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June 2015

GCE Geography 6GEO3 01

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Introduction

This year's Unit 3 examination was similar in style to previous years. Candidates chose all of the Section A questions in reasonable numbers, with the rough percentage popularity shown below:

Question 1: Energy Security = 33%

Question 2: Water Conflicts = 29%

Question 3: Superpower Geographies = 20%

Question 4: Bridging the Development Gap = 12%

Question 5: The Technological Fix? = 6%

Bridging the Development Gap and The Technological Fix? were a little less popular than in previous years, especially the latter topic. Overall, the vast majority of candidates perform well on this examination paper. As in the past, timing issues were relatively uncommon. Most candidates produced full answers and there were many excellent responses.

Specific comments on Section A

As is always the case, there were some very high quality answers in Section A and the average quality of response was good. Many answers demonstrated a good command of physical, human and political geography and many candidates used contemporary events and changes to support their work, as well as well-known examples and case studies. There are some areas centres may wish to focus on when preparing for future assessments:

- In 10 mark data stimulus questions there is still a tendency to describe data rather than provide explanations; when explanations are provided there needs to be a range of these rather than a narrow focus on one aspect.
- There is still a tendency to rely too much on descriptive case study detail, rather than selection and application.
- Most questions in the 12-16 mark range require a supported judgement to be made; many candidates are happy to sit on the fence and 'fudge' a conclusion whereas the strongest answers have the confidence to stand by their case.
- Level 3 and Level 4 marks in the 15 mark questions are only accessible if candidates can show that they are assessing, examining or evaluating (depending on the command word). Failure to do this i.e. by only describing and explaining, limits marks to a maximum of 8 in most cases. The development of evaluation skills and evaluative writing style is thus crucial to candidates aiming for a high grade.

Section A

Question 1 Energy Security

Question 1 (a)

Figure 1 showed a range of data on energy use for three countries at different levels of development – a LDC, a NIC and a MEDC. The first point to note is that all of the data is relative data i.e. percentage and per capita data. Thus explanations of the data based on population size were not relevant. Occasionally China's rapid annual increase in its energy consumption 2000-2008 was explained by its 'rapid population growth' whereas in fact that country's population has been growing at a rate of 0.5% per year for some time.

Broadly, there was good understanding of what the data showed. Most explanations focused on level of economic development. Ethiopia was seen as relying on traditional fuels because much of its population was rural and poor and therefore other sources of energy were out of reach. Physical factors such as China's large coal reserves were often referred to and stronger answers sometimes argued that in the case of Ethiopia HEP was likely to increase in the future due to current dam construction, and that this was also the case in terms of China's percentage of energy from nuclear power.

One key to success was to refer to all aspects of the data in Figure 1. Weaker answers tended to focus only on different energy sources and omitted to consider total energy use or annual growth rate. Occasionally, the nature of biofuel use in Ethiopia was misunderstood although stronger answers contrasted the type of biofuels likely to be used in Ethiopia versus Sweden. Stronger answers moved beyond straight economic development explanations to argue that in Sweden a desire for a more secure energy mix allied to public demands for greener energy sources were explanations for that country's energy sources. In general this question was answered successfully by many candidates.

This is part of a Level 3 answer to Question 1(a).

a) Ethiopia is an LEDC and resultantly hav a much lower ~~tot~~amount of it's energy coming from fossil fules compared to China and Sweden as Ethiopia has a much low GDP in comparison. China has the highest fossil fule consumption at 85% as it is a ~~developing~~ quickly industrilising country. This means they have a large industrial sector and ~~they~~ use a large quantity of fules like ~~oil~~ and coal to power their factories. Sweden on the otherhand is an MEDC and ~~so~~ gain 33% of it's energy from the non-renewable fossil fules, however this energy will be more commonly spent on domestic use and oil for cars as more of Sweden's population will be able to afford luxuries like this. China has a larger rural population that has high levels of poverty.

Biofules are the lowest in China at 8%. as a quickly industrilising country can not power large scale ~~the~~ industry or cities with biofules. Ethiopia on the other hand has 95% of it's ~~peole~~ energy use from biofules as a large number of people are agricultural workers and this is an easy and cheap fule for them to be able to use. Swedens biofules are representative of the idea that

MEDC's once developed are able to concentrate on conserving the environment and put it as a higher priority. The use of biofules ~~is more~~ gives a lower carbon footprint so is preffered by people concerned with the Environment. This is less of a prioty to NIC's like China who need to industrilize fast for profit. A similar thing can be seen with renewables when looking at Sweden 14% and China's lower 5%. Renewables may be used to better the environment however provide ~~less energy~~ other lower levels of energy so have to be large scale. This can't provide China with the high energy consumption they require. *

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Examiner Comments

One of its strengths is making good reference to the data in Figure 1. It also provides good explanations for the differences between the three countries, going beyond simply economic development to consider environmental priorities and demands.

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Examiner Tip

When Figures contain numerical data, like Figure 1 and Figure 4, make sure your answer makes direct reference to it and quote the data in your answer.

Question 1 (b)

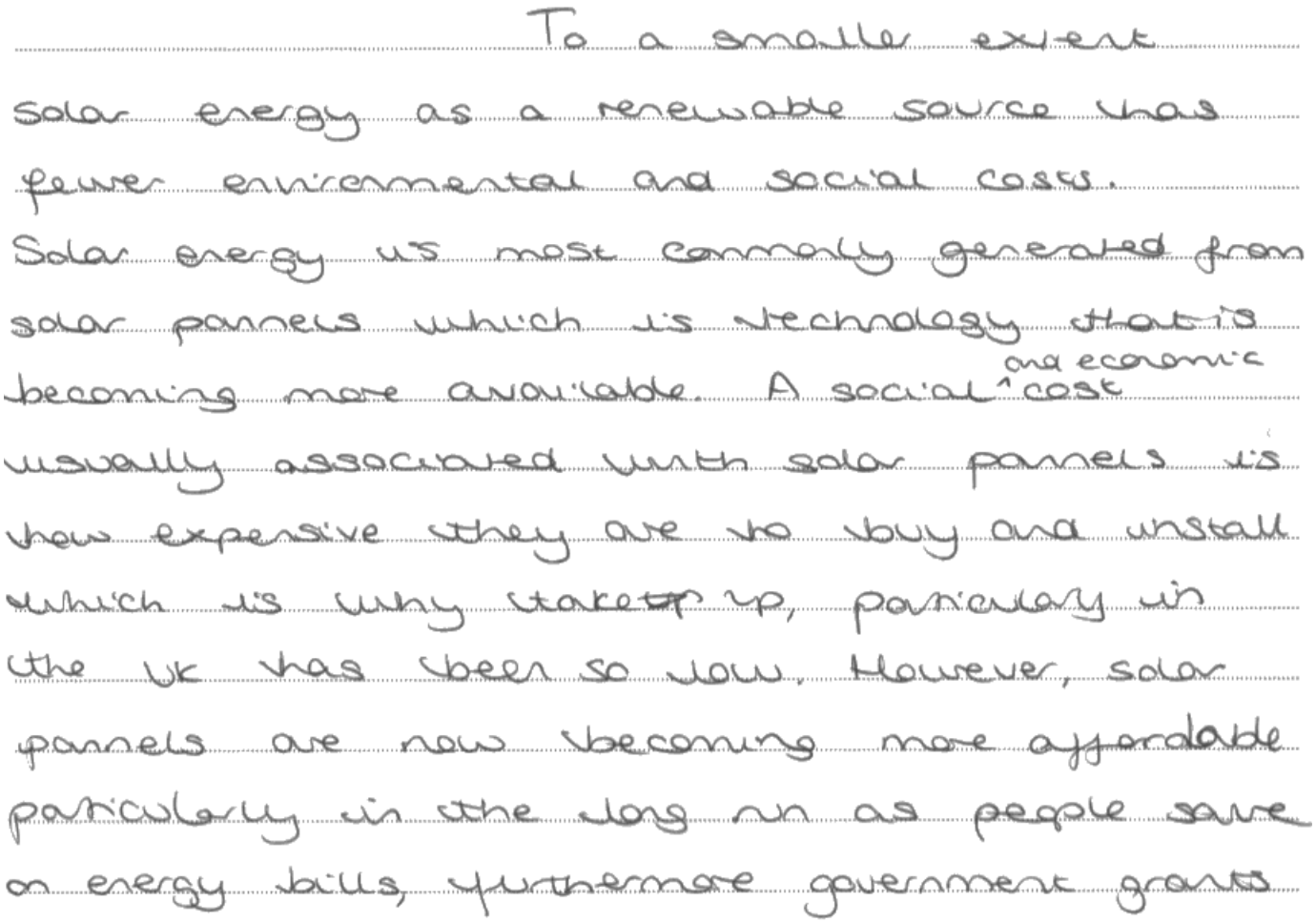
The key to this question was differentiating between renewable and recyclable resources. These are separated out in the specification. A number of candidates treated 'renewable and recyclable' as one and the same. Recyclable resources include nuclear and biofuels, and could include HEP in some circumstances such as pumped storage. A number of answers interpreted 'recyclable' as meaning recycled waste. This could have been relevant if linked to the idea of energy from waste or CHP, although in some cases the answers drifted from the energy focus.

