

# Geography General Senior Syllabus 2019 v1.1

Subject report 2020

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Queensland Curriculum & Assessment Authority  
PO Box 307 Spring Hill QLD 4004 Australia  
154 Melbourne Street, South Brisbane

Phone: (07) 3864 0299

Email: [office@qcaa.qld.edu.au](mailto:office@qcaa.qld.edu.au)

Website: [www.qcaa.qld.edu.au](http://www.qcaa.qld.edu.au)

# Contents

<b>Introduction</b>	<b>1</b>
<b>Background</b>	<b>2</b>
Purpose .....	2
Audience and use .....	2
Report preparation .....	2
<b>Subject data summary</b>	<b>3</b>
Subject enrolments .....	3
Units 1 and 2 results .....	3
Units 3 and 4 internal assessment results .....	3
Total results for internal assessment .....	3
IA1 results .....	4
IA2 results .....	5
IA3 results .....	6
External assessment results .....	7
Final standards allocation .....	7
Grade boundaries .....	7
<b>Internal assessment</b>	<b>8</b>
Endorsement .....	8
Confirmation .....	8
Internal assessment 1 (IA1) .....	9
Examination — combination response (25%) .....	9
Assessment design .....	9
Assessment decisions .....	11
Internal assessment 2 (IA2) .....	14
Investigation — field report (25%) .....	14
Assessment design .....	14
Assessment decisions .....	16
Internal assessment 3 (IA3) .....	21
Investigation — data report (25%) .....	21
Assessment design .....	21
Assessment decisions .....	22
<b>External assessment</b>	<b>30</b>
Examination — combination response (25%) .....	30
Assessment design .....	30
Assessment decisions .....	31

# Introduction

The first summative year for the new Queensland Certificate of Education (QCE) system was unexpectedly challenging. The demands of delivering new assessment requirements and processes were amplified by disruptions to senior schooling arising from the COVID-19 pandemic. This meant the new system was forced to adapt before it had been introduced — the number of summative internal assessments was reduced from three to two in all General subjects. Schools and the QCAA worked together to implement the new assessment processes and the 2020 Year 12 cohort received accurate and reliable subject results.

Queensland's innovative new senior assessment system combines the flexibility and authenticity of school-based assessment, developed and marked by classroom teachers, with the rigour and consistency of external assessment set and marked by QCAA-trained assessment writers and markers. The system does not privilege one form of assessment over another, and both teachers and QCAA assessors share the role of making high-stakes judgments about the achievement of students. Our commitment to rigorous external quality assurance guarantees the reliability of both internal and external assessment outcomes.

Using evidence of student learning to make judgments on student achievement is just one purpose of assessment. In a sophisticated assessment system, it is also used by teachers to inform pedagogy and by students to monitor and reflect on their progress.

This post-cycle report on the summative assessment program is not simply being produced as a matter of record. It is intended that it will play an active role in future assessment cycles by providing observations and findings in a way that is meaningful and helpful to support the teaching and learning process, provide future students with guidance to support their preparations for summative assessment, and promote transparency and accountability in the broader education community. Reflection and research are necessary for the new system to achieve stability and to continue to evolve. The annual subject report is a key medium for making it accessible to schools and others.



# Background

## Purpose

The annual subject report is an analysis of the previous year's full summative assessment cycle. This includes endorsement of summative internal assessment instruments, confirmation of internal assessment marks and external assessment.

The report provides an overview of the key outcomes of one full teaching, learning and assessment cycle for each subject, including:

- information about the application of the syllabus objectives through the design and marking of internal and external assessments
- information about the patterns of student achievement in each subject for the assessment cycle.

It also provides advice to schools to promote continuous improvement, including:

- identification of effective practices in the design and marking of valid, accessible and reliable assessments
- identification of areas for improvement and recommendations to enhance the design and marking of valid, accessible and reliable assessment instruments
- provision of tangible examples of best practice where relevant, possible and appropriate.

## Audience and use

This report should be read by school leaders, subject leaders and teachers to inform teaching and learning and assessment preparation. The report is to be used by schools and teachers to assist in assessment design practice, in making assessment decisions and in preparing students for external assessment.

The report is publicly available to promote transparency and accountability. Students, parents, community members and other education stakeholders can learn about the assessment practices and outcomes for General subjects (including alternative sequences and Senior External Examination subjects, where relevant) and General (Extension) subjects.

## Report preparation

The report includes analyses of data and other information from the processes of endorsement, confirmation and external assessment, and advice from the chief confirmer, chief endorser and chief marker, developed in consultation with and support from QCAA subject matter experts.

# Subject data summary

## Subject enrolments

Number of schools offering the subject: 190.

Completion of units	Unit 1	Unit 2	Units 3 and 4*
Number of students completed	2349	2527	2563

\*Units 3 and 4 figure includes students who were not rated.

## Units 1 and 2 results

Percentage of students	Satisfactory	Unsatisfactory	Not rated
Unit 1	2245	103	1
Unit 2	2399	121	7

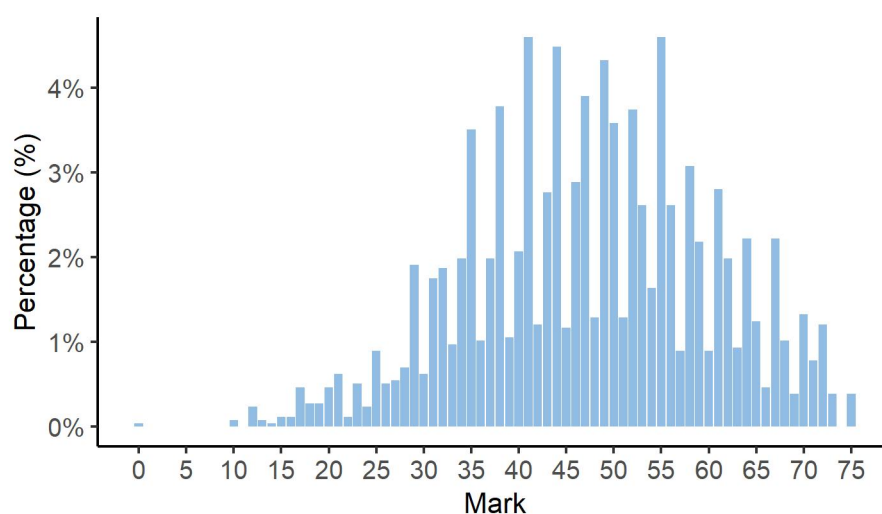
## Units 3 and 4 internal assessment results

### 2020 COVID-19 adjustments

To support Queensland schools, teachers and students to manage learning and assessment during the evolving COVID-19 pandemic in 2020, the QCAA Board approved the removal of one internal assessment for students completing Units 3 and 4 in General and Applied subjects.

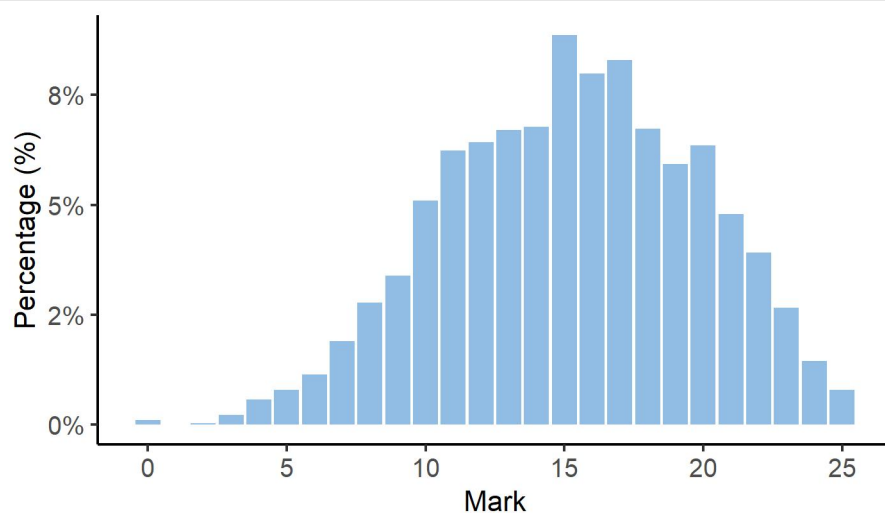
In General subjects, students completed two internal assessments and an external assessment. Schools made decisions based on QCAA advice and their school context. Therefore, across the state some instruments were completed by most schools, some completed by fewer schools and others completed by few or no schools. In the case of the latter, the data and information for these instruments has not been included.

