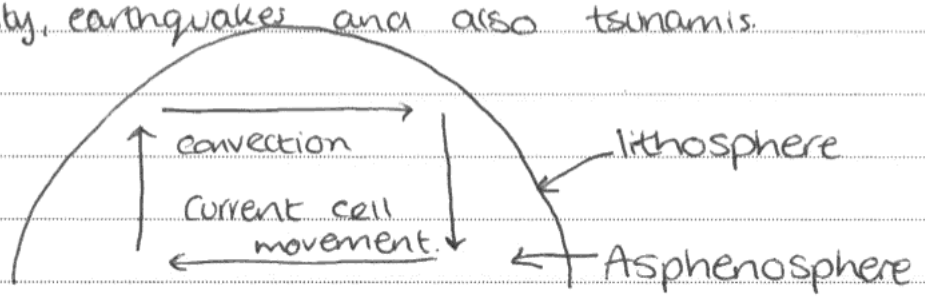
There is a strong focus on the question with the most productive framework for proper assessment. However, the conclusion is a little brief - so Level 4 for Analysis but Level 3 for Conclusions and Evaluation.

ResultsPlus
Examiner Tip

Remember to refer back to the title throughout your analysis. Anyone reading it without knowing the title should be able to guess the title from what you write!

Introduction

Tectonic hazards are events which may effect or have an impact on infrastructure and / or human beings. Hazardousness increases when there are few warnings. Tectonic activity is all to do with plate tectonics, which is the movement of plates due to convection currents. It causes volcanic activity, earthquakes and also tsunamis.



Due to the movement in the asphenosphere which causes convection currents to move, this causes shifts on the earth's surface (lithosphere). This movement causes there to be differeing plate boundaries, which in all ~~course~~ of course causes there to be differeing tectonic activities.

The framework I shall use in my report will be that I will look into the different plate margins. These are ~~destru~~ Convergent - destructive and collision, conservative and constructive. I will then go on to evaluate what tectonic activities they cause and the spacial distribution. I will then look at and ~~evaluation~~ evaluate other elements that can also

cause tectonic activies, such as hotspots and faults. I will then conclude with a final opinion on the significance of plate margins in the spatial distribution of tectonic hazards.
I will use this framework as i can easily asses each ~~boun~~ margin and it's effect, Methodology plus any other factors.

ResultsPlus
Examiner Comments

This has a reasonable Level 3 introduction but it lacks a clear focus on the title.

ResultsPlus
Examiner Tip

Make sure that you make it clear from the start what the question is.

Question 2

Most candidates were able to give definitions of 'cold environments' and often gave definitions of the different types of environment. However, and for some this is where it started to go awry, a surprisingly large number of candidates did not demonstrate understanding of the terms 'values and attitudes' or 'interest groups' in their introduction.

The framework for this report was usually by case study. The most successful candidates considered different types of values and attitudes for a framework whilst others, who kept a strong focus on the title, embedded clear references to values and attitudes within their 'case-study' driven analysis. There were a few really good answers that were based around theories such as those of David Berry and Maslin.

Nearly all the candidates used exactly the same case studies:

- Antarctica – usually almost totally focused on tourism
- ANWR and elsewhere in Alaska
- The Alps
- Arctic Russia
- Lapland.

Knowledge of these case studies was often too basic and thus quite generalised. It was, for example, surprising that whilst almost every candidate used Alaska as a case study, only a tiny number of them mentioned the Alaska Permanent Fund, which plays a vital role in influencing local opinion to look favourably upon the oil industry and its plans for expansion.

One 'case study' that caused some problems for candidates was the use of the Canada tar sands in Alberta. Candidates clearly study this for one of the other units, and indeed one can see why, but in the context of polar environments it is, at best, marginal.

Weaker candidates wrote very descriptive answers which often just recounted everything they knew about management in cold environments, with a good deal of superfluous information about those environments untied to any commentary about management, let alone the values and attitudes that inform those actions. Consequentially they often wrote reports about 'challenges and opportunities' rather than 'values and attitudes'.

Stronger candidates considered different types of values, rather than just stating the opinions of stakeholders, which were, in the best reports, linked well to the relevant interest groups. Some related their case studies to theories, both in the body of the analysis and as part of their conclusions, which related different values and attitudes not just in terms of economic self-interest but also to cultural traditions and outlooks about the 'value of landscapes'. The strongest candidates were able to consider a continuum of values and attitudes along a spectrum.

Introduction

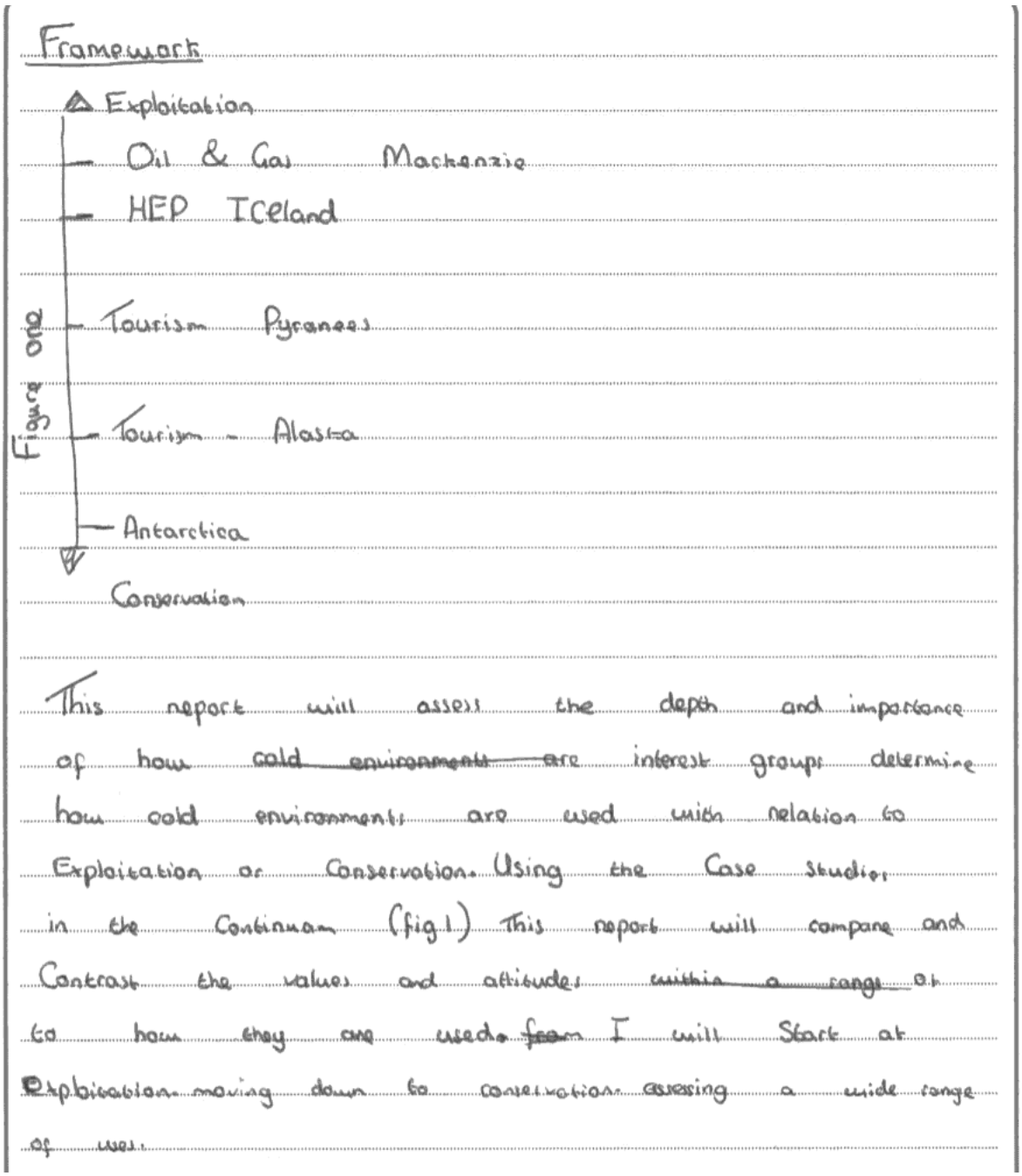
Cold environments today cover approximately 10% of the earths surface so how they are used is of great importance to various stakeholders. Cold environments are icy landscapes characterised by low temperatures with an abundance of snow and ice alongside low population densities and low levels of biodiversity. (Tim Adams et al 2009). Cold environments can be high latitude and high altitude.

