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Examiners' Report
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GCSE Geography 1GB0 03

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Introduction

As might be expected, the second sitting of the paper demonstrated that centres have become confident both in terms of delivery of the content and in offering clearer guidance to candidates on how best to approach the assessment. There were far fewer instances of candidates being short of time, or needlessly over-writing when responding to short-answer questions. The majority of candidates produced 8- and 12-mark responses of an appropriate length.

Of the three multiple-choice questions, candidates had least difficulty with Q02(a)(i), which asked them to identify the most likely top predator in a food chain. They had most difficulty with Q03(b)(ii). Here, 0 marks was a more frequent outcome than 1 for this item, which tested candidates' ability to interpret correctly relatively complex data.

In their extended answers to Q04, many candidates displayed sound knowledge and understanding, and also demonstrated an ability to present articulate, and sometimes nuanced, arguments. There was pleasing evidence of synopticity in some candidates' answers too – for instance, those who applied Boserup's theory in Q04 to argue the case that Norway should continue to sell its oil and gas (on the basis that 'necessity' will mean carbon capture and storage technologies will soon begin to mature).

AO – Assessment Objective

SPGST – Spelling, Punctuation, Grammar, Specialist Terminology

Question 1 (a)

Candidates were directed to study Figure 1 in the resource booklet. This showed them a natural landscape in Norway, large parts of which were shown to be forested.

The question asked for the identification of three local factors affecting where forest can grow. Credit was given to any natural factors shown in the photograph or which could reasonably inferred from it, such as temperature and precipitation.

The majority of candidates attempted to answer the question in a creditable way and many gained full marks. Some physical/natural factors could not be credited because they were too vague, such as: 'The climate'. Human factors ('urbanisation') were not credited because Figure 1 showed a pristine wilderness environment.

A minority of candidates either misunderstood the question or did not read it carefully enough, resulting in no marks being awarded. Typically, they copied out material from the resource booklet's introduction ('Norway is a signatory of the Kyoto protocol', for instance).

(a) Study Figure 1.

Identify **three** local factors affecting where the forest can grow.

(3)

1 The presence of the river

2 altitude

3 Rock type

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Examiner Comments

This answer gains full marks by identifying three local factors shown in Figure 1, or which could reasonably be inferred from Figure 1.

3 marks

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Examiner Tip

The command word 'identify' sends a strong signal that very short statements, or even single words, should be sufficient for marks to be awarded.

Question 1 (c)

This was one of the most poorly-answered short-answer question on this year's paper.

It was based on the first section of content for this component, ie how the global distribution and characteristics of major biomes are influenced by climate.

Marks of 0 or 1 were usual. Either candidates were confused by what was meant by 'temperate' forest (many wrote instead about tropical rainforest or coniferous forest), or were unable to recall any specific information.

Benefit of the doubt could not be given reasonably to extremely vague statements such as 'it rains a lot' or 'middle temperatures' (which might equally apply to any number of different biomes).

As a result, many candidates received low marks. Credit was given, however, to 'relative' statements, such as 'not as much annual rainfall as the tropical rainforest' because there was at least some indication of knowledge about locations, places and environments (AO1).

It was pleasing that some answers provided accurate information such as 'deciduous leaf-shedding trees' or 'distributed near to coastlines in the mid-latitudes'.

(c) State **two** characteristics of the temperate forest biomes.

(2)

1 Deciduous trees

2 ~~Average~~ Distinct seasons

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Examiner Comments

This answer shows satisfactory knowledge of global-scale environments, as required by the specification.

2 marks

Question 1 (d)

The majority of candidates provided a satisfactory or good explanation.

The link between forest growth and the atmosphere is well-embedded in the school curriculum and few candidates showed any obvious knowledge gap.

Most candidates gained 1 mark by stating that tree growth is linked with 'less carbon dioxide' in the atmosphere.

Candidates gaining 2 marks were able to explain this, typically by making reference to photosynthesis and the 'taking in' of carbon dioxide. Thus, they demonstrated understanding of causality and systems.

Short-answer questions using the command word ‘explain’ typically require understanding of causality to be demonstrated.