## Total results for internal assessment

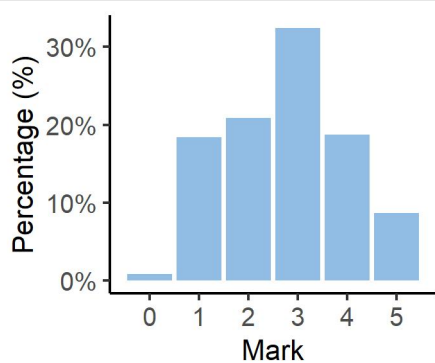


## IA1 results

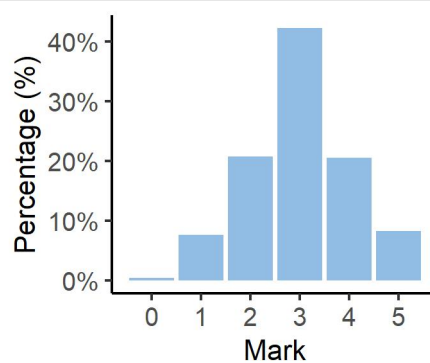
IA1 total



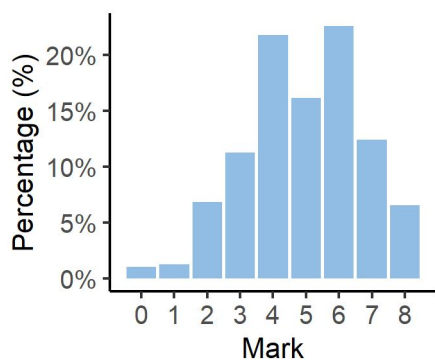
IA1 Criterion 1



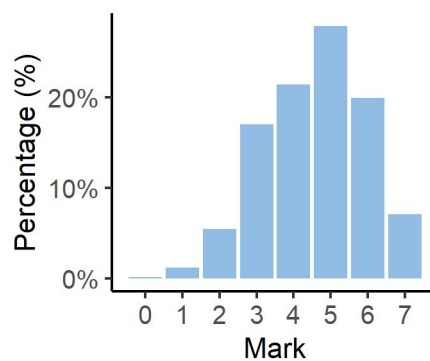
IA1 Criterion 2



IA1 Criterion 3

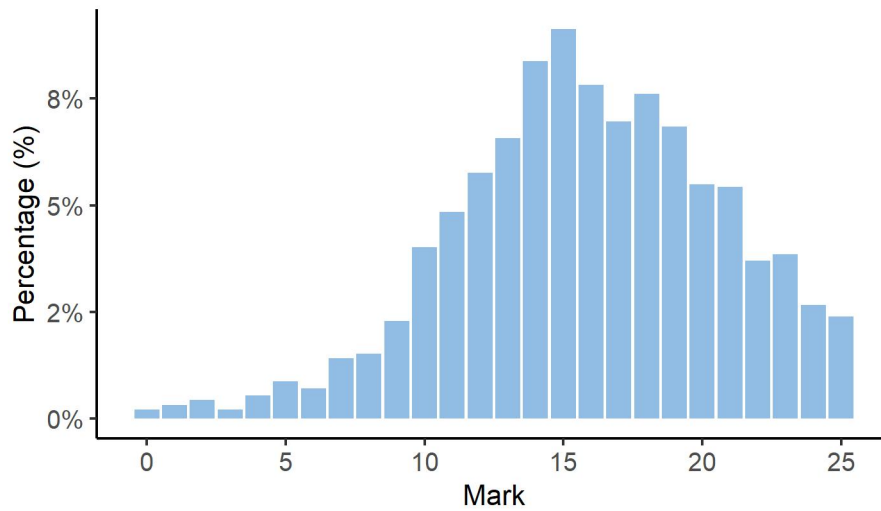


IA1 Criterion 4

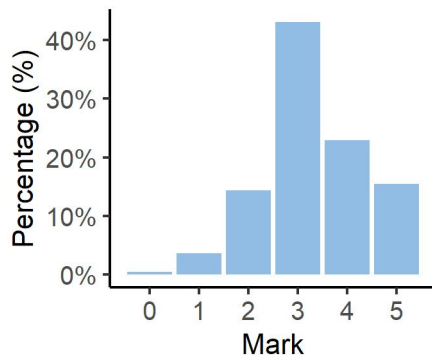


## IA2 results

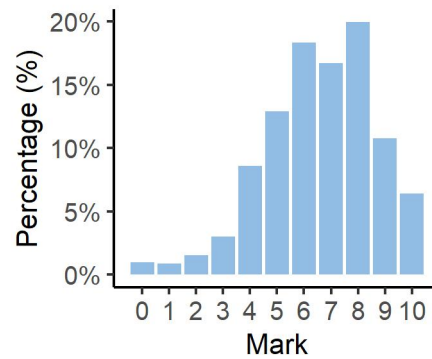
### IA2 total



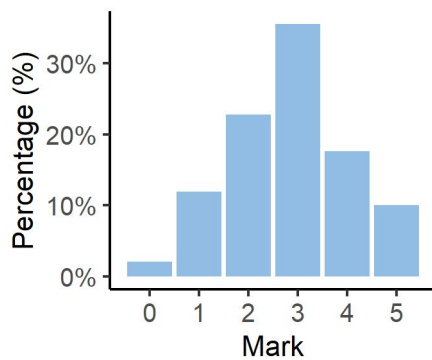
### IA2 Criterion 1



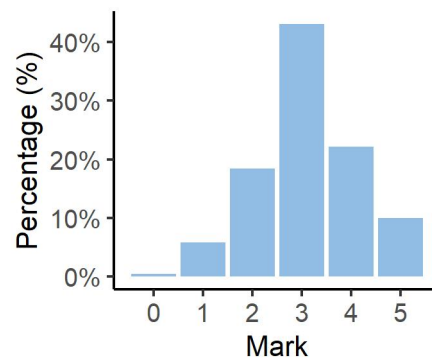
### IA2 Criterion 2



### IA2 Criterion 3

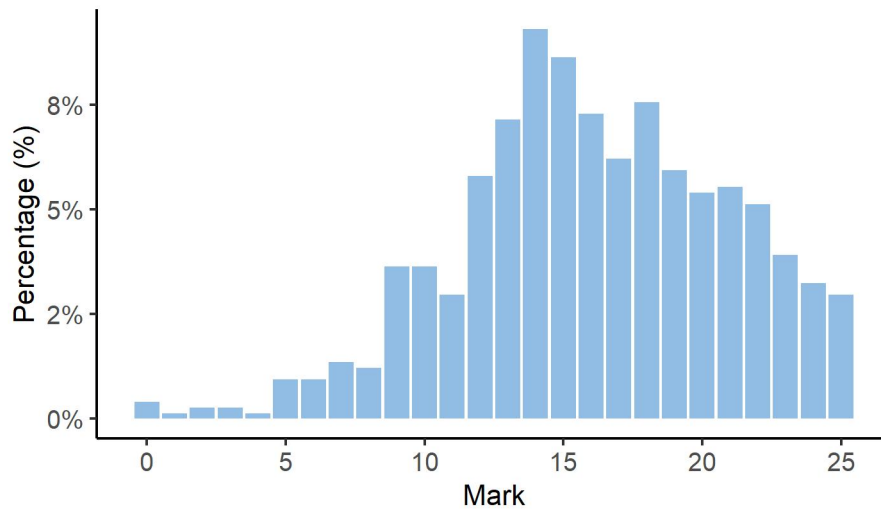


### IA2 Criterion 4

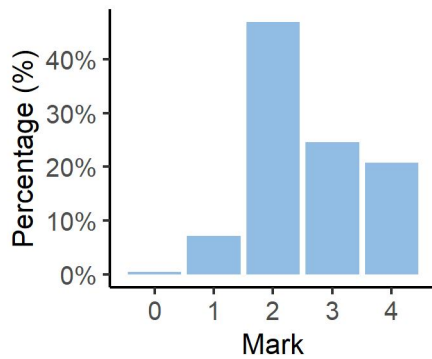


## IA3 results

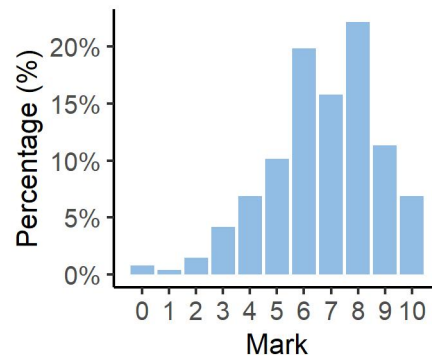
### IA3 total



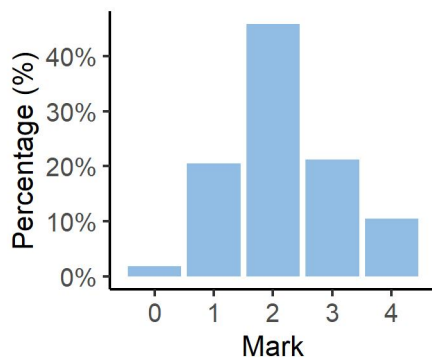
### IA3 Criterion 1



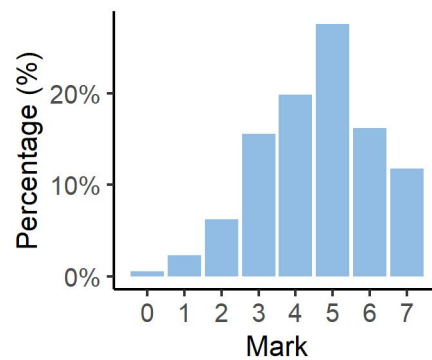
### IA3 Criterion 2



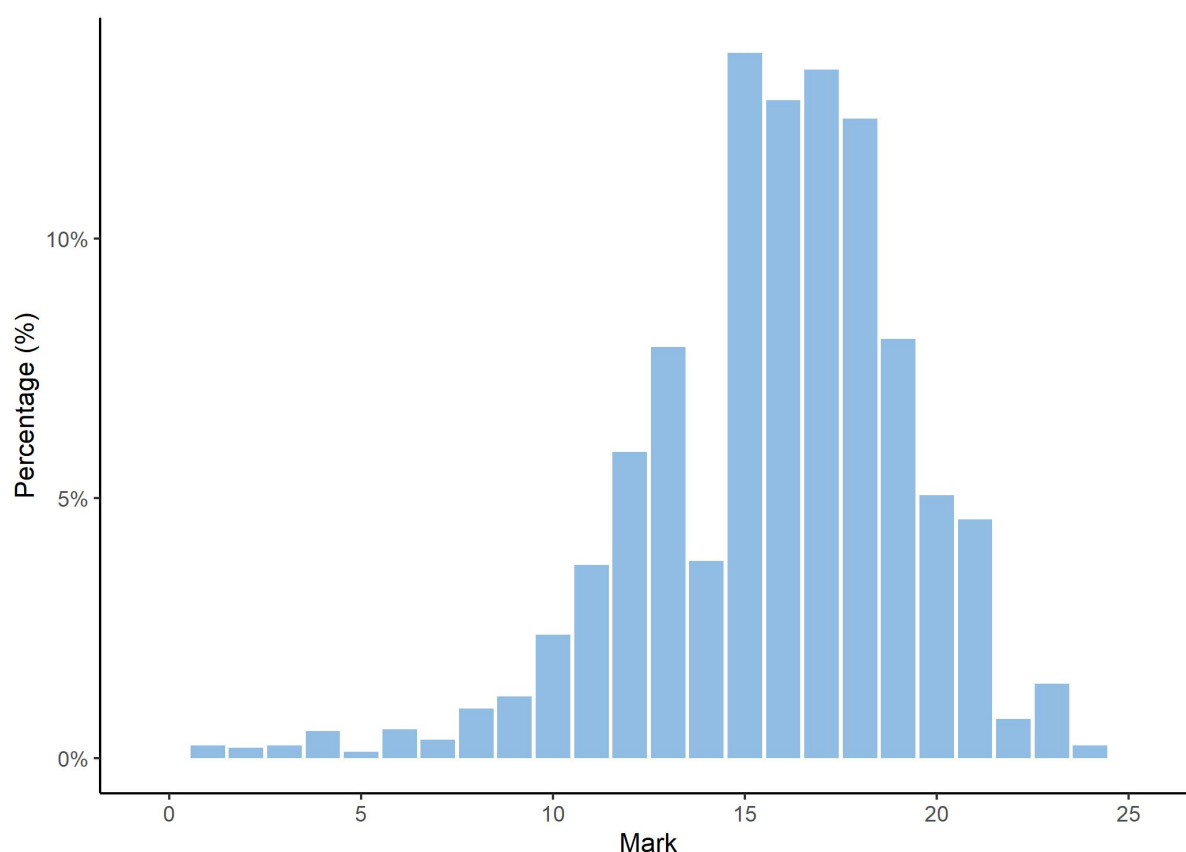
### IA3 Criterion 3



### IA3 Criterion 4



## External assessment results



## Final standards allocation

The number of students awarded each standard across the state are as follows.