Definitions

Interest Group - a person, group or organisation who affects or is affected by how an area is used (www.Free dictionary.com).

High latitude - Are areas covered in Glaciers, permafrost and ice sheets and are found above 60° North and South.

High Altitude - Are Mountainous region found worldwide with permafrost and Glaciers. For every 1000m in height the temperature falls by 6.5°C (Dunn et Al 2009).



ResultsPlus
Examiner Comments

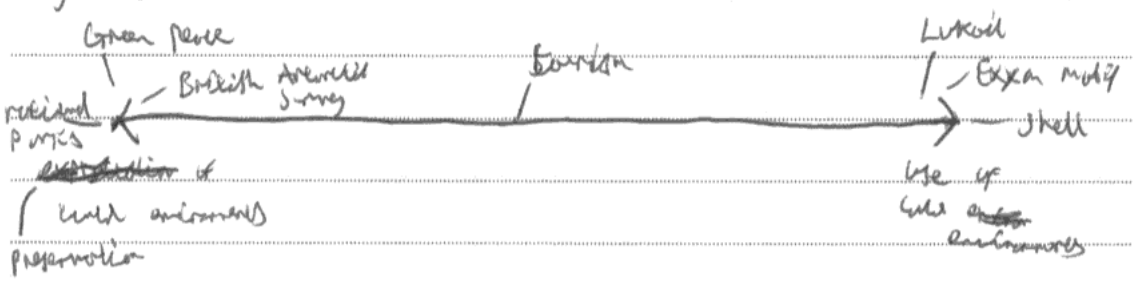
The framework here is a series of case studies. It isn't obvious from this introduction that the candidate has quite the right focus on 'values and attitudes'. A Level 3 response.

ResultsPlus
Examiner Tip

Make it clear in your introduction that you have grasped the key focus of the question - in this case it is values and attitudes.

5. Conclusion

Figure 3



In conclusion, The values and attitudes of interest groups are important when determining the use of cold environments. due to this, it is difficult to determine the use due to the interest groups having varying views. The diagram in Figure 3 allows you to see a range of interest groups, and how their views affect the cold environments. Finally, the overall decisions that must be made when deciding the use of a cold environment should overall be agreed between the various interest groups, due to the range of effects that it may cause to them. For example, with the Canadian Tar Sands, when it was decided for this area to be developed the indigenous group, 'the First nation' were partially taken into consideration, because they

were offered well paid jobs and accomodation for the use of their land. This is not as simple with other indigenous groups such as the Gwich'in in Alaska who view their land as sacred.

ResultsPlus

Examiner Comments

Different because they are different is the main point of this conclusion that does correctly focus on values and attitudes, but doesn't explain how the differences impact on usage. Thus a Level 3 response.

ResultsPlus

Examiner Tip

Try to draw arguments together in a conclusion which shouldn't repeat material from the analysis but evaluate it. How important are values and attitudes?

Question 3

Strong candidates engaged with the 'discuss' instruction, reading the title, correctly, as a statement that could be 'taken on'. The strongest responses demonstrated that drylands can indeed be food insecure (and in some cases extremely so) but they also recognised that drylands can be food secure. At the very top level there was also evidence offered that **non-drylands** can be food insecure. In short, they argued for and against the statement presenting argument and counter-argument and drawing the appropriate conclusions.

The stronger reports approached the challenge of assessing vulnerability by introducing quantitative measures of food insecurity to 'rank order' their case studies e.g. the Global Hunger Index (IFPRI) or the Maplecroft Index. The same candidates used evaluative language to go beyond simple comments such as 'x location suffers food insecurity'. They described food insecurity as chronic, or temporary, or sporadic, or seasonal, rare/common etc using comparative language as part of their discussion. This is obviously another useful way of comparing areas in terms of their vulnerability to food insecurity.

Within the analysis the fundamental causes of food insecurity needed some exploration. Many recognised that socio-economic factors are often a very significant impact on the geography of food security; often more so than climate, soil or geological factors. The best recognised the role of poverty in determining the vulnerable groups with varying degrees of food security **within** areas, which moved them well away from simplistic statements which were often remodellings of environmental determinism with a little Malthusian theory mixed in. The vulnerability of female headed households in urban areas and politically disadvantaged tribes/religious groups in rural areas were amongst the most impressive of these dissections of food insecurity at a regional or even local level. As soon as a candidate strayed beyond drylands the role of socio-economic and political factors became self-evident as in discussions about the growth of food banks in UK/USA.

Within the analysis stronger candidates used models of food security eg FAO access, availability, utilisation, stability and others. The best candidates had a framework that allowed them to use these models in their analysis, for example the comparison of a traditional dryland area most vulnerable to food insecurity linked to availability, with slums in a megacity with vulnerability to food insecurity linked to access and affordability.Weaker candidates failed to focus on the question by presenting physical and human causes of food insecurity in named dryland areas and evaluating which factors are the most significant causes of food insecurity. Such candidates often just gave reasons and examples that supported the statement. Candidates had to 'discuss'. The pre-release was clear: "Research contrasting locations which are experiencing food insecurity, with a particular emphasis on drylands."

The most fertile case-study material was at the regional level because, by definition, these 'recognised' that there were variations within countries which inevitably moved candidates away from sweeping and erroneous conclusions about the role of the environment. For example, Ethiopia is not uniform dryland but the Omo valley, Ethiopia is indeed a dryland area. Mumbai is a megacity and Dharavi is a slum in Mumbai. The choice of China, the USA or even Africa was unlikely to be productive given the enormous range of variation of food insecurity within these continental sized global regions. Finally, Malthus and Boserup were quoted by many candidates. Sadly only a few applied these theories to the question.

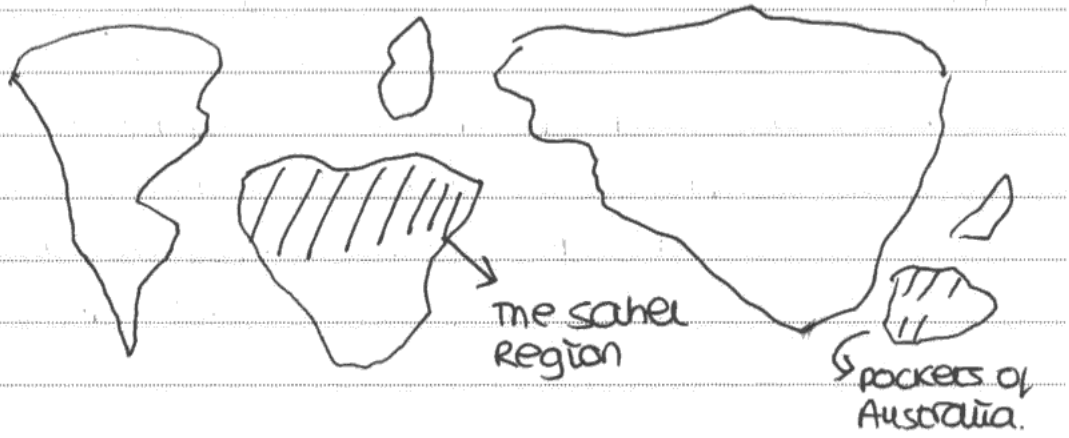
1. Introduction

Throughout this report I will be exploring whether currently, drylands are the areas most vulnerable to the threat of food insecurity. I will focus in particular on how levels of food insecurity vary in dryland and non-dryland regions, due to a disparity in human and physical factors. Thus, I will take a systematic approach to this structuring my report according to dryland and non-dryland regions, and within that by the Maplecroft index. Ultimately, the Maplecroft Index examines the risk of food insecurity in 162 countries and is formed by four sub-indicies: the nutritional and health status of the population, availability of food stocks, stability of food stocks and access to food stocks. Therefore, I will start by looking at those countries with extreme levels of food insecurity in dryland and non-dryland regions such as Somalia and Haiti, and then those with lower FSI scores such as Australia.

The definition of food insecurity, as defined by the FAO is when "people don't have enough food to meet daily caloric needs". However, a lack of food isn't the main issue. As the International Federation of the Red Cross states, "there is not a lack of food globally but poor distribution."

