2003   **Geography GA 3: Written examination**

GENERAL COMMENTS

Overall, there continues to be encouraging signs of better teaching practice and therefore better outcomes for students. At the lower end of the scale there are more students attempting almost every question, including difficult ones such as 2e. There were fewer blanks and a greater frequency of geographic terminology used. At the opposite end of the curve, the quality of work is often revealed in succinct, carefully thought out answers that quantify accurately, use terminology comfortably and apply effectively their own studies to the question.

The most successful answers showed evidence of having read and thought about the data very carefully and were able to effectively incorporate the main thrust from the data into their answers. The most successful answers showed understanding of the concepts of distribution, spatial change over time, scale and spatial association. They also understood the instructional terminology used in the question, i.e. **describe, identify**.

Areas of strength and weakness
Strengths
- In general, students seemed to have no trouble completing the examination; however, there was a percentage of students who did not complete all questions.
- The structure of the paper gave students ample opportunity to demonstrate skill development from classwork during the year.
- Directions were, generally, well followed compared to previous years. Students need to be reminded to use the map data when the question states *Using evidence from the map*.
- Key Geographic Ideas (KGI) were, generally, better used and clearly understood. Many students included frequent reference to KGIs throughout the examination and there has been a marked improvement in their use over the last 3–4 years and students are showing greater confidence in using them independently.
- The map outlines, such as provided for Questions 4d and 5, were a great help to students, reducing the time taken to complete their answers. Students, therefore, focused on the data to be represented rather than attempting to sketch a map of the world prior to commencing the required task. The map outline also improved the accuracy of the mapped phenomena. Fuller legends, appropriate titles and map labels are a welcome trend.
- Data Representation Skills were generally good, although, for Question 5, there seemed to be less detail on the maps than in previous years. Some students used shades of the same colour to show their distributions and this made them difficult to distinguish. Students are strongly advised to use different colours.
- Tables were used to good effect, especially in Questions 3 and 5b. Students who used tables in these questions focused their answers and provided evidence of justification. Students who did not use tables were frequently less focused and more general in their responses. Often, tables of evaluation were given with no context.
- Instructional terminology was understood better this year; however, many students still did not understand the instructional terms, such as analyse, justify, compare, evaluate. Use of these terms in school-based assessment tasks could assist students to better understand the terms on the end-of-year examination paper. This is an area of weakness which needs attention by teachers.
- Students tended to choose more appropriate case study material, for example irrigation water diversion from the Aral Sea, PNG gold mining, Southbank development, Snowy River management, although there was a significant proportion of students using generic material such as fish or water.
- Generally, the handwriting of all students was legible, and there were few difficulties in reading what the students had written. Scripts were easier to read and better set out than in previous years. There are still a number of students writing in pencil; it is often difficult in this instance to decipher key words.
- Students are applying geographic techniques without a great deal of prompting such as quantifying, elaborating on examples.

Weaknesses
- Many students spend too long completing Question 1b, the table. They wrote in meticulous detail, when the question only included three marks, one for each part of the table; and they ran out of time towards the end of the paper. Therefore, students need to balance their time, according to the recommendations given towards time and the number of marks allocated to the question.
- Inappropriate use of the **data**. Some students did not refer to the data and wrote in general terms. Some students are still finding difficulty with the significance and relevance of the data provided. Students need to make more direct use of the data (i.e. relative proportions, amounts) and read the questions carefully.

- Although most students understood and applied the term *Spatial Association* successfully, students are still very poor at understanding and choosing a weak spatial association. Some tend to over use KGIs or use them when not required or at an inappropriate point and others misunderstood the notion of *scale*.
- Teachers need to ensure that students understand the terms classify, geographic characteristics, factors and human phenomenon. There were some poor definitions/understanding of the terms *sustainable* and *renewable*. Many students appeared not to fully understand the term *evaluate*.
- Poor use of **student case studies** meant that many students score little for a question that enables them to use their own class research. Students appeared to learn material but not apply it correctly. Students must read, and think about the questions.
- Whilst students attempted to map data as required, many students lost marks for poor graphicacy or lack of attention to conventions, for example Questions 4d and 5. Some students were unable to accurately locate places on maps.
- Some students confused a *resource* and a *global phenomenon* as well as a *process* and a *resource*, for example *fish* and *fishing*. Also, *deforestation* is not a resource.
- Students need to be exposed to a wider range of data. Some appeared to have difficulty understanding the features on the aerial photograph and the land use map. Teachers need to reinforce the importance of map reading skills and being able to decipher information presented on a map, and being able to use the legend and other map features.
- Students are not good at summarising information from world maps. All students should know the names and locations of the continents and significant regions such as the Middle East and Central America. They need to practise summarising mapped information using regional categories rather than naming all the countries. Also, students should know that Africa and Asia are continents and not countries.
- There was some lack of understanding of basic map techniques – proportionate circles are for the country not the centre of the country specifically.
- Some examples of poor geographic expression or knowledge: 'Above' or 'below' the equator; Eastern Europe- France Germany and UK; Alaska missed from the USA map; Amazon in Africa.
- There are still a large number of students who spend time writing out the question in their answer. With the limited space available to write their answers, this means there is less depth to their answers as well as less time. Students should not include a regurgitation of the question in their answer.
- Some students have difficulty with the concept of scale and refer to local impacts as being regional and vice versa.
- There was some use of top, bottom, left and right instead of N, S, E and W and this still needs to be corrected by teachers.

