2014 Examination Report

VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

State Government Victoria

2014 Geography GA 3: Written examination

GENERAL COMMENTS

Students generally performed well on the 2014 Geography examination. In particular, most students seemed to be able to complete the examination in the time allocated and attempted most or all of the questions. Questions were generally answered in a succinct, well-expressed manner. The general depth of understanding and application of knowledge was impressive.

Areas of strength

- Many students wrote in-depth responses that showed understanding of the topics studied, and used relevant geographic language and conventions.
- Mapping skills were, on the whole, excellent, with detailed, well-presented world maps to illustrate a global phenomenon.
- Local fieldwork provided background for some very good examples of spatial interaction, change over time and sustainability of a resource.
- Many students were able to demonstrate good knowledge and understanding of case studies, often including excellent statistics and pertinent comments to support their discussion. This was evident in various sections of the paper, including the discussion of strategies for improving the health of the Murray-Darling Basin; the firm grasp of population policies in different countries; global phenomena; and relevant case studies and data to support an understanding of effects on people and the environment.
- Generally, the case studies used were current and relevant.
- High-scoring students understood the instructional terms 'explain', 'describe' and 'discuss', and generally made good use of examples and quantitative data to support their contentions.

Areas of weakness

- Students not reading the key words in questions and misunderstanding instructional terms such as 'compare' and 'evaluate' is a concern that has been raised in past examination reports. Question 4b. ('To what extent') proved to be quite difficult for many students.
- A number of students did not read the questions carefully and, therefore, did not address all aspects of the question, which meant they could not obtain full marks. For example, in Question 3d., many students responded to each bulleted point on population but then failed to make a comparison or link.
- Low-scoring students presented prepared answers to questions about factors, impacts and responses, but neglected to modify their answers to address the question.
- Many students had difficulty understanding key terms such as 'sustainability', 'distribution' and 'spatial interaction'. 'Spatial interaction' was confused with 'movement' by many students. 'Sustainability' seems to be a confusing concept for some students. They knew the definition of the term but could not apply it to the question. Question 1a. was misunderstood by many students. Many also misused terms to describe a distribution pattern.
- Inaccuracy and an inability to interpret the information on the maps and the photograph were problems experienced by many students. Too many students did not understand the term 'annotate'.
- There was a lack of detailed evidence to support some answers or inappropriate examples and outdated case studies were used. There was also a lack of understanding of the geography of the Coorong and Lower Lakes. Many students did not refer to specific evidence of fieldwork, as required in Question 2f.
- Many students appeared to ignore the link between questions or failed to see that the focus of the question had changed between different parts of the question.
- Although students' map work was generally done well, they need to think more carefully about the title of their maps as this influences how they respond to subsequent questions. For example, a map titled 'Distribution of Deserts and Desertification' would require the student to think carefully before discussing the causes of deserts or desertification in subsequent questions.
- With regard to analysing topographic maps, students are encouraged to practise basic skills such as the use of cardinal points/compass directions, including intermediate points (north-east, south-west, etc.) to describe direction, the application of scale to calculate distance and area, the use of grid references and grid square references to locate features, and careful use of a legend.

SPECIFIC INFORMATION

Note: Student responses reproduced in this report have not been corrected for grammar, spelling or factual information.

This report provides sample answers or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding errors resulting in a total less than 100 per cent.

Question 1a.

Marks	0	1	2	3	4	5	6	Average
%	7	10	16	22	19	14	12	**3.3**

Common errors included:

- not referring directly to the map and not clearly describing the location of the water resource within the map extract
- failing to use direction in the answer
- not describing the water resource in relation to a named feature on the map (for example, Mansell Road).

Most students were able to recognise the basic patterns shown on the map, such as linear and random or scattered distributions. More able students could locate the water resource within the map extract and then state its relationship to other features, such as vineyards and orchards.

High-scoring students were precise in locating the water resource, described its pattern and also referred to specific features near the water resource, for example:

- stating Mirrool Creek is in the south-east, describing its location in relation to Widgelli using compass direction terms accurately or the accurate use of road names
- stating that the Main Canal ran through the township of Griffith, providing a description of the general linear shape using accurate compass directions and, in some cases, use of grid references
- stating that the dams were randomly distributed or unevenly distributed across much of the area, and noting exceptions like the McPhersons Range and further noting their location in relation to features, more specifically, named roads.