Figure 1 shows how there is a poor distribution.

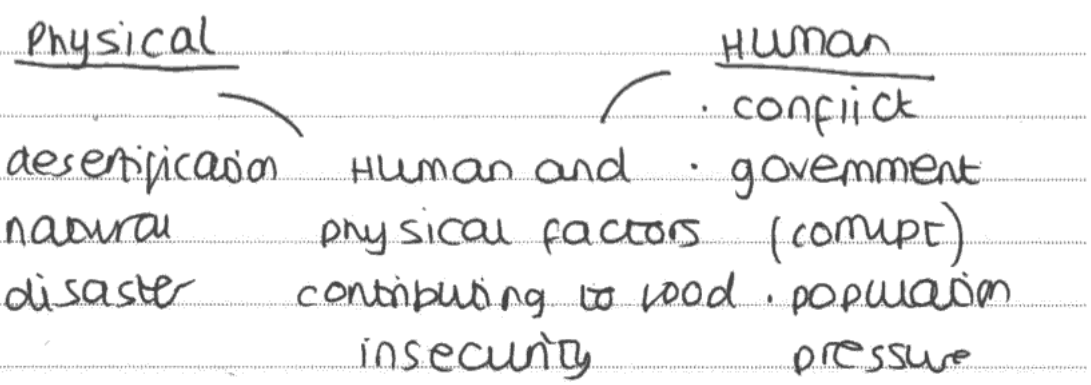
Figure 1) A world map
//// = those areas suffering from food insecurity



As figure 1 shows, there is an irregular distribution of food supplies. Thus, with 37% of the world's population living in dryland environments, and 925 million people suffering from hunger globally, it is debatable whether only drylands are the most vulnerable to the threat of food insecurity.
drylands is defined by the FAO as "those regions classified climatically as arid, semi-arid or dry-subhumid" and vulnerability is defined by Dunn et al as "a high risk combined with an inability of individuals and

communities to cope.

There are a range of physical and human factors which contribute to food insecurity in dryland and non-dryland areas, ranging from population pressure to conflict, as Figure 2 shows:



Thus, the proposed question is a complex, multi-faceted issue and needs careful, in-depth analysis in order to grasp whether drylands are the areas most vulnerable to food insecurity - something which I plan to answer by the end of this report.

ResultsPlus
Examiner Comments

There is a very clear focus in this introduction with a clear identification of the various restrictions in the title as well as the 'discuss' command. This is a Level 4, top band, example.

ResultsPlus
Examiner Tip

An introduction should have a clear and explicit reference to the question asked.

Sudan

According to the UNDP drylands are home to the poorest and most marginalized people on earth. Sudan is a dry land area in the Sahel region, which is extremley vulnerable to the threat of food insecurity. The climate is erratic having shown a significant decrease in rainfall during the 1960's - 1990's. Furthermore the area suffers reoccuring drought and suffered particularly severe drought in the 1980's. The population are already extremeley vulnerable to these changes as 70% of the population work in the agricultural sector. In Darfur farmers lack the provisions to be able to store water from the rainy season in order to overcome shortages in periods of drought.

Due to the inability to grow enough crops, demand for food in Sudan far exceeds supply. The population growth rate is 3%, which means that the carrying capacity of land is exceeded. Combined with this, Sudan is an LEDC dryland area which means that the government cannot afford to have food surplus to distribute in times of crisis. Currently Sudan is [illegible] also subject to civil

war which means that help from NGO's and other governments cannot reach the country. Also The New York Times reported that due to civil war between the rebels and Sudanese the population are relying on roots and leaves as a source of sustinence.

Sub conclusion

Sudan is extremley vulnerable to the threat of food insecurity due to the climatic conditions that are characterised by its dryland status. This is demonstrated by the human and physical factors which cause Sudan to be threatened by food insecurity

Lake Chad

Lake chad is also in the sahel region and borders the countries of Niger, Nigeria, Cameroon and Chad. 9% of Chad is dryland area - and the area surrounding lake chad is extremley vulnerable to the threat of food insecurity. Desertification has caused the lake to shrink from 25,000 km² to 2,000 km². The population are extremley dependent on the lake as a source of irrigation and food production, which makes the process of desertification a mayor factor in

threatening their livelihoods.
similarly to Sudan the population rely on agriculture as a source of income. The fishermen who source their fish from lake Chad have seen a significant decrease in the income they can make from their catch, from £30 a day to £6 a day. 25 million people live around the basin, therefore the demand for water far exceeds the supply available.

Sub conclusion

Overall the threat of desertification in lake chad means that this dryland area is threatened by food insecurity, predominantly due to water scarcity. Currently the dependency of the population on the lake to sustain them means that they are extremely vulnerable.

India

India is an NIC, where 72% of the land is dryland according to the geographical in 2011. In rural areas of India food insecurity rates are extremely high as a result of being a dryland. Many of the population rely on subsistence farming as a source of food, however, due to the climate the land is threatened and many of the people in turn face extreme poverty. Previous schemes

to improve food security in India have made the problem worse. For example, the Green Revolution in the 1970's included using technology such as fertilisers to improve soil fertility. These fertilisers had detrimental effects in the long-term causing the soil to be stripped of nutrients and causing the land to become hard to cultivate. The government in India have prioritised agriculture less, for example, in the 1980's 1.8% of their GDP was spent on the agricultural sector, this has decreased to 0.6% in 2008. The country has a large population of 1.2 billion and supporting those in extreme poverty is difficult, when the economy is prioritised in other forms of development.

~~The USA~~ subconclusion

Overall the case study of India demonstrates that the combination of economic instability and physical inability to grow crops cause the dry land to experience be vulnerable to the threat of food insecurity.

The USA and Australia

The USA is an MEDC however currently dryland areas are vulnerable to the threat of food insecurity. According to the USDA (united states Department of Agriculture) they are experiencing the

worst drought in 25 years. This drought means that crop yields have fallen by 27.5% of crops that are wheat such as soy bean and corn. Corn production was down 12%. The main problem here is that if production is threatened in the USA, other countries which rely on them for imports are ~~those~~ at risk of food insecurity.
In Australia dryland salinity leaves many of the dryland ~~regions~~ regions extremely vulnerable to food insecurity. The process of salinisation occurs when the water table rises and then unlocks salt stored in the ground. Salinisation has damaged 5 million hectares of land in Australia and the damage has cost $270 million. ~~The case study of this MEDC shows that~~ Salinisation means that it is

many hand for vegetation to grow. The case studies of the MEDC's demonstrate that the physical processes which effect dryland areas are extremely detrimental and cause vulnerability for their population as well as other countries who are dependent upon them.

Sub conclusion

The case studies of the MEDC's show that

drylands in more economic stable areas are still vulnerable to food insecurity as a result of physical processes. Although less so because of human causes in contrast to Sudan, lake chad and India

In conclusion my report has shown that food insecurity often affects dryland areas making them the most vulnerable to the threat of food insecurity. This is a result of the climatic factors as explored in sudan and lake chad where drought threatens a large section of the populations livelihoods. However is also worsened by the fact that currently drylands are in those areas that are developing and lack the economic stability to combat vulnerability, for example failed schemes such as the 1970's green revolution in India. The USA and Australia show that although they are largely food secure as countries, the threats that come with the characterisations of dryland cause vulnerability. Overall food insecurity is an extremely complex issue, especially in dryland areas where the climate can be erratic and the population often the most vulnerable.

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ResultsPlus
Examiner Comments

This case study approach does a decent job of assessing how **these particular** drylands are vulnerable but the report lacks a conclusion and these areas are not put into any general context of drylands as a whole. There is no separate conclusion and the sub-conclusions tend just to repeat what has already been said. It is at Level 3 for the analysis.

ResultsPlus
Examiner Tip

Timing is important - the conclusion matters as much as the introduction. In fact it matters more!

Question 4

The answers to this question were generally quite strong, although many examiners reported that there were fewer extremely good answers than have been seen in the past. As with all other questions, the strongest candidates gave a clear indication in their introduction that they understood the focus of the question and, within their methodology, how to embark on an evaluation. They gave clear definitions of culture and cultural diversity, followed by a good range of influencing factors. However, quite a few candidates focused on culture in general, rather than the 'landscapes' that might be generated.