Standard	A	B	C	D	E
Number of students	340	903	1120	158	2

## Grade boundaries

The grade boundaries are determined using a process to compare results on a numeric scale to the reporting standards.

Standard	A	B	C	D	E
Marks achieved	100–81	80–65	64–41	40–16	15–0

# Internal assessment

The following information and advice pertain to the assessment design and assessment decisions for each IA in Units 3 and 4. These instruments have undergone quality assurance processes informed by the attributes of quality assessment (validity, accessibility and reliability).

## Endorsement

Endorsement is the quality assurance process based on the attributes of validity and accessibility. These attributes are categorised further as priorities for assessment and each priority can be further broken down into assessment practices. Data presented in the assessment design sections identifies the reasons why IA instruments were not endorsed at Application 1, by the priority for assessments. An IA may have been identified more than once for a priority for assessment, e.g. it may have demonstrated a misalignment to both subject matter and to the assessment objective. Refer to the quality assurance tools for detailed information about the assessment practices for each assessment instrument.

### Total number of items endorsed in Application 1

Number of items submitted each event	IA1	IA2	IA3
Total number of instruments	192	192	192
Percentage endorsed in Application 1	14	61	50

## Confirmation

Confirmation is the quality assurance process based on the attribute of reliability. Teachers make judgments about the evidence in students' responses using the instrument-specific marking guide (ISMG) to indicate the alignment of students' work with performance-level descriptors and determine a mark for each criterion. These are provisional criterion marks. The QCAA makes the final decision about student results through the confirmation processes. Data presented in the assessment decisions section identifies the level of agreement between provisional and final results.

### Number of samples reviewed at initial, supplementary and extraordinary review

IA	Number of schools	Number of samples requested	Supplementary samples requested	Extraordinary review	School review	Percentage agreement with provisional
1	189	974	165	66	24	96.55
2	121	712	224	10	45	91.37
3	70	366	78	0	7	95.19

# Internal assessment 1 (IA1)

## Examination — combination response (25%)

The examination assesses the application of a range of cognitions in both short response and extended response questions. Part A consists of five to eight short response items that assess breadth of learning, depth of comprehension and the Explaining, Comprehending and Communicating criteria. Stimulus materials may be used, but are not required in Part A (Syllabus section 4.5.1).

Part B consists of one extended response item to unseen stimulus that assesses analytical skills. Stimulus for Part B should be succinct enough to engage with in the planning time and fit on one A3 page or equivalent. It should consist of visual texts, e.g. maps, graphs, statistics, infographics, images, diagrams, and minimal text of no more than 150 words (Syllabus section 4.5.1).

## Assessment design

### Validity

Validity in assessment design considers the extent to which an assessment item accurately measures what it is intended to measure and that the evidence of student learning collected from an assessment can be legitimately used for the purpose specified in the syllabus.

#### Reasons for non-endorsement by priority of assessment — validity practices

Validity priority	Number of times priority was identified in decisions*
Alignment	81
Authentication	0
Authenticity	84
Item construction	63
Scope and scale	80

\*Total number of submissions: 192. Each priority might contain up to four assessment practices.

### Effective practices

Validity priorities were effectively demonstrated in assessment instruments that featured:

- stimulus in Part A that provided scope for in-depth responses in the Explaining criterion, within the conditions of the short response section
- comprehensive stimulus in Part B that provided scope for astute interpretations and inferences in the Analysing and Applying criterion
- complex data that represented a spatial pattern and provided opportunities for students to achieve the top performance level in Communicating by exhibiting proficient transformation of data and the creation of sophisticated maps and graphs.
- clear alignment of questions to criterion that allowed students more than one opportunity to demonstrate the assessment objectives, for example complex questions that allowed for Explaining and Comprehending to be assessed in one question.
- stimulus for Part B in which sources were diverse and did not repeat information in different formats (e.g. a map and a graph of the same data). Complex stimulus provided opportunities for students to select and use a range of evidence in their analysis and demonstrate the top performance-level descriptors for the Analysing and Applying criterion



- maps of appropriate geographical scale to allow students to recognise spatial patterns associated with land cover change and identify relevant relationships and implications of the pattern, for people and places
- relevant data (stimulus) to enable recognition of indications of climate change and identification of significant relationships and implications of these relationships, for people and places.

### Practices to strengthen

It is recommended that assessment instruments:

- clearly assess only Explaining, Comprehending and Communicating criteria in Part A (as per the syllabus specifications) and do not include questions that require analysis, either explicitly or implicitly, e.g.
  - a question that assesses the Explaining criterion may not require stimulus. Students could describe features and elements of biophysical and anthropogenic processes that shape the identity of places and provide explanations of the complexity of interactions that result in land cover change and a changing climate, based on their understanding of the subject matter
  - a question that assesses the Comprehending criterion may assess recognition of spatial patterns of land cover change through the accurate mapping of data (also meeting requirements of the Communicating criterion), and the relationships and implications for people and places of this pattern may be assessed in a written response. Similarly, a question that assesses the recognition of indications of climate change may not require stimulus, or if stimulus is used (either student generated or teacher provided), then it must not require analysis to respond.
- ensure context statements, captions and URLs for stimulus do not include information that provides an answer or directs a response. For example, if a caption describes the process evident in the stimulus such as 'Deforestation in Borneo between 1985 and 2005 occurred at 850 000 hectares of forest per year', this would provide information expected in the response
- provide more than one opportunity for students to respond to each criterion. This may require assessing more than one cognition in multiple questions. For example, a question that asks students to explain features and elements of biophysical and anthropogenic processes that shape the identity of places and that also results in an identifiable spatial pattern that can be described, could assess aspects of both the Explaining and Comprehending criteria
- reflect an appropriate geographical scale. For example, questions that require a response at a global scale may be too broad to enable students to provide depth that reflects the top performance-level descriptors
- provide opportunities for students to achieve the highest performance level for Explaining by including suitably complex questions. Where a question is too simple, the response can only be elementary
- provide sufficient opportunities for students to create sophisticated cartographic *and* graphic forms. This can be achieved by providing data that contains complex information, e.g. multiple data sets, or data that requires a calculation to create a relevant value, prior to creating the map or graph.

## Accessibility

Accessibility in assessment design ensures that no student or group of students is disadvantaged in their capacity to access an assessment.

### Reasons for non-endorsement by priority of assessment — accessibility practices

Accessibility priority	Number of times priority was identified in decisions*
Transparency	53
Language	16
Layout	59
Bias avoidance	59

\*Total number of submissions: 192. Each priority might contain up to four assessment practices.

### Effective practices

Accessibility priorities were effectively demonstrated in assessment instruments that featured:

- appropriately formatted stimulus that did not include distractors, was not crowded or skewed, was legible, and allowed sufficient white space between stimulus on the A3 sheet for Part B
- formatting of questions in Part A that placed stimulus or data with the question and response space.

### Practices to strengthen

It is recommended that assessment instruments:

- use stimulus of a suitable quality, e.g. images that are not blurry, legible text font size on maps and graphs, and stimulus without distractors
- do not include the URLs for any stimulus items, including on the A3 stimulus sheet. The URLs crowd the stimulus, reducing accessibility.

## Assessment decisions

### Reliability

Reliability is a judgment about the measurements of assessment. It refers to the extent to which the results of assessments are consistent, replicable and free from error.

### Agreement trends between provisional and final results

Criterion number	Criterion name	Percentage agreement with provisional	Percentage less than provisional	Percentage greater than provisional
1	Explaining	96.45	3.51	0.04
2	Comprehending	97.1	2.79	0.11
3	Analysing and Applying	97.06	2.79	0.15
4	Communicating	95.61	4.28	0.11

## Effective practices

Accuracy and consistency of the application of the ISMG for this IA was most effective when:

- for Comprehending, responses clearly evidenced spatial patterns of land cover change and indications of climate change, and identified relationships and implications for people and places
- for the analysing objective in the Analysing and Applying criterion, responses aligned to the upper and mid performance-level descriptors explicitly used the data and information when selecting and interpreting stimulus rather than simply referring to the stimulus item
- for the applying objective in the Analysing and Applying criterion, responses aligned to the upper and mid performance-level descriptors demonstrated the explicit application of the analysis to make generalisations about the impacts of climate change on biophysical and anthropogenic environments
- for Communicating, evidence matched to the upper performance-level descriptors demonstrated *proficient* transformation and representation of geographical information (i.e. competent, skilled or adept) to create *sophisticated* cartographic and graphic forms (i.e. of intellectual complexity).

## Samples of effective practices

The following is an excerpt from a response that illustrates the characteristics for the Explaining and Comprehending criterion at the performance level indicated. The sample may provide evidence of more than one criterion. The characteristics highlighted may not be the only time the characteristics have occurred throughout the response.