The following are examples of high-scoring responses.

Water resource 2 – Main Canal
The Main Canal flows for 15 km south west in a broad arc in its lineal constructed channel from the central north of the area, then west through the centre of Griffith and then north west and off the area depicted by the map at GSR0708.

Water resource 3 – Dams
Dams are distributed widely across the area surrounding Griffith. These water resources are often distributed linearly along roads. For example, there are 19 dams with 250 m of Mansell Rd. There are a few exceptions, particularly in the area surrounding Widgelli where there are fewer roads, and in the town of Griffith, where the land is densely populated.

Question 1bi.

Marks	0	1	2	Average
%	11	41	48	**1.4**

Most students understood why wetlands are an important water resource of the Murray-Darling Basin. However, while they typically said that wetlands provide a healthy environment/habitat and a home to important species, flora and fauna, many students gave no elaboration or example.

The following is an example of a high-scoring response.

Wetlands in the MDB are important as they provide a home for the natural flora and fauna e.g. the water couch, straw necked ibis and magpie geese in the Macquarie Marshes.

Wetlands are an important water resource for the environment of the MDB. They are an important part of the ecosystem for many flora and fauna, in particular, water birds. Wetlands filter and clean the water to ensure the health of the rivers and ecosystems.

Question 1bii.

Marks	0	1	2	3	Average
%	12	22	25	40	**2**

This question was generally well answered. Most students were able to outline that there had been conflict over wetlands in the Murray-Darling Basin. A popular example was the Barmah-Millewa wetland, but a number of other examples were used just as effectively. Many students were able to identify conflicting groups within the Murray-Darling Basin but neglected to look at the instructional cues in the question, where first and foremost they had to explain why the wetlands were a source of conflict. As in previous years, some students seemed to struggle with identifying a specific organisation or group and merely suggested that 'environmentalists' or 'farmers' were fighting over water use.

The following are examples of high-scoring responses.

Water resources in the MDB wetlands are a reason for conflict due to conflicting views and great demand on water use. The Barmah-Millewa forest wetland supported by Landcare needs environmental water to support its River Red Gum population and vast array of flora and fauna. Whereas Deniliquin rice farmers argue that the same water should be used to support their $2 billion SunRice industry and their associated livelihood. Landcare want greater environmental flow, whereas the rice farmers want more water for their industry.

Often conflict occurs between environmentalists and agricultural users of water within a wetland. For example, Barmah Forest located on the border of Vic and NSW, is both RAMSAR listed and an iconic site. Environmental flows play a vital role in managing the health of the ecosystem. Conflict in the Barmah Forest has arisen between environmental groups such as the Victorian Environmental water group arguing that the 236 bird species will be lost if the environmental flows are not increased whereas the downstream users of the Murray River such as the Mildura citrus crop growers argue that their crops and income and jobs are at risk with reduced amounts of water.

Question 1biii.

Marks	0	1	2	3	4	Average
%	17	16	20	21	26	**2.2**

Resolutions were quite well understood, although opinions were not always clearly supported with data, dates and chronology or outcomes for the conflicting parties.

The following are examples of high-scoring responses.

In 2003, the Living Murray Initiative was established to attempt to regain water allocations from local farmers and restore the water to environmental flows. They dedicated $500 million to restore 500 gL annually from the surrounding irrigators. They have been successful as 485 gL has been recovered and the policy is now in Stage 2. The environmentalists are pleased with the progress however they believe a further 4000 gL needs to be restored as environmental flows to maintain a completely healthy wetland. At the same time, the rice farmers are dissatisfied with this resolution as obviously this will have a negative impact on their rice growing as rice is heavily dependent on water and many farmers believe that with reduced water allocations their industry will no longer be viable.