It is good practice for candidates to insert 'because' into their answers to 2-mark ‘explain’ questions.

(d) Explain **one** way increased forest growth could affect the atmosphere.

(2)

It would decrease the levels of carbon dioxide in the atmosphere as the increased number of trees means there will be more trees and plants that will take in carbon dioxide for photosynthesis.

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Examiner Comments

This answer provides an explanation: the answer goes further than only stating that carbon dioxide is reduced when trees grow.

This response is well-structured: a simple knowledge statement is converted into a fully creditable answer thanks to the development ('...as the increased number of forest means that...').

2 marks

an increase if forrest growth would reduce the carbon dioxide levels in the atmosphere.

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Examiner Comments

In contrast, this response only receives 1 mark because no proper explanation is provided.

The candidate notes that forest growth is linked with reduced atmospheric carbon dioxide levels (1 mark) but no understanding is shown of why this might be the case.

This answer lacks any further development: note the lack of a connective word or phrase such as 'because' or 'due to'.

1 mark

Question 2 (a) (ii)

Most candidates were able to state an adaptation. Popular choices included white colour (camouflage), thick fur and tiny ears.

Question 2 (b)

The majority of candidates gained the single mark available for simple recall of the meaning of 'abiotic'. The simple statement 'non-living things' was sufficient.

A small minority of answers could not be awarded a mark because they were, unfortunately, self-contradictory – for example, the statement: 'Non-living organisms living in an ecosystem.'

(b) Define what is meant by the term **abiotic**.

(1)

Non living

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Examiner Comments

Despite its brevity, this answer defines the term correctly.

1 mark

Question 2 (c)

In this paper, a 4-mark question linked to a single figure is intended to function partly as a 'springboard' task.

This means that while some credit is available for analysis of Figure 9 (demonstrated through selective use of the geographical information provided – AO3), there is additionally an expectation that candidates will demonstrate geographical understanding of learned concepts or relationships as part of their answer (AO2).

In this question, Figure 4 provided plenty of geographical information about projected temperature changes and their effects on Norway's environment. It did not, however, contain any explicit references to *biodiversity*. The question was testing whether candidates could *apply* their knowledge and understanding of the concept of biodiversity to the geographical information they had been directed to study.

The best answers, at the top of the attainment range, had no difficulty in doing so. Candidates analysed Figure 4 carefully and found evidence, for example, of spreading parasites and increased incidence of wildfires. They took care when answering to stress what the impact might be on species *habitats* and *overall biodiversity* within the ecosystem.

In contrast, weaker answers, at the lower end of the attainment range, frequently copied out information from Figure 4 and asserted that animals and trees would die. Such answers showed limited or no geographical understanding of what is meant by 'biodiversity', typically gaining no more than 2 of the 4 marks available, as a result.

Some of the weakest answers provided very poor analysis and interpretation of Figure 4. Incorrectly, they deconstructed the meaning of the third text circle ('low temperatures currently make it difficult for some invading species to be established.') and argued that temperatures were predicted to fall in the future in Norway.

(c) Study Figure 4.

Explain two reasons why temperature changes shown in Figure 4 may threaten the biodiversity of Norway's taiga forest.

(4)

1 Higher temperatures could increase the chance of fires from lightening strikes. This could lower biodiversity as many habitats could get destroyed which could kill many species as they can't survive without a habitat.

2 A warmer summer will help parasites and pests to spread. This could also lower biodiversity as pests and parasites will bring more deadly diseases ~~with~~ which could kill species.

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Examiner Comments

This is a good example of an answer that provides a perfect blend of AO2 and AO3.

The source material has been analysed and interpreted correctly (AO3) to provide an answer that also demonstrates geographical understanding of biodiversity (AO2).

4 marks

1 There are more chances that the forest will catch on fire.

2 Pest and parasites might speaad a if there is a warm temperature

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Examiner Comments

In contrast, this answer makes use of the source material but does not explain how biodiversity is threatened, which is the focus of the question.

The assertion that 'animals die' shows no creditable understanding of the important bio-geographical concepts and relationships about which candidates are expected to know.

