

International Advanced Level Geography

Unit 3 WGE03

Contested Planet

Exemplar scripts with examiner commentaries

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Introduction

This guide has been created using student responses to the June 2018 International A Level Unit 3 (WGEO/03) examination paper. The answers and examiner commentaries in this guide can be used to illustrate the standards of the IAL Geography assessment.

Unit 3, Contested Planet, investigates contemporary global issues and how they influence people's lives as well as how they can be managed, at scales from local to global. There are two compulsory physical Geography topics:

- Topic A1: Atmosphere and Weather Systems
- Topic A2: Biodiversity under Threat

Candidates choose two further optional topics which have a human and political Geography focus.

Either:

- Topic B1: Energy Security, or
- Topic B2: Water Conflicts

And either:

- Topic C1: Superpower Geographies, or
- Topic C2: Bridging the Development Gap

Unit 3 is worth 30% of the total IAL marks. It is 2 hours long and marked out of 90 marks.

The examination paper is divided into three distinct sections.

- Section A tests Topics A1 and A2, with a combination of 10 mark data stimulus questions and a 15 mark essay question in questions 1 and 2. There is also a 15 mark synoptic essay question (Question 3) which links together themes from Topics A1 and A2, and AS Unit 1.
- Section B tests topic B1 or B2
- Section C tests topics C1 or C2
- Sections B and C consist of 5 mark data stimulus questions, and 15 and 20 mark essay questions.

Important details of how the WGE03 examination paper format can change from exam series to exam series can be found here:

<https://qualifications.pearson.com/content/dam/pdf/International%20Advanced%20Level/Geography/2016/Teaching%20and%20learning%20materials/Contested-Planet-Unit-3-WGE03-Assessment-Guide.pdf>

10, 15 and 20 mark questions test a mixture of AO1 and AO2 skills, and 5 mark data stimulus questions test some AO3 skills. Assessment Objectives (AOs) are explained more fully in the specification (page 57) along with their breakdowns across units.

Our command words are defined in our specification, please see page 95, and will remain the same for the lifetime of the specification. Questions will only ever use a single command word and command words are used consistently across question types and mark tariffs.

This document should be used alongside other IAL Geography teaching and learning materials available on the website here:

<https://qualifications.pearson.com/en/qualifications/edexcel-international-advanced-levels/geography-2016.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FSpecification-and-sample-assessments>

The June 2018 WGE03 question paper, mark scheme and examiner report can be found here:

<https://qualifications.pearson.com/en/qualifications/edexcel-international-advanced-levels/geography-2016.coursematerials.html#filterQuery=Pearson-UK:Category%2FExam-materials>

Exemplar scripts

Question 1a Atmosphere and Weather Systems

Using Figure 1, suggest how physical and human factors can explain the different tropical cyclone impacts. **(10)**

Mark scheme Question 1a

AO1 (4 marks)/AO2 (6 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Cyclone impacts can be related to the Saffir-Simpson scale, which is determined by wind strength and storm-surge height – higher intensities lead to larger impacts usually.
- Landfall and tracks are important in explaining impacts in terms of a 'direct hit' and the time a cyclone spends over an area.
- Broadly, vulnerability and capacity to cope can be related to level of development.
- There are large differences in the data shown in Figure 1, which differ by order of magnitude in terms of deaths and economic losses especially.

AO2:

- Intensity could help explain death toll, but the largest death toll (Nargis = 138,000) was SS4 whereas Bopha was SS5 with a much lower death toll (1901); the lowest intensity storm had the lowest deaths (Sandy).
- Other physical factors could include the time the storm stayed over a particular area, the intensity and duration of rainfall which adds to flooding and therefore impacts, and the strength of local winds.
- The physical nature of the coastline determines how far a storm surge moves inland; it might be argued that the area hit by Nargis was especially low-lying and therefore very extensive areas were flooded compared to Sandy; credit the idea that global warming might be making storms worse.
- Human factors include preparation, warning and prediction. In the Philippines very frequent cyclones might mean the population is better prepared and has a higher capacity to cope; Nargis could be argued as rare for Myanmar and therefore the population was unprepared.
- Widely disseminated warnings, which were timely and accurate could explain lower deaths especially if evacuation was carried out – likely in the case of the USA and Sandy (TV / radio warnings, satellites and planes tracking the storms).

<ul style="list-style-type: none"> Economic losses are partly a result of what people had to lose, i.e. high value coastal property in the USA and insured losses, versus limited insurance and property in the developing countries; the Philippines might be seen as being better prepared and so people have adapted. Population density is a factor, as 8 million were affected by Sandy (only 117 deaths) versus only 1.5 million for Nargis. 	
Mark	Descriptor
0	No rewardable material.
Level 1 1-4	<ul style="list-style-type: none"> Demonstrates isolated or generic elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) Applies knowledge and understanding to geographical information inconsistently. Connections/relationships between stimulus material and the question may be irrelevant. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)
Level 2 5-7	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding to geographical information to find some relevant connections/relationships between stimulus material and the question. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 3 8-10	<ul style="list-style-type: none"> Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) Applies knowledge and understanding to geographical information logically to find fully relevant connections/relationships between stimulus material and the question. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Example 1a:

firstly, physical factors such as the strength of a storm have different impacts. The stronger the storm, the higher the impact is going to be, as shown in figure 1. Typhoon Bopha is a category 5 storm on the saffir-simpson scale, making it a very strong storm. This can be seen as very many people died (1,901).

Secondly, human factors such as preparation and preparedness can lower the impact of the storm. For example in USA there was 17 deaths this is lower than the deaths in Burma and Philippines. This could be due to strong building structures that limit and withstand the power of tropical cyclones. For example concrete well structured houses strong enough to withstand powerful winds that protect people keeping them safe from harm.

Furthermore, USA is an MEDC making it a rich nation and is able to afford hazard proof structures unlike Myanmar and Philippines. Although, deaths are limited their are high economic losses of 75 billion because in the USA there are a lot of expensive structures such as buildings, roads and more, making damage costs very high.

Moreover, ~~human~~ physical factors such as location determine how many people will be affected. For example in the Philippines it is an island so more people cannot ^{evacuate} escape inland. Therefore, they are more vulnerable to being affected by flooding due to a storm surge affecting many on the low-lying coast. As shown 6,245,000 people were affected.