Concepts used included variants on Venn diagrams with culture in the middle and the varying influences of migration, globalisation etc, some applied this by overlapping the exemplars used.

Sadly, there were very few candidates who tried to evaluate the **relative** importance, in terms of suggesting that some factors had more of an effect than others. Those who did so generally produced superior reports especially if they recognised that the 'factors' are not constant in either time or space.

Strong points included:

- The wide range of interesting cultural landscapes used in the UK and further afield, such as London, New York, Marrakesh, Sydney, Bhutan, Machu Picchu, Grand Canyon, Uluru, Havana, Oman, Dubai, and Belfast.
- The topicality of case studies, using very recent sources, and there was evidence of individual research by many candidates, and of fieldwork by some, particularly in London.
- Clear frameworks which worked well which were structured by factors such as globalisation, migration, religion, level of protection, political decision making etc.
- The use of clear divisions such as those between rural/urban cultural landscapes enabling the relative importance of different factors to be discussed effectively. The best candidates showed the multi-layered nature of cultural landscapes, in both urban and rural landscapes, as being a product of both historical and modern factors, as well as physical and human factors.
- Good use of specialist vocabulary, such as ethnoscapes, financescapes and clone towns.

Weaknesses included:

- Long-winded definitions of culture with a lack of coverage of cultural landscapes in their introductions.
- A poor selection of case studies leading to a lack of focus on landscapes; the choice of case studies is vital.
- Other reports described several cultural landscapes in considerable detail, but did not discuss the factors which led to their development.
- There was some inappropriate use of models and diagrams which were not really relevant to the question.
- Case study by case study frameworks tended to lead to descriptive accounts, which lacked the focus needed on factors affecting the development of cultural landscapes.

Evaluate the relative importance of the different factors which contribute to the development of cultural landscapes

Introduction

UNESCO defines a cultural landscape as 'a distinct geographical area which uniquely represents the combined works of nature and of man'. The term was first used by the German geographer, Otto Schlüter in the early 20th century and the concept was developed by the American geographer, Carl Sauer. The adoption and use of the concept by the World Heritage Association in 1992, made the concept of 'cultural landscapes' known and visible around the world (Wikepedia.org)

Focus: The main thrust of my argument will be that different physical and human factors are of great importance in contributing to the development of cultural landscapes. I will show that these factors may change over time and that physical factors are more important in contributing to the development of rural cultural landscapes whereas human factors are more important in contributing to the development of urban cultural landscapes.

Framework: In this report, I will be evaluating a range of physical and human factors shown in the table below. In order to evaluate a wide range of cultural landscapes, I will be using a number of both rural and urban case studies of cultural landscapes, in order to obtain a representative collection of cultural landscapes from around the world. The examples I will be using were chosen because they range in scale, are either rural or urban and are found in different

PHYSICAL FACTORS	HUMAN FACTORS
· Scale · Vegetation · Distinctive landforms Relief Geology	· Agriculture · Industry · Tourism · Spiritual/religious values placed on the area

parts of the world. The case studies I will be using are shown below:

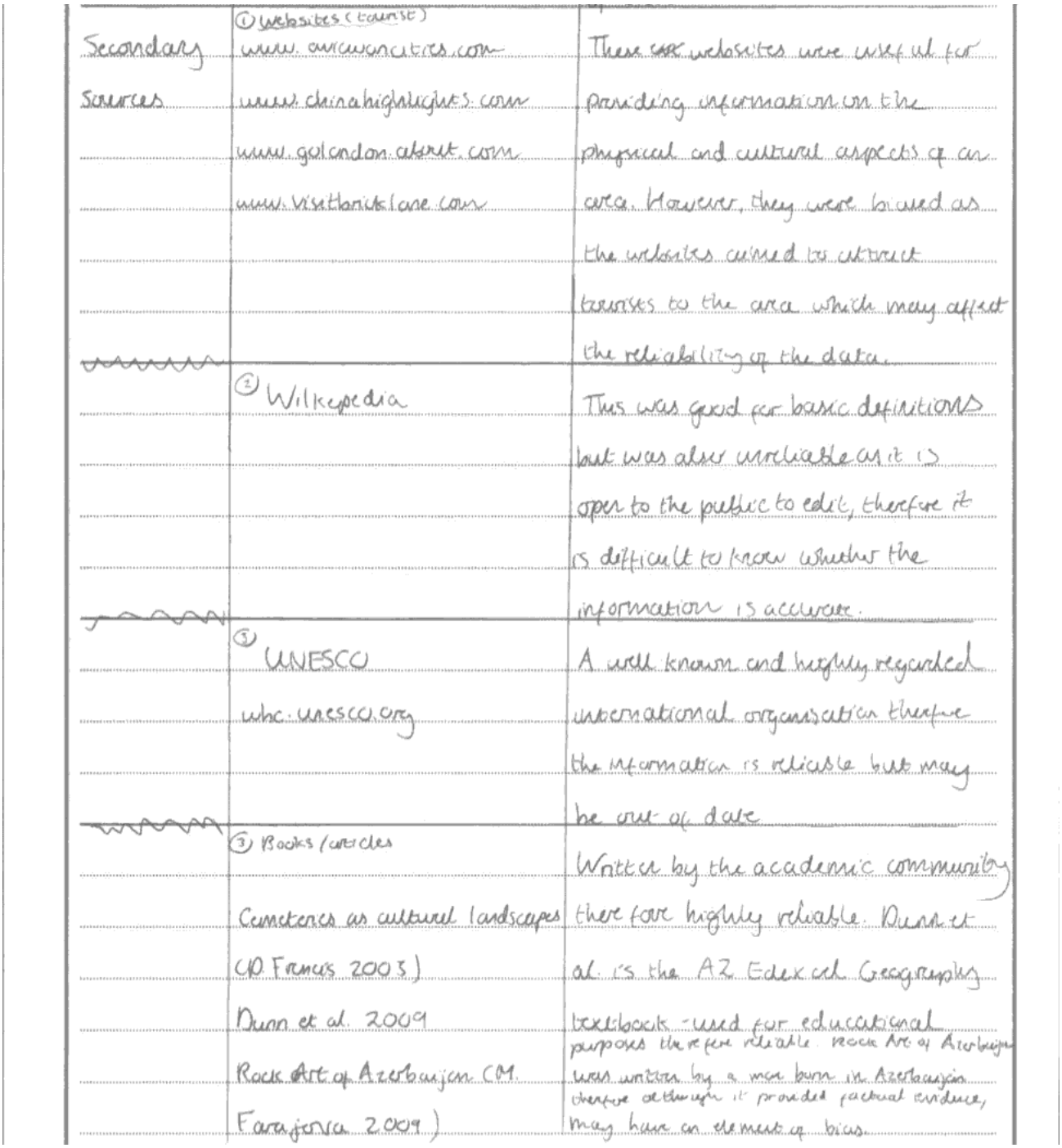
RURAL CULTURAL LANDSCAPES	URBAN CULTURAL LANDSCAPES
· The West Lake of Hangzhou, China · The Gobustan Rock Art Cultural Landscape, Azerbaijan · St Kilda, Scotland · The American West: the Grand Canyon	· London (Brick Lane, Canary Wharf and Highgate Cemetery) · Bam, Iran

Rural cultural landscapes are often sites that are situated away from the main hubs of an area and, with a low population density and few built structures. Urban cultural landscapes on the other hand, are often densely populated with many built structures and high levels of human activity. Urban cultural landscapes reflect social and political traits and patterns (definitions adapted from Dunn et al. 2009)

Research and Methodology

In order to gain sufficient information on the variety of case studies of cultural landscapes used throughout this report, a ~~number of~~ primary and secondary data was collected using a variety of techniques, on each location.

	Techniques	Advantages/disadvantages
Primary data (quantitative techniques)	Place checks, picture the quote, video snapshots and observations and land use and buildings were carried out at Brick Lane, Canary Wharf and Highgate Cemetery on separate trips	This provided concrete data from factual evidence. However, there were some limitations as we visited some areas early in the morning when some shops were closed. Therefore we were unable to determine the land use of the area. In addition, some observational techniques may have an element of bias



ResultsPlus
Examiner Comments

This is an exemplary, top Level, introduction with a very clear approach to the question asked which comes through very strongly indeed. The methodology is also very strong with an excellent range of sources properly evaluated.