2 marks

Question 3 (a) (i)

A wide range of correct final answers was accepted due to the range of values candidates were permitted to extract from Figure 5. For example, it was acceptable to use a 1973 value in the range 5-7 million tonnes of oil.

Candidates were awarded 2 marks for the calculation of an acceptable percentage change when accompanied by some creditable data working or manipulation. Many candidates found this task difficult and did not know the correct procedure to follow.

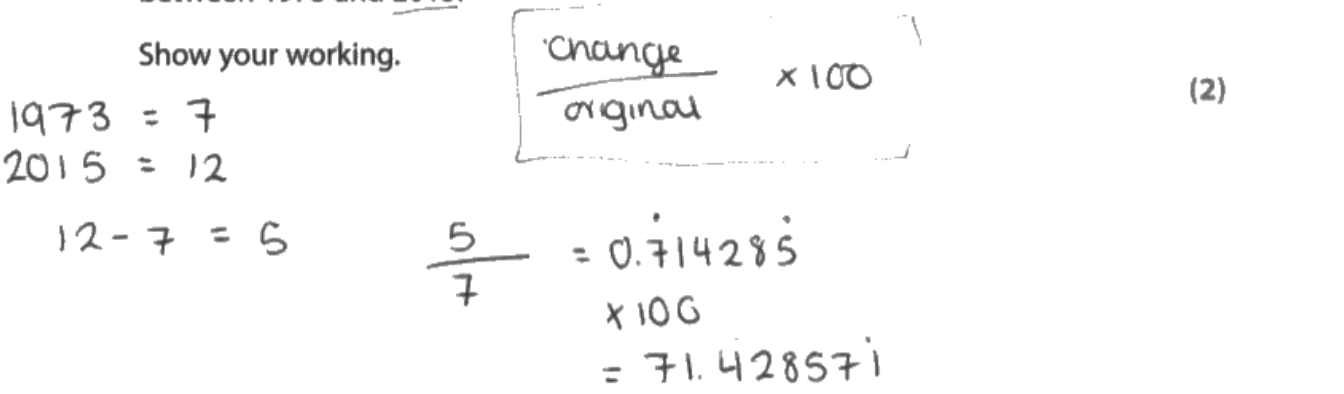
3 Use Section C (pages 7, 8, 9, 10 and 11) in the Resource Booklet to answer this question.

(a) Study Figure 5.

(i) Calculate the percentage change in the use of energy from HEP sources between 1973 and 2015.

Show your working.

(2)



71.4 %

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Examiner Comments

This candidate performs the calculation correctly and also provides appropriate working (using data in the acceptable range specified by the mark scheme).

2 marks

Question 3 (a) (ii)

The majority of candidates selected two pieces of evidence correctly, showing increased use of biofuels or carbon capture and storage. It was important for candidates to look carefully at the geographical information provided, rather than simply to write down their own preconceived ideas.

As a result, a small number of candidates stated the use of fossil fuels or oil had fallen over time since 1973, a view that was not supported by Figure 5. It was, however, correct to state that coal use had declined over time.

(ii) State **two** pieces of evidence indicating that Norway is trying to reduce its carbon footprint.

(2)

1 They are now using less coal.

2 They now use more HEP.

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Examiner Comments

This candidate provides two valid pieces of evidence from Figure 5, which support the proposition that Norway's carbon footprint may be reducing in size.

2 marks

Question 3 (b) (i)

This question was answered correctly by the majority of candidates.

Question 3 (c)

Like Q02(c), this question was focussed on a single figure; the explanation for which the question asks ideally should draw on a mix of supporting geographical information from Figure 7 (AO3), along with the candidate's own knowledge and understanding (AO2).

Here, candidates were able to analyse Figure 7 for evidence of Norway's:

- relatively small population size compared with the other countries
- extremely high Gross Domestic Product (GDP) per capita
- status as a major oil-producing country

By blending this information with their own understanding of oil supply-and-demand relationships (specification 9.3), many candidates were able to provide an explanation which gained 2 or 3 marks.

(c) Study Figure 7.

Explain why Norway exports a high percentage of the oil it produces.

(3)

Due to Norways low population of around 5 million, low percentage of the oil produced is used by the population of Norway so a large percentage is exported, this brings a high profit to Norway increasing its GDP.