Some answers tended to fall into the trap of 'everything I know about the Three Gorges Dam' and suffered from being overly descriptive. Nevertheless most answers dealt with the social and environmental impacts of two or three energy sources with some use of examples to support their arguments.

As in the past, nuclear accidents and 'bird strikes' (for wind turbines) tended to be given an over-prominent role in coming to conclusions about social and environmental impacts. Biofuels were often considered quite discursively with an examination of the case for them being carbon neutral allied to their impact on food prices.

Many answers failed to address the nub of the question 'to what extent' and instead explained the social and environmental impacts of different energy sources in a stand-alone way. Stronger answers went beyond this to argue that some sources were worse than others. This was done by scale in some cases, with candidates arguing that small solar installations could not be compared with the impacts of a large HEP dam. Geothermal was often touted as an energy source which has few if any negative impacts. Very good answers returned to the theme of renewable versus recyclable to argue that recyclable resources tended to have larger impacts on people and the environment and that the negatives of renewable were minor in relation to their environmental benefits over fossil fuels.

This example is the latter part of a Level 3 answer to Question 1 (b).


To a smaller extent solar energy as a renewable source has fewer environmental and social costs. Solar energy is most commonly generated from solar panels which is technology that is becoming more available. A social and economic cost usually associated with solar panels is how expensive they are to buy and install which is why take-up, particularly in the UK has been so low. However, solar panels are now becoming more affordable particularly in the long run as people save on energy bills, furthermore government grants

have made them more accessible to families. Solar panels can be used domestically or in large scale projects. Domestically, the environmental costs are low as it is mainly beneficial because it means less fossil fuels are needed. However, environmental problems might arise on large scale projects such as in Spain as where there are 'farms' with hundreds of solar panels it takes away land which could have been used for farming.

In conclusion, only to a small extent do renewable and recyclable energy resources have environmental and social costs associated with their development. This is because compared to the alternatives of nuclear or fossil fuels such as: coal, oil and gas, renewables have a much lower impact on the environment as the energy source is infinite. Furthermore, the social impact is smaller as most people are aware of climate change and so support projects that aim to tackle it so renewable energy sources are more popular.

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Examiner Comments

This answer is evaluative, using phrases and words such as 'to a smaller extent' and 'however'. It has a clear conclusion which makes a clear judgement about both social and environmental consequences. The answer failed to achieve Level 4 because it did not differentiate between 'renewable' and 'recyclable' energy resources.

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Examiner Tip

All of the words in questions are important. In Question 1(b) it was vital to differentiate between 'renewable' and 'recyclable' energy resources. These are not the same thing, and could not be treated as the same in an answer expecting to achieve Level 4 marks.

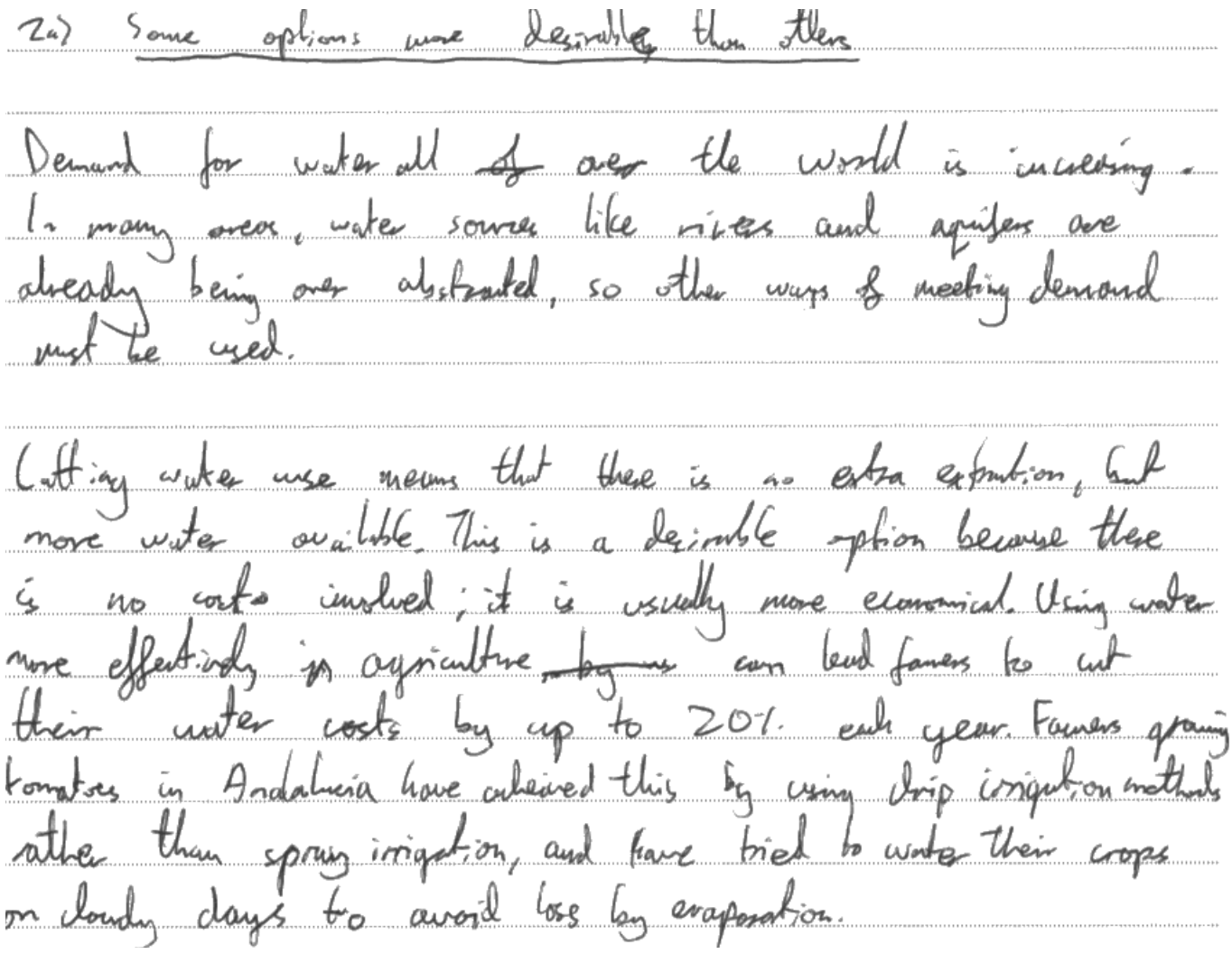
Question 2 Water Conflicts

Question 2 (a)

Figure 2 contained a simple spectrum of four ways to increase water supply. This popular question was usually completed fairly successfully although there was variable understanding of the four ways to increase water supply shown in the figure.

Conservation was generally understood well. Domestic conservation methods in the home were often referred to as was drip irrigation. There was generally good understanding that conservation was a good way to reduce demand without needing to increase supply and was therefore economically and environmentally sustainable. Recycling of waste water was less well understood. In some cases this option was missed out of answers, or combined with conservation. Dams and reservoirs were sometimes referred to as conservation, as was capturing rainwater in pumpkin tanks and other methods. These are methods of water storage, not water recycling. Better answers recognised that grey water was an example of water recycling and referred to how this could be done in a domestic setting. The advantages and disadvantages of groundwater extraction were better understood and some aquifer terminology, such as recharge and over-abstraction, was seen in good answers. Desalination was usually understood well in terms of high economic costs and environmental drawbacks such as carbon footprint. Stronger answers related the desirability of different approaches to specific locations, arguing that desalination is not an option for landlocked countries and that in some cases groundwater supplies might be very sustainable due to high rainfall and low abstraction rates. In other words they began to question the order shown on Figure 2. Singapore is a very good example of water conservation and recycling grey water although this was very rarely mentioned.

This is a Level 3 answer to Question 2(a).



2a) Some options were desirable than others

Demand for water all ~~of~~ over the world is increasing. In many areas, water sources like rivers and aquifers are already being over abstracted, so other ways of meeting demand must be used.

Cutting water use means that there is no extra extraction, but more water available. This is a desirable option because there is no costs involved; it is usually more economical. Using water more effectively in agriculture ~~by~~ can lead farmers to cut their water costs by up to 20% each year. Farmers growing tomatoes in Andalucia have achieved this by using drip irrigation methods rather than spray irrigation, and have tried to water their crops on cloudy days to avoid loss by evaporation.

Using grey water ~~requires~~ and recycling waste water requires the water to be cleaned to a certain level before use. This has been done successfully in public Singapore, where all public toilets use grey water. However, the costs involved mean that in parts of the world where water is not as scarce, it is often cheaper to use new water. Reasons for this kind of use is thus often limited to MEDCs. But waste water from bathing is used all over the world to water crops, so at a low level it is easy to implement.