ResultsPlus
Examiner Tip

It is very helpful to evaluate the potential problems of bias and reliability in your sources because it will help with your evaluation.

Question 5

Most examiners reported a much stronger approach to this question than seen in past, with many candidates not just showing a strong command of the topic but also using frameworks based on well-known models, applied at a range of scales.

Popular models which worked well as frameworks included the WHO Health Transition model, Kuznets curve and also Omran's epidemiological model but these also included the introduction of factors which are clearly unrelated to economic development. Candidates using these frameworks established from the start that 'strongly related' is not a synonym for 'completely explained by'. Less successful frameworks based on a north/south or LEDC/ MEDC division tended to close off the possibility of other factors playing a role and also led to far too strong an emphasis on 'India is poor so..' type responses which disallowed the reality of huge internal variations within countries, regions and even quite small communities.

Popular case studies focused on indoor and outdoor air pollution and asthma – using countries in Africa as well as Mexico City, Beijing and London (including the expansion of Heathrow) - which provided evidence for both argument and counter-argument with respect to the title's assertion. Older case-studies appeared frequently, which is of course perfectly acceptable, although these were not always convincingly linked to economic development or indeed any other variable.

There were a number of interesting case studies demonstrating real research at small 'local' scales; for example studies of a city such as Bristol contrasting life expectancy and lifestyles in a small area and relating this to economic status. A number used local super output area data from the health domain. Others at a larger scale used sketches derived from the GAPMINDER website very effectively.

Strong points included:

- Showing the two-way relationship between economic development and health risk and using data to support the strength of this relationship.
- A good range of 'degenerative' and 'infectious' risks and comments about genetic risks not linked to economic factors e.g. sickle cell disease.
- The use of facts and statistics to back up use of health risks e.g. air pollution PPM in London and Mexico City, prevalence rates of HIV/AIDs.
- A sophisticated treatment of obesity and the medical impact that it can have.

Weaknesses included:

- Long-winded treatments of health risks with insufficient focus on economic development.
- The poor selection of case studies led to a lack of focus on causes rather than consequences, the selection of appropriate case studies is vital.
- Introductions which just listed definitions, often through a bullet pointed list, which prevented candidates from developing a focus to their report.
- There was some inappropriate use of models and diagrams which were not really relevant to the question.

3.0 Are Health risks strongly related to economic development?

3.1.0 Is HIV/AIDs related to economic development?

HIV/AIDs is a sexually transmitted disease, that takes 10 years to develop to full 'AIDs'. It kills 1.7 million people a year (WHO 2011) and at the pandemic's peak in 2002 killed 2.6 million people (worldmapper) It is uncurable, so once contracted to live people need to take antiretroviral drugs, globally 34 million people live with HIV/AIDs (WHO 2012) and in LICs & NICs where money is hard to come by for therapy only 8 out of 23 million people are recieving it (UNICEF & WHO2009)

3.1.1 HIV/AIDS in the US

The US is a developed nation, where education and the availability of contraception is taken for granted, however 13,000 people die from HIV/AIDs (worldmapper 2002) and it is the 34th Cause of death (CDC and world life-expectancy 2009). Why is it still a problem? The economic level of US means that it must be down to choice, where people ignore education/advice and do not protect against HIV contraction by unsafe sex or taking drugs through contaminated needles.

3.1.2 HIV/AIDs in India

In complete comparison the NIC - India has 30X more deaths for from HIV/AIDs with 360,000 people died in 2002 (worldmapper). It is a greater problem here where education and contraception is not available to all, being the 13th Cause of death. (world life expectancy 2009). So, it is

clear that the lack of economic development means that 20% of youth popⁿ is not in education (UNICEF 09) and 25% of entire popⁿ is illiterate (BBC 08). The people do not understand the risks posed from HIV/AIDs, but also there is a cultural element where contraception use is not allowed. However, it is clear that they have no choice, unlike the Americans, and even once contracted lack of financial stability means they cannot afford antiretroviral drgs and have to rely on the limited support of charities like UNICEF and UNAIDS which can only do so much.

3.1.3 subconclusion

HIV/AIDs is strongly related to economic development, as having the financial stability in a country ensures an educated public about ~~health risk~~ HIV/AIDs, money to pay for contraception and antiretroviral therapy, but it can also lead to having a more lenient and approach where people ignore what they know, and this is very much the case in Us.

3.2.0 Is Malaria related to economic development?

As shown by the ETM, infectious diseases are prevalent in countries of lower economic development. This is ~~clear~~ true also for Malaria as 90% of global deaths are in Africa (which is mostly LICs) (WHO 2009), and is also the 15th cause of death with 830,000 ~~deaths~~ the most recent figure (worldlifeexpectancy 2011). However, it also seems environmental related due to climate also playing an important role.

3.2.1 Malaria in The Democratic Republic of Congo (DRC)

The DRC is situated in ~~the middle~~ Africa right on equator. In the world it is 2nd for deaths from Malaria with 124,000 in ~~2009~~ 2011 (world life expectancy) and it's GDP is one of lowest in the world, it's lack of economic/financial stability means that standard of living is poor and simple strategies to ~~avoid~~ reduce risk of Malaria such as buying a mosquito net and taking antimalarials is not possible for majority of the ~~wor~~ county. Although, economic development helps prevent health risk, their climate/environmental factors is also key, with temperatures never dropping below 18°C (BBC 2011) and very high humidity levels, DRC is perfect for the breeding of mosquitoes, which transmit Malaria. Hard to compare to HICs due to the fact that majority of HICs have less favourable climatic conditions for malaria to be a risk.

3.2.2 Malaria in Canada

This is clearly shown by Canada, a huge ~~country~~ HIC in northern hemisphere where in 2011 there were NO reported deaths from malaria, but also the Climate does not favour the habitats of mosquitoes, unlike DRC, with annual temperatures ranging from −32°C to 24°C! (BBC 2011). However with rising pollution levels imminent due to discovery of oil reserves Canada could see rising temperatures, also due to industrialising of transition economies releasing more pollution that will lead to global warming. If temperatures were to rise, then Canada may see ~~re~~emerging health risks like Malaria as temperatures would be able to support the survival of mosquitoes.

3.2.3 Subconclusion

Even though it is environmental factors which first determine whether Malaria is prevalent in a country, the economic development would help secondly, as HICs can afford simple ~~or~~ strategies to combat Malaria that LICs ~~as~~ cannot ~~a~~ by use of mosquito nets, repellents and taking antimalarials. However, indirectly if global warming increased, temperatures would be more suitable for Malaria to invest and could lead to epidemics in previously "too cold" HICs, who would be unprepared.

3.3.0 Is skin cancer related to economic development?

Skin Cancer is not a major cause of death globally, being 59th in the table with 77,000 deaths (world life expectancy and WHO 2009). However with increasing temperatures and use of sunbeds, skin cancer could be on the rise.

3.3.1 Skin Cancer in Australia

Australia experiences around 2,000 deaths from skin Cancer a year (cancer council 2010 & world life expectancy 2010) and ~~-~~ with a rate of 5.8 deaths per thousand it is ranked 4th in the world (world life expectancy & 2009). However, it is a HIC nation, ~~so~~ but the ~~third~~ geographical location means that it experiences UV levels considered "extreme" by ARPANSA at currently ~~UV~~ 12 (out of 12) (ARPANSA) and it is also situated beneath the ever largening ozone hole where all CFCs from world in atmosphere concentrates at poles. ~~This~~ Skin Cancer is a form of natural pollution that is being made worse through man-made pollution,

which increases with economic development, as shown by the kuznets Curve (figure 2).

3.3.2 Skin Cancer in Uk

(Cancerresearch 2010)

In comparison, Uk, another HIC has 3000 deaths from skin cancer (more than Australia) but a rate more than half that of Australia at 2.4 deaths per thousand (worldlifeexpectancy 2009)

In Uk, the UV levels rarely exceed 7 or 8 on a good day (Health Protection Agency) so the a number of skin cancer caused by direct exposure to UV radiation from the sun is 2 or 3 x less than that in Australia - ~~also~~ so how?
The level of economic development in Uk leads to a luxury life, where people choose to use sunbeds instead. Using sunbeds before 35 increases risk of skin cancer by 87%. (cancer research + ~~Cancer Council~~ WHO 2010) and it starts at a young age with 6% of 11-17 year olds in Uk using sunbeds, a figure of 250,000 children! (cancer research 2010). ~~So it is the choice~~.