Lastly, human preparedness can limit reduce the number of deaths. For example ~~an~~ well equipped and trained emergency services can save more people by responding quickly and effectively. That's why only 117 people died in USA unlike in Asia where many more died because they lacked emergency services that are well trained and equipped. This could be because of a country's level of development.

Mark / Level awarded	Level 3, 8 marks
Examiner commentary	<ul style="list-style-type: none"> • This answer is focused on explaining the data shown, and avoids describing it. • Understanding of tropical cyclones is demonstrated, for instance through the explanation of the impact of storm surges. • The answer directly uses some of the data in Figure 1, to support the explanations made, and refers to all three countries. • Both physical (magnitude of the tropical cyclone, location) and human factors (preparedness, level of development) are explained. • It explains why economic losses are so high in the USA, but deaths are relatively low: the answer begins to recognise that the data is complex and at first sight contradictory.
Improving this answer	The key factors of population density and warnings / evacuations could have been included. The answer focuses a little too much on 'structures' (i.e. buildings that can withstand the physical forces) and slightly less on other key human explanations.

Question 1b Atmosphere and Weather Systems

Evaluate the success of short-term and long-term management responses to the drought hazard. (15)

Mark scheme Question 1b

AO1 (5 marks)/AO2 (10 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Forecasting and prediction using weather models is a short term strategy, used in places like the USA, Australia and the Sahel (FEWSnet), although its accuracy varies.
- Long-term strategies focus on adapting to water shortages such as increased water storage and smarter water use to reduce evaporation, e.g. drip irrigation and many type of dams, water transfers and desalination
- Farming strategies focus on the choice of crop and cultivation method and include technologies such as GM.
- Aid and emergency are sometimes needed to respond in areas where food and water supply have collapsed – but this is short-term only.
- A distinction should be drawn between areas which are arid and those which suffer from drought, i.e. a short-term meteorological hazard.

AO2:

- A difference may be drawn based on where drought occurs because in developing countries long-term water management is much rarer than in the developed world, e.g. USA and Australia where large scale water management is more common – emergency short-term strategies are rarely needed; Australia has installed desalination in response to drought.
- In many cases long-term water management has proved costly and not always effective as it can lead to overuse and salinisation of cropland, and climate change may reduce supply, e.g. the Murray-Darling and Colorado rivers reducing effectiveness over time.
- Drip-irrigation and other smart irrigation methods have a lot of potential to reduce overall water use and cope with drought spells, but this tends to be costly and is therefore hard to apply to developing areas such as the Sahel.
- However, there are many intermediate technology solutions (zeer pots, check dams, contour-bunding) that can conserve water and food in drought prone areas – their application is patchy because they are often NGO funded.
- Governance might be raised as an issue as many of the world's drought prone, rainfed agriculture areas are in the Sahel and Central Asia which are poorly governed and subject to conflict and disruption – this could be seen as a barrier to progress and the implementation of successful responses.

<ul style="list-style-type: none"> In some cases emergency aid is required in drought stricken areas, although it is often late in coming despite widespread warning and is likely to be only a temporary solution to save lives in the short term – longer term adaptation is required but this means a long-term commitment and funding. Stronger answers should address the concept of success, by considering how far responses have improved water availability. 	
Mark	Descriptor
0	No rewardable material.
Level 1 1–4	<ul style="list-style-type: none"> Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2 5–8	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3 9–12	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4 13–15	<ul style="list-style-type: none"> Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Example 1b

Drought occurs during a period of below average rainfall. They often occur in semi-arid regions e.g. the Sahel in Africa. often hitting LICs. management is often hard. ^{results =} water is in shortage.

Short-term ^{management} ~~management~~ will always be effective during a time of emergency when immediate help is needed e.g. importing water from other countries - but this is costly and most LICs won't be able to afford this. LICs will often harvest rainwater (either leaving buckets out to capture rain or extracting it from soil) - however during a time of crisis of no rain this won't be possible. They can ~~also~~ create terraces in their soil to stop soil erosion that would normally destroy their crops during drought. ^{Action Aid is an NGO that help in the short term with drought, they often help by buying cattle or so farmers to help with income for high price}

Long-term ~~management~~ management is effective in ensuring drought will never occur with large impacts and that it can be overcome quickly. These can include water storage e.g. holding in reservoirs so water will always be readily available e.g. this was useful in the California water project. ^{Using} genetically modified crops which are drought resistant - these will grow even during drought and allow farmers to still harvest crops, allowing to still earn income and population to still have food. e.g. GM crop banking project helped save Africa with a high yielding crop. ^{Program like storing up on food can be}



Useful in the long term as during drought when food is likely to be in shortage by storing up on it will avoid starvation. Changing irrigation systems to rain water irrigation can also be a success as it's not using up water that can be drunk. Or changing irrigation systems to drip water to avoid using so much water. Appreciation is also useful taken to avoid soil erosion and allow crops to grow better. *

* Other useful short-term management include adaptive farming e.g. stop overgrazing and change it for rotational to again protect the soil. Soil is extremely important during a period of drought as if there is no moisture crops won't grow and the population won't be fed.

To conclude both short-term and long-term management are a success. Short-term is super effective during the start of a drought - many of the above mentioned have been adapted in the Sahel which continuously has droughts and were found to be extremely efficient. Whereas if long-term management was there from the beginning impacts of drought would not be felt as much.

(Total for Question 1 = 25 marks)

* 2 water transfers can also be installed to divert water from an area of surplus to an area of deficit e.g. in the Murcia - Tagois transfer in Spain during a period of drought helped the village have water for its population. However, as this can be costly so only tends to be done in Hks

Mark / Level awarded	Level 4, 13 marks
Examiner commentary	<ul style="list-style-type: none"> • Starting with a brief definition of drought shows good understanding, and provides the answer with a focus. • There is a sound understanding of short-term (emergency situation) and the idea that long-term solutions are attempting to reduce drought risk, not just cope with the immediate impacts. • A good range of examples is used (rainwater harvesting, terraces, dams, GM crops, irrigation systems) • Some of these are slightly less convincing e.g. farming terraces are long-not short-term • While some examples are located, others are more generalised. • There is a clear conclusion, although this lacks full development
Improving this answer	Slightly fewer examples, but more carefully located ones. The answer also needs a little more clarity on which solutions are short-term and which long-term. The conclusion needs to be developed and a clearer judgement made especially about long-term management: many would argue this is more effective as it reduces risk, whereas short-term management copes with impacts.