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Examiner Comments

This answer gains full marks: the candidate analyses the information in Figure 7 and applies their own understanding of supply-and-demand economics in relation to oil.

3 marks

To make money from other countries, some countries will pay more as they don't have much or any naturally.

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Examiner Comments

In contrast, this candidate provides no creditable evidence based on analysis and interpretation of Figure 7 and receives only 1 mark.

1 mark

Question 3 (d)

In contrast to previous questions Q02(c) and Q03(c), this question asked candidates to study two figures from the resource booklet before providing an explanation.

Typically, questions that ask candidates to focus on multiple figures are testing their ability to *make geographical linkages and connections between the different information and issues sources they have been directed towards*. Here, for example, Figure 7 provided information about Norway's high GDP per capita.

Figure 8 contained information detailing how the sovereign wealth fund (SWF) makes a range of global investments, thereby generating social and other benefits for Norway's population. All of the marks available for this question were targeted at assessment objective three (AO3) ie the interpretation, analysis and linking of multiple information sources.

Answers at the top of the attainment range offered a selective analysis of the source information with a strong focus on social benefits. Additionally, a clear explanation was provided of how oil sales are used to maximise the social benefits via a range of strategic investments – thereby resulting in a very high GDP per capita.

Answers at the lower end of the attainment range showed poor judgement when using the information to explain social benefits. Typically, candidates chose to copy out some of the more vaguely-worded parts of Figure 8 (the oil pays for 'vital services') rather than the clearest examples of social benefits (support for an ageing population, or maternity and child care benefits).

Low-mark answers tended merely to reassert that the social benefits are paid for by oil sales (which the question stated), without using any of the supporting information about the SWF, its specific investments in global companies, or the high GDP per capita data shown in Figure 7.

(d) Study Figure 7 and Figure 8.

Explain **two** social benefits for Norway's people from selling its oil.

(4)

1 The money produced by oil sales ~~is invest~~ could be invested into Norway's welfare system, improving maternity and ~~welfare~~ childcare provision. This will vastly improve the quality of life for pregnant mothers and children as they will be ~~more able to afford luxuries such as~~ able to access better healthcare, which is a social benefit.

2 Due to the large export income for Norway in selling its oil, the country ~~can~~ this ~~has~~ receives a larger GDP so it can further invest in better education, improving literacy rates, which is part of the reason why Norway's HDI ~~is so big~~ value is so high.

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Examiner Comments

This answer receives full marks.

The candidate analyses Figure 8 and focusses on the clearest examples of social benefits shown there.

The funding of the benefits is then explained clearly, using supporting details and data from both Figure 7 and Figure 8.

4 marks

One way to approach this type of question is to make *explicit* references to both figures in the answer space.

For example, a candidate could write: 'Norway has a very high GDP per capita of $71,000 as Figure 7 shows. This explains why its government is able to make a range of investments in social services such as childcare, as Figure 8 shows.'

(d) Study Figure 7 and Figure 8.

Explain **two** social benefits for Norway's people from selling its oil.

(4)

1 Generous welfare system, Norway can afford the a generous welfare system for childcare and maternity Provision

2 Norway gets a ~~a~~ high HPI. ~~as it e~~ This benefits People as Norway ~~can~~ shows how good the quality of life is for People in Norway.

ResultsPlus
Examiner Comments

In contrast, this answer is less successful.

Although the social benefits have been identified there is no explanation provided of how these have been funded, beyond a restating of the question ('selling the oil').

2 marks

Question 3 (e)

This was the first of the three opportunities for extended 'data storytelling' provided by the examination.

The focus was a single data-rich figure (in common with the 8-mark questions included in previous examinations and sample materials). Figure 9 showed many different challenges for Norway, any of which offered opportunities for an assessment (probably carried out by reflecting on the possible severity, expense or timescale of the challenges).

Many candidates provided a structured response that demonstrated their skills (AO4) in using, interpreting and extracting quantitative and qualitative information.

At the upper end of the attainment range, candidates made wide use of the resource and referenced supporting information from Figure 9 carefully. It was pleasing to see many candidates making use of the map's scale in order to estimate how far offshore some of the oil developments were located. This allowed them to offer an evidenced assessment of the probable costs and difficulties.

