

2020 VCE Geography examination report

General comments

In 2020, the Victorian Curriculum and Assessment Authority produced an examination based on the *VCE Geography Adjusted Study Design for 2020 only*.

After a very challenging year, the strength of responses on each question was a credit to each student's and teacher's perseverance throughout 2020. Most students could address at least some aspects of every question with the use of data as evidence. The ability of most students to interpret and then apply data from the data booklet was especially strong.

In all questions, a range of responses was noted, with students achieving a range of levels across the whole examination paper. The synthesis of all components of the study is challenging. Students who were able to apply content learnt in the appropriate context to show a clear conceptual understanding of a question were well placed to score highly in a range of areas. Students who focused only on the content of the study without considering the context and conceptual nature of the examination question tended to provide responses that covered only part of the question.

Areas of strength

Knowledge of content and context to apply knowledge:

- Every question required key knowledge content. It was evident that students were able to use a large range of learnt materials, including case studies, elaborations, and evidence in the form of data, in their responses.
- Students were often able to use appropriate evidence and elaborations to support statements made, especially in higher order questioning.
- Students were able to apply appropriate context to respond to a question using clear conceptual understanding of both Unit 3 and Unit 4.

Geographical skills:

- Data was presented using a number of maps, which students were able to interpret very well.
- The use of geographic language and literacy was strong, with students able to respond to questions using appropriate terminology.

Areas for improvement

Responding directly to the conceptual component of the question:

- All questions require understanding of content, application of appropriate context and conceptual understanding of the question. While there were fewer students who responded to questions in list form, or with a random assortment of content from both Units 3 and 4 without direct relevance to the question, there was still a tendency for students to do so. Students providing a list style approach and stating all that they know about key words within a question, when a focus on answering the conceptual layer is

required, highlighted the need for less of a focus on learning great amounts of content and more on being able to apply content learnt in an appropriate contextual manner.

- It is important that students choose their content in the appropriate context. This will help support responses in showing higher order conceptual understanding of the question.

Exam technique:

- Read the question carefully and only include content that is relevant to the question. Rote learning responses to questions from previous years is not necessarily a good strategy.
- Students can use highlights to break down and scaffold responses to ensure they focus on the conceptual nature of the question and use content (data and elaboration) in the correct context. Responses must not simply provide a lengthy list of possibly irrelevant material.

Students need to read the question carefully to ensure all aspects are answered rather than respond with what they think or what they may have prepared.

Specific information

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 resulting in a total more or less than 100 per cent.

Question 1

Marks	0	1	2	3	4	5	Average
%	5	3	10	25	29	29	3.6

The fieldwork technique identified must clearly be a primary fieldwork technique (for example, photographs, quadrat studies or interviews). Higher order responses showed specific interconnection of the primary technique used with how it could test the hypothesis and why it is an appropriate technique to be used. Many responses were able to show this well, highlighting the ability to apply knowledge gained from fieldwork conducted in Unit 3 to another location.

The following is an example of a high-scoring response. The response indicates the primary fieldwork technique clearly and justifies the use of the technique as an appropriate technique and then interconnects the primary fieldwork technique with how it could test the hypothesis.

An appropriate primary fieldwork technique would include the testing of the pH levels of local water systems. This addresses the impact of the hypothesised increase water run off of this housing estate by testing potential alkaline levels in the water. If the water system tests results in levels of high than 7pH than that means the water has higher alkaline levels. Due to chemicals in washing detergents, fertilizer and pesticides usually being higher in alkaline levels, if high alkaline levels are presented, it can be concluded that the water run off from the estate have contributed to the changes of chemical compounds

Question 2a.

Marks	0	1	2	3	Average
%	6	6	31	56	2.4

A description of one spatial technology used to assess land use change was required, with high-scoring responses describing how the specific spatial technology assessed the land use change. In many responses a clear description of the land use change was provided. Students who clearly understood the concept of land use change evident at their fieldwork location were able to interconnect the use of a spatial technology to assess change.

In some responses, the fieldwork undertaken had no clear evidence of land use change. Fieldwork that looked at increasing a land use (for example, medium-density housing to high-density housing in Camberwell) or the impact of long-term land use (for example, noise pollution surrounding Moorabbin Airport) meant that students were not well placed to respond to the question as land use change was not evident.

In responses where Google Maps was used to assess land use change, the change was not always clear. Google Maps in itself provides a map of a location; the interconnection of other layers – photographs, for example – with a location may help provide data for an assessment. Alternatively, the use of My Maps or other spatial technologies could provide location data that was generated by the student to help assess land use change.