SPECIFIC INFORMATION
Question 1
a

Marks	0	1	2	3	4	Average
%	6	3	14	16	61	**3.22**

Students had to classify the Housing and Development Board buildings in two ways and to justify their classification.
Most students were able to classify the resource in two ways and justify their classifications. The most frequent classifications were *human, sustainable* or *renewable*. For example, more successful students classified the resource as human/or man-made and justified it saying *it was man-made for humans to use*. Other acceptable answers were restorable, residential, recreational, finite, for example *It is a recreational resource as it has many recreational facilities such as holiday resorts, swimming pools, sports hall etc*. The labelling of Malaysia and Indonesia lead some to assume these were the location of the study.

More successful students demonstrated that they correctly interpreted the legend from the map and were able to provide specific examples. Less successful answers were vague and tended to repeat their classification choice, e.g. *it is a human resource because humans built it*.

These should have been easy marks for a student to earn, but even the most common classifications were used inappropriately. Answers were often lengthy statements, not classifications. Less successful responses had unclear justifications, or in some cases, justifications which did not match the classification. Teachers must remind students that they need to apply definitions in the examination, not just write them out in rote fashion.

Some students had difficulty with their definitions of *renewable, sustainable and finite*. Students need to remember that when they are discussing *Sustainability* that it refers to the resource being there for future generations – this was often omitted from the justification. Sustainable does not mean it 'can be used over and over again'. As proved in a later question, *sustainable* was clearly not understood by most students who used it.

Some struggled with definitions, classifying the housing developments as infinite or personal resources. The term *non-renewable* was often misunderstood.

Some students who referred to *finite* justified this by saying the resource was countable, as opposed to saying that the buildings would eventually wear out. Others tried to classify the resource as *natural*, but were unable to back up their classification.

b

Marks	0	1	2	3	Average
%	10	8	20	62	**2.33**

Students had to complete a table to compare the location and scale of Housing and Development Board buildings between the Marine Parade and Woodlands estates.
Most students attempted this question and were able to identify similarities and differences between Marine Parade and Woodlands and clearly understood what was required. Good responses wrote one point per cell, as the marks suggest.

Many students referred to all housing estates not to the two indicated by the question. Although the matrix was generally completed correctly, a few students did not understand the simplicity of 'location' as a concept and wrote excessive information. Some students tried to make the question very complicated and wrote long, convoluted answers. Others were able to give three similarities or differences for each box, and while this showed a depth of understanding, it also showed a difficulty in judging the marks allocated for the question and the suggested time.

More successful answers stated that *both HDB buildings were coastal and/or near water* (*Woodlands is near the Selat Johor and Marine Parade near the Straits of Singapore*) or *both were on the island of Singapore* when discussing the similarity in location. When referring to differences in location, better students indicated that *the Marine Parade Estate is in the south, Woodlands Estate is in the north*. They may have indicated that *Marine Parade is near central Singapore whereas Woodlands is far from central Singapore*. Regarding scale, better students said that *Marine Parade is smaller than Woodlands/Woodlands is larger than Marine Parade or Marine Parade is small and compact, whilst Woodlands is large and spread out.* Successful responses were able to quantify this by referring to *Woodlands 5 km across and Marine Parade as 1km across*.

Less successful responses were characterised by a confusion of location and scale. For example, incorrect reference to scale such as *Marine Parade is located 17.5 km away from Woodlands.* Less successful students confused location with what is contained in a given location. Others referred to the facilities in each location instead of contrasting the differences in location.

A few students confused direction, stating that both Woodlands and Marine Parade were on the east of the island. Some students described how the buildings in Woodlands were more spread out than in Marine Parade. Some students measured the distance between the two estates when interpreting the term *between,* and others referred to all of the area between the two estates, rather than a comparison between the two.

c

Marks	0	1	2	3	4	Average
%	8	10	24	20	38	**2.70**

Students had to give one piece of evidence supporting the following statement and one piece of evidence rejecting the statement.
'There is a strong spatial association between the distribution of recreation facilities and the distribution of Housing and Development Board buildings in Singapore.'
This question proved to be quite tricky for students. Most understood the term 'spatial association' but many had difficulty writing the responses clearly. Students used the data supplied very well; however, not all used the two maps when answering this question. Some just relied upon the text, which did not supply all of the information that was required.