Further ground water extraction is often an easy and cheap option as the infrastructure is already in place. However, the risks of unsustainable aquifer abstraction are very high. Groundwater depletion can lead to soil salination, sea water ~~encroach~~ encroachment and an increased vulnerability to toxic leachates. All of these things have happened in Bangladesh, where high population pressures and low development levels have left Bangladeshis with few other options.

Desalination is a useful option, especially in countries with extreme water stress. It is usually used in arid and semi-arid regions like Saudi Arabia, eastern Spain and California, where physical water sources are scarce due to low rainfall and ~~to~~ possibly also poor geology (eg. Limestone in Spain). The technology associated is very costly, which is why only developed areas like the ones above use it. It also has a very low yield, and in the ~~Gulf of~~ Persian Gulf there have already been fears that Qatar's desalination plants have been releasing waste sea water to the detriment

dams can reduce, they also posing an environmental risk and threat to biodiversity.

The factors which influence the desirability of a water source are largely influenced by price, but also the environmental and social implications of using the resource.

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Examiner Comments

This answer covers all of the options shown on Figure 2 in an organized way and, in some cases, it uses brief examples to support the explanations given i.e. water conservation in Andalucía and desalination in semi-arid regions. Rather than simply rejecting the 'worst' option it makes the point that in some cases desalination might be useful, as well as explaining its problems.

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Examiner Tip

Some stimulus material, notably Figure 2 and Figure 3 in this exam paper, can be 'taken on'. Figure 2 is just one view of the desirability of different ways of increasing water supply. The best answers will question this view, and in some cases argue for an alternative. Don't be afraid to state your case as long as it is supported.

Question 2 (b)

Although not the same question, the theme of transboundary water resources has appeared as a question on this examination paper before. The issues raised in the past tended to re-appear this year. While the question was answered successfully by most, many potentially very good answers failed to deliver because:

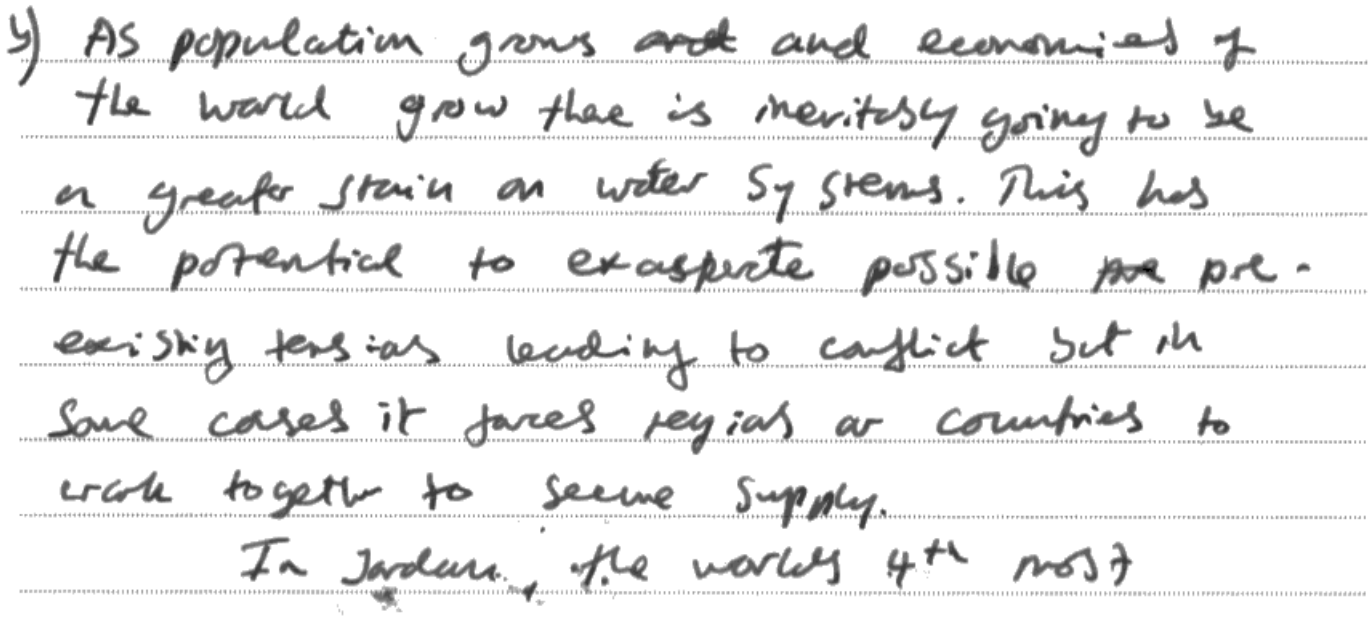
- they relied too heavily on case study detail, much of which was not relevant to the question i.e. there was a lack of selection and application
- 'conflict' was seen in very black and white terms, rather than as being on a spectrum from mild disagreement which could be easily resolved right up to the potential for armed conflict
- case studies were simply presented in 'my next case study is' or 'another example of conflict is' form, rather than being integrated into an argument
- in some cases, factual detail on which countries sat within which drainage basins, or which direction rivers flowed in, was poor.

Overall, there was a lack of focus on why conflict exists over water supplies in the first place. Many transboundary water sources are not a source of conflict at all; candidates need to be more analytical in considering why some become a source of conflict. In the main there are three underlying factors:

- Areas of existing / increasing water stress / scarcity where demand exceeds supply (or is soon likely to).
- Places where there are pre-existing political, cultural or economic disagreements and water gets dragged into this.
- International situations, as opposed to regional / internal situations.

There are of course the Helsinki / Berlin rules and numerous specific iterations of these such as on the Nile, Colorado and Mekong rivers, which seek to reduce conflict by promoting agreement. These were often referred to so that many answers did at least begin to recognise that conflict is not inevitable.

This is part of a Level 4 answer to Question 2 (b).



water insecure country, the population is facing the worst drought in years while coping with an influx of Syrian refugees. Taking into consideration the religious and political tensions with its neighbour, ~~Egypt~~ Israel, this could be seen as the perfect storm ~~event~~ for a water war to arise. However this could be argued to have already happen with the 1967 war partly catalysed by water rights, now the two countries are seen as one of the few success stories of the region. The 1993 peace deal lead Israel to be granted ~~water~~ groundwater extraction rights in exchange for the pumping of ~~desalinated~~ desalinised water to Jordan, this highlited the need for ~~conflict to war~~ cooperation in all Sectors of society, rather than just governmental agreements that saw the Turkey - Israel water transfer scheme fall apart on many occasions

The possibility for political conflict is high in many regions where water plays a key part of foreign policy. The dividing of the Indus river has been a problem since colonial times and after independance Pakistan formed its water supply in another region. this is one of the reasons ~~the~~ ~~this~~ for the continuing dispute over

the Kashmir region and has fueled tensions between India and pakistan. Although some will say the Indus water treaty has survived for 60 years so ~~has~~ has no reason to fail now, cracks are showing and with each country blaming each other for of mismanagment. *

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Examiner Comments

This answer's strength is in identifying the underlying factors that make conflict over transboundary water supplies more likely – rather than just describing transboundary situations. These factors include rising populations, already water stressed regions and pre-existing political or economic tensions between players. This answer goes well beyond the simple assertion that if water sources are shared there will always be conflict, which is of course not necessarily true.

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Examiner Tip

The Water Conflicts question often suffers from 'case study overload' and a 'my next case study is' approach. Not all case studies are relevant to a particular question, and not all information from relevant case studies in useful. You must be selective, and apply relevant information to the question.

Question 3 Superpower Geographies

Question 3 (a)

As in the past, Superpower Geographies proved to be a popular choice. Figure 3 showed three different ways of measuring superpower status. Question 3(a) focused on whether these indicators were valuable in terms of measuring status. Some candidates did not quite latch onto this idea, and instead attempted to explain the rank orders shown. This was not the question set.

There were many good answers which did begin to consider value. These often made reference to the hard / soft power idea. Military spending was argued as an example of hard power and many candidates were aware of the global reach of US military power and were able to argue that spending was a useful measure, because it reflected global ability to act and threaten, as well as technical prowess in military matters. The medal table was sometimes dismissed as of little value, although stronger answers argued it had some value in terms of 'soft' cultural influence, acting on a world stage, ability to fund and run a huge global sporting event. Very good answers often suggested alternative cultural measures at this point such as global brands and media. Most understood the value of patent applications in terms of innovation, education levels, spending on research development and related this to an 'economic' pillar of superpower status.

The best answers frequently suggested alternative 'higher value' measures, often GDP or membership of, and influence within, global IGOs. Overall, many answers to this question were successful but this did depend on a focus on 'value' rather than drifting into an explanation of the rank order.

This is part of a Level 3 answer to Question 3(a).

a) A superpower is a country or region with disproportional power. They also have four pillars, which are; Military dominance, plentiful resources, economic wealth and a powerful ideology.