At the lower end of the attainment range, candidates often performed this task quite poorly, however. For example, they wrote that Norway could come into conflict with neighbour countries yet did not go as far as identifying Russia by name. Candidates need reminding that grounding arguments in detailed evidence is an essential geographical skill.

Candidates were also required to evaluate the geographical information and issues in Figure 9 by offering, in turn, an assessment of each challenge about which they wrote. For example, some candidates reasoned that the challenges of developing new sources might reduce over time as technology is improved, prompted by necessity.

Other candidates argued that the challenges Norway faces in relation to sharing resources with Russia is at least potentially manageable through diplomacy.

At the very top of the attainment range, candidates sometimes:

- made *links* between the different challenges: for example, by arguing that climate change impacts on the Arctic Ocean could lead to more unstable, and therefore dangerous, conditions, with icebergs breaking away, which could then jeopardise offshore oil operations

- sustained a blended response of information and argument throughout the entire piece of writing (each new challenge was, in turn, briefly assessed at the end of each paragraph)

- either introduced, or concluded, the answer by offering an assessment of which was the greatest challenge shown in Figure 9. However, it is important that any such overview *actually reflects what has been written*. Some candidates described several challenges and then abruptly concluded that one of them was particularly important. However, no supporting evidence or argument had been provided that supported this viewpoint.

- environment → climate → drilling
- political → Russia
- social

(e) Study Figure 9.

Assess the challenges Norway faces in developing new offshore oil sources.

(8)

Norway faces environmental challenges in developing new offshore oil sources. There are concerns about oil exploration in shallow waters off the Lofoten Islands and this may be related to the fact that the vibrations produced by drilling can interrupt the communication between marine animals. Furthermore, increasing oil production will promote the combustion of fossil fuels which releases carbon dioxide into the air, enhancing the greenhouse effect. It is uncertain how rising temperatures will affect the Arctic Oceans and the delicate ecosystems it houses, possibly meaning that Norway faces resistance from environmental groups.

Norway faces political challenges as one oil field being explored is on the boundary between Norwegian and Russian territorial waters. This could lead to disputes over ownership of the oil field which could escalate into more violent forms of conflict.

Norway faces technical difficulties in attempting to get oil from under deep water. This technology is expensive and may detrimentally impact Norway's GDP per capita if more money is needed to invest in technology. Furthermore, using deep water oil sources may be more dangerous.

In conclusion, I believe that Norway's most serious challenge is the environmental challenge because using more oil fields can have a negative impact on the global

environment due to the greenhouse effect - it won't just impact on Norway. Drilling can also have a negative impact on marine animals and ecosystems which are already undermined by global warming. However, political challenges are also important due to the fact that they have the potential to escalate the most

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Examiner Comments

This answer provides a sustainable blend of evidence and argument, thereby meeting both the AO4 and AO3 assessment criteria admirably well.

Note how the final assessment (that environmental challenges are most important) is supported: the candidate notes that drilling will place strain on ecosystems *already under stress from climate change*.

Here, the candidate is establishing *logical connections between different elements of information* in order to make a case – excellent to see.

Level 3

8 marks

In some of the new offshore oil sources the challenge Norway faces is being able to get to the oil. For example they have technical difficulties to overcome in order to access and use deep water oil sources. Another problem is disputes over who has the right to access the areas between them and Russia. As some oil sources are on both sides of the bourder so that will lead to political arguments between neighbouring countries. In some areas there is environmental concerns as oil exploration in shallow areas near the coast could cause flooding and could kill the fish if there was a oil leakage. However it could also lead to some benefits in terms of social and cultural benefits for the local people. Jobs could be created as well and therefore local people can earn more money.

Overall there is a lot more challenges than positives as there is many things that need to be overcome.

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Examiner Comments

In contrast, this answer is over-reliant on information extraction skills (AO4) and shows limited ability to evaluate the information (AO3).

The best fit for an answer such as this is the lower part of the middle mark band.

Level 2

5 marks

Question 3 (f) (i)

Most candidates gained at least 2 marks on this question, with many achieving full marks.