Question 2 Biodiversity under Threat

Using Figure 2, explain why some countries protect more of their land than others. (10)

Mark scheme Question 2

AO1 (4 marks) /AO2 (6 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Conservation areas / protected areas are used to protect biodiversity and ecosystems and they vary in size and degree of protection, e.g. strongly protected NPs versus 'paper parks'.
- Conservation areas protect ecosystem services (regulating, provisioning, cultural and supporting).
- Conservation and protection can be costly, but also brings economic benefits such as tourism as well as wider benefits
- The environmental Kuznets curve is a model of the relationship between development and attitudes to the environment, including conservation.

AO2:

- Broadly, developed countries protect a greater percentage area, e.g. Germany 37%, NZ 33% and Japan 27% - this could be related to availability of funds for conservation.
- The Kuznets curve suggests attitudes to conservation change with development: low income countries may not be degrading their environment so there is less reason to protect; middle income / industrialising countries (Indonesia = 14%) may have other priorities, i.e. exploiting resources, whereas developed countries are trying to right past wrongs.
- Attitudes to conservation are likely to be more positive in places where peoples basic needs are already met and people have time / money to value and enjoy ecosystems and biodiversity; there is an argument that in places where people depend on the land for food they protect it out of necessity, i.e. low income countries.
- Country size / population density could play a role as Canada's low percentage which are uninhabited and / or are deemed to be under no threat or have little conservation value. Equally in crowded places such as India few areas might be available to practically protect due to urban and agriculture pressures.
- The value of tourism could be seen as important in terms of conservation – Kenya, NZ and especially St Lucia could be seen to be protecting because this generates income from their unique ecosystems – so the reason is a practical one.

- Brazil's high percentage, and possibly Kenya's 13%, might be seen as protecting globally important species and ecosystems – possibly as a result of international pressures; on the other hand some areas could be 'paper parks' with little in the way of monitoring or policing.

NB Answers that only consider global warming are likely to be self-penalising, and unlikely to score beyond the top of L2, because of a lack of 'extent'.

Mark	Descriptor
0	No rewardable material.
Level 1 1-4	<ul style="list-style-type: none"> • Demonstrates isolated or generic elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding to geographical information inconsistently. Connections/relationships between stimulus material and the question may be irrelevant. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)
Level 2 5-7	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding to geographical information to find some relevant connections/relationships between stimulus material and the question. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 3 8-10	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding to geographical information logically to find fully relevant connections/relationships between stimulus material and the question. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Example 2

Figure 2 shows the clear divide between HIC and LIC 'protected status' claims, where Germany and New Zealand ~~are~~ have the highest with 37% and 33% respectively, of national parks, nature reserves etc. This is because, with Kuznet's environmental curve, once a country reaches a certain level of development, its environmental awareness increases and degradation decreases - this would be due to the relocation ~~or~~ and removal of manufacturing industries, green and carbon taxes on industries and vehicles etc, and investment into afforestation schemes, where legislation can be created. This was seen in the UK's national parks act, where areas were designated as protected and could not be used ~~as~~ for human benefit.

~~Furthermore~~ On the other hand, LICs and industrialising countries such as India, have a large amount of envt. degradation through deforestation and logging, and pollution through industrial discharge, meaning that wildlife areas are placed under threat. There is little to none of legislation and commitment to wildlife protection, as seen in Vietnam and Indonesia, as they fear it would threaten their industrialisation process and would not allow their economy to develop. Furthermore, ~~the~~

HICs have a growing population, with India having 1.2 billion people and is projected to increase - this means that urban sprawl is occurring, requiring deforestation due to land demand and therefore little protection. Brazil is not an industrialising nation, but has been pressured by NGOs to reduce environmental damage and has a large amount of awareness of the benefits the Amazon

(Total for Question 2 = 10 marks)

rainforest provide

Mark / Level awarded	Level 3, 10 marks
Examiner commentary	<ul style="list-style-type: none"> • This is a concisely written answer that shows good understanding of the data shown in Figure 2; it does refer to and quote some of the data in Figure 2 (ideally it would use the data a little more fully in the answer). • The answer recognises the developed / developing (HIC/LIC) divide and links this to the environmental Kuznets curve by way of explanation. • Explanations include deindustrialization in developed countries, green taxes, UK national parks plus deforestation, lack of legislation, population growth (India) and fears of conservation restricting economic development in developing / emerging countries. • The range of explanations used is very good, and these are clearly expressed. • The anomaly of Brazil is identified and succinctly explained in terms of external pressure to protect Amazonia.

Question 3 Synoptic question

To what extent is global warming the most significant threat facing low income developing countries?
(15)

Mark scheme Question 3

AO1 (5 marks)/AO2 (10 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Low income developing countries include most of sub-Saharan Africa, South Asia and parts of Latin America.
- Global Warming implies an increase in average surface temperatures and likely changes to rainfall patterns – although the extent of this is unknown and there is wide range of projections.
- Global warming can be seen as a context threat, as it has the potential to affect ecosystems, meteorological hazards, water supply and health / disease
- Wellbeing relates to the idea of a health, food supply and safety – it could be interpreted in a number of ways.

AO2:

- One approach is to argue that GW is a threat, but not today. Other threats such as tropical cyclones or major tectonic hazards are perhaps more likely to directly impact on people today – although GW may become an increasing threat in the future.
- In some places the threat of running out of key resources, perhaps linked to growing populations, might be seen as more significant and immediate – this includes food and water (a Malthusian view) and is an issue in rural areas but also in some megacities in terms of poverty.
- It also depends on location; some places such as the Sahel or island states like the Maldives have very direct threats such as sea level rise and the possibility of reduced rainfall which will affect people's ability to grow crops, get water and therefore survive – in some locations these threats are much more pressing than others.
- GW has the potential to degrade ecosystem services, especially the hydrological cycle which many people in developing countries depend on for direct water supply, due to the lack of managed water supply; goods that are obtained from ecosystems could also be affected.
- GW could affect some hazards, such as making tropical cyclones more frequent / more intense – which would directly affect many who live in cyclone belts.