The NSW Inland Rivers and Environments Restoration Program has been effective to an extent through water buy-backs from willing sellers. The program itself was socially accepted as water was only bought from willing sellers. It was not however economically feasible as the governments spent approximately $1.8 million on the buy-backs. Therefore this was only a short term solution and cannot be maintained in the long run. Overall it was fairly effective at reducing the conflict between the environmentalists and the cotton growers in Dubbo as approximately 40 000 mL of water was bought back and of this approximately 20 000 mL flowed straight to the marshes. However, only 80% of the marshes was flooded not the entire wetland. Therefore still more needs to be done to fix the conflict and to protect the marshes from degradation.

Question 1ci.

Marks	0	1	2	Average
%	16	40	44	**1.3**

In their definitions of management strategies, most students could successfully describe and define the strategy selected, but the highest-scoring responses included an example. When describing water-linked infrastructure, for example, high-scoring responses first described the sort of infrastructure used in the Murray-Darling Basin and then provided examples of infrastructure, such as lined channels, dams and drip irrigation as opposed to overhead irrigation to use water more efficiently.

Question 1cii.

Marks	0	1	2	3	Average
%	14	22	31	33	**1.8**

The impact of the selected strategy named in part ci. was often stated, but it was not always clear if it was a strategy that affected people or the environment. The highest-scoring responses justified the impact of the management strategy with quantification, examples or a time scale.

The following is an example of a high-scoring response.

> *In the Coorong and Lower Lakes at the mouth of the Murray in South Australia barrages have been installed between islands. The five barrages were originally made in the 1940s to decrease salinity in the Lower Lakes and lower Murray, and to stabilise water levels. However this has had a negative impact on the environment, especially during the millennium drought in the 2000s. As the Coorong was blocked off from the Lower Lakes and the sea when the Murray mouth closed over, it became 5 to 6 times saltier than the sea. Lake Albert and Lake Alexandrina couldn't get any water from the Coorong due to the barrages and became 0.6 m lower than sea level exposing acidic soils which harmed plants and animals.*

Question 2

Although many students were able to answer this question well, there were several concerns: poor reference to fieldwork, poor understanding of the term 'spatial interaction' and questions not being read carefully.

Questions 2a., 2b. and 2e.

2a.

Marks	0	1	Average
%	46	54	**0.6**

2b.

Marks	0	1	Average
%	45	55	**0.6**

2e.

Marks	0	1	Average
%	17	83	**0.9**

Overall, students' understanding of spatial interaction was poor, with many focusing on 'movement'. Many students did not clearly annotate their example of spatial interaction on the sketch outline and it was unclear which item on the outline the student was referring to. More students successfully identified a management strategy.

Responses to part. b frequently reiterated what had been stated in part a. and this information was often incorrect.

Students were required to name two components on the sketch outline that were spatially interacting with each other. The majority of students identified the beach and the housing/hotels or the ocean and the rock wall/groyne as components of spatial interaction in the area, labelling these on their sketch outline and inserting a linking arrow between them. The outcome or consequence of the spatial interaction was required.

The following are examples of high-scoring responses to Question 2b.

> *Spatial interaction occurs between the beach accommodation and the beach, as people travel from their accommodation to the beach to swim/relax.*

> *The water/ocean moves as its waves meet the beach, an example of spatial interaction, as it's the changing tides that are eroding the natural coastline and washing the beach away.*

Students must take care not to imply or assume an interaction consequence; for example, saying that spatial interaction occurs between the components 'to use the beach', 'to get to the beach' or 'to go to and from' does not adequately illustrate the nature of the interaction. Most students used the T-shaped groyne or seawall as their example of management (part e.) and annotated their sketch with a comment such as 'management strategy – groyne built by hotel

owners to prevent erosion and preserve the beach by stopping the ocean waves having such a large impact on the beach'.

Question 2c.

Marks	0	1	2	Average
%	20	38	43	**1.3**

Responses to this question tended to display a very satisfactory understanding of spatial interaction. Many students were generally able to identify components of the local resource but lacked an understanding of the consequence of the interaction. Some students quoted statistics from fieldwork data to support their response, and others drew mud maps of their resource in their responses to parts c. and d. This was not necessary, but effectively demonstrated their understanding by illustrating their example.

The following are examples of high-scoring responses.

At Kenwith Park Newtown Geelong, there is a strong spatial interaction between the tennis club rooms and the tennis courts as people enjoy socialising in the tennis club rooms after matches. For example, the collated survey results stated that 37 out of 45 people who use the tennis courts then socialise with others in the tennis club rooms.