The first table in figure 3 shows the top four military spending in 2012 in US $ billions. The amount of spending on military increases your military dominance (which is one of the pillars to be a superpower). In this table we can see USA spending $711 bn on their military compared to China's $143 bn spending who is second

in the rankings. The reason why military dominance and it's power is a measure for a superpower status is that firstly it acts as a detterent from ~~enemy~~ threats in foreign lands. The USA for example hewe military bases in every continent except Antartica, which instead have a scientific research lab there. Overall military spending shows the strength of a country and is an example of a hard power. However military spending figures can be distorted due to the exchange rate mechanism and thus would be better if purchasing power parity was used for this comparison Also some figures may be biased as counties may say they spend more to make it look as they have a larger military dominance.

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Examiner Tip

This response begins with a definition of 'superpower'; this is a good way to 'get into' your answer as it focuses on the key topic of the question. The question is about the value of military spending as a way of measuring status, and the answer uses data from Figure 3 to help provide explanations. Towards the end it begins to make a value judgment arguing that PPP data would be better than nominal spending data.

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Examiner Comments

All of the 10 mark data stimulus questions are about providing explanations, so they use the command words 'explain' or 'suggest reasons' or 'comment on'. You are never asked to 'describe' in these questions, so 'saying what you see' gains very few marks.

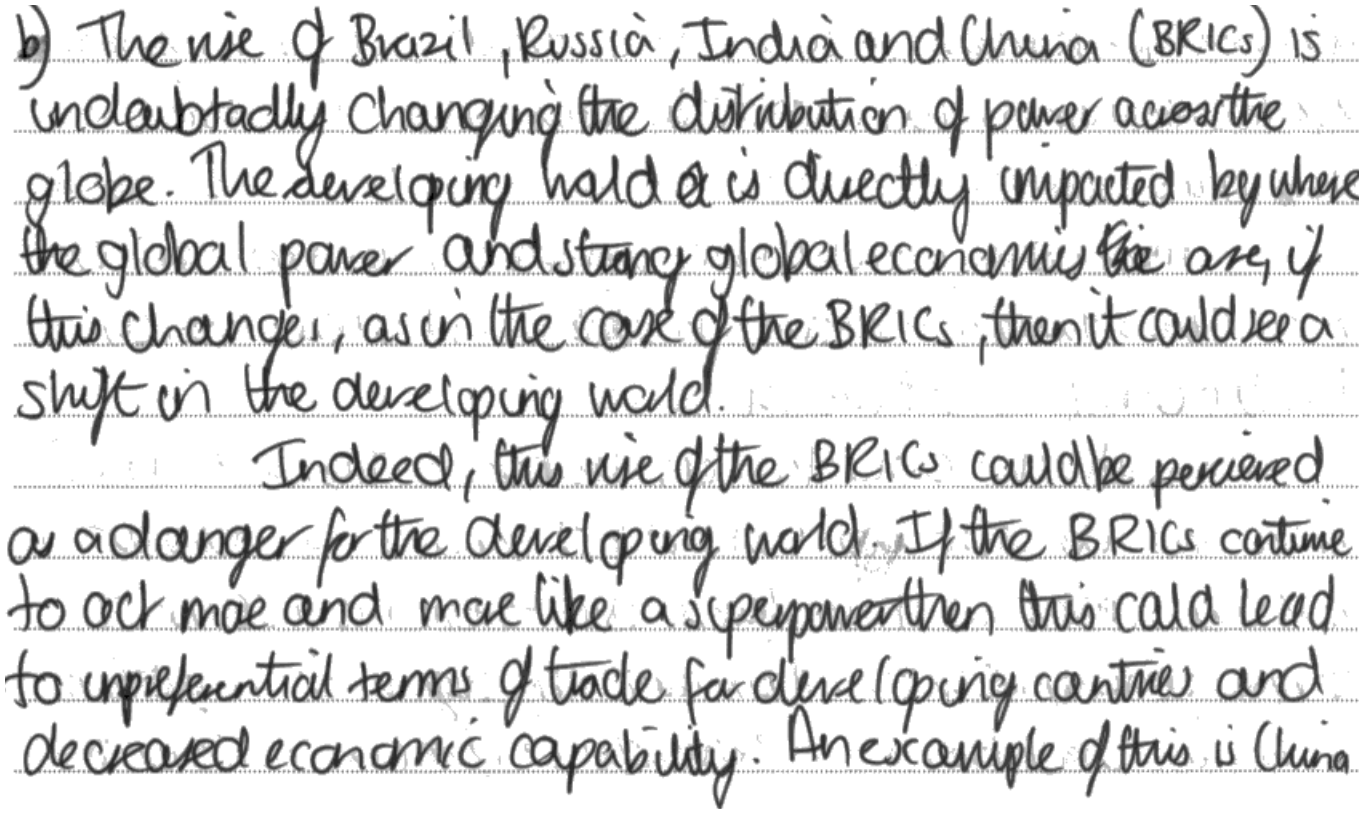
Question 3 (b)

This question proved challenging to some, although there were some very good answers. Perhaps the key to it was successful question interpretation. The question was *not* about:

- the threats the BRICs pose to the USA
- the opportunities and threats to the BRICs themselves, of their continued emergence
- a chance to write everything known about the BRICs in turn.

The focus had to be on the developing world, and in order to be as flexible as possible only the OECD countries were excluded from this focus in the mark scheme. A common, but often not very successful, structure was to trawl around the four BRICs in turn outlining the threats and opportunities they present to developing countries. This tended to lead to repetitious answers and in the case of Brazil, little being said. Some answers drifted into long descriptions of the Ukraine crisis. More successful answers were thematic, and focused particularly on the role of China in Africa. There was often good use made of examples from Sudan, Nigeria and Angola focusing on the costs and benefits of Chinese involvement in terms of resource extraction, prices, labour, infrastructure and development. Many answers were evaluative in their approach, recognising that China's role could not simply be dismissed as neo-colonial nor was it universally beneficial. A small number of answers were narrow as a result of only focusing on this theme. Good answers often considered whether the BRICs were a model that other countries could follow (e.g. the MINTs – not named in the specification, but now widely referred to), and whether BRIC FDI would be different to OECD FDI in terms of exploitation. Many answers considered the resources demand and environmental implications of continued BRIC growth and the implications for this in terms of global warming and its impacts, and even 'water wars'. A small number moved into a more geopolitical sphere, and considered whether a multipolar world in the future would be more or less stable than the world today. A conclusion / judgement was required and most included this and argued, for instance, that economic opportunities might be of short-term benefit only to be followed later by downsides in terms of environmental implications and resource shortages.

This example of a response to Question 3(b) gained a Level 4 mark.


b) The rise of Brazil, Russia, India and China (BRICs) is undoubtedly changing the distribution of power across the globe. The developing world as is directly impacted by where the global power and strong global economies lie are, if this changes, as in the case of the BRICs, then it could see a shift in the developing world.

Indeed, this rise of the BRICs could be perceived as a danger for the developing world. If the BRICs continue to act more and more like a superpower then this could lead to unpreferential terms of trade for developing countries and decreased economic capability. An example of this is China

and it's so called 'land grab's. It has been rapidly developing into places such as DR Congo (for cobalt) and South Sudan to grow produce for it's own internal market. These are highly exploitative although China is at the moment paying these land grabs through cheaper imports to these countries and by updating the infrastructure such as tarmacking the roads or building new hospitals. As China develops it's likely to become more stretched economically as the south slows down, this could see a continuing of the land grabs but more exploitation and less of a beneficial agreement between the countries. Furthermore, India is already flexing its muscles so to speak, through harsh control of resources over it's neighbouring countries of Bangladesh and Pakistan. India is controlling the water flow of the Ganga and as it's economy continues population continues to grow, instances such as the Farakah barrage may become all too common. This is undoubtedly a threat to the developing world as India's resource consumption will increase, for a country of a population of 1.26 billion this could prove disastrous for India's neighbours and cities such as Chittagong and Karachi.

On the other hand, the current stance as of USA as the worlds leading county and power in a unipolar world evidently isn't working, due to the abundance of LEDC's and underdevelopment in large rural swathe's of Africa and Asia. The emergence of new wealthier BRIC

nations could see aid giving pattern shift and an increased development and funding for the developing countries. This could entertain a fall in mortality both child and elderly and see the HDI of a country as a whole increase. Therefore the development of the BRICs can be seen as an opportunity for extra 'help' for the less developed economies which could see the redistribution of global wealth.

On the other hand, military spending is one of the areas that has increased sharply within the last few years by the BRICs. Indeed, the action of Russia alone are huge cause for concern for the developing and the developed world. Their increased bomber patrols and ongoing conflict in the Crimea region of Ukraine could be the precedence of things to come in the future, such is the heavy investment Russia are undertaking within their armed force. Furthermore, India and China are also investing hugely in both armies and navies, whilst they may argue the case of self defence, the Indian army has already been involved in many bloody skirmishes on the Nepali and Bangladesh borders. So the rise of the BRICs can be seen as a threat, and a direct threat at that due to their increasing military presence and activity.