NB: credit low-income regions / parts of emerging countries e.g. specific reference to slums in urban areas, low-income rural subsistence parts of India and China and others. Credit the argument and assessment rather than being overly picky about 'low-income countries'.	
Mark	Descriptor
0	No rewardable material.
Level 1 1-4	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2 5-8	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3 9-12	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4 13-15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Example 3

It is hypothesised that if temperatures rise by more than 5°C or more in the next century a mass extinction of flora and fauna will occur. Global warming is therefore a very significant threat facing not only low income countries but the world. Global warming ~~is~~ threatens low income countries in different ways depending on their geographical location. ~~In the Pacific,~~ In the Pacific, Fiji ~~is~~ is threatened by sea level rise as a result of global warming causing the polar ice caps to melt. LICs such as Sudan are threatened by global warming causing climate change which might accelerate desertification and cause drought and famine across the country. ~~Global warming~~ Global warming is more of a long-term threat and although its effects can already be felt today ~~there are~~ there are more immediate threats facing LIC's.

~~Research shows~~ Natural disasters are another significant threat facing LIC's. Many LICs such as the Philippines are in high risk ^{areas} ~~zones~~ where there is the potential of typhoons which regularly occur, earthquakes and volcanic activity. These would appear as a significant and immediate threat although



they are usually short-term and do not last ~~for~~ indefinitely ~~because of~~ ~~the~~ ~~the~~ Therefore they are not the most significant threat facing low income countries, particularly because not all LICs face these threats. Moreover many of these natural disasters will be made worse by global warming such as typhoons increasing in strength making global warming ^{an} even more significant threat to LICs.

Lastly another significant threat facing low income developing countries is the destruction of their natural ecosystems and resulting reduction in biodiversity as their natural resources are exploited in the name of economic progress and development. Irresponsible environmental practices as the LIC develops could result in an environmental catastrophe for that country as it tries to develop its economy. However this threat is easily mitigated through effective and enforced environmental regulation.

In conclusion global warming is the most significant threat facing low income developing countries to a large extent. This is because it will affect every LIC whereas natural hazards do not and will not be ^{as constant and prevalent as the}

(Total for Question 3 = 15 marks)

negative effects of the sea level ^{rise} ~~rise~~. Global warming is also more significant threat than human destruction of the environment and this could add to the threat of global warming and make it worse.

TOTAL FOR SECTION A = 50 MARKS

Mark / Level awarded	Level 4, 13 marks
Examiner commentary	<ul style="list-style-type: none"> • The opening line, which states that temperatures may rise by 5°C in this century shows the candidate understands the possible scale and pace of global warming. • There is the evaluative idea that global warming will impact on developing countries in different ways depending on location (Fiji, Sudan) • Other threats are considered i.e. natural disasters: this broadens the answer and addresses the ‘to what extent’ command phrase. • The answer provides the evaluation that natural disasters may not be as significant because they are temporary, whereas global warming could be a more significant longer term change. • Ecosystem destruction is considered as a further threat, but its extent is argued to be less because it can be managed. • There is a clear conclusion.
Improving this answer	<p>The answer might have considered the threats global warming poses in a little more depth, before (correctly) moving on to consider other threats.</p> <p>The conclusion is more of a summative statement of what has already been said; statements such as ‘it will affect every developing country’ are not supported.</p> <p>The conclusion could explain how human destruction of the environment will ‘add to the threat of global warming and make it worse.’</p>

Question 4 Energy Security

To what extent are radical technologies and energy conservation the best ways to meet future energy demand as cheap fossil fuel supplies decline? (20)

Mark scheme Question 4

AO1 (5 marks)/AO2 (15 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Responses that demonstrate **only** AO1 without any AO2 should be awarded marks as follows:

- Level 1 AO1 performance: 1 mark
- Level 2 AO1 performance: 2 marks
- Level 3 AO1 performance: 3 marks
- Level 4 AO1 performance: 4–5 marks

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Radical technologies include hydrogen fuel cell technology and electric vehicles (EVs) as well as other technologies such as carbon capture and storage (CCS)
- Conservation of energy means using less energy to do the same work (energy efficiency) and includes LED lights, home appliances, more efficient engines and power generation.
- Existing technologies such as nuclear and renewables are relevant, and in some cases can be radical, e.g. solar thermal
- Future energy needs relates to demand, and this is expected to increase by 40-60% by 2050, globally making the concept of peak oil / gas relevant.

AO2:

- Genuinely radical technologies are a currently an unknown quantity: EVs are getting more common but still require electricity much of which comes from fossil fuels so while they reduce local pollution, they don't necessarily reduce energy consumption.
- Hydrogen fuel cells / power is another alternative to fossil fuels but as yet it is not a large scale technology, is very costly, has safety issues and there is no cheap available source of hydrogen.
- CCS could allow fossil fuels, e.g. cheap coal to continue to be burned without releasing pollutants into the atmosphere but is largely unproven and potentially very expensive – it also fails to address the issues of declining supplies of fossil fuels, i.e. peak oil / gas.
- Conservation might be argued as being one way forward, as reducing wasted energy will make existing supplies last longer; there is a lot that can be done to make engines, lighting and home appliances much more energy efficient although there is a cost which may be too high for developing regions.
- Many might argue that it is actually existing renewable that have the largest role to play as fossil fuels decline in terms of supply, because they are proven technologies that could be used much more widely, i.e. wind, solar and HEP; some might consider nuclear has a future as a low-carbon, non-fossil fuel source although it has a number of