In Toolangi State Forest the spatial interaction occurs between the trucks in the coupes which take the timber that has been harvested from the Mountain Ash trees, onto the road to the Hayfield Mill, where it is then created into furniture to be sold in large retails stores in Victoria like Bunnings.

Question 2d.

Marks	0	1	2	Average
%	5	38	57	**1.5**

Students had to clearly describe a change over time in their local resource. Stronger answers explained what the resource was like originally and made a comparison between the resource then and now. Many students discussed how infrastructure had been added, renovated or upgraded, but higher-scoring students made comparisons between the original state and that after change had occurred.

The majority of students had a good understanding of change over time. Some students gave brief answers. Students were able to use geomorphology or geology, as well as human changes, to answer this question.

The following are examples of high-scoring responses.

Cape Woolamai was once an island situated to the south east of Phillip Island. However, over time due to the deposit of sand and beach materials, a tombolo has formed attaching Cape Woolamai to Phillip Island. The tombolo has been stabilised by vegetation and is now 30m above sea level.

Prior to 1990 the Melbourne Docklands was an industrial wasteland, derelict and falling apart. Places Victoria created a regeneration plan for the next twenty years. Now the Melbourne Docklands is a business hub with brand new offices, apartments and shops, changing the Melbourne Docklands from an industrial eyesore into a thriving, modern inner city region.

Question 2f.

Marks	0	1	2	3	Average
%	6	21	45	28	**2**

This question required students to refer to their fieldwork data, for example, surveys and interviews or simple observations, but few students specifically did this. Much was implied, with little reference to data collected in the field. Some management strategies were well expressed and very well evaluated.

Many students wrote about the sustainability of the strategy and not of the resource. Careful consideration of the question is important. Most students understood the term 'sustainability' and were able to make a statement indicating successful application of this term.

The following are examples of high-scoring responses.

Lower Eltham Park is likely to be highly sustainable as a result of the walkways and footpaths being implemented. It was noted during the fieldwork and visit to LEP on a Sunday that a mothers group with babies and 4 families were using the walkway at one time. The footpaths will ensure that soil erosion and compaction does not occur at LEP.

As a result of the 'Take in Take out' management strategy, the Tarra Bulga National Park has become a more sustainable resource as it is now able to be preserved for the use of future generations as it is no longer polluted by rubbish that used to be deposited in the park. This was clearly evident while walking through the park, where there was minimal rubbish observed along the footpaths that have been placed in the National Park. Because the 'Take in Take out' management strategy is taking place, the national park will now have soils that have not been polluted by rubbish that is otherwise deposited frequently by visitors (they must now take it home). As a result of this, native species such as Southern Sassafrass and Myrtle Beech will thrive for longer and be there for future generations.

Data collected in the field indicates that 86% of people commute to the Melbourne Docklands via public transport. 59% of these people are not satisfied with the frequency of public transport services such as trams. Increasing the frequency of trams will ensure that the Melbourne Docklands is easily accessible helping to sustain the economic and social areas of the region as people continue to visit, spend money and use community facilities in the Dockland precinct.

Question 3a.

Marks	0	1	2	Average
%	38	27	36	**1**

Many students did not know the definitions for 'crude death rate' and 'age-specific death rate'. Some students took 'crude' in 'crude death rate' to mean 'premature' deaths, from causes including murder and violence. Others seemed to think that these were deaths that were not predictable. A third misconception was that the statistics were not accurate.

Most students attempted to make the two terms different so the age-specific rates were seen as expected and natural. Both definitions were often lacking 'per 1000'.

High-scoring responses noted, for the two maps at Figures 3a and 3b, simple definitions of each metric or similar ones that could have been easily adapted for the response to this question. Crude death rate refers to the number of deaths per 1000 of the total population of a country in a year, whereas age-specific death rate refers to the number of deaths per 1000 in a specific age group, such as five years and under, 20–29 year olds or over 70 years. Age-specific death rate is slightly different from infant mortality rate, which is the number of deaths of infants in the first year of life per 1000 deaths.

The following is an example of a high-scoring response.