A range of energy efficiency strategies was suggested, such as more efficient types of light bulb or phone-charging devices: these allow the same service to be delivered but with a lower input of energy needed. Candidates who made references to specific types of fossil fuel (oil, coal, gas) were likely to gain additional credit.

Benefit of the doubt was given to candidates who were, at times, insecure on the strict distinction between energy efficiency and energy conservation. Thus, credit was also given for suggestions such as 'turning down the thermostat' – which, it could be argued, is an instance of conservation, rather than efficiency, because an inferior service has been delivered (a cooler home) rather than exactly the same service (a very warm home).

(f) (i) Explain **two** energy efficiency strategies that can help fossil fuel supplies last longer.

(4)

1 Houses can use insulation in the walls. This reduces the Fossil fuels needed to generate the power for the houses as less energy is wasted and can escape. or This means once the house is heated it will stay warm.

2 By Carpooling less fossil fuels will be used for transport as instead of 2 people making the same journey in 2 cars they use 1 which uses ½ the fuel. This means oil will last longer as less is used for transport.

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Examiner Comments

This answer has two fully-reasoned causal statements.

The ideas are developed and also make specific reference to different types of fossil fuel (oil).

4 marks

1 Using other renewable strategies like HEP and wind turbine farms could provide people with energy, and therefore significantly decreasing fossil fuel consumption.

2 Not only that, but encouraging people around the country to do basic things like reducing heating use, switching lights and electrics off after use, will significantly allow fossil fuel supplies to last longer.

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Examiner Comments

This answer is more simplistic.

Two simple explanations are provided, neither of which is developed.

2 marks

Question 3 (f) (ii)

In this, the second extended 'data storytelling' exercise, candidates were required to make extensive use of qualitative data from Figure 10. Their task was to offer a reasoned assessment of the economic costs and benefits for local Lofoten Islands people of oil resource development.

At the upper end of the attainment range, typically candidates drew on four or more of the quotations in order to provide a balanced answer that was equally focussed on costs and benefits. The best answers also maintained a sustained focus on *economic* impacts for *local* people, such as the fishing community or tourism entrepreneurs.

As part of their evaluation of the information and issues (AO3), high-achieving candidates often wrote critically about the possible timeframe and sustainability of any benefits. Some excellent answers provided convincing evidence that candidates were 'thinking like geographers' because of the way their assessment made use of varying geographical *scales*. For example, there was recognition that revenues from local-scale Lofoten Island oils would feed into a national-scale SWF and be invested in ways that maximise revenue. Subsequently, it would be redistributed back to local-scale communities, such as Lofoten islands people.

It was very pleasing to see GCSE-level candidates operating at such a sophisticated level ie demonstrating an awareness of intersecting geographical scales of governance.

In contrast, answers in the middle and lower end of the attainment range tended to describe some costs and benefits without offering anything in the way of real evaluation. Performed correctly, the command word 'assess' demands evaluation. These candidates often did not maintain a sustained focus on *economic* impacts, typically veering into environmental effects. Alternatively, considering impacts on a *local* people, frequently answers digressed into a description of national- and global-scale impacts of
oil use.

(ii) Study Figure 10.

Assess the economic costs and benefits for local people of developing this oil.

(8)

One economic cost is the detriment to local economy. This is shown by the fisherman, who's job will become redundant due to the killing of fish as a result of oil development. Many fisherman will find it harder to do their jobs, and will make less money to contribute to the local economy. Although this is a problem, the development of oil creates many jobs, which can boost the local economy.

Furthermore, the ~~tourism~~ income from tourism would decrease as Lofoten is described as the 'Amazon of Norway' showing its vast diversity and tourism potential. Oil production would destroy the biodiversity, and therefore, hotel owners and workers will not reciere any income as visitors are no longer interested. Both ~~the~~

of these factors effect the economy locally, ~~and~~ however the jobs created through oil would counter this slightly.

There is a large-scale (national) benefit of oil development, as it brings in wealth (after exports) which can be used with the Sovereign Wealth Fund to invest money and improve the lives of people around the whole country. This is agreed with by the government ministers and norwegian pensioners. The oil development brings national economic benefit through exports, which can be invested into ~~making~~ services, creating even more jobs and boosting the overall economy.