<p>costs and benefits.</p> <ul style="list-style-type: none"> The rise of fracking and biofuels in USA (and in UK and other countries in the future) plus nuclear expansion in some places (UK, China) could delay investment into other renewable such as wind, solar, tidal etc. <p>NB Answers that only cover radical energy technologies OR energy conservation will be self-penalising.</p>	
Mark	Descriptor
0	No rewardable material.
Level 1 1-5	<ul style="list-style-type: none"> Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) Applies knowledge and understanding of geographical ideas, making limited and rarely logical connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited coherence and support from evidence. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2 6-10	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships. (AO2) Applies knowledge and understanding of geographical ideas in order to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3 11-15	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and accurate. (AO1) Applies knowledge and understanding of geographical information/ideas to find some logical and relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical ideas in order to produce a partial but coherent interpretation that is supported by some evidence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a conclusion, largely supported by an argument that may be unbalanced or partially coherent. (AO2)
Level 4 16-20	<ul style="list-style-type: none"> Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) Applies knowledge and understanding of geographical information/ideas to find fully logical and relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is supported by evidence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a rational, substantiated conclusion, fully supported by a balanced argument that is drawn together coherently. (AO2)



Example 4

As global populations increase and the middle class expands, especially in Asia, our global demand for energy is increasing. The challenge is to meet this demand while at the same time reduce our ^{dependence on} ~~use of~~ oil and coal (fossil fuels) so that our CO_2 emissions and other environmental damages can be controlled.

Hydrogen has been explored as a potential fuel. Its advantage is that its only emission is water, which in itself is harmless. It is used mainly in the transport sector in the form of hydrogen fuelled cars. While these ^{cars} produce much less harmful gases than petrol powered cars, we must consider how the hydrogen is produced. Since hydrogen in itself is not a primary energy source, we must get hydrogen from methane or from water. To separate the hydrogen from these compounds needs high temperatures, which need to be powered by an energy source. So from country to country, the



• footprint of hydrogen fuel varies. In a country like the Czech Republic where much of the energy generation is from coal, ~~the~~ separating hydrogen from methane would need lots of coal to be burned, hence still producing greenhouse gases and causing acid rain through SO_2 and NO_x .

Electric cars are another innovation meant to reduce greenhouse gas emissions. While they are much cleaner than petrol or diesel cars, they have a much shorter range, with the maximum being 362 miles per charge. Often it is closer to 100 miles per charge. Again, ~~the~~ charging points are also scarce, which deters potential buyers, and the electricity generation in itself varies in its carbon footprint from country to country (as discussed earlier).

Complete Carbon Capture and Storage (CCS) is a radical technology which is still in its infancy. It works by trapping all of the CO_2 released in power stations, and this ~~gas~~ gas is then stored in rocks deep underground. Canada opened a ~~the~~ coal energy production plant with ~~the~~ CCS that had 90% ~~less~~ fewer emissions than non CCS plants of the same size. However there are concerns that gases like methane and CO_2 , artificially ~~the~~ trapped underground may still find a way to escape into the atmosphere, especially if there is an earthquake.



~~the~~ Energy conservation comes in many forms, like developing radical technologies or finding ways for the general population to use energy more efficiently, like switching off the lights when leaving a room ~~and~~ walking or cycling when travelling short distances ~~instead~~ of going by car. However it is unclear if these alone will be enough to meet the future demand, especially ~~if~~ since the technologies are not fully developed and many of these are not at all widespread. Moreover, countries like Canada (tar sands in Alberta), the USA (shale oil and gas in Colorado, Utah and Wyoming) and Brazil (deepwater oil) are exploring unconventional fossil fuels which are much worse in terms of emissions than normal fossil fuels. The resources devoted to these unconventional fossil fuels unfortunately shows that some of the world's greatest powers do not

(Total for Question 4 = 20 marks)

believe that ~~the~~ radical technologies will develop fast enough to replace conventional fossil fuels when they run out, and are unwilling to set an example to the rest of the world and ~~lead the way~~ away from all types of fossil fuels.

Mark / Level awarded	Level 4, 18 marks
Examiner commentary	<ul style="list-style-type: none"> • The first paragraph of the answer shows good understanding of the factors driving up demand for energy – especially the ‘global middle class’ idea. • The answer explains ‘radical technology very clearly (hydrogen, EVs and CCS) and evaluates the contribution of these by explaining their limitations e.g. how hydrogen is obtained. • Energy conservation is explained clearly • The contribution unconventional fossil fuels could make to future energy is explained, and located
Improving this answer	<p>The section on radical technologies is very detailed and evaluative, although energy conservation is considered in less detail – although there is some evaluation.</p> <p>Overall, the answer is very evaluative: the conclusion could be developed to make a clear judgement about which energy sources (or conservation) are likely to make the most contribution. The conclusion hints at the idea that fossil fuels are likely to continue to be used for some time, but this idea needs development.</p>

Question 5 Water Conflicts

To what extent are water conservation and desalination the best ways to guarantee future water supply as demand continues to increase? (20)

Mark scheme Question 5

AO1 (5 marks)/AO2 (15 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Responses that demonstrate **only** AO1 without any AO2 should be awarded marks as follows:

- Level 1 AO1 performance: 1 mark
- Level 2 AO1 performance: 2 marks
- Level 3 AO1 performance: 3 marks
- Level 4 AO1 performance: 4–5 marks

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Desalination uses seawater to make freshwater, and is common in many countries in the Middle East as well as others; it is energy intensive and economically costly.
- Water conservation includes a wide-range of strategies to make water go further.
- Grey water recycling, drip irrigation and water harvesting are examples – these can use high or low tech approaches.
- Water demand is set to increase, perhaps by 40-50% globally by 2050 with some areas, e.g. India and parts of Africa set to experience even faster increases in demand.

AO2:

- Many countries in the Middle East, and increasingly elsewhere, already rely on desalination for much or the majority of their water supply so in some ways it is already a 'solution' – the question is how widespread could it be (land-locked countries?) given the cost and need for an energy source; it also has some environmental issues not least carbon emissions from fossil fuel as the energy source.
- In many parts of the world declining river flows (linked to over-abstraction), falling water tables and water pollution (rivers, groundwater salinisation) mean there is some urgency in terms of a need for alternate supply, or making better / more sustainable use of existing resources – options are often very limited.
- Water conservation has high potential in many cases; Singapore is an example of where public education, water pricing and technology has been used to reduce over-all water use; water pricing is used in many places but risks making water too expensive for those that need it most.
- In Singapore and other places, rainwater harvesting is used to capture and then use rainwater that would otherwise be lost to the hydrological cycle – this can be done in hi-tech ways or low-tech ones such as Pumpkin Tanks, so might be argued to have widespread application at a range of levels of development.