Crude death rate is the overall amount of deaths occurring in a country per 1000 people whereas age specific death rate is the amount of deaths in a specific age bracket per 1000 within that group.

Question 3b.

Marks	0	1	2	3	4	5	Average
%	7	7	12	21	19	34	**3.4**

Students who correctly answered this question had thoroughly studied the two maps and had planned their response to agree, disagree or offer qualified remarks. The highest-scoring responses used quantification and understood the degree of spatial association. Some students simply gave separate descriptions of both distributions and could therefore gain no marks. Other students who did not use the instructional term 'discuss', provided some viewpoints but spent more time providing reasons for the distribution. Reasons or an explanation for the patterns were not required.

In analysing the amount of data provided, some students were able to use the simplifying strategy of combining the five groups of infant mortality rate and crude death rate into three groups, high, medium and low, which permitted more manageable comparison.

Students were not expected to describe the whole global pattern. This question was quite well managed by a majority of students. Students demonstrated knowledge of individual nations as well as of the regions of the world; the latter helped by Figure 3c. Having said this, some students misnamed regions or misspelt place names.

The following is an example of a high-scoring response.

In some regions of the world the distribution of crude death rates (CDR) and infant mortality rates (IMR) are similar. For example, the region of sub-Saharan Africa displays high infant mortality and high crude death rates e.g. the Central African Republic had a CDR of 12–16 and the IMR of more than 75. They are also similar in South America where the IMR of 10–24.9 for most countries correlates to the CDR of 4–7.9. Yet the measures are not always globally similar. The IMR in Western Europe is almost entirely less than 10 yet the CDR in Italy, Portugal, France and Spain is 8–11.9, relatively higher than their IMR. These

exact figures are also found in USA and Canada. Moreover Russia has an IMR of less than 10 and a CDR of a high 12–16. Overall the distribution of CDR and IMR vary from region to region, not always being similar.

Question 3c.

Marks	0	1	2	Average
%	15	45	40	**1.3**

Students who gave good responses to this question picked up on the term 'factor' and looked for economic, environmental or social conditions that increased deaths. Some students failed to notice the immediate exclusion, 'other than infant mortality', and proceeded to discuss factors affecting the level of both crude death rates and infant mortality rates.

Diseases, war, natural disasters and social customs, including education, were all selected, often with particular national or regional examples. Some students offered a more statistic-based response that often showed confusion. Life expectancy as a factor needed a detailed explanation of how it interacted with youthful and aged populations to influence the death rate.

The following is an example of a high-scoring response.

The access to education in a country will impact its crude death rate. This is observed in countries such as South Africa that has a high death rate and a mere 47% of the population being able to attend secondary education. If individuals are educated, they become aware of methods of disease prevention decreasing the crude death rate.

Question 3d.

Marks	0	1	2	3	4	5	6	Average
%	4	4	14	14	28	21	14	**3.8**

This question produced many responses that showed great knowledge of two national population policies, but most did not offer sufficient comparison to score the full marks allotted. In this question, 'compare' meant to describe the similarities and differences. Suitable aspects of comparison included the success or otherwise of the policy, which was the most common, but the highest-scoring responses also looked more closely at the similarities of timing, compulsion or mortality.

Many students provided two policies of two countries without comparing similarities or differences. Other low-scoring responses provided examples of several policies from more than two countries.

The following are examples of high-scoring responses.

The One Child Policy (1979) was introduced to reduce China's rapidly growing population by reducing the high fertility and birth rates per 37 1000. It involved limiting offspring to one per couple with the exception of rural couples and twins. Incentives of access to education and housing were provided to those who obliged, while those who rejected the policy, received less and were often forced to have an abortion. The policy was an overall success as the fertility rate has fallen to 1.5 and the birth rate to 12 per 1000. A policy that has proved unsuccessful is the 'Angel Plan' (1994) in Japan. In contrast to China's policy, it aimed to increase fertility rates from 1.5 and birth rates to 10 per 1000. Unlike the One Child Policy the strategies of infrastructure to support working parents, counseling and monthly payments to couples, were not sufficient to decrease the burden of raising a child and the fertility rate decreased to 1.23, and the birth rate to 8 per 1000.