To conclude, the development of oil is ~~hugely~~ costly for local people, as it causes loss of jobs. ~~However~~ This ruins the local economy in order to develop the country. However, they will still recieve some benefits through the Sovereign Wealth Fund

(Total for Question 3 = 33 marks)

TOTAL FOR SECTION C = 33 MARKS

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This high-achieving answer provides a sustained blend of information and argument, thereby meeting both AO4 and AO3 criteria well.

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Examiner Tip

An answer such as this, which is focussed on costs and benefits, might ideally conclude with:

(i) an overall assessment of whether or not, on balance, the overall costs outweigh the benefit, or

(ii) an assessment of whether or not any particular costs and benefits are especially important to think about, and why this is the case

8 marks

Question 4

As in previous papers, the final extended question offered candidates an opportunity to synthesise all of the information in the booklet and provide a reasoned argument about what should happen next, based on the three options provided.

Option two was, unsurprisingly, a very popular one because at face value this was the clearest example of benefitting all ways. Thus, candidates operating in the middle of the attainment range quite easily were able to devise a rather basic argument that using up existing oil would provide money for Norway, whilst stopping new exploration would protect the environment. In many cases, though, candidates were unable to demonstrate a more developed understanding of the issues (as might be expected for a Level 3 answer).

In contrast, the other two options do not obviously appear to be 'compromise' solutions at first glance. However, GCSE geography candidates with a secure understanding of the issues and concepts that underpin this paper, were able to produce a reasoned argument. They showed that either of these two less popular options could, in fact, deliver the best *long-term* outcome for Norway's people and its environment *providing certain conditions were also met*.

Option 1, for example, was seen by some candidates as an opportunity for Norway to become a world leader in renewable energy, whilst also taking a leading role in the international community. The clear implication was that this might deliver an environmentally and economically promising future for Norway. This would benefit people in all kinds of important ways, such as improved collaboration with other countries.

Similarly, Option 3, although appearing a poor choice at first glance, could, in fact, offer the best future providing, say, part of the profits were reinvested in technologies such as carbon capture and storage. Ultimately, this would help address pressing environmental challenges.

At the top of the attainment range, there was evidence that candidates were well-trained in how best to produce a blended answer combining information from the resource booklet (AO4), prior knowledge and understanding (AO2), and issues evaluation and judgement (AO3). Candidates who were able to balance these elements in a sustained way were more likely to reach the highest level mark band.

4 Study the **three** options below for Norway.

Option 1: Set an example to other countries by stopping oil production altogether.

Option 2: Use up existing oil resources but stop looking for new oil fields.

Option 3: Continue to explore and develop all new oil fields.

Select the option that offers the best future for Norway's people and its environment.

Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(12)

Chosen option 2

Option 2 offers the best future for Norway's people and the environment because the profits made by exporting existing oil can be reinvested into the development of renewable energy sources which will have positive long term effects for the people and the environment. This is because it provides high paid jobs in the quaternary sector and means that no further habitats are damaged by new oil fields being developed. It will also minimise the damage done to the tourism and fishing industries because there will be no oil spills close to fishing areas such as the Lofoten Islands and the same number of tourists will continue to visit because no further damage is done to the scenery. Option 2 will stop pollution

debates over the ownership of oil fields because Norway will not develop any new oil fields such as the one in Figure 9 that is on the boundary between Norwegian and Russian territorial waters. This reduces the chances of people becoming involved in conflict

However, some environmental damage will be done by option 2. This is because existing oil resources will continue to be exploited and the combustion of oil enhances the greenhouse effect due to the production of carbon dioxide. This will negatively impact the environment as temperatures will rise and it is uncertain what impact this will have on sensitive arctic ecosystems, as shown in Figure 9. Another argument against option 2 is that research into renewable energy many not be enough to support the SWF because, as shown in figure 10, the Sovereign Wealth Fund requires 'as much oil as possible to maintain the fund'.