- Some will argue that water supply needs to be increased using other methods, because the increases in demand are so large; this is why mega-dams and water transfers are being used in many parts of the world to increase storage capacity and move water from areas of surplus to areas of deficit; these schemes are costly and therefore not able to be used everywhere, they also have many social and environmental drawbacks.

NB Answers that only cover desalination OR water conservation will be self-penalising.

Mark	Descriptor
0	No rewardable material.
Level 1 1-5	<ul style="list-style-type: none"> Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) Applies knowledge and understanding of geographical ideas, making limited and rarely logical connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited coherence and support from evidence. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2 6-10	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships. (AO2) Applies knowledge and understanding of geographical ideas in order to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3 11-15	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and accurate. (AO1) Applies knowledge and understanding of geographical information/ideas to find some logical and relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical ideas in order to produce a partial but coherent interpretation that is supported by some evidence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a conclusion, largely supported by an argument that may be unbalanced or partially coherent. (AO2)
Level 3 16-20	<ul style="list-style-type: none"> Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) Applies knowledge and understanding of geographical information/ideas to find fully logical and relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is supported by evidence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a rational, substantiated conclusion, fully supported by a balanced argument that is drawn together coherently. (AO2)

Example 5

~~Water~~ In the 21st Century, population is increasing exponentially. This falls in line with the theory which Malthus put out saying that: 'As the population increases exponentially, the amount of supplies and resources will increase geometrically.'

The fact that there is only 2% of fresh water available in the world for over 8 billion people to use is astounding and is clear evidence to the fact that there is an extremely large water stress on various parts of the world as the level of water demand has surpassed the supply.

Desalination is a method which has been introduced in recent times due to the advancements in technology. This refers to using saltwater from the seas to get freshwater which can be used for human purposes. This utilises reverse osmosis which is a process where water is passed through a partially permeable membrane in order to get the purest form of water possible. This is already in use in the middle east in countries like the United Arab Emirates, Qatar and Saudi Arabia. These areas are covered with deserts and as they have no real groundwater to rely on; they use ground desalination



Schemes to cope with the demand. However this is regarded as an extremely costly process due to the fact that the technology required for this method is extremely expensive and requires a large amount of knowledge to carry out. This is why this won't be suitable in countries like in the Sahel.

Water Conservation is another method which will be used by countries to secure the supplies of water they have. This is mainly done by building dams or ~~em~~ embankments to trap and store water so that this water can be used in times of need. The three gorges dam in China is a prime example of a dam which has been built upstream to conserve water and use for various purposes. This ~~was~~ is frequently used to take water for China's industries which are evergrowing and for hydroelectric production. The dam built on the Nile river is an excellent example which showcases how water can be stored and used during periods such as droughts where water is needed most. However in order to carry out ~~this~~ these water conservation schemes, large amounts of costs will be required and there maybe significant risks posed by the construction to flora and fauna. The Yangtze river dolphin was one of these species which almost went extinct during the construction of the three

gorges dam as their breeding grounds were destroyed.

However besides both of these methods, there will also be other methods of increasing the water supply through methods like grey water recycling, ~~using~~ utilising moisture from plants and turning to ~~fresh water~~ and also sewage treatment and supplying fresh water through that.

At the moment, demand will continue to increase significantly and conflicts will arise as seen in the middle East on multiple occasions, these technologies are humanities best hope to sustainably conserve water for the future. However they may have long

(Total for Question 5 = 20 marks)

periods of development and will be incredibly costly.

TOTAL FOR SECTION B = 20 MARKS

Mark / Level awarded	Level 3, 15 marks
Examiner commentary	<ul style="list-style-type: none"> • This answer begins, usefully, with a focus on water demand and mentions the concept of water stress – although ‘various parts of the world’ is rather vague in terms of Geography. • The section on desalination explains the technology, where and why it is currently used, and provides some evaluation i.e. cost and ‘knowledge’. • Like many candidates, this answer equates water storage in dams and reservoirs with water conservation; reservoirs clearly have a role to play, but they are not water conservation. There is some evaluation in this section. • However, in the second from last paragraph grey water recycling (conservation) is mentioned – although it is not specifically stated as conservation.

	<ul style="list-style-type: none">• The conclusion is a little simplistic, and doesn't specifically address 'to what extent' i.e. which methods are best / worst in terms of meeting future demand.
Improving this answer	<p>The content of this answer is good, but the candidate needs more secure knowledge (definitions) of water conservation to make the explanations more convincing.</p> <p>While there is evaluation, the conclusion needs to specifically address how far desalination, conservation and other methods (storage, transfers) could help cope with increased water demand.</p>

Question 6a Superpower Geographies

Using Figure 3, suggest why IGO membership is important for superpower status. (5)

Mark scheme Question 6a

AO1 (2 marks)/AO3 (3 marks)

Award 1 mark (AO1) for each relevant point **and** further expansion marks for reasons/explanations linked to the data shown (AO3), up to a maximum of 5 marks.

- Only the most powerful country, the USA, is a member of all 3 organisations (1) which suggests IGOs are one aspect of superpower influence (1).
- All three countries are WTO members, which could be seen to indicate that trade is very important (1) because it generates the wealth superpowers need to act in other spheres, e.g. militarily (1).
- Only the USA has more than 10% of the votes at the IMF meaning one country has significant influence (1) which can be related to the dominance of the USA's 'western' economics (1).
- Russia and the USA are UNSC permanent members meaning they make decisions on global security issues (1) which reflects their geopolitical influence / military strength – key features of a superpower (1).

Example 6a

Superpower status involves global reach and dominance over other ⁽¹⁾ countries. Figure 1 shows that there is overlap in the membership of influential IGOs such as the WTO, UN and IMF but that significant involvement such as permanent membership and a high proportion of voting power is concentrated in the hands of superpowers such as the US and Russia. The US, the only current superpower, owns 17% of voting rights in the IMF, showing how it is able to influence global economic ^v decisions and policies in the favour of national ~~the~~ interests. Permanent membership of the UN Security Council which Brazil is excluded from, allows guaranteed access to decisions made on global conflict and peace-keeping operations. All ^{three} countries are members of the WTO which allows them to influence trade decisions and policies in their favour.