Trade is set to increase with the BRICs, how they go about this will largely define the impact their rise may have. Indeed, if the BRICs continue to join IGOs such as the G8 or OECD then they are likely to trade with more developed nations and when they do trade with

developing nations they are likely to dictate the terms of trade, thus taking most of the economic benefits from trade, which acts as an engine for growth. This would follow the pattern that the USA started post-ward setting up IGO's to consolidate global trading power and practices, groups such as the IMF, WTO and World Bank.

Alternatively, the rise of the BRICs may see them identify that the LEDC's, as India and China were not so long ago, needs help and thus they may trade with them more frequently to enhance their economic growth, as the USA did with Mexico through the creation of the NAFTA trade bloc, without the close proximity of the USA, Mexico wouldn't be the NIC it is today.

Nevertheless, the rise of the BRICs will lead to an increase in healthcare and population in the BRICs, people will own more consumer goods. Therefore their useage of resources such as water, electricity and oil will go up, this will reduce availibility for developing nations of what are finite resources. This could act as a reminder threat to developing nations as the BRICs spending habits and overall lifestyle shifts, they will also pollute the environment more through more CO_2 released and watercourses pollution.

In conclusion, assessing the impacts of the rise of the BRICs is difficult as nobody knows how they may behave. If they behave similarly to the USA then their rise may be seen as more of a threat than an opportunity. However,

they focus more on the LEDC's social welfare and wealth distribution than if their rise is surely an opportunity for developing countries.

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Examiner Comments

This answer shows very good understanding of the BRICs and has a balance of opportunities and threats. These include trade, aid, exploitation and land grabs, military threats and resource demand. The answer is well supported throughout with reference to specific BRIC countries. In addition there is a clear conclusion.

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Examiner Tip

One of the 'stand out' elements of this example answer to Question 3(b) is the number of times words and phrases like 'nevertheless', alternatively' and 'on the other hand' are used. This language is characteristic of writing that is considering both sides of an argument – something you are always expected to do in these 15 mark questions.

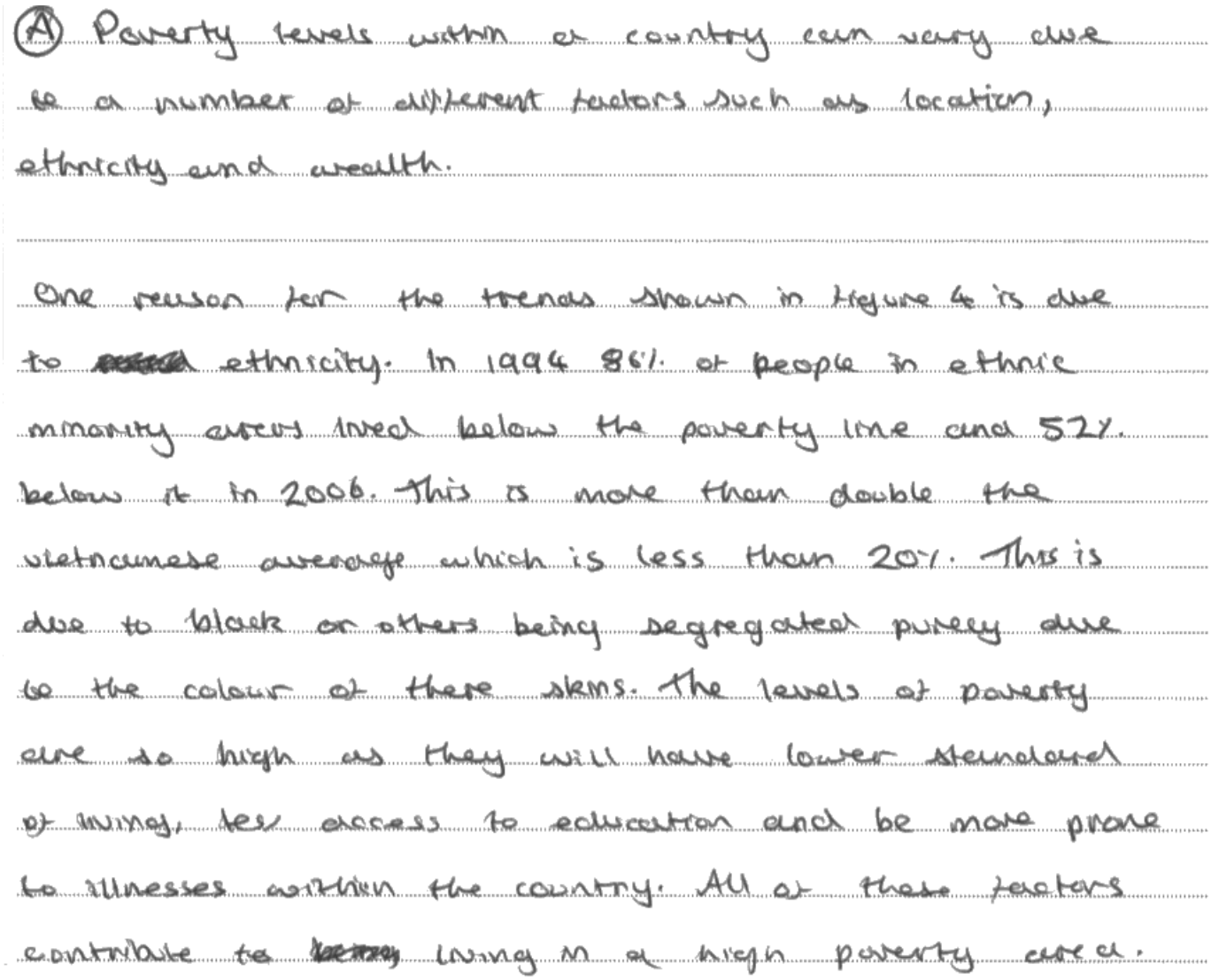
Question 4 Bridging the Development Gap

Question 4 (a)

As in previous years, there was a sense that this question was a positive choice for a small number of candidates, but that it was avoided by many. Some clearly saw some interesting trends and were prepared to engage with Figure 4 and provide explanations of the data. An important aspect of the question was answering with a consideration for differences and trends. Most did this, and the data in Figure 4 was used in answers. This is an expectation when the figure includes numerical information. Some answers were overly descriptive of Figure 4.

Nevertheless, many answers began to provide explanations for the data. Most commonly these focused on the likelihood that urbanisation was taking place along with industrialisation and that this was contributing to the fall in urban poverty. Stronger answers linked this to the theme of wider globalisation in the region and the benefits of FDI. Rural poverty falls were often explained by the work of NGOs and the focus on the MDGs since 2000 in some cases. Occasionally examples of rural development projects were used to illustrate the process of improvement. Perhaps the weakest trend was that of ethnic minorities, which was often stated but not explained. However, some strong answers were prepared to explain this in terms of prejudice and discrimination, as well as rural isolation, and in some cases made reference to either India (caste system) or South Africa to help their explanation. The overall message from this question is that explanations gained marks whereas descriptions did not.

This example is part of a Level 3 answer to Question 4(a).



(A) Poverty levels within a country can vary due to a number of different factors such as location, ethnicity and wealth.

One reason for the trends shown in Figure 4 is due to ethnicity. In 1994 86% of people in ethnic minority groups lived below the poverty line and 52% below it in 2006. This is more than double the vietnamese average which is less than 20%. This is due to black or others being segregated purely due to the colour of there skins. The levels of poverty are so high as they will have lower standard of living, less access to education and be more prone to illnesses within the country. All of these factors contribute to living in a high poverty area.

The Urban areas curve has also fallen from 25% to less than 10% below the poverty line by 2006. This difference to the ethnic minority areas is due to people in urban areas having a better access to job opportunities and also having a higher standard of living due to them living in a developed area such as Hanoi. The fall is due to the whole country developing as a whole so by gaining more investments or supplying more exports they are allowing the country to grow with more ~~money~~ money entering the country helping urban growth.

ResultsPlus
Examiner Comments

This answer makes direct reference to the trends shown on Figure 4, and uses data to support this. Clear explanations for the ethnic minority and urban area trends are provided.

ResultsPlus
Examiner Tip

With a figure like Figure 4, it is important to refer to all of the trends. Missing a line out leads to a narrow answer.

Question 4 (b)

This question was open ended and much depended on how candidates approached it in terms of application of examples to the overall theme of economic development versus environmental and social consequences.

A small number of answers struggled to get started and tended to focus on a very narrow theme, such as the impacts of the BP Deep Water Horizon oil spill or another narrow case study. Some took a 'top down' versus 'bottom up' approach. This could work, although again answers tended to be rather narrow and were really more about answering a question about different approaches to development rather than the question posed.

Many good answers took a slightly more conceptual approach and made reference (either directly or by implication) to the Kuznets's curve idea to argue that while economic development led to environmental problems these were temporary whereas economic progress was permanent. Perhaps the most used case studies were China and India. These were often applied successfully in terms of Chinese poverty reduction versus rising environmental impacts – the latter often supported by factual detail on water and air pollution. India was often used to illustrate the problem of growing inequality resulting from rapid economic change. This was another example of a question where a clear conclusion often helped an answer move from Level 2 to Level 3 (or higher) in the mark scheme.