In Japan, the population of 127.3 million is increasingly ageing, with 25% of the population in 2013 being over 65 years. In an attempt to resolve this issue the Fukuri Marriage Hunting Cafe has been set up online to increase the percentage of people getting married. For those couples who got married, had children and increased the fertility rate, as a result of the website, the government gave cash bonuses, of up to 20 000 Yen, and similarly helped subsidise the cost of the education for the child. This population policy aims at directly combating the issue; however the United Nations funded program in Niger focuses on educating those involved and subsequently indirectly reducing population. Niger (a country in sub-Saharan Africa) is experiencing rapid population growth, with the population set to increase from 18 million in 2013 to 59 million in 2050. This policy that creates 'safe places' in urban centres, such as on the outskirts of the capital Niamey, aims to educate 12–18 year old women on maternal health, self-esteem, financial decisions and family planning. The policy uses mentors (local women) to help assist these 1600 adolescents. Unlike Japan, Niger's population policy is aimed at educating the women to understand the importance of having less children. Japan however, focuses on the problem directly, rather than assisting to remove some of the social pressures that push Japanese women to have less children.

Question 4a.

Marks	0	1	2	3	Average
%	5	14	36	45	**2.2**

Students' maps were generally of a good standard. Most maps were drawn correctly, with many students obviously preparing and knowing their case study maps very well. Most students provided an appropriate title and a relevant key/legend. However, the accuracy of maps was inconsistent as some students did not identify the phenomenon in the correct locations or regions. Low-scoring students did not use appropriate colours (blue is for water, not land/human features). Some students were inaccurate or careless with their mapping.

Question 4b.

Marks	0	1	2	3	4	5	Average
%	6	8	18	24	25	19	**3.1**

This question was quite difficult for some students. Most students were able to discuss some information about natural processes and human activities that explained the distribution of their selected global phenomenon, but there were also many who failed to understand what the question was asking them to do. A common error was to misread the question, thinking it was about either natural processes or human activities. Some students discussed their global phenomenon in general and failed to mention locations. Few students discussed to what extent the natural processes and human activities contributed to the distribution of the global phenomena. Strong responses provided extensive elaboration and quantifying data about their specific locations.

The following are examples of high-scoring responses.

Desertification is the result of a combination of natural processes and human activity, with human misuse of land creating 70% of desertification instances globally. For example, in the 1930s desertification increased severely in North America as a result of overgrazing and overcultivation. Similarly, in southern America the advent of commercial farming led to increased rates of deforestation in north-eastern Brazil, where land clearing rates reached 2 250 000 ha annually in between 1990 and 2000. However, climate also influences the global distribution of desertification to a moderate extent as, for example, strong wind created severe wind erosion in the 1930s in northern America, where it was estimated that 75% of topsoil was blown away by 1939. Furthermore, semi-arid regions bordering arid regions are more susceptible to desertification, as their climate is drier (150–250 mm annually) and therefore they are more susceptible to wind erosion if deforestation and overcultivation occur. Thus, both human activity and natural process contribute to global distribution of desertification, however, human misuse in semi-arid regions is the largest factor.

Natural processes explain the distribution of malaria immensely, as climate change has produced better breeding grounds for anopheles (malaria carrying) mosquitoes. In Mount Kenya, over a period of time the average temperature rose 2 degrees, resulting in a seven-fold increase of malaria cases there. Human activities such as population movement, displacement and inappropriate use of anti-malaria drugs contribute greatly to the distribution of malaria. Population displacement of Burmese people to Thailand spread malaria on a large scale.

Natural processes and human activities interact resulting in desertification. However, of greater relative importance is human misuse of land and exploitation of natural resources in determining the distribution of this phenomenon. For example, the north region of Brazil, the low and fluctuating rainfall of 200–800 mm and high evaporation rates of 3000 mm make the land increasingly vulnerable. This is due to less ground cover, exposing the soil to the harsh temperature, thus incredible aridity and susceptibility to erosion by wind. However, in the Great Plains, the widespread conversion of the land to cropland and the removal of native prairie grasses increased the land's risk of desertification. During the Dust Bowl period in 1934–35, 100 million acres of topsoil was blown away.