Mark / Level awarded	5 marks
Examiner commentary	<p>This answer makes the following extended points as illustrated by the mark scheme:</p> <ul style="list-style-type: none">• The idea that there is overlap in membership of IGOs on Figure 3 (1) and this concentrates power in the hands of some countries (1)• 17% of IMF voting rights in the hands of the USA supports national interests (1) and gives economic and political influence (1)• UNSC membership provides permanent access to decision-making (1) about conflict / peace-keeping (1) <p>Each suggested extended reason (AO1) is specifically linked to an interpretation of the information in Figure 3 (AO3).</p>

Question 6b Superpower Geographies

Assess the strengths and weaknesses of China as an emerging superpower. (15)

Mark scheme Question 6b

AO1 (5 marks)/AO2 (10 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Emerging superpowers (China) are on an upward trajectory in terms of global influence and power, but not yet at the level of 'superpower' e.g. the USA.
- Power and influence can be judged in terms of economic, military, cultural, demographic and geopolitical influence.
- A distinction is often made between hard and soft power mechanisms.
- Comparisons with other emerging / superpower countries can reveal the strengths and weaknesses of China.

AO2:

- Economically, China is the world's second largest economy and a major player in global manufacturing which has generated wealth and rising incomes; it is a key global leader in some sectors such as renewable energy – it tends to lack global brands but does have rising personal wealth although a fraction of the USA on a per capita basis; China's economic power might be judged as its most significant source of power.
- Politically it has a number of weaknesses in terms of a lack of internal democracy and openness which means it is viewed with suspicion by traditional western powers, plus a lack of willingness to act globally unless its direct interests are threatened – it could be argued that not getting involved is strength, allowing China to focus on its own development.
- Militarily it is some way behind the USA; it has a large standing army and air force, but lacks the global naval military reach of the USA, but is developing this – China is a nuclear armed power which gives it a seat at the 'top table'.
- Culturally China has much less global influence, even than countries such as India, although the Beijing Olympics in 2008 did give China a global stage; its lack of global brands means its cultural reach is relatively small.
- Some might argue the sheer scale of China economically and demographically means that its influence is large and almost bound to grow over time, assuming its economic strength continues to increase.
- A number of wider weaknesses could be considered including a rapidly ageing

population, major environmental issues and the possibility of regional conflict with its neighbours could all derail its progress as an emerging power.	
Mark	Descriptor
0	No rewardable material.
Level 1 1-4	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2 5-8	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3 9-12	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4 13-15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Example 6b

China is an emerging super power. It could be argued that our world is no longer ~~one~~ uni-lateral, but bi-lateral by the G-2 (China and USA).

The rapid industrialisation of China has led to them entering in the global market as a result of large manufacturing and exporting of goods. This can be seen with the exports of 'rare earths' which are used to make nuclear weaponry, phones... to the USA. This has largely increased their superpower status by gaining powerful political allies such as the USA and gaining a stronger economic growth through FDI. This is further emphasised by the fact that China's ~~work~~ large workforce is high-skilled and educated leading to important TNCs such as Apple and Samsung setting up there, increasing FDI levels. However, rapid ageing population is leading TNCs to move out into countries such as India who have a large demographic dividend, leading to reduced FDI and exports and ~~the~~ larger costs on health care and pensions reducing their economic power.

In terms of military power, China has been largely investing billions of dollars on the 'blue water' navy, which would allow China to have a greater global control and impose hard power over other countries. However,



it could be argued that it is yet a slight weakness as the USA has a larger airforce and navy army which allows it to be the 'world's policeman' such as in the South China sea debate where USA's military TNCs set on the area to increase sales, therefore reducing ~~the~~ China's military potential.

In addition, China is the world's most polluting country in the world seen by the 5 year reduction in life expectancy due to pollution. This has led to ~~be~~ a bad global image and reduced levels of tourism ~~to~~ reducing its power, ~~however~~, Nevertheless, they have been spending \$104 bn on solar and wind power (which is wise as much spending as the USA) and also ~~relocate~~ relocating their pollution levels to African countries through neo-colonialism relationships, which according to Frank's Dependency theory, helps China become a superpower due to the relocation of polluting industries and larger access to natural resources such as copper and oil leading to energy security. As well by having strong relationships with Africa, they have achieved to have a strong vote on the UN's decision making imposing a larger political ~~power~~ power.

(Total for Question 6 = 20 marks)

In conclusion, even though China has large weaknesses as an emerging superpower, such as large pollution levels, their recent investing in manufacturing and military navy has led to them having a global say on international trade and being able to impose hard power over other countries, leading to it ~~gaining~~ gaining allies and having a larger superpower status.

Mark / Level awarded	Level 4, 13 marks
Examiner commentary	<ul style="list-style-type: none"> • The first paragraph provides some focus; the use of the 'G2' idea is a good one but the terminology used is not quite correct (see below) • The second paragraph focuses successfully on China's economic strengths (exports, FDI inflows) but is also evaluative in the sense of recognising China's ageing population and rising costs for TNCs. • Military strength is explained, briefly, and there is some good terminology 'blue water navy' 'world's policeman' • China's relatively poor environmental image is explained as a weakness. • There is a sound conclusion with some evaluation.
Improving this answer	<p>This answer is on the cusp of L3/L4 but was given Level 4 marks as it explains a range of strengths and weaknesses, with some support.</p> <p>In the first paragraph the terms 'unilateral' and 'bilateral' are used, rather than unipolar and bipolar. This first paragraph could have set up the idea of 'pillars' of superpower status (economic, military, political, resources) and this would have provided a more focused structure. Stronger support in terms of data / facts about China's economic and military strengths would have helped.</p>

Question 7a Bridging the Development Gap

Using Figure 4, suggest why these goals were chosen by the United Nations as the 'top 3'. (5)

Mark scheme Question 7a

AO1 (2 marks)/AO3 (3 marks)

Award 1 mark (AO1) for each relevant point **and** further expansion marks for reasons/explanations linked to the data shown (AO3), up to a maximum of 5 marks.