This excerpt has been included to:

- demonstrate a response to stimulus in Part A that exhibits the Explaining and Comprehension criterion and does not stray into analysis. The response provides an in-depth explanation of the features and elements of both biophysical and anthropogenic processes and a comprehensive explanation of the interactions that result in dryland salinity. The Comprehending criterion is met with a comprehensive description of the spatial pattern evident in the stimulus. This type of question allows students to demonstrate more than one cognition in a single question, increasing their opportunity to demonstrate achievement in each criterion multiple times across one examination.

**Explaining (4–5 marks)**

This response demonstrates:

- in-depth explanations describing a variety of features and elements of biophysical and anthropogenic processes that shape the identity of places
- comprehensive explanations of the complexity of interactions that result in land cover change and a changing climate

**Comprehending (4–5 marks)**

- comprehensive recognition of spatial patterns of land cover change.

Dryland Salinity is the accumulation of salts in the soil and in groundwater that is mobilised to the surface and redistributed into waterways, occurring in non-irrigated regions. The source displays the distribution of salinity in Australia and it is evident that the geographical spatial pattern is in dry regions indicated in south-western western Australia, north-eastern South Australia, parts of central Victoria and New South Wales and significantly in central and south-western Queensland. These areas are and are located around river systems such as the Murray Darling Basin and is caused by geographical processes biophysically and anthropogenically by the removal of deep-rooted native perennial plants that are replaced with shallow-rooted crops, thus causing the water table to rise. It impacts aquatic ecosystems by increasing the salinity of the water affecting the local biota, alien species are thriving and loss of biodiversity causing biological annihilation.

**Practices to strengthen**

To further ensure accuracy and consistency of the application of the ISMG in this IA, it is recommended that:

- evidence in responses matched to *proficient* transformation in the Communicating criterion (data transformation) demonstrates the use of recognised conventions for cartographic and graphic representations and accurate representation of data in maps and graphs that reveals the evident spatial pattern
- evidence in responses matched to *'accomplished'* use of geographical terminology and the conventions of written communication' at the upper performance level for the Communicating criterion, demonstrates correct use of terminology and geographical concepts as per the subject matter for Unit 3 Topic 1.

# Internal assessment 2 (IA2)

## Investigation — field report (25%)

This assessment requires students to research a land-management or water-management challenge at a local scale through a field investigation. A field investigation assesses a range of cognitions in a particular context including observing, questioning, planning, collecting, recording, representing and analysing primary data and communicating geographical understanding in a field report (Syllabus section 4.5.2).

### Assessment design

#### Validity

Validity in assessment design considers the extent to which an assessment item accurately measures what it is intended to measure and that the evidence of student learning collected from an assessment can be legitimately used for the purpose specified in the syllabus.

#### Reasons for non-endorsement by priority of assessment — validity practices

Validity priority	Number of times priority was identified in decisions*
Alignment	42
Authentication	1
Authenticity	14
Item construction	22
Scope and scale	26

\*Total number of submissions: 192. Each priority might contain up to four assessment practices.

#### Effective practices

Validity priorities were effectively demonstrated in assessment instruments that featured:

- a succinct context and task statement that reflected the focus of the investigation, aligned to the subject matter for Unit 3 Topic 2, e.g.
  - context: ‘The local river is of major significance for aesthetic, recreational and environmental reasons. However, with continued urban growth, changes to land cover is posing management challenges for the sustainability of the river.’
  - task statement: ‘Conduct a field study to investigate an identified management challenge to the sustainability of the river in relation to the expansion of urbanisation at a specific location along the river.’
- an investigation that focused on a single site for fieldwork activities, which allowed for suitable and sufficient fieldwork data to achieve the top performance level for the Analysing and Applying criterion and allowed students to make relevant proposals for the fieldwork location
- a task of suitable scope and scale that allowed students to respond within the conditions of the assessment (i.e. word length). For example, fieldwork carried out at a single site (scale) that allowed for analysis of data to identify a specific challenge (scope).

## Practices to strengthen

It is recommended that assessment instruments:

- ensure scope and scale is suitable for students to propose action for the site investigated. For example, a requirement for students to propose action for an entire catchment is too broad
- allow for unique student responses and give students the opportunity to demonstrate the top performance-level descriptors for selecting data in the Analysing and Applying criteria by ensuring appropriate data collection techniques are implemented. For example, if data is collected as a group, establish a repository for all data from which student's select specific data to use in their response. Alternatively, provide for students to collect data individually.
- align scaffolding with the syllabus specifications. For example, using the scaffold provided in the syllabus for the written report will ensure students include all relevant sections
- require students to integrate maps and graphs into the field report, as per the syllabus conditions. For example, maps and graphs appear in the report in the relevant sections, not as an appendix. The appendix should only include raw fieldwork data, as specified in the syllabus
- select a fieldwork location where there is an evident geographical challenge for students to investigate, and one that has significant implications for both people and places.

## Accessibility

Accessibility in assessment design ensures that no student or group of students is disadvantaged in their capacity to access an assessment.

### Reasons for non-endorsement by priority of assessment — accessibility practices

Accessibility priority	Number of times priority was identified in decisions*
Transparency	6
Language	4
Layout	1
Bias avoidance	1

\*Total number of submissions: 192. Each priority might contain up to four assessment practices.

## Effective practices

Accessibility priorities were effectively demonstrated in assessment instruments that featured:

- clear, concise instructions to complete the task that were aligned to the assessment objectives
- instructions outlining the requirements of the task that reflected the assessment objectives, for example in a section entitled 'To complete this task you must'.

## Practices to strengthen

It is recommended that assessment instruments:

- use appropriate geographical terminology to describe the task and limit the use of bold and italics to avoid distraction.

## Assessment decisions

### Reliability

Reliability is a judgment about the measurements of assessment. It refers to the extent to which the results of assessments are consistent, replicable and free from error.

#### Agreement trends between provisional and final results

Criterion number	Criterion name	Percentage agreement with provisional	Percentage less than provisional	Percentage greater than provisional
1	Explaining and Comprehending	94.67	4.52	0.82
2	Analysing and Applying	87.48	11.65	0.87
3	Synthesising	91.45	8.11	0.44
4	Communicating	91.89	7.24	0.87

### Effective practices

Accuracy and consistency of the application of the ISMG for this IA was most effective when:

- at all performance levels, responses included clear evidence that students had collected, analysed and interpreted geographical data and information gathered in the field
- for Explaining, at all performance levels, responses demonstrated explanations of both biophysical *and* anthropogenic processes that shape the identity of places and result in land cover change
- for Comprehending, the evidence in responses matched to the upper performance level descriptors, clearly identified sophisticated (i.e. complex) relationships and implications for both people and places based on the spatial patterns of land cover change observed at the fieldwork site
- for Analysing and Applying, at the upper performance levels, responses demonstrated selection of fieldwork data and information that explicitly identified a geographical challenge evident at the fieldwork site
- the 'best-fit' approach was used if a student's response matched descriptors in more than one performance level
- for Synthesising, responses matched to both the upper and mid performance-level descriptors demonstrated that the proposed action was specifically related to the fieldwork site.

#### Samples of effective practices

The following are excerpts from responses that illustrate the characteristics for the criterion at the performance level indicated. The samples may provide evidence of more than one criterion. The characteristics highlighted may not be the only time the characteristics have occurred throughout the responses.

This excerpt has been included to:

- demonstrate the Analysing and Applying criterion where the interpretations and inferences are directly as a result of analysing fieldwork data (as represented in the graphs) and the generalisations are clearly extrapolated from the analysis.

### Analysing and Applying (9–10 marks)

This response demonstrates:

- discerning selection of fieldwork data and information
- astute interpretations and inferences that identify how patterns, trends and relationships represent a geographical challenge for the fieldwork location
- sophisticated extrapolation from the analysis to make generalisations about the impacts of land cover change on biophysical and anthropogenic environments.

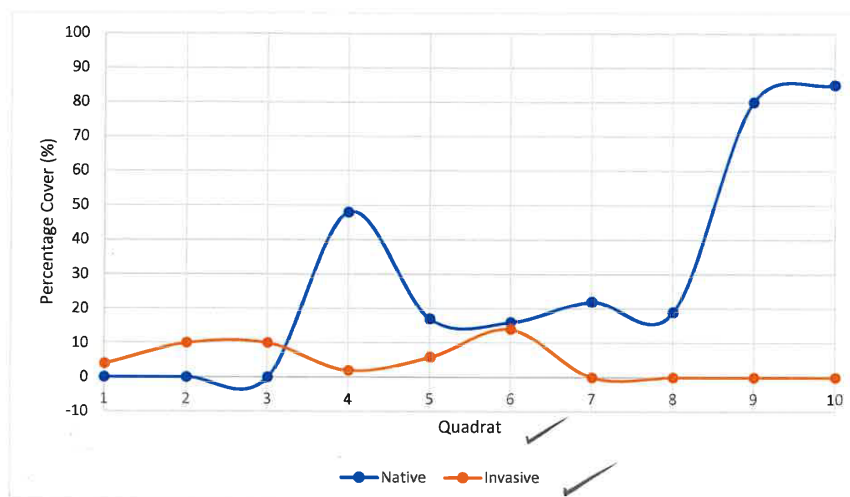
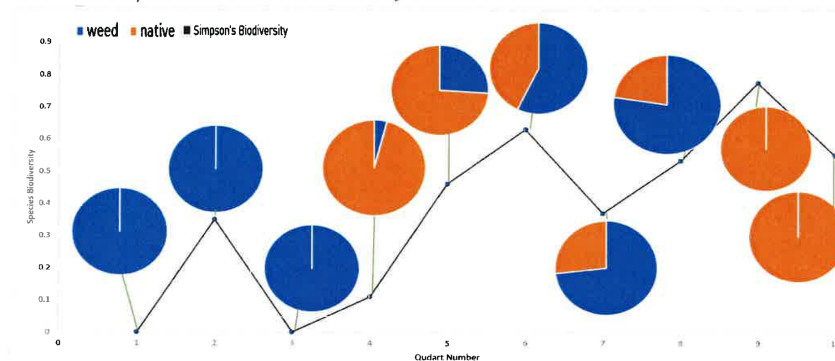


Figure 15: Comparing the percentage cover of native and non-native flora per quadrat to prove the prevalence of the co-existence theory

There is an inverse relationship between native and invasive species, in which quadrats with a higher prevalence of weeds contain a lower abundance of native flora. A Spearman's Rank Correlation Coefficient states that there is a moderate negative relationship between the two variables with a 63% chance that when the percentage cover of non-native flora increases, native flora will decrease. This follows the competitive exclusion principle and hence significantly decreases the biodiversity of native species (Science Direct, 2020).