3.3.3 Subconclusion

Skin cancer is strongly related to economic development, for both countries, education and ~~management~~ schemes (like "Slip, slap, slop" in Australia) are in place to reduce the rate of skin cancer in both countries, but people still choose to ignore what's right for them. This choice is only really available in HICs with high standards of living and in a stage of mass-consumerism. Also pollution from CFCs is leading to ozone depletion which will greatly increase rate of skin cancer in Australia due to ozone hole allowing more harmful UVB radiation to reach Earth.

4.0 Conclusion

To conclude, from all the evidence discussed in this report economic development relates strongly to health risk.

For all health risks, the causes are not simple, but complex, with more than one factor contributing, but it seems to be clear that mostly economic development has strongest relation to a health risk, in particular they way it is combatted through use of antibiotics, such as antimalarials for prevention of Malaria, therapies, such as radiotherapy to fight cancer and antiretroviral therapy to keep HIV/AIDs patients alive, as well as simple living improvements like mosquito nets and, apply suncream, not using sunbeds and safe sex.

However, there are always anomalies that do not fit the pattern, arguably Malaria is predominantly related to environmental/geographical location, with warmer climates favouring the habitat for injectious parasites and vectors - mosquitoes in this case. But, level of economic development ~~could change this, as this is~~ also ayects the Malaria, as countries with similar climate to DRC (and majority of Africa which is where most of the deaths occur) does not even come close to the dominance Malaria has in Africa as a continent and this clearly supports the fact that even Malaria is strongly related to level of economic development.

Globally, as transition economies like Brazil, Russia, India and China ~~alongside the already developed nations~~ are continuing to rapidly industrialise and this leads to increasing pollution levels. Alongside the stable (and falling) pollution levels of ~~these~~ HICs, there is still a huge

net increase in pollution levels annually, and the problem of air pollution is it's ability to disperse throughout atmosphere causing global warming and ozone depletion to occur. In both cases, the rising temperatures will induce greater risk from injectious diseases like Malaria and skin Cancer aswell as extreme weather events which would lead to more health risks aswell. This could see re-emerging diseases like Malaria in countries that were too cold previously to be faced with an epidemic.

Finally, economic development leads to increased travelling and globalisation, and this could also relate to health risks in future re-emerging in countries like Uk, where migration rates are high and the likelihoods of previously extinct diseases could re-emerge such as TB or Smallpox.

So, throughout this report, it is clear that the level of economic development is strongly related to health risks. This can be directly (through antibiotics, quality of life, education and therapies) or indirectly (through pollution, global warming, ozone depletion, and migrational rates)

ResultsPlus
Examiner Comments

This is a very well-organised piece of work that focuses on the title and keeps it at the centre of the report with excellent sub-headings and conclusions woven into the analysis. Top level 4.

The conclusion is very impressive with a successful evaluation and weighing up of evidence. A top level response.

ResultsPlus
Examiner Tip

Mini-conclusions are a useful method of keeping one's mind on the title!

Section 1 — Introduction

1.1 Definitions

Throughout my report I will use geographical terms. ~~to back up my answer~~ .

Health - according to the World Health Organisation (WHO) health is: the physical or mental well being of someone at any given time

Health risks: are any thing that is a threat to human health (hazard)

The health risk equation is:

exposure x virulence or toxicity.

Economic development is the process of modernisations with in a country. This includes infrastructure and health amongst others. It is determined by the wealth of a country

Pollution - can occur in 3 forms: Atmospheric, hydrospheric and terrestrial

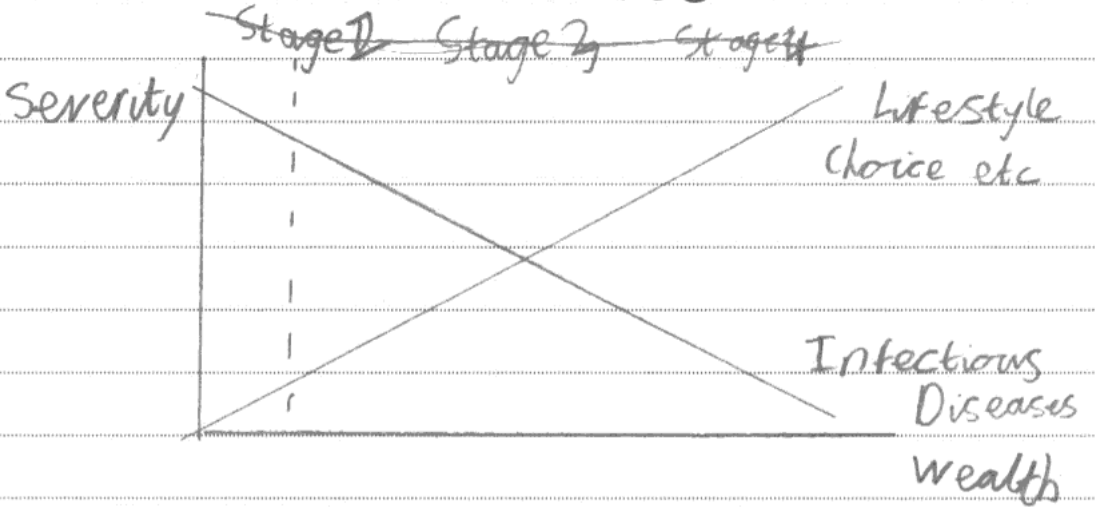
Pollution is a hazard, as it can harm human health. ~~It is the~~

1·2 Focus

Throughout this report I will analyse and evaluate ~~whether~~ to find out the extent of how health risks are related to economic development. I will use key terms such as those in 1·1 to help my analysis and evaluation.

~~I will use dog~~
I will include the use of various diagrams throughout my report. This is as they will help me to analyse and compare various case studies that I will use in my report.

Figure 1 the Epidemiological Transition Model



The model above shows how health risk vary in terms of severity. It also shows how levels of severity

~~w~~ relate with wealth and hence economic development. ~~I will use~~ ~~It also show~~

Throughout my report I will look at different health risks such as: obesity, pollution and HIV. I ~~do~~ will analyse ~~as to why~~ the distribution of ~~w~~ these health risks and I will analyse the pattern to see why it is like this and discuss potential reasons.

I will include ~~the~~ use of case studies throughout my report. I will compare them and evaluate ~~whether they show~~ how much if at all they show that health risks ~~and~~ are related to economic development.

1.3 Research

As well as using ~~research without w~~ case studies throughout my report, I will also include the use of facts and figures to complement my case studies and give them significance.

~~The table below shows~~

Case Study	Concept	Source(s)
UK obesity	33% of adults have a weight problem or are obeases	NHS Report, Topic Eye Article
West Bengal + Bangladesh Arsenic Poisoning	Under-grounded water supply ~~contam~~ Contaminated - arsenic	Geofil Top Spec Geography Digby + Conling 2010

Case Study	Concept	~~Relevance~~ source
China's Pollution	Industrialising country suffering from environmental degredation	Geofile, UN website
Africa ~~AIDS~~ HIV	72% of worldwide HIV cases found in Africa	Edexcel A2 book, Geofile
Australia's Ozone layer depletion	CFC's damaged ozone layer above Australia	Sunsmart.org Top spec Geography Digby + Conling 2010

Overall I think that I have chosen good reliable sources, that will help me to understand ~~what~~ ~~is~~ the health risks and levels of economic development.

Their are some problems with my sources however. Firstly for UK obesity I have used a Topic Eye article. This could be inaccurate as it may be biased for entertainment purposes. However,

I have backed up this with NHS statistics so it shouldn't be a problem.

ResultsPlus
Examiner Comments

A clear introduction with the sensible technique of explicitly identifying the focus. Strong methodology with evaluation in the table too. At the very top of Level 3 for both D and R.

ResultsPlus
Examiner Tip

If the introduction is strong it sets the report on the right pathway - that is to say a pathway which addresses the question set and not the 'topic' in general.

Question 6

Many examiners reported that there was an improved standard of report structures, with the 'essay' approach a thing of the past. Thus most candidates wrote their introduction section followed by a methodology section that led into analysis and conclusion with some referencing and the use of helpful diagrams, usually of models. A significant number had both sub-conclusions and a bibliography. The stronger candidates tended to include a spectrum of reliability for their methodology that had a range from Wikipedia and blogs at one end to academic journals and up-to-date text books at the other end. Some candidates tried to interweave their methodology into the analysis section of the report but that didn't work too well. It worked better when numbers were allocated to specific resources in the methodology and then applied where used within the answer.