- Poverty could be seen as the number 1 goal because of how widespread it still is globally (1) with 100s of millions still living on less than \$1.25 per day (1).
- Poverty might be seen as strongly influencing the other 2 goals shown (1), e.g. poverty causes hunger, so alleviating poverty should also reduce hunger (1).
- Health and wellbeing and / or hunger could be linked to the ability to earn an income (1) as a lack of either of these reduces capacity to work (1).
- The top 3 were put first because they might actually be achievable (1) and did improve under the MDGs so have been carried forward (1)
- More universally agreed than some (1) which are lower down (and not shown here) i.e. gender equality less important to some cultures. (1)

Example 7a

These goals were chosen as the top 3 because poverty is a serious issue that many people are suffering world wide and is a cause for the development gap. Reducing poverty will help more people acquire education and jobs to increase income per person in a country. Zero hunger is to reduce the number of people without food so to reduce death and also to ensure a productive working force. Good health and well being so more people are healthy and strong to work in also to ensure there is a higher life expectancy.

Mark / Level awarded	4 marks
Examiner commentary	<p>This answer makes a number of points, although they tend not to be extended points:</p> <ul style="list-style-type: none">• Cause of the development gap (1)• Reducing poverty will improve education and jobs / income(1)• Reducing hunger to make the workforce more productive (1) and therefore more able to work (1).
Improving this answer	<p>The first point could have been extended with the idea of the scale of the development gap, or the severity in Sub-Saharan Africa / South Asia.</p> <p>The second bullet is a little weak, as then causation is reversed: education and jobs will reduce poverty.</p> <p>The last point above shows the candidate has started to link the three goals; it misses the extension that if more people can work incomes would likely rise.</p>

Question 7b Bridging the Development Gap

Assess the strengths and weaknesses of aid as a way of reducing the development gap. (15)

Mark scheme Question 7b

AO1 (5 marks)/AO2 (10 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1:

- Aid is any assistance given from one country to another; it is often defined as Official Development Assistance (ODA) and can be in the form of money, loans, or technical help; debt cancellation and economic restructuring might be considered forms of aid (SAPs, HIPC).
- Aid can be bilateral or multilateral; in the latter case it is provided through organisations like the World Bank or EU; it is also provided by NGOs.
- Aid is often, but not always, focused on development, i.e. ensuring progress in terms of basic needs, economic and social development.
- Aid can be long terms development aid or short-term emergency assistance.
- There are other ways of reducing the development gap, such as trade and FDI.

AO2:

- Aid is essentially a transfer of resources from donor to recipient and on the face of it should even out global inequalities; critics argue that the net transfer of resources in recent decades has actually been toward the developed world.
- In many cases aid, both bilateral and multilateral, is used to fund economic development schemes of all sorts – water supply, energy, transport, etc. which can have a positive impact on modernisation and development – but often corruption and mismanagement delay projects or undermine their ultimate success.
- Bilateral aid in particular is criticised for being tied, i.e. dependent on the recipient using the aid as directed by the donor thus reducing its flexibility and value; this is also a criticism levelled at SAPs /HIPC in that it allows the aid givers undue influence to force their agenda on the recipient.
- NGO aid is often seen as more positive due to its smaller scale, greater transparency and focus on basic needs and individual communities – however it is patchy, may not reach many, dependent on NGO funding and may not lead to real development progress beyond meeting basic needs.
- Many could argue that trade and FDI are better ways to make countries progress economically, with benefits of a larger more modern economy eventually trickling

down to many people – as in the case of China; again, critics could argue this approach leads to greater wealth but also greater inequality.	
Mark	Descriptor
0	No rewardable material.
Level 1 1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2 5–8	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3 9–12	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4 13–15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Example 7b

Aid is when resources or help is provided to areas or people in need, and can come in many forms including foreign aid (aid from other countries) and multilateral aid and bilateral aid which is aid given within countries either directly from government (bilateral) or distributed through NGOs from the government (multilateral). This can have many strengths and weaknesses in reducing the development gaps.

One strength is that aid can provide a country with the resources it needs to fund development projects. Aid given by governments and other countries can help to fund different schemes that can be used to further development. For example, the AFCAD scheme in Uganda provided farmers with chicken feed to help them to have a healthier and better livestock, which can fund development of agriculture in the area. This is a massive strength of aid due to it being able to have a direct impact on the reduction of the development gap.

Another strength of aid in reducing the development gap is that it can indirectly affect the different aspects of the development gap and can help to close the gaps through the provision and increasing availability of facilities as well as



improving existing facilities. For example, a ^{scheme} ~~strategy~~ in Ethiopia led by an NGO provided more equipment for schools in the area as well as putting more children into schools to receive an education. This can help reduce the development gap as it can ~~quite~~ provide more people with better opportunities to further increase social and economic development in countries.

However aid can have weaknesses. In many cases, particularly with foreign aid, countries are required to pay back for the aid they received. The large amount that countries are often required to pay back can damage the economy of these countries and actually hinder the development of these countries as they become stuck in a cycle of receiving aid and constantly being overwhelmed by debt. This is a highly significant weakness as it can cause the development gap to expand.

Overall, aid has many significant strengths that can be hugely useful in reducing the development gap. However there can also be very significant weaknesses such as debt which can help to expand the development gap rather than close it.

(Total for Question 7 = 20 marks)

Mark / Level awarded	Level 3 / 12 marks
Examiner commentary	<ul style="list-style-type: none"> • It begins with an extended definition of aid, which is partially correct: multilateral aid is given by IGOs not NGOs. • This answer is conceptually good i.e. it shows good understanding, but it lacks support / evidence / examples in places to support the points made. • It uses the example of AFCAD, but at the top of the second side 'a scheme in Ethiopia led by an NGO' is vague and lacks depth. • Both strengths and weaknesses (debt) are considered, so there is some evaluation albeit at a general level.
Improving this answer	This is a sound Level 3 answer. It is focused on aid, there are examples in general terms and there is an evaluation of strengths and weaknesses. It needs more specific exemplar support, and a better grasp of terminology to achieve Level 4 marks.