Although invasive flora tends to decrease the prevalence of native species, the biodiversity of the area still has the potential to be high. This is supported by a very low spearman's rank of 0.24 between biodiversity and invasive flora. Therefore, biodiversity is not a reliable indicator for how invasive species is impacting the ecosystem. Refer to appendix 1c.

#### 1.c Biodiversity Vs Prevalence of Weeds





This excerpt has been included to:

- demonstrate how the synthesis relies specifically on the analysis in order to propose and justify action to manage the identified challenge for the fieldwork location.

#### Synthesising (4–5)

This response demonstrates:

- insightful synthesis of information from the analysis
- justified proposal/s to manage the impacts of the identified challenge
- use of convincing evidence.

#### 4.0 Invasion Triangle

Factors influencing the invasion of non-native flora was given a rank from 1-5 to illustrate the contribution the factor has on the risk of invasion. 1 is the lowest risk, 5 is the highest risk.

Factor	Rank
<b>Invasion Attributes:</b>	
Dispersal and reproduction adaptations of weeds.	4
Tolerance to drought.	3
Tolerance to saline environments.	2
Ability to grow in disturbed areas.	3
<b>Site Total:</b>	<b>12</b>
<b>Site Environmental Characteristics:</b>	
Risk of Saltwater Intrusion due to:	
o Erosion.	2
o Sea level rise.	1
Topography increasing pollution run-off.	1
Increasing population density and residential development.	2
Low soil infiltration rates due to either saturated or dry soil.	2
<b>Site Total:</b>	<b>8</b>
<b>Site Biotic Characteristics</b>	
Decreased biodiversity of <u>native</u> species due to competitive exclusion.	3
<b>Site Total:</b>	<b>3</b>

Table 1: Ranking of Invasion Triangle Factors.

As Invader Attributes contribute the greatest to the risk of weed invasion, the solution should focus on this aspect. ✓

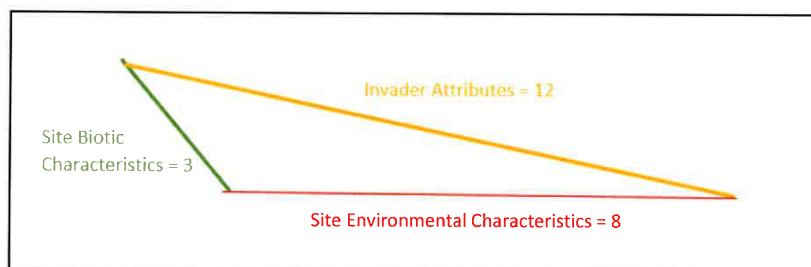


Figure 18: Invasion Triangle for Melaleuca Wetlands Weed Invasion

## 5.0 Conclusion and Proposed Action

As invader attributes pose the greatest threat to the natural biodiversity of the area, a preventative weed control management plan is to be implemented which also focuses on community education of invasive species.

Coochiemudlo Island's coast-care group has recently implemented thermal weed control. Although effective, this technique only implements a short-term management plan and requires frequent upkeep. Therefore, to ensure the long-term viability of the RAMSAR protected wetland it is recommended to use funds provided to Coast-Care by the Australian Government to spray the ecosystem with an organic foliar spray. Foliar Spray is a "successful method for weed control" and involves the use of a diluted, organic herbicide (Storrs, Dam, & Finlayson, 2000). A "selective herbicide" which native species are tolerant to will be used to ensure that the area, traditionally owned by the Quandamooka people is respected, whilst also following weed management protocols set by RAMSAR.

Vegetation is to be sprayed along the edge of the dune system and within an 11m radius of the pathway.



Figure 19: Area Proposed to be sprayed with Foliar.

Although the pathway will still be a disturbance, by reducing the abundance of weeds, seed dispersal will be reduced. Although compacting soil, it is important to keep the trail as it connects the Quandamooka people with the habitat. This weed management project will also educate the community on weeds within the ecosystem and is hence expected to decrease the community's use of Impatiens within gardens. This decreases the spread of weeds through surface runoff.

Although site environmental characteristics, particularly risk of saltwater intrusion is a concern for the survival of native flora, spread of invasive flora is a more imminent risk. By removing/decreasing weeds, the impact of saltwater intrusion is reduced due to complexity and ability for native species to adapt to change expected to increase. Therefore, if saltwater intrusion occurs, native species will have an increased ability to adapt to an altered soil pH and hence the health of the ecosystem will be relatively maintained.

## Practices to strengthen

To further ensure accuracy and consistency of the application of the ISMG in this IA, it is recommended that:

- for the Communicating and Analysing and Applying criteria, responses matched to the upper and mid performance levels demonstrate use of data gathered in the field (primary data). Any secondary data is only used to value-add to the fieldwork data
- for the Analysing and Applying criterion:
  - at the upper performance level, *astute* interpretations and inferences are demonstrated through making clear links between multiple pieces of data to explain how patterns, trends and relationships represent a geographical challenge for the fieldwork location
  - generalisations about the impacts of land cover change on biophysical and anthropogenic environments, at the upper and mid performance levels, demonstrate extrapolation from the analysis, i.e. the understanding from the analysis is extended to generalise about impacts
- to demonstrate the requirements of the Communicate criterion cartographic and graphic forms are created by students and are fully integrated into the field report, as close as possible to where they are referred to in the text. Appendices should only include the raw fieldwork data represented in the report.

## Additional advice

- Schools submit field reports that are communicated in 1500–2000 words or clearly indicate which 2000 words have been used to make judgments (refer to the *QCE and QCIA policy and procedures handbook*, Section 8.2.6, for guidance on managing response length,). For example, annotations on maps, graphs and diagrams, and information presented in tables (other than raw, unprocessed data) are included when determining word length of a response.

## Internal assessment 3 (IA3)

### Investigation — data report (25%)

The investigation requires students to respond to an identified population challenge for a selected place in Australia at a local scale, e.g. a city, suburb or rural town, using a fundamental set of raw data provided by the teacher (as a starting point) and additional data researched and gathered by the student. The findings of the geographic inquiry will offer proposals for sustainable management in response to the identified challenge (Syllabus section 5.5.1).

### Assessment design

#### Validity

Validity in assessment design considers the extent to which an assessment item accurately measures what it is intended to measure and that the evidence of student learning collected from an assessment can be legitimately used for the purpose specified in the syllabus.

#### Reasons for non-endorsement by priority of assessment — validity practices

Validity priority	Number of times priority was identified in decisions*
Alignment	50
Authentication	2
Authenticity	28
Item construction	17
Scope and scale	21

\*Total number of submissions: 192. Each priority might contain up to four assessment practices.

#### Effective practices

Validity priorities were effectively demonstrated in assessment instruments that featured:

- a succinct context and task statement that reflected the focus of the investigation and was relevant to the subject matter for Unit 4 Topic 1
- an initial dataset that represented a clear demographic challenge for a specific place at a local scale. For example, the data, once transformed into a population pyramid, clearly exhibited a bulge or dip for a specific demographic group
- a place with a demographic challenge of sufficient scope that provided students the opportunity to research more in-depth data to respond to the identified challenge.

#### Practices to strengthen

It is recommended that assessment instruments:

- focus on local scale, which is not necessarily local place. A local place may not reflect an identifiable demographic challenge. Ensure that the initial dataset for a place has a clearly identifiable demographic challenge. For example, an ageing population, a youth population, a bulge in a particular age/sex group that poses a challenge for the community

- use a fundamental, primary dataset as the initial data. The data should not have been processed by a third party for a particular purpose, e.g. data from a city/shire council. Use ABS data for the initial dataset to align with the syllabus subject matter.

## Accessibility

Accessibility in assessment design ensures that no student or group of students is disadvantaged in their capacity to access an assessment.

### Reasons for non-endorsement by priority of assessment — accessibility practices

Accessibility priority	Number of times priority was identified in decisions*
Transparency	3
Language	5
Layout	1
Bias avoidance	1

\*Total number of submissions: 192. Each priority might contain up to four assessment practices.

### Effective practices

Accessibility priorities were effectively demonstrated in assessment instruments that featured:

- clear and concise instructions to complete the task that aligned to the assessment objectives
- appropriate and accurate geographical terminology.

### Practices to strengthen

It is recommended that assessment instruments:

- format initial ABS data as a table that students can easily access and transform using relevant technologies.

## Assessment decisions

### Reliability

Reliability is a judgment about the measurements of assessment. It refers to the extent to which the results of assessments are consistent, replicable and free from error.

### Agreement trends between provisional and final results

Criterion number	Criterion name	Percentage agreement with provisional	Percentage less than provisional	Percentage greater than provisional
1	Explaining and Comprehending	98.1	1.63	0.27
2	Analysing and Applying	95.66	3.66	0.68
3	Synthesising	94.85	5.15	0
4	Communicating	92.14	7.59	0.27

## Effective practices

Accuracy and consistency of the application of the ISMG for this IA was most effective when:

- responses matched to the upper performance-level descriptors for Explaining clearly demonstrated *in-depth* explanations of the relevant demographic processes that contributed to the identified challenge, e.g. birth rates, death rates or migration
- for Comprehending, to meet the upper and mid performance-level descriptors, spatial patterns were recognised and accurately described using appropriate geographical terminology, for example appropriate references to population density for a place, or urban sprawl
- responses matched to the upper performance-level descriptors in Analysing and Applying showed a clear match to *discerning* and *considered* selection of data and information, as demonstrated when the response used a range of primary data that represented complex relationships that allowed for *sophisticated* extrapolation
- evidence matched to the top performance level for Synthesising was *insightful* and the proposed action was clearly *justified* by evidence from the analysis.

## Samples of effective practices

The following are excerpts from responses that illustrate the characteristics for the criterion at the performance level indicated. The sample may provide evidence of more than one criterion. The characteristics highlighted may not be the only time the characteristics have occurred throughout the responses.