This example shows part of a Level 4 answer to Question 4(b).

(4b) Using named examples, evaluate the view that the economic gains from development are often outweighed by social and environmental costs. (15)

Globalisation and development have proven to have vast economic benefits, however, the distribution of these benefits is not always fair or even. Furthermore, some players actually experience economic costs to development, whilst others profit.

Trans-National Corporations are major global players in development. They are companies which have offices or production in two or more countries. TNCs have a reputation for taking advantage of countries in the 'periphery' and exploiting workers, causing damaging social costs. In 2013, the Sawar factory building in Dhaka, Bangladesh collapsed, killing 1,129 people. This was a factory which

made garments for TNCs such as Primark and Walmart, with HQs in Western countries. This happened as a result of these companies neglecting to invest properly in infrastructure. Since the majority of TNC profits are sent back to Western countries, systems such as these aid the development of the Western countries, but can often damage the development of the 'periphery' countries that the TNCs outsource to. Countless more incidents like this have been reported, such as the Kader Toy Factory fire in Thailand in 1993, which killed 188 people, or the Bhopal disaster in 1984 at a Union Carbide plant in India, killing 3,787. Incidents such as this damage both the social and economic infrastructure of a country - whilst benefitting the economic development of the HQ country of the TNC.

ResultsPlus
Examiner Comments

This answer uses good terminology and its key strength is that it uses good examples to support its argument that TNCs can be 'negative' in terms of development from the perspective of worker exploitation and environment. Rather than just referring to 'factories' it names some specific examples which adds weight to the argument.

ResultsPlus
Examiner Tip

Examples, facts and figures are important to a good quality answer. Without them, answers tend to deal with generality and lack depth.

Question 5 The Technological Fix?

Question 5 (a)

Question 5 proved a little less popular than it has in the past. Figure 5 offered the views of three different people on technology in the form of three quotes. A somewhat unanticipated focus for answers was a focus on the 'job' of each of them. This was a perfectly acceptable approach to answering the question, and led to some interesting observations on why the views might be held.

A more common approach, and a successful one, was to apply different examples of technology to the different views to help explain why they might be held. In terms of Kurzweil, examples included various types of intermediate technology and medical advances that were clearly beneficial in terms of human development. For Lovins, examples used included fossil fuels and their environmental impact. Kranzberg's views were the least detailed in most answers, with many responses more or less repeating the stated view. Stronger answers looked for examples of technology where their impact was unforeseen or disruptive in some way. These commonly included GM crops, DDT and mobile phones. These were used to argue that the impact of technology can't be known for certain until the technology has been adopted.

Overall, answers varied from straight re-statements of the information in Figure 5 to much more successful explanations of the views by applying examples to them. The message is perhaps that using examples should always be the expectation in these 10 mark data stimulus questions.

Question 5 (b)

Many answers to this question were successful or at least partly so. It is worth saying that knowledge of the North-South divide as a concept was not universal. Some answers clearly saw it as a 'north and south of the equator' line, which it is not. There were a few instances of confusion in terms of the position of Australia and New Zealand in terms of the divide. On the other hand, there were some very good answers that went beyond the divide and argued that differential access to technology within countries was just as important as the N/S difference.

A very common theme was leap-frogging technology, especially mobile phones. This was generally supported by some detail relating to India and / or Afghanistan. The concept of the global digital divide and Digital Access Index was often referred to. Internet access in east Africa was also used as an example of the existence of the divide and how it could be overcome by investment. Medical technology and access to ARV drugs was often used to show that the divide is still in existence. Better answers tended to use terminology such as 'technology transfer' and 'digital divide' rather than relying on a more generalised approach. Many answers argued that the divide was narrowing in terms of communication technology but perhaps less so in other areas. Well-chosen examples were essential to a successful answer as was the ability to come to a view.

This is an example of a low Level 4 answer to Question 5(b).

b) The global north-south divide is a concept used to show that the northern hemisphere is more economically developed than the south. To a certain extent, there is still a north-south divide in access to technology that is derived from economic reasons. For example, HIV and AIDs anti retroviral drugs ~~are~~ made by Glaxo Smith Kline was patented so that cheaper copies could not be made, restricting the access to it in LICs in the southern hemisphere. However, the UN, WHO and G8 agree on universal access to HIV treatment in LICs. There are also schemes such as the 'Positive Action Plan' in place for NGOs to provide affordable HIV treatment in LICs for over 2 million children, showing that there is less of a divide between access in the north and south, just a difference in technology used.

~~Technology access~~ Technological convergence can be seen in recent years, giving people all over the globe a more equal access to technology. Technological leapfrogging (has contributed to this) where countries jump over ~~the~~ inefficient and more expensive technology to more affordable technology. An example of this is mobile phones. 68% of world mobile phones are in developing countries, where in ~~the~~ rural

Rwanda, they are used to communicate drug stock and patient records. The use of M-Pesa, a which allows money transfers via text in Kenya promotes economic development of the country, so in future years, they may be able to access further advanced technologies suggesting the break down of the north and south technology access divide.

The north and south divide on access to technology can also be seen as deteriorating due to increased use of appropriate technology in LICs. Pumpkin tanks in Sri Lanka are provided by Practical Action, which allows locals to collect rain water for domestic and agricultural uses, increasing access to improved water and increasing water security. However, when comparing Ethiopia, a LIC, and Canada, a HIC, a north-south divide can still be seen. Canada, with a GNI of $33,170 per capita has 100% access to improved water whereas Ethiopia, with a GNI of $170 per capita only has 24% access suggesting economic development is still impacting access to technology.

Other factors may be influencing the north south divide of access to technology, such as politics and religion. China and North Korea both restrict

internet use which is affecting ~~their~~ their populations access to technology. Equador, a LIC is also suffering from the lack of access to contraception, a basic ~~tec~~ technology due to 90% of their population being Catholic.

In conclusion, a north ~~and~~ south divide still exists in access to technology, with HICs in the northern hemisphere having access to complex technology that LICs in the south cannot access. However, increasing technological transfers can be seen through the use of appropriate technology in LICs to improve access.

However, appropriate technology may sometimes worsen the inequality gap. ~~An~~ For example, a well project funded by the UN and ~~the~~ the World Bank lead to arsenic ~~pois~~ poisoning of 70 million people in ~~the~~ Bangladesh. This meant that aid had to be used to combat the issue instead of being invested into buying more technology.

ResultsPlus
Examiner Comments

This answer uses some good terminology such as 'technological convergence' and 'leapfrogging'. There are examples used to illustrate the nature of the technological divide including mobile phones and others. There is a clear conclusion, which does go beyond the simple idea that there is a north-south divide and argues that it is changing due to technology transfer.

ResultsPlus
Examiner Tip

Good 15 mark answers usually have a structure i.e. there is logic to the way the answer is set out. A brief introduction and a conclusion help achieve this, as does having organised sections in the middle dealing with different causes or consequences.

Overall comments on Section B Issues Analysis: Arctic on the Edge

This year's Issues Analysis was set in the Arctic region. This is an area all candidates are familiar with because it is a stated case study in Unit 1. Perhaps because of this, synopticity was reported to be slightly less in evidence than in previous years. Nevertheless, most answers were thorough and provided three full answers to the questions. There was evidence of good preparation and most candidates knew their way around the Resource Booklet and could use it reasonably effectively in the exam. There was evidence of wider research, most often this related to oil and gas development and some aspects of indigenous peoples' lives in the Arctic. The overall quality of answers was good, although there was perhaps some evidence that Question 6(a) was unexpected as the phrase 'physical systems and ecological resources' seemed to throw some candidates early on. The pre-release is available for a long period of time, but candidates still need to make sure their preparation is thorough:

- Ensure candidates know the resource booklet well before they enter the exam; time should not be spent in the exam looking for the right resources to refer to.
- Ensure candidates understand the sequence of the resource booklet; it is usually organised into sections either with sub-headings or by topic, and questions normally focus on one section (with links to others).
- Prepare synoptic ideas by researching using the websites provided (and others), thinking about the relevance of models, concepts and theories, considering parallel and contrasting examples from other parts of the world, and linking to concepts and content in other AS and A2 units.
- Consider the wider geography of the region in terms of development, physical features, culture etc.
- Do not try to anticipate questions.
- Time spent planning, briefly, all three answers is time well spent. Some answers to Question 6(a) drifted into threats which was the focus of Question 6(b). Candidates who did this often ended up repeating themselves and worse, risked losing the thread of their answers.

Question 6 (a)

The opening question may have come as a surprise to some candidates and the phrase 'physical systems and ecological resources' was not universally understood. Arctic physical systems essentially relate to the role in climate regulation and most candidates included at least some elements of this in their answers. Most referred to albedo and the thermohaline circulation and the idea of the Arctic as a 'global refrigerator'. Stronger answers also made the link to global atmospheric circulation and the existence and importance of the polar cell.

Many answers made use of the Millennium Ecosystem Assessment regulating, supporting, provisioning and cultural services model. This was good to see, and it provided a useful structure for answers.