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

The spatial technology used to assess the land use change from a car park (transport) to an urban square (recreational) at Prahan Square was drone footage. The footage, sources from the Stonnington City Council's Youtube channel, was used to observe how the land use has changed by comparing it with footage from before the development. It could be used to assess the land use change by comparing it with future footage.

Question 2b.

Marks	0	1	2	3	4	5	6	7	8	Average
%	4	3	8	9	17	14	18	12	16	5.0

Responses required two geographic characteristics that related to a fieldwork area and its surrounding region to be clearly identified, then an explanation of how each characteristic influenced the process of change, not just a description of the geographic characteristics. An understanding of the process of change was key to responding well to this question. Most students were able to identify two geographic characteristics and identify how they influenced the process to some extent, with one geographic characteristic showing a stronger understanding of the process of change.

Some responses described the land use change over time rather than explaining how two stated characteristics influenced land use change.

Question 3a.

Marks	0	1	2	Average
%	5	17	78	1.7

This question required students to compare the loss of forest cover in Bangladesh during the period 1930–1975 with that of the period 1975–2014. Students were required to use the evidence in Figures 2 and 3 from the data book to respond to this question. Most students were able to do this very well or with minor errors, identifying that the rate of loss is greater in the 1930–1975 period (6572 km²) than the 1975–2014 period (2482 km²) and using evidence from the data book effectively.

Question 3b.

Marks	0	1	2	3	4	5	6	Average
%	2	3	10	17	26	20	21	4.1

Responses needed to refer to areas of negative change only. While there were three clear areas of change that could be commented upon, some responses broke these down or focused on more than three areas. A range of areas was able to be identified. The response required a statement and quantification on the distribution of the forest loss, as well as a statement and quantification on the scale of the forest loss. Most students were able to respond well with high-scoring responses scaffolding scale and distribution. Highlighting key components of the question helped many students to scaffold their response.

The following is an example of a high-scoring response that refers to the negative change only and clearly references data presented.

From 1930-2014, Bangladesh experienced quite a severe amount of forest loss. In the top central part of the country ranging all the way to the north eastern part of the country, there was forest loss in a scattered fashion, ranging in severity, with majority of the loss being under 5-10km², with some exceptions of districts losing more than 20km². In addition to this the most severe loss of forest is seen in the south-eastern part of the country at quite a large, severe scale and clustered distribution. This area is where Bangladesh lost most forest with the area having demonstrating majority of loses from 5-010km², 10-15km² and also quite a few districts losing 15-20km² of forest. The central southern part demonstrates some average amount of forest gain ranging from less than 1km² to very little districts with 10-15km². However this gain may only be enough to compensate for the weakest amount of forest loss in the southern western part of Bangladesh.

Question 4

Marks	0	1	2	3	4	5	6	7	8	Average
%	2	3	10	20	21	17	13	7	6	4.3

The question required:

- identification of a specific location where ice sheets and glaciers are melting
- description of one cause of melting ice sheets and glaciers at the specific location
- explanation of the significance of the impact of melting ice sheets and glaciers related to the specific location.

Responses showed a reasonable understanding of melting ice sheets and glaciers at a specific location learnt through a case study at a specific location. The depth of understanding varied, with some students identifying a specific location and then providing a more generalised description and explanation of the significance that could be applied in a more global sense or to a range of case studies. Where case studies focused on a specific location, greater depth was able to be provided, while case studies that interconnected a number of locations tended to provide more of a description of impacts rather than explain the significance of the melting. Some responses provided an overall statement on the cause of melting glaciers and ice sheets without identifying a specific location.

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

In Greenland, a cause of melting ice sheets and glaciers is the global release of carbon emissions. This is accelerating the global warming process, having warmed the average global temperature 10c since pre-industrial times (approximately 1950s) and predicted to reach 1.50 c within the next two decades. The current release of approximately 40 billion tonnes of carbon annually is melting Greenland's ice sheet at an unprecedent rate; between 1992 and 2018 it lost 3.8 trillion tonnes of ice, and is projected to lose 8-25% of its icesheet by 2100, and achieve total melting by 3000. This is having sever negative local and

global impacts. In Greenland, the loss of ice is forcing traditional Inuit people closer to urban lifestyles and a culture clash is occurring, which may be a potential factor in the highest suicide rate in the world of 107 per 100,000 with 1 in 5 people having attempted it. Globally, the total melting of Greenland's ice sheet will contribute 5-7 m of sea level rise, which is potentially enough to displace 400 million people. As such, the significance of melting in Greenland is of severe local and global significance to humans.

Question 5a.