This excerpt has been included to:

- demonstrate the analysing objective of the Analysing and Applying criterion
  - where discerning selection of data provided the opportunity to demonstrate a geographical challenge, i.e. relationships between the data are evident
  - by showing astute interpretations and inferences that made clear links between multiple pieces of data to explain how patterns, trends and relationships represent a geographical challenge, i.e. the links between the age groups of people for both inward and outward migration, household composition and the changes to industry/employment composition. The analysis clearly uses the relevant data transformations
- demonstrate the Communicating criterion (data transformation)
  - the graphs illustrate proficient transformation of data as they reflect accurate representation of the data and include appropriate conventions. They are sophisticated graphical representations because they are suited to the type of data, and complexity and relationships are evident in the representations.

### Analysing and Applying (9–10 marks)

This response demonstrates:

- discerning selection of demographic data and information
- astute interpretations and inferences that identify how patterns, trends and relationships represent a geographical challenge for a specific place in Australia

Migration has had a profound impact on the age structure of the population and has been largely influenced by the popularity of Victor Harbor as a sea change, retirement location. In 2016, 53.86% of all migrants exceeded the age of 55 years, representing the majority of net immigrants, concurrently, a 10.98% loss of those aged 18-24 (Fig.3.5) occurred. This has influenced household compositions (Fig.3.6), with a lower proportion of couple and single parent families with children, and group households, and a higher proportion of single person households and couples without children when compared to national averages. Overall, the proportion of single-person households was 15.2% and couples without children was 13.3% more than Australia (Fig.3.6). With an ageing population (Fig.3.2), Victor Harbor has experienced the most significant change of household types within the lone person demographic, 2.43%, compared to Australia, with -0.25% change. This shift in household composition is represented in changes in employment structure and industry composition.

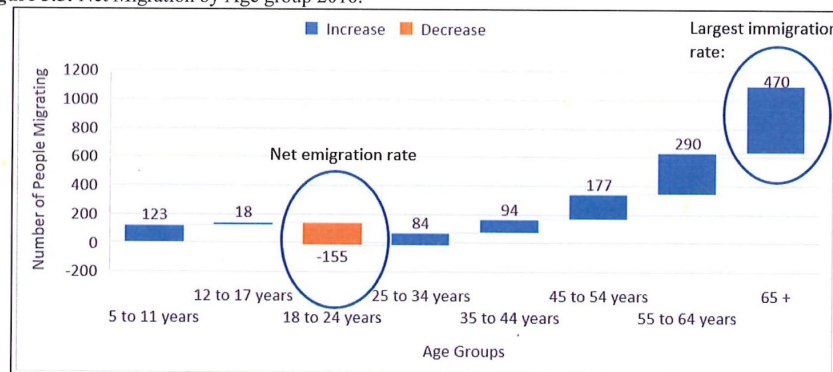
Between 2011 and 2016, the Health Care and Social Assistance category has experienced a growth in employment numbers (Fig.3.7). Simultaneously, a decline in numbers employed in retail, construction, manufacturing, agriculture, professional, scientific and technical, financial and insurance, transport, postal and warehousing services (Fig.3.7) was evident. The decline in a wide range of industries poses challenges for Victor Harbor's economic sustainability.



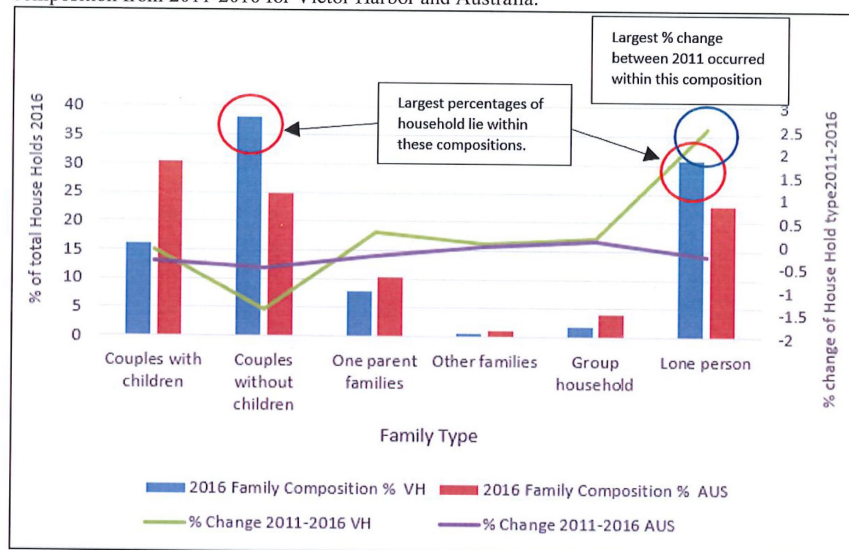
## Communication

- proficient transformation and representation of geographical data and information
- creates sophisticated graphic forms.

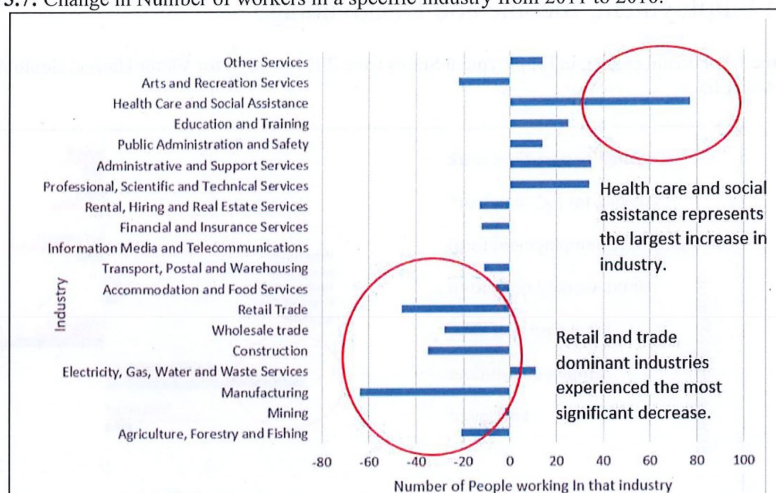
**Figure 3.5: Net Migration by Age group 2016.**



**Figure 3.6: Percentage of Specific Family Composition 2016 Vs. percent change of that Family composition from 2011-2016 for Victor Harbor and Australia.**



**Figure 3.7: Change in Number of workers in a specific industry from 2011 to 2016.**



This excerpt has been included to:

- demonstrate the Communication criterion (data transformation)
  - data transformation is proficient, indicating the accurate spatial pattern found in the data, and the maps include the relevant conventions for mapping
  - they are sophisticated cartographic forms because they are suited to the type of data being represented and complexity and relationships are evident in the layers of data.

#### Communicating (6–7 marks)

This response demonstrates:

- proficient transformation and representation of geographical data and information
- creates sophisticated cartographic forms.

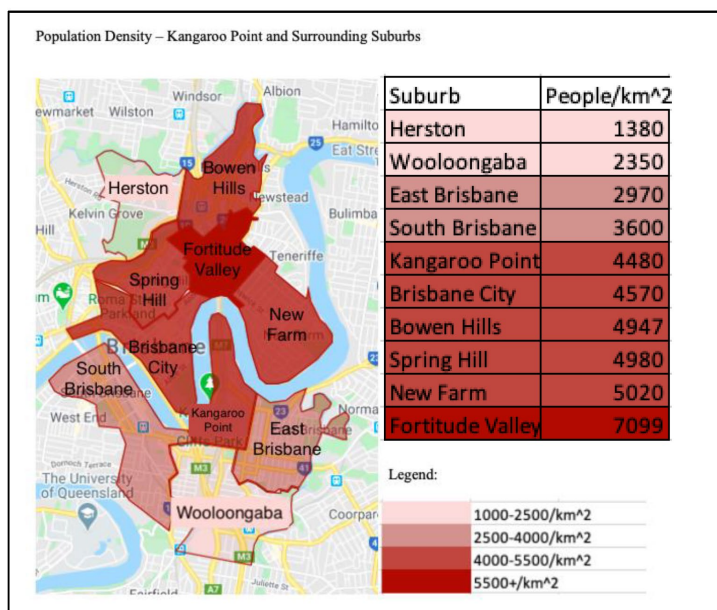


Figure 6: Population density of Kangaroo Point and surrounding suburbs (Australian Bureau of Statistics, QuickStats, 2020)

#### Kangaroo Point and Surrounding Suburbs Doughnut Effect

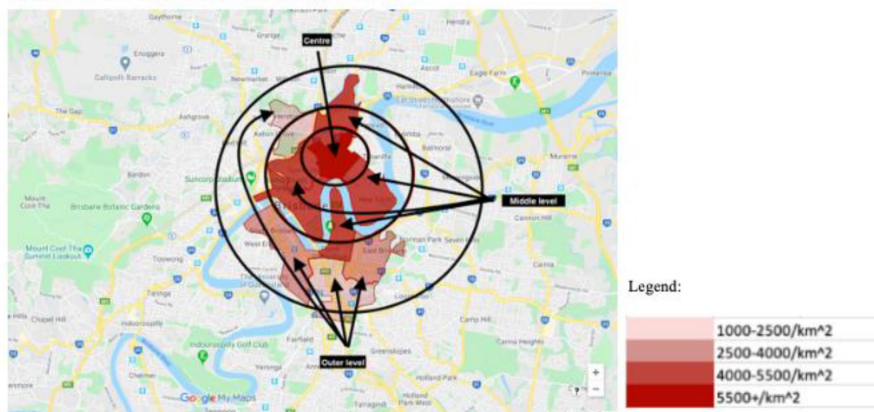


Figure 12: Doughnut effect of Kangaroo Point and surrounding suburbs (made using Google My Maps)



### 3.2 Land use

Figure 4: Kangaroo Point land use map (made using Google My Maps)

Figure 4: Kangaroo Point land use map (made using Google My Maps)

This excerpt has been included to:

- demonstrate the applying objective of the Analysing and Applying criterion. Generalisations about the impacts of demographic change that are clearly extrapolated from the analysis, i.e. inferences are made from what is known.

#### Analysing and Applying (9–10 marks)

This response demonstrates:

- sophisticated extrapolation from the analysis to make generalisations about the impacts of demographic change for people and places.