Some candidates found the question challenging because it required them to focus not so much on the different strategies which many did but the reasons for the differences between these strategies. The weakest answers simply ignored 'the reasons' and reconstructed the title as 'Describe the strategies used to manage tourism'. These reports not only lacked any assessment but also much contrast between management strategies (other than simple statements about their differences). They also lacked any attempt to differentiate between leisure and tourism and, very occasionally, forgot that 'rural' is the requisite context in an Option entitled 'Consuming the Rural Landscape'.

Strong points included:

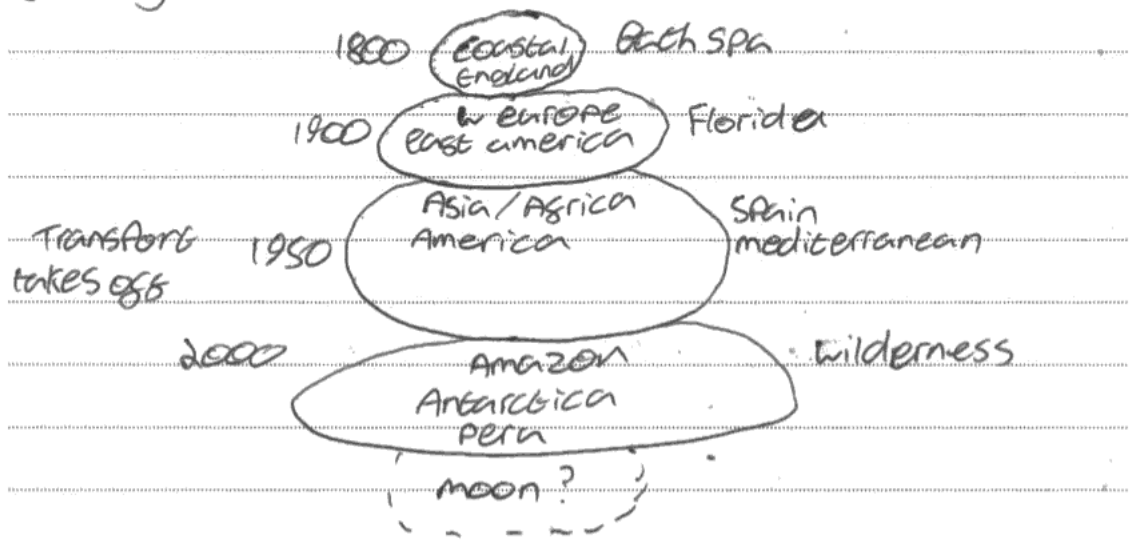
- Many quoted up-to-date research or their own primary data collection, which when used well was rewarded.
- When using case studies, the better candidates justified their choices.
- It was a joy to come across case studies that had not been seen before.
- Some candidates considered the strategy of 'do nothing' and its implications and applied this to the question posed.

Weaknesses included:

- Quoting Chaffey 1996 seems somewhat dated for a rural case study.
- Weaker candidates tended to just provide case study material and in some cases this was irrelevant.
- Focus on strategies could become a focus on the challenges instead.

Introduction:

Different places all over the world undergo management for different reasons. Some areas are highly environmentally sensitive whereas other areas are threatened by the volume of tourists at certain times. This causes varying problems in rural areas which all need to be managed else they could collapse. The pleasure periphery model shows how leisure and tourism has spread over time. It can show you that certain places have been visited since the 18th century which would of needed multiple management schemes to keep running. It also shows ~~how~~ what places are currently being exploited which means they could be under pressure from tourists fleeing to see these new sites.



Places such as Peru - Machu Picchu are currently being exploited and are replying by creating management schemes.

~~I will be~~ I have researched into what causes different strategies that are needed to manage

the expanding leisure and tourism sector. These reasons could include: Ranging ecosystems that are sensitive to tourism, whether Locals have a say in how the area surrounding them is managed. It is common that areas need to be preserved which can be cut off to the public. Species eg animals are often protected which means management schemes have to revolve around their needs. Tourism can also be seasonal which means substantial management is needed to withstand huge pressure from the volume of tourists in a short space of time.

ResultsPlus
Examiner Comments

There are strengths in the introduction but it could be improved with better focus on one of the title's keywords - 'different'. These are addressed on the second page but not with any clarity.

A Level 2 response.

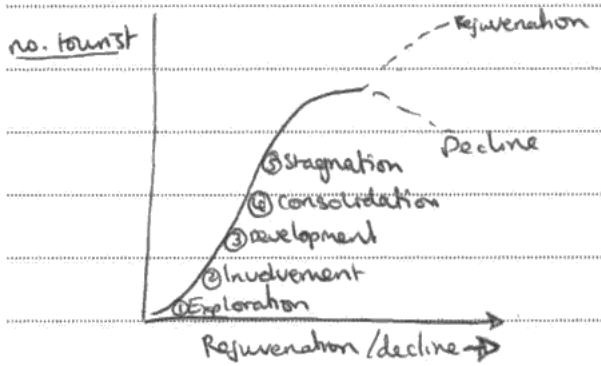
ResultsPlus
Examiner Tip

If the introduction includes an explicit mention of the keywords and focus on the question it helps keep the report on track.

Total Protection Preservation - Antarctica

Antarctica is located in the South pole, and it is approx 14.2 sq km in size. It is valued for being the most pristine, hostile environment, which is remote to many people. It's tourism boom began in the 1990's which can be said that due to media coverage more and more people are becoming aware of this pristine environment. In 1990 - 1991 tourist level were at 10,000 which is very little in comparison to 33,824 of 2011. This small but highly significant level of tourists arriving are having many impact hence management techniques are being put in place to minimise the effect. Management can be defined as the ability to control the amount of resources.

Butlers Model: fig 2



According to the Butlers Model Antarctica is at the stage of Exploration and as management have been put in place it means it therefore can not afford to go to the level of development. In 1959 the Antarctic Treaty was put together to minimise the impacts of tourism, which therefore declared Antarctica as a 'natural reserve of peace and science and as a region of cooperation it meant that no nuclear, or military practices were and are not permitted.

This can be considered as a successfull strategy as it also bemeans that it avoids disputes of economic minerals such as coal / oil.

In 1994 the Convention of the Conservation of Antarctic

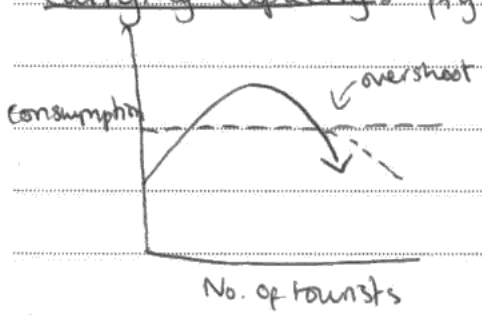
Marine life Resources was put together via the Madrid Protocol (www.asoc.org) meaning that no fishing is permitted in the southern oceans. This is due to the fact that many fish, mammals and birds have been harvest, killed or disturbed due to the arrival of tourism. And since the released of 'Happy Feet' in 2006 it created a major tourism boom which nearly had a knock on effect on the Emperior Penguin which was nearly harvested to extinction. [Frozen Planet - David Attenborough)

Preservation - Ecotourism - Exploitation → Cost Rica

Costa Rica is located in south America, with Nacaragua to the North and Panama to the south east.
In 1987 Costa Rica was propomedly known as an Ecotourism paradise with tourist numbers of 329,000. This is mainly due the natural attraction of biodiversity and adventure tourism. However since then tourism has boomed and it is the country's largest economic contributer as in 2011 2.2 million people were said to have visited. This has resulted in the country placing 10 nation parkes to protect the 12 inter tropical rainforests and species that it may hold. The level of people have caused

high levels of pressure on the environment as well as on resources.