Marks	0	1	2	3	4	5	6	Average
%	4	4	13	19	25	16	19	3.8

Responses to this question needed to refer to a selected location experiencing desertification and then outline two significant impacts that have resulted from the desertification. A wide range of impacts was accepted, with most responses focusing on environmental, economic or social conditions. Higher scoring responses tended to classify each impact under these headings, then elaborate on the significance of the impact using evidence, data or detailed elaboration to support the outline. Higher order responses clearly showed an understanding of the impacts at a selected location, while more generalised outlines of impacts that could be applied to a range of locations did not score as well. Some responses only outlined one impact, highlighting the need for students to check that all components of the question have been answered.

Students who had attempted to double up on examples, such as the Mato Grosso in Brazil, where desertification is an impact of deforestation, found responding directly to questions of desertification challenging. A far better approach is to have two more simplistic case studies (one for each land cover change) that clearly reflect the aims of the study design.

Student responses that provided examples such as the Great Green Wall strategy in the Sahel could not achieve high marks as it was often difficult to highlight the national component. The strategy does operate at the national level but, under examination conditions, students were unable to elaborate on the nuances and details, and so responded with the strategy as a regional one or with far too generalised responses that could apply to any location across the Sahel.

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

One significant negative social impact of desertification in Niger is increased food insecurity. Nigeriens live a significantly subsistence farming way of life, therefore the process of desertification majorly impacts there access to food as they are unable to effectively grow crops. This has led to Niger having vast levels of food insecurity with approx.. 1.5 million experiencing food insecurity and over 800,000 children classified as malnourished.

Another significant negative social/economic impact of desertification in Niger is lack of education. As a result of desertification Nigeriens struggle to create an income this leads to vast amount of poverty in the country therefore people have low access and quality of education, the UN ranks them 187th on the education index and only approx. 8% of females attend high school

Question 5b.

Marks	0	1	2	3	Average
%	13	12	31	43	2.1

Most students were able to briefly name and outline a response to an impact of desertification. Higher scoring student responses detailed specifics of the response and included relevant detail in the form of data

or elaboration or explanation of the mechanics of the response. Some student responses did not link specifically to Question 5a.

The concept of a national scale was lost in some student responses. For example, while the Great Green Wall does operate on a national scale, a range of student responses indicated that the Great Green Wall operates within the Sahel. Where responses were clearly at a national scale, students were more easily able to provide a stronger answer to the question of what the national scale response has been. It is important that in choosing responses, students focus on the key knowledge in the study design for Unit 3 Outcome 2.

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

Great Green Wall initiative (GGWI) is a response to Desertification in Niger as the government has supported the initiative as well as 11 other African countries. GGWI aims to create a large band of vegetation cover across 11 African countries in an aim to decrease food shortages in Niger through planting and caring for large amounts of revegetation in the country.

Question 5c.

Marks	0	1	2	3	4	5	6	7	Average
%	9	7	13	18	20	19	10	5	3.6

Students were required to identify an appropriate criterion to evaluate the effectiveness or likely effectiveness of a response on a national scale identified in Question 5b. In using a criterion, the appropriateness needed to be detailed. Not many students were able to provide additional detail as to why a named criterion was appropriate when evaluating the effectiveness of the response. Rather, student responses tended to imply that the criterion was appropriate. Most students were able to highlight what worked or did not work well when evaluating the national response. Stronger student responses provided specific data or evidence to justify their evaluation. Others did not provide specific detail for the stated location and were very general.

One way to approach the question was to:

- state a criterion – one aim of the response was to ...
- state why it is appropriate – using this aim as the criterion is appropriate as it reflects the aims of the strategy of ...
- evaluate to what extent the response met the criterion and use evidence to back this up.

Question 6

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	2	3	7	12	12	13	15	12	12	5	5	5.4

This question required a response using Figure 4 from the data booklet to reference two contrasting regions and then discuss an issue and associated challenge for each region for future population growth given the data on adolescent birth rate. Most students were able to identify two contrasting regions; these were often country-specific, but a range of regions could have been identified (for example, Europe or Southeast Asia) using the map from Figure 4 to identify higher or lower adolescent birth rates. Responses could refer to an ageing population but did not need to as contrasts were evident across a range of regions/countries.

A number of approaches were possible, with students able to draw upon their knowledge of the Demographic Transition Model alongside an understanding of population dynamics for a range of countries with different economic, political and social conditions to identify one issue and then one associated challenge. Students who were able to identify the impact of high or low birth rates over time (population

momentum) were able to respond in a higher order manner. Responses that provided a scaffold using annotations of the question also scored highly. However, there were a range of responses that highlighted a lack of understanding of the implications of a high or low birth rate over time or did not use the concepts within the Demographic Transition Model to help support the discussion.

The following is an example of high-scoring response that identifies two contrasting regions and clearly discusses an issue and associated challenge.