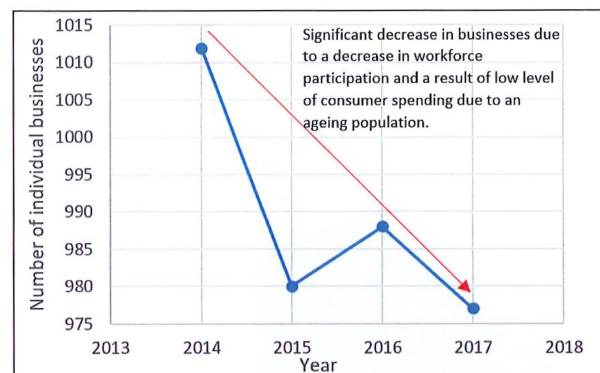
#### 4.1 Housing Affordability:

Victor Harbor's once relatively low housing costs have increased (ABS, 2016). High immigration rates of elderly retirees (Fig.3.5), has led to a higher demand for housing (predominantly separate houses (84.9%)), leading to higher mortgage payments (Fig.3.13), causing a higher percent of mortgage payers in housing stress (Fig.3.14). Worst affected are low income earners, comprising 29.1% of Victor Harbor's population (Fig.3.10), and first home buyers. This ultimately works against the desire to attract and retain youth in the town, reflected in a high emigration rate of those people aged 15-29 (Fig.3.5). Youth are key to Victor Harbor as they provide health care, industry and retail-based services in conjunction with a larger disposable income to maintain the economy.

#### 4.2 Effect of Employment on Youth Deficit and Economy:

An increase in part time work (Fig.3.8), concurrent with a proportional decrease in the number of people entering the labour force (fewer 15-24-year old's), causes a drastic decrease in workforce participation. Resultantly, there will be a significant projected decrease in employment (Fig.3.9). Due to the high proportion of aged households (Fig.3.6), low workforce participation, high proportion of part-time, casual and semi-skilled employment sectors, Victor Harbor's average median weekly income is low (Fig.3.10).

**Figure 4.1:** Number of Businesses from 2014-2017. Source: ABS Data



This has implications for Victor Harbor's longer-term economic sustainability and flow-on effects to health and community service provision and quality of life. A decrease in employment, larger proportion of older, lower income earners reflected in Victor Harbor's populations high level of dependency (Fig.3.4) and high level of disadvantage (Fig.3.11, 3.12), leads to a lower rate of discretionary,

consumer spending which disadvantages businesses who depend on consumer sales to pay vendors. This results in an (already evident (Fig.4.1)) reduction of businesses, while demand for council services increases, resulting in the decrease of sustainability and liveability for residents of the town.

A large proportion of the existing labour force is engaged in low paid employment, and there is a low proportion of secure full-time equivalent employment options. This reinforces the difficulties associated with attracting permanent younger demographics looking for stable, full-time work, reflecting in the town's significant youth deficit (Fig. 3.2). Only people aged 18-24 accounted for Victor Harbor's outmigration (Fig.3.5). This indicates that whilst Victor Harbor can attract younger families, it has difficulty retaining families beyond school leaver age who leave to access more stable or permanent employment.

This excerpt has been included to:

- demonstrate the use of information from the analysis to justify proposals to address the identified challenge in the place being investigated in the Synthesising criterion. Proposals are directly linked to the data arising from the analysis, which represents credible evidence.

### Synthesising (3–4 marks)

This response demonstrates:

- insightful synthesis of information from the analysis
- justified proposal/s to manage the impacts of the identified challenge
- use of convincing evidence.

## 5.0: Conclusion and Proposed Action:

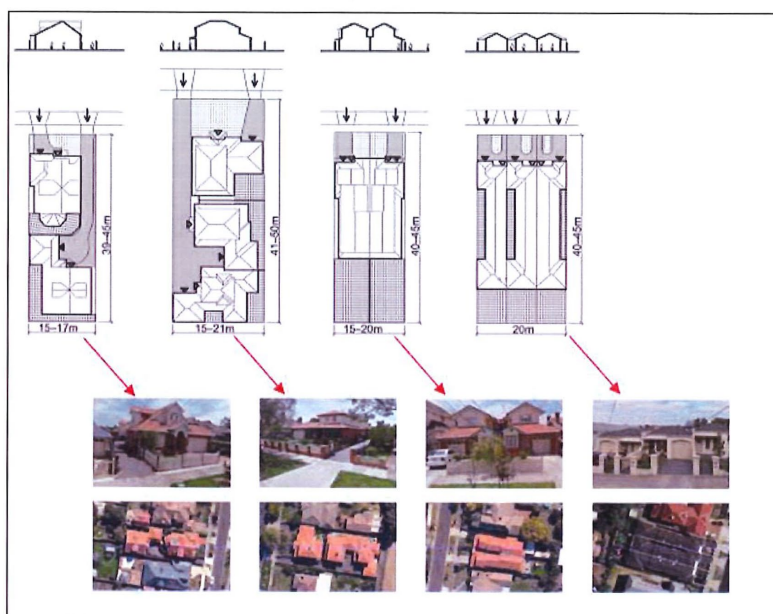
Victor Harbor's ageing population exceeds the national trend, which has led to an influx of lone person and couple family households (Fig.3.9) residing in predominately separate houses (ABS, 2016). A peak in the population for the 65+ age demographic (Fig.3.3) and a large retiree immigration rate (Fig.3.5), has resulted in a decrease in employment and work force participation (Fig.3.8) and low income (Fig.3.10), leading to a dependency ratio of 102.43% (Fig.3.4). These factors pose challenges for housing affordability (Fig.3.13, 3.14), businesses (Fig.4.1), and place pressure on health services (Fig.3.7).

### 5.1 Housing Affordability:

A wider range of affordable housing types (high density infill housing (Fig.5.1)) close to retail centres, increasing average housing densities in new land divisions and providing special needs housing options is encouraged. However, increasing separate houses will not suit the increase in smaller family compositions (Fig.3.6), instead townhouses (Fig.5.2) and apartments should be implemented, with stair climbing mobility systems.

This will support Victor Harbor's 68% of smaller household compositions and older age groups, in which 29% are low-income earners (Fig.3.9, 3.10). It will make efficient use of and easy access to existing physical infrastructure and will increase the attraction and retainment of first home buyers seeking affordable housing options. This will ultimately increase workforce participation especially for health care workers, catering for an increase demand in health care; ultimately leading to more economic flow due to discretionary spending, making the town more economically sustainable. Notably, this will also create employment prospects for younger tradespeople seeking jobs, (attracting and retaining youth).

**Figure 5.1:** Sample Urban Infill Housing



Source: Google Images

### Practices to strengthen

To further ensure accuracy and consistency of the application of the ISMG in this IA, it is recommended that:

- schools note that IA3 responses require use of the common formulas for this unit and other mathematical models, including dependency ratio, as specified in the syllabus
- for Communicating, maps are student-generated using spatial technologies and/or ICT as stated in the syllabus assessment specifications or that downloaded or photocopied maps are suitably adapted to the student's own information by using overlays and annotations
- to demonstrate the top performance-level descriptor of 'sophisticated cartographic and graphic forms' data is suited to creating complex representations, e.g. scatter graphs, multiple line graphs, compound bar graphs, ternary graphs, population density maps, population distribution maps or relevant land use maps.

### Additional advice

- Schools submit data reports that are communicated in 1500–2000 words or clearly indicate which 2000 words have been used to make judgments (refer to the *QCE and QCIA policy and procedures handbook*, Section 8.2.6, for guidance on managing response length). For example, annotations on maps, graphs and diagrams, and information presented in tables (other than raw unprocessed data) are included when determining word length of a response.
- Teachers should ensure that the assessment condition that the authentication strategy for student-created graphs to be completed under supervised conditions has been implemented.

# External assessment

## Examination — combination response (25%)

### Assessment design

#### Assessment specifications and conditions

The examination is a combination of short and extended response items related to Unit 4 Topic 2: Global population change. It consists of:

- 5–8 short response items in response to stimulus (data)
  - may include explanation, measurement, calculations, drawing, labelling and, annotating maps, diagrams and graphs
  - responses may take the form of creating maps and graphs, annotating, sentences and/or paragraphs as required by each item
- One extended response item in response to stimulus (data)
  - may include using a model and/or calculations
  - multiple possible responses from the stimulus.

#### Stimulus specifications

- Stimulus materials are succinct enough to engage with in the planning time and for Section 2: Extended response stimulus fit on one A3 page or equivalent.
- Stimulus materials consist of visual texts, e.g. maps, graphs, statistics, infographics, images, diagrams and minimal text (no more than 150 words).
- Stimulus materials are not provided prior to exam.
- Context statements are included for each piece of stimulus in the form of a brief description that may include source of data, and any general details about the purpose or construction of the data.

The assessment instrument consists of two sections. Questions are derived from the context of Unit 4 Topic 2: Global population change. This assessment determines student achievement in the following assessment objectives:

1. explain geographical processes by describing the features, elements and interactions of demographic processes that shape the identity of places and result in patterns of population change
2. comprehend geographic patterns by recognising spatial patterns of demographic change for places at global, regional and local scales of study, identifying relationships and the implications for people and places
3. analyse geographic data and information by selecting and interpreting demographic data to infer how patterns, trends and relationships represent a geographical challenge in relation to global population change
4. apply geographical understanding by extrapolating from their analysis to generalise about the impacts of demographic change for places of origin and places of destination globally

6. communicate geographical understanding of global, regional and local demographic change and the challenge for sustainable management by selecting and using cartographic, graphic, written and mathematical skills in short and extended responses.

**Note:** Objective 5 is not assessed in this instrument.

The stimulus was specific to each question and consisted of maps and graphs, which were designed to elicit both short responses in Section 1, related to assessment objectives explain, comprehend, analyse and communicate (data transformation) and an extended response in Section 2 related to assessment objectives analyse, apply and communicate (written).

Section 1 had five short response questions, including the creation of a graph.

Section 2 consisted of one extended response item, which assessed the analyse, apply and communicate objectives. The question required students to analyse a range of data (maps, graphs and a diagram) to make inferences about a geographical challenge arising from the migration of people to Dhaka in Bangladesh. Then, based on their analysis, students were required to make generalisations about the impacts of the identified challenge for people or places.