One issue that afflicted many answers was the inclusion of oil, gas and mineral resources under the heading 'ecological resources'. These are not ecological in nature and therefore could not be credited. These answers were often the same ones that drifted into threats, which was the territory of Question 6(b).

In terms of ecological resources the most common themes were the importance of the region as an area of animal migration, and the provisioning services provided by the biomes in the area – especially in terms of indigenous groups. This was the most common place to see some synoptic information gleaned from research i.e. in terms of how named groups utilise the resources in the Arctic. Tourism was often referred to as a cultural service along with the spiritual connection many Arctic people retain to the landscape. Overall, this question was often successfully answered but the drift into oil, gas and minerals was the undoing of some potentially good answers.

This is a Level 3 answer to Question 6(a).

a) The Arctic can be defined as high latitude where the average daily temperature does not rise above 10°c in the summer. The Arctic has many physical and ecological resources which are of great value to the planet and its people. These can be broken down into provisioning, cultural, supporting and regulatory ecosystem services.

The Arctic has many provisioning services, one of the main is food. The Arctic provides fish to the Indigenous population who inhabit the Arctic. The Arctic waters also provide fish globally in between 1950 and 2006 950,000 tonnes of fish were caught in US, Canadian and Russian waters. The Arctic also

provides water produces such as timber from coniferous pines, spruces and fir, which can be used by indigenous groups for building and fires. This is important to the people of the Arctic.

The Arctic cultural services are also of great value to its people local people and also globally to tourists. The local people, such as the Inupiaq have a special spiritual connection to the Arctic fisheries and feel a connection with the land and food provided by the Arctic. Also the Arctic has become a tourist attraction due to its vast beauty and unspoilt landscape. Around 1.5 million tourists visit the region per year, via Arctic cruise ships. Most tourists take part in whale, bird and boat watching, however activities such as kayaking and trekking are becoming increasingly popular. This shows the importance of the Arctic for people globally and locally.

The Arctic also provides regulatory services and supporting services which are vital to the earths functioning and the Arctic self-regulation. The Arctic is a huge carbon sink and has ~~a huge~~ the Arctic albedo sea ice and snow cover has a high albedo and reflects 85% to 90% of the solar energy it receives. This has a huge impact on the cooling of the Earth. Also it is estimated

that the Arctic has 1400 gigatonnes of methane stored in its permafrost. Also the Arctic balances the heat deficit of polar regions through atmospheric circulation which moves tropical heat polewards, this has the effect of cooling the whole planet. The Arctic also transfers ocean warmth north and discharges cold Arctic water south, through thermohaline circulation. These processes are vital to regulate the regulation of the terms global temperature.

In conclusion, the services provided by the Arctic are of great value to us people and indigenous population and the planet's global temperatures.

ResultsPlus
Examiner Comments

This answer uses the Millennium Ecosystem Assessment services structure as a way of organising its answer, which provided structure. It picks out a range of services which link to physical systems and ecological resources to explain the importance of the Arctic to people and the planet. It makes good use of the Resource Booklet, although could have demonstrated wider knowledge and understanding a little more fully.

ResultsPlus
Examiner Tip

Be careful not to anticipate questions; many candidates discussed Arctic oil and gas in Question 6(a), but it does not 'fit' into the question phrase 'physical systems and ecological resources'.

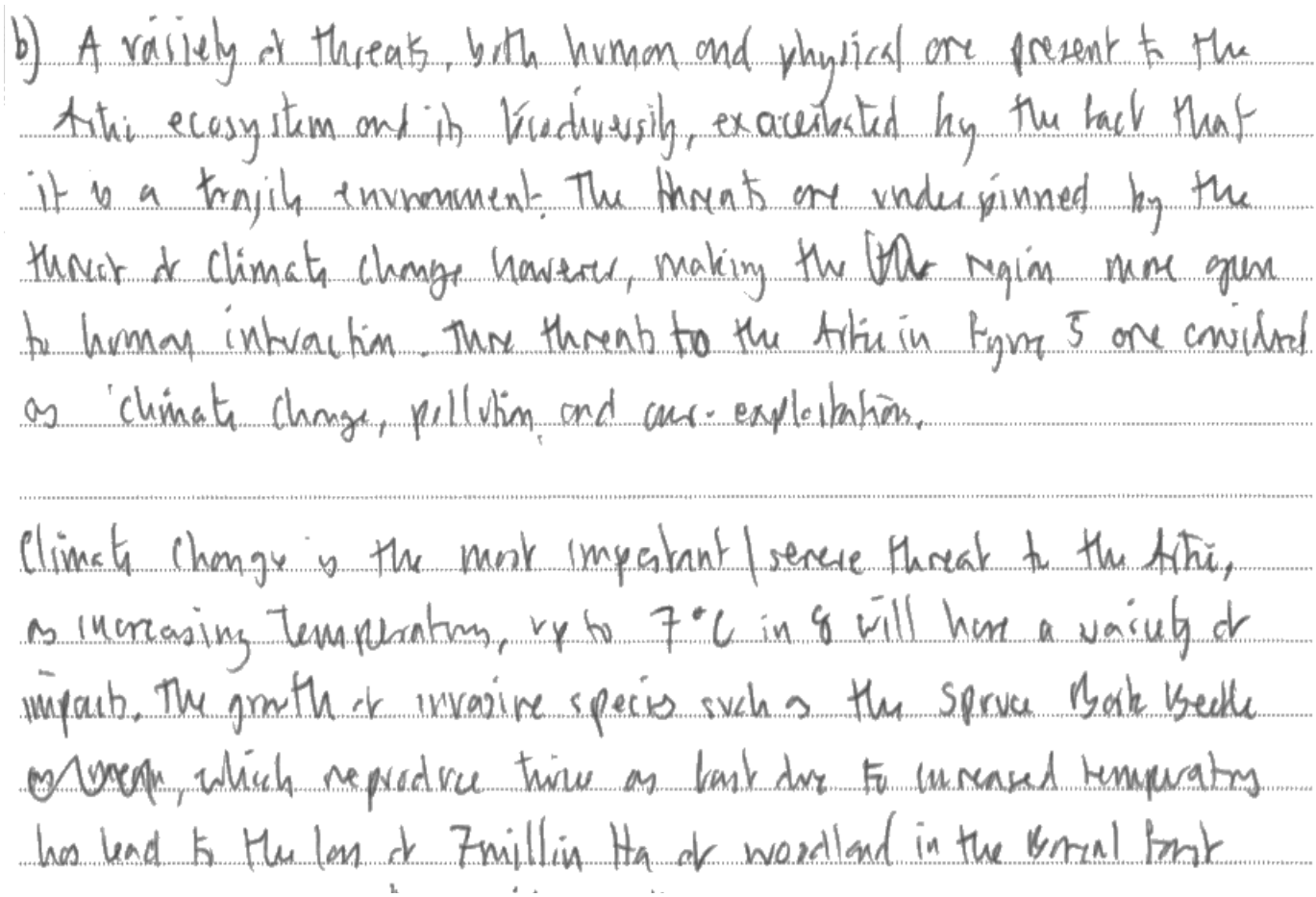
Question 6 (b)

The focus of this question was threats to the Arctic. These were outlined in the Resource Booklet and there were a wide range of threats that could be considered. Figure 5 was used as a structure by many candidates. It included the threats of climate change, over-exploitation and pollution and could be further deconstructed into exploitation of oil and gas, and fish. One of the keys to the question was using a wide range of threats. A surprising number of answers 'missed' a key threat (even in some cases climate change) or else focused too much on one at the expense of others – most frequently oil and gas.

Some answers were a little confused over cause and consequence. This can be illustrated with reference to the idea of the tree line moving north and 'tundra squeeze'. This is a consequence of a warming Arctic, so global warming is the causal threat. The treeline movement is a threat to tundra species, but it is not the fundamental cause. In general, answers did cover a wide range of threats and most were successful. There was evidence of synoptic research especially in relation to oil and gas exploitation and the threat of overfishing.

Where lower than expected marks were awarded it was most frequently because the critical phrase in the question 'relative importance of the threats' was not addressed. The word 'relative' was not fully understood by some who used phrases in their answer such as 'all of the threats have relative importance' or similar. The key was to identify the most / least severe threats and explain this position. Very good answers determined some criteria for this such as the immediacy of the threat, how likely it could be managed and its scale. Many argued successfully that climate change was the 'context threat' and therefore the most severe. Successful answers made the link between threats, arguing that climate change simply exacerbates over-fishing, tourism and mineral exploitation by opening up the Arctic to further irreversible human change. These characteristics are the difference between a 'standard' Level 2 answer listing the threats and a sophisticated Level 4 answer judging the relative importance of threats.

This is an example of a Level 4 answer to Question 6(b).



b) A variety of threats, both human and physical are present to the Artic ecosystem and its biodiversity, exacerbated by the fact that it is a fragile environment. The threats are underpinned by the threat of climate change however, making the [illegible] region more open to human interaction. Three threats to the Artic in Figure 5 are considered as 'climate change, pollution and over-exploitation.