Two contrasting regions are sub-Saharan Africa, specifically Chad and Asia, specifically Japan. In Chad, the adolescent birth rate is at more than 150 per 1000 women aged 15-19 years compared to Japan with less than 10 births per 1000 women aged 15-19. One issue an associated challenge for Chad is the potential for very high birth rates which would then push rapid population growth as when women start having babies earlier in life they tend to have many more babies that those that begin having children later in life. A high birth rate alongside a lowering death rate as is evident in stage 2 to 3 of the DTM mean that the country of Chad could be facing rapid population growth. The associated challenge being providing health care services for the rapidly growing population. Whilst in Japan the reverse is occurring as rates of adolescent births are low which is then slowing population growth over time and resulting in an ageing population at Stage 5 of the DTM and the associated challenges of managing an ageing population such as providing health care services to the elderly. Whilst both challenges resulting from the adolescent birth rate are similar they impact very different parts of the population.

Question 7a.

Marks	0	1	2	Average
%	14	32	55	1.4

Good responses focused on one characteristic that placed Country X at Stage 5 of the Demographic Transition Model, with evidence from the profile: for example, the low birth rate seen in the 0–4 cohort being just under 4 per cent. Interesting approaches focused on the shape of the profile, once again referring to specific data, usually in reference to the 75+ cohort. Most students handled this question well, confidently interpreting Figure 5 to identify a characteristic of the population structure of Country X. High-scoring responses demonstrated an understanding of what changes between a profile at Demographic Transition Model Stage 4 and Stage 5, in particular the decline in birth rates and increase of death rates due to the larger cohort in the 65+ age range. The highest scoring responses also specified data to support their understanding.

Areas for improvement include focusing on just one stage rather than the movement between stages.

Question 7b.

Marks	0	1	2	3	4	Average
%	23	15	24	18	20	2.0

This question required an understanding of the Demographic Transition Model from Stages 4 to 5 and the ability to explain the reasons for this transition with reference to Country X. High-scoring responses focused on how the migrant population changed the profile, using specific evidence (for example, significant bulges at the 35–54 age range, more females than males, with the highest range occurring at the 45–49 age group). They further elaborated on how this could lead to more structural changes in the future: for example, an increased population overall but limited increase in the birth rate due to many of the migrants being in the

higher side of fertility, less likely to have many children and bringing few children with them. Further, this will likely create a greater aged dependence in the near future as they age.

Some students chose to use a diagram of the Demographic Transition Model or population profiles at Stages 4 and 5 to help with their description. This was very effective in helping to explain the population dynamics and supported the written response that students had made.

Question 7c.

Marks	0	1	2	3	4	5	6	Average
%	9	12	19	20	20	10	10	3.0

The process of international population movement and its impact on the population structure of Country X needed to be explained using evidence from Figure 5 in the data booklet. Explanation of the structural changes that may occur with specific reference to age groups from the profile were required. While many students understood and could describe changes in migrant population, specific reference to Figure 5 data was needed to support their ideas. Future changes were discussed in higher scoring responses, citing patterns of ageing and growing populations. Consideration of the scale of movement was also a feature of high-scoring responses.

Question 8

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	3	2	4	6	11	13	19	16	14	6	6	5.9

In responding to the question, students were required to:

- identify at least two issues and challenges arising from a specific country's ageing population
- describe two strategies in response to the associated issues and challenges.

Higher order responses most often indicated a careful reading of the question. Students who scored highly planned their response and signposted it throughout. This ensured relevance throughout their writing. Common case studies included Japan, Germany, China, Singapore and Australia. Strategies discussed could be at a national or local scale.

A common successful approach was to:

- identify the ageing country
- set the context by providing a key piece of data
- link this directly to an issue and challenge
- move to a discussion of a strategy aiming to deal with the issue and challenge outlined.

This was then repeated in relation to a second issue and challenge, and to the appropriate strategy response.

Choice of response was important. Migration responses in Australia to the ageing population need to be clearly evident. The 'populate or perish' response was not an appropriate choice in this context. However, the skilled migration program does go some way to addressing gaps in the workforce. The nuance of this in relation to an ageing population was challenging for some students.

The choice of case study was equally important. Students who had investigated a population that was clearly ageing generally scored more highly than those who used case studies that focused on populations that were not clearly ageing or where reasons for population growth in the country were complex. China being impacted by population momentum and Australia being impacted by migration were two examples where

responses were problematic, especially where students confused government responses (such as the One Child Policy) as responses to an ageing population.

Students who did not score well responded generally and/or described the two strategies and then evaluated these rather than tying them directly to the 'issues and challenges arising' from the ageing population. Inaccurate data or writing on more than two strategies were additional weaknesses observed.