## Assessment decisions

Overall, students responded well to the following assessment aspects:

- constructing an appropriate graph suited to the data (multiple line graph). In the relevant question, the majority of students accurately plotted the data and included all the relevant labels (axes and title) and a legend to distinguish the graphed data
- analysing graphs to explain trends and patterns in fertility data for specific regions and the world, using detailed evidence to support explanations
- describing patterns of life expectancy using detailed evidence from a graph, and in particular identifying the difference in life expectancy between regions.



## Effective practices

The following samples were selected to illustrate highly effective student responses in some of the assessment objectives of the syllabus.

### Short response

Assessment objective: Analyse

Item: Question 4b

This question required students to analyse the graph they created showing population growth for selected Melbourne suburbs, explain the geographical challenge for the place with the fastest growing population and provide two examples of the challenge.

Effective student responses:

- accurately identified the overall trend
- identified the different rates of growth for each LSA
- identified South Morang as the place with the fastest population growth
- used evidence from the graph to support the analysis
- explained the geographical challenge as sustainable development
- provided two relevant examples for the challenge of sustainable development.

Student samples of effective responses

This excerpt has been included to:

- illustrate a high performance level for analysing (in a short response question).

#### Analysing (4 marks)

This response:

- identifies the different rates of growth for each LSA
- identifies South Morang as the place with the fastest population growth
- uses evidence from the graph to support the analysis.

Population growth in Melbourne between 1996 and 2016 has significantly accelerated in certain areas such as Cranbourne East and South Morang. South Melbourne depicts a growth of 4061 over the 20 years with the largest increase being between 2001 and 2006. Ellen North shows a <sup>slow fluctuating population growth</sup> ~~consistent~~ growth of 2639 in the first 5 years, 501 in the following, then a decline of 1144 in the last 10 years, finishing at 6805. Cranbourne East had a rapid growth rate of 734 to 16 195 from 1996 to 2016. South Morang had the highest population growth out of the four selected Melbourne suburbs, increasing from 2348 to 24060, depicting an increase of 21 712 residents in the 20 years.

This excerpt has been included to illustrate:

- a high-level response that identifies the challenge as sustainable development. Although the terminology 'sustainable planning' has been used, the context is an appropriate match to the EAMG descriptor at the top level for the analysing objective
- two relevant examples of this challenge for South Morang.

**Analysing (3 marks)**

This response:

- explains the geographical challenge as sustainable development
- provides 2 examples for the challenge of sustainable development.

2016. This rapid increase in population causes the geographic challenge of sustainable planning. Quick planning of infrastructure and services is required due to the significant increase in population of South Morang. If there is no planning the suburb will be unable to sustain the influx of people. Also, there is another geographic challenge of employment. It is critical that as the population increases, so does the employment opportunities. However, as the suburb grows there is more competition for employment. As there is more competition, less people are employed as there are limited jobs for a greater population of people.

Assessment objective: Analyse

Item: Question 3

This question required students to analyse fertility graphs for Africa and Europe to explain the patterns and trends. The second part of the question asked students to make inferences about the impact of the identified trends on population change in both regions.

Effective student responses:

- identified the overall trend in fertility rates
- described the trends for both regions, using detailed evidence
- identified the difference in fertility patterns
- explained a relevant impact for both regions.

Student samples of effective responses

This excerpt has been included to illustrate:

- a response that answers both parts of the question at the top performance level
- a response that includes appropriate inferences about the impacts on population change.



**Analysing (7 marks)**

This response:

- identifies the overall trend in fertility rates
- describes the trends for both regions, using detailed evidence
- identifies the difference in fertility patterns
- explains a relevant impact for both regions.

The graphs show a steady decrease in fertility across all regions in Europe, from an average of between 2 and 3 live births per woman to below the replacement rate of 2.1. Regions such as Western and Northern Europe showed an increase of fertility rate between 1960 and 1970, however Western Europe has since shown a significant decrease in fertility rate to below 2. This trend can be seen to relate ~~to~~ to the world trend in a decrease in ~~the~~ fertility between 1950 and 2010. Africa, however, has shown a significant increase in fertility followed by a significant decrease after 1970. An exception to that would be Western Africa, which continued to increase until 1980, and Middle Africa, which showed the most significant increase between 1950 and 2000, with fertility rate from approximately 6.1 to just below 7 in 2000. The impact of these trends on population change in Europe is that population will continue to decrease due to the majority of fertility rates being below the replacement rate of 2.1. A reliance ~~on~~ on migration would allow population to continue to increase. In Africa, population will continue to grow before decreasing due to population momentum. While fertility rate has dropped, it will take time to see a decrease in population growth while children born during this time move through the years of fertility (15 to 49). After these children have passed these ages, significant decrease in population will be seen across Africa.

**Extended response**

Assessment objectives: Analyse, Apply and Communicate

Item: Question 6

This question required students to analyse a range of stimulus to make inferences about a geographical challenge arising from the migration of people to Dhaka in Bangladesh. Students then had to apply their understanding, from the analysis, to make generalisations about the impacts of the identified challenge for people or places.

Effective student responses:

- used comprehensive data to support the explanation
- identified complex relationships in the data
- made generalisations about the impacts on people or places that were complex
- used the analysis to support the generalisations
- organised paragraphs to convey ideas purposefully and fluently in relation to the question
- used correct geographical terminology throughout the response.

## Student samples of effective responses

This sample has been included to illustrate:

- a response that clearly links aspects of the data analysed to explain a relevant geographical challenge
- the use of comprehensive data to support the analysis
- identification of complex relationships in the data, such as the relationship between reasons for migrating to Kamrangichar (employment) only to be faced with an 'oversaturated' job market leading to unemployment or employment in 'low wage jobs such as street vendors'. This lack of employment results in marginalised populations forced to live in slums
- the use of the analysis to make generalisations that are complex, such as making the link between marginalisation and the quality of life within the slum; the lack of access to infrastructure, such as toilets, and the subsequent need for healthcare services due to risk of disease (easily transmitted due to the population density within the slum) and that 'as low-income earners, these people are most likely unable to afford healthcare if they were to become ill'
- a response that uses appropriate geographical terminology and the features of an extended response in a combination examination.

### Analysing (8 marks)

This response:

- provides a detailed explanation of a geographical challenge
- uses comprehensive data to support the explanation
- identifies complex relationships in the data

### Applying (5 marks)

- provides a detailed explanation of a geographical challenge
- uses comprehensive data to support the explanation
- identifies complex relationships in the data

### Communicating (3 marks)

- organises paragraphs to convey ideas purposefully and fluently in relation to the question
- uses correct geographical terminology throughout the response.

The stimulus reveals that Dhaka, Bangladesh is experiencing a significant geographical and demographic challenge as high levels of citizens internally migrate from rural to urban areas. <sup>the challenge of</sup> This includes <sup>a lack of employment opportunities</sup> marginalisation and <sup>their</sup> population density and the subsequent impacts on people and quality of life.

<sup>the capital of Bangladesh,</sup> Dhaka, has and continues to experience a significant growth in population, with less than 1 million people in 1960 to ~~now~~ around 18 million people by 2015 (stimulus 4). As well, the population is projected to increase to ~~over~~ over 40 million by 2040 (stimulus 4). This significant population growth can be attributed to the internal migration flows in Bangladesh, with 45% being rural to urban areas <sup>in 2011</sup> (stimulus 8). The greatest pull factor to an urban area, like Dhaka,

is employment opportunities, with 60% of reasons for migration to Kamrangirchar (a region of Dhaka) being 'seeking job' (stimulus 7). However, 50% of business employment in Kamrangirchar includes the informal sector - which includes low-wage jobs such as street vendors (stimulus 7). Furthermore, 39% of ~~people~~ are unemployed or do unpaid house work (stimulus 7). With ~~heavy~~ heavy migration flows as people look for work and an oversaturated job market thereof, ~~these~~ these little to no income earners are marginalised to slums. In fact, 37% of Dhaka's almost 20 million population ~~live~~ <sup>persons/km<sup>2</sup></sup> live in slums, with a slum population density of 220246 <sup>persons/km<sup>2</sup></sup> compared to 19677 <sup>evident</sup> for the non-slum population (stimulus 3). These high density single storey areas are demonstrated in the Kamrangirchar slum, which is only 3km<sup>2</sup> (stimulus 2). As seen, in stimulus 1, Kamrangirchar is one of the most significant examples of an informal settlement home to marginalised people (due to the lack of high-wage employment opportunities).

The implications of this challenge is evident in the low quality of life of those living in the high density slums. Stimulus 2





demonstrates the significant implications on the quality of life for those living in Dhaka's slums.

①. As well, 5% of the slum population do not have access to a tap/well, and are most likely to retrieve water from the closest source – the river (stimulus 5). This further impacts the quality of life of the slum population due to the increased risk of illness and disease.

In conclusion, the stimulus indicates that Dhaka is experiencing a demographic and geographic challenge as high levels of people internally migrate from ~~urban to rural~~ rural to urban areas. This challenge includes the lack of employment opportunities and the subsequent marginalisation of low income-earners to slums, where negative implications on quality of life are evident.

### Practices to strengthen

It is recommended that when preparing students for external assessment, teachers consider:

- preparing students to carefully unpack the questions to identify
  - explicit instructions and recognise the relevant cognitive verbs. A question may require a specified number of examples, such as in Question 2 which instructed students to 'provide two examples ...'
  - different parts to the question, for example an analyse question, such as Question 5, required an analysis of the pattern and the identification of one relevant geographical challenge
- how students describe spatial patterns using appropriate geographical terminology and concepts. For example, Question 2 required students to explain the type of pattern shown for the USA; the pattern is a clustered pattern of population distribution. The appropriate use of terminology allows students to answer accurately and succinctly
- including activities to build student's vocabulary of relevant terminology for Unit 4 Topic 2. A clearer understanding of geographical concepts and terminology will allow students to communicate ideas purposefully and fluently. For example, the concept of 'forced migration' was incorrectly used to describe voluntary migration for the purposes of employment or to escape poverty in the extended response.