Climate change is the most important / severe threat to the Artic, as increasing temperatures, up to 7°C in 8 will have a variety of impacts. The growth of invasive species such as the Spruce Bark Beetle in Europe, which reproduces twice as fast due to increased temperatures has lead to the loss of 7 million Ha of woodland in the Boreal Forest

Biome, home to over "85 different" mammals, which are losing their habitat. The increased decreased limiting factors for plant growth will allow the tree line to advance North, which will reduce the size of the Artic Wetlands, which are - accounting for 50% of the global total (absolutely), this is significant in terms of biodiversity, as 300 migrating birds species rely on them as a breeding ground - supporting global biodiversity. However, this would also increase carbon sequestration and reduce the help mitigate against the threat of global warming to some extent.

The threat of global warming is also highly significant due to the impact it would have on the climate service which work against climate change. The reduction in sea ice (fig 7) would reduce the effectiveness of the Albedo effect, and the melting of permafrost would release 1bt 00 tonnes of methane - exacerbating the enhanced greenhouse effect.

Pollution is a major threat, particularly due to the potential for oil spills and introduction of invasive species through shipping. The "90 bn barrels of oil" contained are 84% offshore, and make oil spills a 75% chance as they are technically difficult to recover. For example, the Exxon Valdez spill in 1989 killed 300,000 seabirds and will take the ANWR 60 years to recover from, this would greatly impact the food chain in figure 4. Furthermore, the use of the Artic as a shipping zone also poses a threat, as this could lead to the introduction of invasive species. For example, the introduction of the Muscle Zebra to the Great lakes from ships arriving from the Caspian

sea reduced phytoplankton by 80%. If this was repeated, as the Artic has such low primary productivity, its carrying capacity would be further reduced and reduce species numbers at each trophic level (fig 4).

Finally, over exploitation of fish stocks could lead to a massive decline in Artic biodiversity, as fish are a keystone species. As shown by the fact that quotas for fishing have already been exceeded by over 7000%, further overfishing could lead to a repeat of the destruction of fish stocks in the North Atlantic (fig 6). This is increasingly likely as food demand is expected to rise 60% by 2050. However, arguably this is the most straightforward threat to manage through schemes such as experimented of the Alaskan coast, and through policy. Also, fish farming is increasingly effective, and this could release the pressure to over-exploit the Artic.

Overall, the most significant threat is that of global warming, not only due to its direct impact on the loss of ecosystems and biodiversity, but also because the loss of ice will facilitate the human threats which rely on greater access to the Artic region. Global warming will also have the widest scale impact, and is arguably the most complex problem threat to mitigate against.

ResultsPlus
Examiner Comments

The key here was to consider the full range of threats and determine their relative importance. This answer recognises the severity of the global warming threat at the start of the answer. It also considers pollution and over-exploitation, and recognises that the severity of threats is affected by whether or not they can be managed. It has some synoptic knowledge as well as making good use of the Resource Booklet. The conclusion makes it clear that global warming is linked to the other threats and makes a clear judgement.

ResultsPlus
Examiner Tip

Question 6(b) was worth 16 marks, a relatively high tariff. This means in the exam more time needed to be set aside for Question 6(b) compared to 6(a) and 6(c) which were both worth 12 marks.

Question 6 (c)

The last question related to the three options for the Arctic's future outlined in the Resource Booklet. It might have been expected that significant synoptic information would have been included in answers to Question 6(c) whereas in fact this was rarer than anticipated and thus a little disappointing. Reference was often made to the Antarctic Treaty although often only in passing. Some other places were referred to as examples of management, such as the Galapagos, although these often failed to convince as parallel examples.

That said, most candidates considered all three options. Some criteria were needed to be able to judge how useful each of the three options might be. Some candidates made reference to sustainability criteria while others judged the management plans in social, economic and environmental terms. Answers were often rather descriptive but many moved a little beyond this and began to weigh up the pros and cons of the different options. Perhaps a little disappointing was that many candidates 'sat on the fence' rather than making a clear judgement as to which option (or hybrid, or alternative) was best. On the plus side, many recognised that without some sort of concerted action on greenhouse emissions the future of the Arctic might be considered quite bleak.

This last example is a Level 3 answer to Question 6(c).

c) The three approaches to future management of the Arctic evaluate the varying ~~prop~~ ~~prospectives~~ respectives of peoples reaction to the current warming and changing environment of the region. This includes politicians, indigenous residents, environmentalists, scientists as well as the populations of said countries.

Business as usual is probably the most realistic approach. Each ~~region~~ country already acts unilaterally as the Arctic council exists as a forum with ~~less~~ more advisory than legislative powers. Its existence can still act as a comparing forum and advisory area where the countries can discuss and share conservation strategies - however as it is non-binding the effects are likely to be minimal. At present there has been no significant conflict between the Countries, however the ~~previously~~ law of the sea that states if a county can prove the seabed is an extension of their continental shelf they have right to it - has seen conflict emerge between Russia and Norway, and Canada. Essentially Business as usual will test Russia's willingness to keep to the rules and with the ever present threat of oil and gas emerging, Russia's

dominance as a 'hard power' has potential to cause great conflict. It is definitely the less environmental ~~app~~ scenario and approach have the most politically viable, as countries like Russia (who wants its potential 70 billion barrels of energy) and USA (whose government is hyper sensitive to public opinion due to politicians being democratically scrutinised through reelection) seek to ~~accept~~ act unilately.

Arctic Framework may be considered a great approach to addressing the needs of the arctic biodiversity whilst maintaining the development of its countries. The Circumpolar Council would allow all voices an equal say - restricting the dominance of larger country and allowing the knowledgable inuit and other indigenous groups to have a binding say. Problems include the restriction of politicians, as country would have to supply representatives and cost as another layer of bureaucracy is added into the equation. Ultimately public opposition might overpower politicians want to preserve the area, such as the retraction of Obama's executive order to maintain the area of Chukchi Sea, ~~as~~ which he went back on two word just 4 month after, allowing Shell to begin drilling. This proves the need for the Arctic framework which would make Obama (for example) subject to international scrutiny and restriction.

It would also bring about greater peace as territorial arguments can be settled in a controlled environment as fish stocks managed more sustainably than under MARPOL.

Lastly, the Arctic Global Sanctuary can be considered particularly unachieveable as its main weakness. Firstly, countries would never agree to it as they are subject to the needs of their people - politicians especially who seek re-election - and thus prioritise economic development over and sustainability of their economy over environmental considerations. An Antarctic treaty would eradicate ecotourism which brings prosperity to the indigenous people, as well as scientific investigation etc, both of which are vital to the education of the planet. Nevertheless the 3rd framework of a Global Sanctuary would vitally protect the region from further expected degradation. The biodiversity and unique composition of its biome is likely to be preserved and the prosperity of its endemic species heightened. However this is all at the expense of economic development of the rest of the world, and with only 4m people inhabiting this region, it may be agreed that social uproar and conflict over energy and resource depletion is more of a concern than the arctics biodiversity.

Thus to conclude it is clear that the militarisation of the Arctic is not one of cold war aggression, but rather a reaction to a contemporary issue of energy. Hence, the necessity for an Arctic framework seems to be of great potential and need, to restrict certain hard powers dominating the issues and taking matters into their own hand; as was seen in 2007 when Russia placed their flag, antiquatedly claiming territory.

ResultsPlus

Examiner Comments

This answer considers all three 'actions' from the Resource Booklet in detail and in a balanced way. It refers to the recent actions of players, which is synoptic knowledge not in the Resource Booklet. All three potential management actions are evaluated individually and at the end there is a clear judgement as to which option is the most desirable.

ResultsPlus

Examiner Tip

The example answer shown here is not a 'standard' one. It takes the question in a slightly more political direction than might have been expected. However, it is still very closely linked to the three management options so is very acceptable as an approach. It shows that there is room for more than one approach to answering a question.

Paper Summary

There were many good answers to the questions on this summer's Unit 3 Contested Planet paper in both Section A and B. Performance was similar to past series, although the level of detail in the 10 mark data stimulus questions in terms of explanations was perhaps less strong than in the past. Based on their performance on this paper, candidates are offered the following advice:

- Although it is tempting to try and spot questions in Section B, this is a dangerous game that leads to confused candidates and weak answers.
- Command words such as 'assess', 'evaluate', 'discuss' and 'to what extent' require a judgement – sitting on the fence produces weak answers.
- The Water Conflicts question particularly continues to suffer from 'case study overload' i.e. unselective, write-all-I-know-about, poorly applied case studies. In the worse examples the case studies chosen are not relevant to the question at all. This was very noticeable this year.
- As has been said before, often a brief summative paragraph using evaluative language would be enough to lift some candidates out of Level 2 and into Level 3 in the 15 mark part (b) questions in Section A.
- Question wording is very important: it was surprising how many candidates wrote about the ranking rather than the value of the data in Question 3(a), or oil and gas in Question 6(a) (which is not an ecological resource) - please read them very carefully.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx

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