Carrying capacity: fig 3



Costa Rica is said to have reached it's overshoot as the country has reached its overcapacity. This is because the amount of people arriving cannot be sustained by the

level of resources the country has. This has therefore caused many impacts such as soil degradation and deforestation. However the Costa Rican government are seeking to implement ~~many~~ many successful managements. Education is its main focus, as by teaching very young children the importance of rainforest they are also able to teach a brand new generation ~~as~~ once they are older which is said to be sustainable. Sustainability can be defined as meeting the needs of ~~the~~ the current generation without compromising the need of the future. In addition local people have designed the motto "Take nothing but photos, leave nothing but ~~footprints~~ footprints, waste nothing but time", this was generated to stop local tribes from harvesting, and killing the endangered species for summers. 10% of the land are protected via national parks, meaning no mining or harvesting is permitted. The tourist agency had also promoted the idea of eco-lodging which therefore meant that land wouldn't needed to be deforested to clear land for hotels as they would

built within the tree tops. However they are seen to be rather expensive so tourist alternate to eco-bed & breakfasts instead, but sometimes there are issues of 'greenwashing' of hotels that say that they are eco friendly when they are not really. So regulations and observation of the hotels are taken to monitor whether they are ~~e~~ or not. Finally other hotels and businesses are highly tax due to the land degradation they cause and due to the fact that the leak money out back to their country.

Conservation - Preservation - Galapagos Islands

The Galapagos islands are located 60 650 miles off of Ecudor on the Nazca plate boundary. It can be said that this is why the islands are very volcanic and hold many endemic species.

In 1991 there were approx 41 000, people in comparison to 2011 160,000, and as this islands are extremly fragile and sensitive to any changes, management have been placed to conserve these highly valued islands. According to fig 3 they have not reached overshoot as they have been succesfully managing their ~~ecotypes~~ islands and according to fig 2 they are at the stage of development and consolidation as they are aware of the multiple impacts that threaten these island and hence have seeked to reduced them via management.

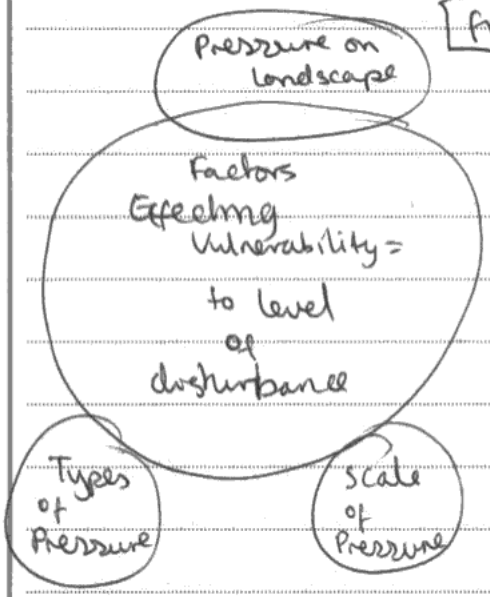
Each tourist that arrives pays 25 dollars which is put towards the Charles Darwin Trust which aids with the conservation programmes of these endemic species. The islands have been split into three use groups, 1) Extensive use which is has high value of wildlife and biodiversity hence only 16 people are allowed on this area at any given time. 2) Intensive use which still has lots of biodiversity but tourists are only allowed on the 'honeypot' sites. 3) Recreation use which most people sit under.

Finally the Ecuadorian government has seeked to reduce its numbers and at only peaks season to reduce the impacts.

Conservation - Preservation - Exploitation - Machu Picchu

Machu Picchu is located ~~is~~ in the Cusco Region of Peru in South America, 480 ~~south~~ east of Lima.
This is a prestigageous site that is highly known for its Inca settlement ruins and in 2006 was ~~named~~ one of the 7 wonders of the world. However Machu Picchu is suffering the 'love to death syndromin. This is because of over 2000 tourists ~~visit~~ visit and pass the trail every day causing many environmental issues. (My main source for these key facts have been from a Geopactfile designed for A Level students meaning it is unlikely to be biased.)

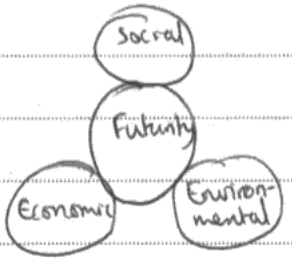
Tourism has reached its overcapacity [fig 3] as tourism boomed over the last 10 years by 224%. UNESCO had noticed its pressures and have managements techniques it was aiming to enroll and placed it as a world heritage site.
The Peruvian government have been placing fees on entry to the sites at $20 which has generated over 6 million dollars in 2011 which contributed to the countries ~~local~~ economy as well as 3 million dollars from the pricing of the Inca trail. In addition they have reduce the number of people allowed per day to 500 to reduce the pressure.



[fig 4 = Fragility model]

In this model we can tell that as Machu Picchu has many pressure on its land eg from tredding underfoot, or simply because of its location it's highly prone to landslides due to the mountainous eg ridge and monsoon weather. All of these pressure effect the vulnerability of the land and the likelyhood of disturbance. It was said, in 2005 a rare orchid only known to be on the mount Machu Piccha had become extinct. Therefore many locals put together a group / company that demonstrated the pressures of tourism on the Inca trail as well as the mountain. Here the 32 gaurds also dedicate their jobs to make sure people stay on path however this is such a small number in comparison to 2000 park gaurds of the Peak District UK. Finally wardens have been placed to avoid pollution into the Urubamba river and in Aguas Calientes 'tent city' to avoid environmental impact.

[Fig 5 sustainability Futurity Model]



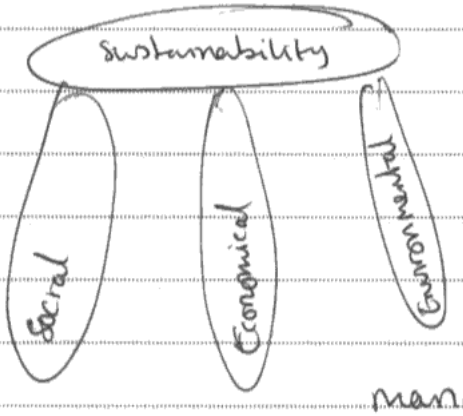
When all three factors are utilised the Peruvian government would seek to make Machu Picchu a sustainable rural area.

[refrences from 'Planet Earth' - David Attenborough]

Tourism Enclave =>
Direct approach:
This is the approach taken by Himalayas, Nepal and Machu ~~Pichu~~ Picchu, because both theses areas are potentially dangerous ~~to~~ and vulnerable to disturbances. Therefore what this makes sure that ~~people~~ tourist are kept away from locals people to avoid tourism. Not only that but because these ~~are~~ areas are susceptibal to change and in economically stable places they are able to afford hard techniques suche as fencing, and making paths.

Indirect approach, This is the cheaper approach which appears to be working successfully in the ~~gal~~ Galapagos islands via the usage of land zoning. This technique is used in sensitive areas hence a soft approach is therefore implemented, for example litter bins, land zoning, trail signs. ~~etc~~

In conclusion it can be said that models can be successful in assessing the level of tourism over a a given time, and help to predict future outcomes. In order for managements to be ~~successful~~ successful they need to complete the three different attributes (Fig 6 Sustainability stool) and only then can an rural area be protected at an equal scale which the impacts outweight the advantages. Antarctica appears to be highly and successfully managed as its carry capacity is zero as any effect would mean and cause damage



to the pristine environment meaning that therefore the future generation wouldn't be able to enjoy the scenic value as well In addition the Galapagos Islands and ~~Eco~~ Costa Rica have both been able to successfull manange their areas to maintain the ecotourism ~~has~~ within the country

ResultsPlus
Examiner Comments

There is good case study information in the analysis but it would be significantly stronger if the reasons for difference were more explicitly addressed.

The conclusion rather confirms that tendency to 'drift' opening, as it does, with a statement about the efficacy of models in assessing the level of tourism.

Level 3 for both A and C on this report.

ResultsPlus
Examiner Tip

Be careful not to let the title slip from your mind! Write a note to yourself - keep it relevant to the question!

Paper Summary

There are many encouraging trends in the last few series of this examination; not the least of these is the increasing sophistication of centres in preparing candidates to answer the question that they are set rather than offering broad overviews of the topics in which they are embedded. In other words taking a view!

Based on their performance in this examination, candidates should:

- make sure their answer has a clear introduction which has explicit reference to the question
- be careful to include only appropriate case-study material
- give an overall conclusion and perhaps some mini-conclusions, as they write their report, to remind them of the question
- ensure they know the difference between models and theories.

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