Desertification is caused due to an interaction between natural processes and human activities. Climatic conditions, like low variable rainfall, 200–300mm in the Sahel region, already provide the trigger for desertification to spread. But human activity, like rapidly increasing populations, 3.5% growth rate in Niger, and unsustainable farming practice, e.g. over-irrigation in the Aral Sea, are more dominant as they further exhaust vulnerable lands due to the increased need for resources, which leaves land infertile.

Question 4c.

Marks	0	1	2	3	Average
%	7	12	35	46	**2.2**

This question was handled very well. High-scoring responses clearly described a positive or negative impact on people or the environment due to the selected global phenomena. Higher-scoring responses also elaborated on the impact by giving very good quantifying data. Low-scoring responses referred to both positive and negative impacts and/or

discussed the impacts on both people and the environment. The requirement for one specific location was sometimes ignored.

The following are examples of high-scoring responses.

In the Serido region of north-eastern Brazil, increasingly desertification has led to severe water shortage. 67% of the region's population lacks access to a proficient water supply, and the majority of the population only has access to 450 cubic metres of potable water per capita annually, which is only a third of the amount recommended by the United Nations.

In Madagascar, off the east coast of Africa, the entire population of 23 million people are at risk of malaria. One negative impact on the people of Madagascar from malaria, along with deaths, is that governments spend money on malaria treatments, reducing the funding for education, therefore continuing the cycle of poverty in Madagascar.

In the Aral Sea (located on the border of Kazakhstan and Uzbekistan) desertification has caused a negative impact on people due to the spread of toxic dusts that are swept off the dry sea-bed in dust storms. In nearby regions, people breathe in this toxic dust which causes adverse health conditions; an estimated 5 million have been affected by this.

In Zambia, HIV/AIDS is having a negative effect on people. In Zambia there are over 1 million people living with the disease and 22 000 people as a result of it in 2013 alone. These deaths have left 600 000 children as orphans who need to be cared for, taking up the money and resources that could otherwise be used elsewhere, having a negative impact on all people in society as well as the people who die and their orphans.

Question 4d.

Marks	0	1	2	3	4	Average
%	4	6	19	29	42	3

High-scoring students named a government or non-government organisation, gave a detailed account of its response to the selected global phenomenon and evaluated the effectiveness of the response, using quantification to support their arguments. They also discussed the response and effectiveness on a local scale. Low-scoring students mentioned a response but did not elaborate in sufficient detail.

Evaluating the effectiveness of the response proved difficult for some students as they clearly did not understand this instructional term. High-scoring students described the strengths and the weaknesses of the strategy at their given location and outlined how effective it might be.

The following are examples of successful responses.

Henry Howard Finnel, a man with a degree in agriculture, was employed by the American Federal Government in 1934 to develop and teach farmers in the Great Plains in midwestern USA, methods of sustainable farming to reduce the risk of further desertification. These included land terracing, crop rotation, and contour ploughing. These were adopted at a regional scale throughout the Great Plains, with very effective short term results. By 1936, 5.5 million acres were under these new practices, and by 1938 the amount of soil erosion had decreased by 21.7%. Furthermore, in the long term they have remained effective, as although the Great Plains have experienced dust storms and desertification since the Dust Bowl in the 1930s, they have not been as severe.

The Kazakhstan Government and World Bank have joined together to fund the Kok-Aral Dam which was constructed in 2005. This 12 km dam aims to restore the North Aral Sea and cost $US85 million. This dam has been successful in restoring the North Aral Sea and over 450 km^2 of dry seabed (desert) has been covered with water, to a depth of 40 metres in some points. Thus flora and fauna have returned. Despite this dam cutting off water supply to the South Aral Sea, most agree the Kok-Aral Dam is still effective as without it, neither North nor South Aral Sea could survive.

The Presidents Malaria Initiative is a government organisation that aims to eradicate malaria through providing insecticide malaria nets with over 6 million being distributed in Madagascar, along with providing indoor residual sprays against malaria and treatment for pregnant women and young children. Adequate treatments from trained professionals is another aim and the Presidents Malaria Initiative trained 4000 Malogesy people on how to treat malaria, which has resulted in over 140 000 people in Madagascar being cured of malaria. So far, the Presidents Malaria Initiative has been very effective in its response to the global phenomenon of malaria.