Whilst option 1 protects the environment by stopping oil production, it may cause the Norwegian economy to struggle because figure 7 shows that Norway is a large exporter of oil. This means that there will be no money to invest in renewable energy technology. Option 3 will boost the Norwegian economy and therefore quality of life but is not sustainable because oil is a finite resource and will eventually run out. This means that Norway will have no backup option of energy security once all oil fields have been exploited. Option 3 also encourages environmental damage by promoting the use of fossil fuels across Norway and the rest of the world.

In conclusion, I believe that option 2 is the best option for Norway's people and environment because it allows Norway to make sufficient profits to invest in sustainable renewable energy sources. Due to Norway's high HDI, shown in figure 8, Norway already has a good education system making it likely to become a pioneer in renewable energy technology. It can then export this to other countries to boost the economy and maintain the high quality of life that its people enjoy. In the long-term, it will reduce emissions protecting the environment. However, option 2 (its current exports lead to 500m tonnes of CO_2 emissions) will encourage the use of fossil fuels to a certain degree which will badly impact the environment, and it will likely lead to a loss of jobs in the oil sector, making many people unemployed and having a negative impact on their lives.

ResultsPlus
Examiner Comments

This is an example of an excellent response to Q04.

This well-structured answer provides a perfect blend of resource booklet information, prior knowledge and understanding, and evaluative decision-making.

Level 3

12 marks

SPGST: 4 marks

Total: 16 marks

Chosen option 2

Option 2 still allows the SWF to fund important matters of Norway without finding new drills. This still gives the people over "9,000 companies part owned by the SWF", which increases their standards of living and provides new jobs for a range of people. This is the main reason for option 2.

Stopping the search for new oil fields further stops the environmental damage of oil extraction; such as habitat

destruction in "the shallow coastal water". This saves the habitants and the biodiversity of Norway. Another reason is the benefit of local people. Local fisherman can still catch fish without oil killing them. This is very important as it takes into account the local people's opinions too, as seen in figure 10 when the fisherman gives his opinion.

However, there is a weakness to option 2. That is - once the oil reserves have run out, the SWF can no longer fund the infrastructure and "excellent maternity and childcare provisions" so the population will have to go without these as oil production will have stopped. This is a very strong weakness, but does not outweigh the benefits, as this can be fixed in the future by other government schemes.

Option 1 was not chosen as a sudden stop in production would potentially crash the Norwegian economy and would stop the

SWF funding all together. This would decrease the standard of living for everyone. Option 3 was not chosen as (as shown in Figure 9) many people in the area of Hammerfest are at risk of "cultural costs" if new oil fields are continuously found and exploited, which could decrease the tourism in that area. This would affect tourism-related businesses and the local people that work there, as it would put them out of business.

ResultsPlus
Examiner Comments

This candidate provides a sensible answer, which arrives at a judgement that is partly supported with evidence from the booklet and prior understanding. It could not be characterised as a 'well-developed' answer.

Note that there is less secure use of the rules of grammar and spelling than in the previous example.

Level 2

8 marks

SPGST: 3 marks

Total: 11 marks

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- Candidates should be reminded that *grounding arguments in detailed evidence* is an essential geographical skill (see comments for Q03(e), above)

- The command word 'identify' sends a strong signal that very short statements or even single words should be sufficient for marks to be awarded

- Typically, a 2- or 4-mark 'explain' question whose focus is a *single* figure will require candidates to create a 'blended' answer: this makes use of supporting geographical information from the figure (AO3) *and also* the candidate's own knowledge and understanding (AO2) (see comments for Question Q02(c), above)

- Questions that begin with a statement such as 'study Figure 7 *and* Figure 8' are typically designed to encourage candidates to create *linkages and connections* between the two information sources, in order to create an explanation (see comments for Q03(d), above)

- In 8-mark questions, which use the command word 'assess', candidates will not automatically gain a top-level mark simply by choosing one challenge/impact/factor (possibly at random) and then asserting that it is more important than the others; additionally, they must provide an answer *whose content supports this assessment*

- In Q04, very knowledgeable candidates will sometimes provide an excellent evaluation of the issues but neglect to use supporting evidence from the resource booklet. Candidates need clear guidance that there should be *sustained* use of information from the resource booklet throughout their final answer

Grade Boundaries

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

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