In the supporting evidence section, many just rewrote the statement. Evidence was frequently given in a generalised statement such as *most HDB building areas have recreation facilities* – hardly evidence. Others wrote in general terms without quoting specific evidence. Students who separated the recreation facilities into their various types found interesting patterns and gave excellent answers while, for others, this technique confused and generalised them. More successful students were able to specify a particular estate and quantify the recreation resources located within. For example, Ang Mo Kio, Woodlands, Bukit Merah.

Other good answers referred to a specific resource, i.e. libraries and quantified how many of the libraries were to be found strongly spatially associated with Housing and Development Board buildings. Examples of successful answers were:

> At Pasir Ris there is a club, four holiday resorts, a library, fishing site and a park. This is clear evidence of spatial association.

> Towards the south-west of Singapore there are many HDBs. For example, in Jurong East and West, Bukit Batok and Clementi there are many recreational facilities such as libraries and swimming pools.

Some students quantified well, for example, of *27 swimming pools and 19 stadiums only four are not in HDB areas*.

Rejecting evidence was much better handled with most students citing Sentosa with its chalets and golf course or a Housing and Development Board estate that had no or only one recreation facility such as Yishun and Burkit Timah. Identification of a precise location of recreation facilities that lacked a building development, for example the location of fishing sites and golf courses being located well away from HDB complexes, showed students were accurately locating examples of evidence rejecting a spatial association. More successful students were able to specify a resource, i.e. fishing sites and quantify the number found outside Housing and Development Board buildings. Less successful students stated that *all recreation facilities were strongly spatially associated with Housing and Development Board buildings* and offered no examples or specific data.

Question 2

a

Marks	0	1	2	3	4	Average
%	8	11	14	5	62	**3.04**

Students had to identify one location for each of the four stages in the mining of bauxite by placing the letters B, C, D and E in four of the five blank circles marked on the outline map provided.

Although almost all students demonstrated sound skills in interpretation of the aerial photograph and map of Weipa, a large number failed to correctly locate the stages in the mining of bauxite on the map. Even when the final allocation was correct, there was a good deal of evidence of rubbing out and rearranging the letters. This question showed some very basic misunderstandings about both the representation of data by aerial photograph and map and the inability of many students to use the two simultaneously. Teachers need to ensure that students can use the visual cues like those in the data booklet to accurately locate places on maps and photographs.

The most successful answers identified all four stages correctly. Less successful answers did not get any correct or identified only two correctly (B and E in most cases). Many students did not leave one circle blank. Less successful answers probably did not refer to Figure 2c to help them answer the question. Some students wasted time adding a detailed key to their maps for each of the letters A-E.

Although the differing scales of the answer booklet map and those in the data booklet made this question more difficult than it initially appeared to be, this factor did not faze the more successful students.

b

Marks	0	1	2	Average
%	21	38	41	**1.20**

Students had to explain how either one physical factor or one environmental factor could prevent mining taking place at Location X as shown on the aerial photograph.

On the whole, though students were able to find the mangrove swamp, their reasons for it preventing mining were poorly expressed. Most students were able to identify area X as a mangrove swamp. Some hedged their bets and wrote *mangrove swamp, seasonal swamp or open grassland and undisturbed natural open forest* – this response was considered too general and unacceptable. Many students failed to explain how this feature would prevent bauxite mining. Those who got the mangrove swamp identity, frequently did nothing with it. *There is mangrove swamp so mining cannot take place* (but why couldn't it?).

More successful students referred to the *difficulties of draining away the water, being too soggy to mine, possible seepage of water into the mines or machinery, or accessing the region due to the abundance of water and fragility of the mangrove ecosystem*. Therefore, the more successful answers were able to explain this as posing problems of access for machinery or providing unique habitat for wildlife. Others referred to possible environmental concerns like possible heritage or protection orders.

Less successful students could identify X as a swamp, but failed to mention it was a mangrove swamp as described in the legend. Others also incorrectly identified X because they did not read the scale or legend accurately. Some failed to say why the feature was hard to mine, simply saying that *because it was a swamp it could not be mined*, or else they thought incorrectly *that there could not be bauxite under swamp land because there was no rock and soil there*. Some less successful students also thought *the problem was seasonal flooding*.

Less successful answers also showed a lack of knowledge about how bauxite is mined as described in the data book and these answers often referred to flooding of the underground mining area.

c

Marks	0	1	Average
%	22	78	**0.78**

Students had to indicate what change appeared to have taken place by 2002, as shown on the land-use map, to Location Y, which in 2001 was land cleared of vegetation for mining.

Most students correctly identified the change expected (bauxite mining).

d

Marks	0	1	Average
%	15	85	**0.85**

Students had to indicate the change that appeared to have taken place at Location Z between 2001, as shown on the aerial photograph, and 2002, as shown on the land use map.
Most students correctly identified the change – cleared of vegetation ready for bauxite mining. Some students maintained there had been no change evident and should have examined the data more carefully.

e

Marks	0	1	2	Average
%	17	58	25	**1.08**

Students had to indicate how rehabilitation contributed to the sustainability of the natural forest in the region.
Students generally failed to realise that there were two parts to this question. Most understood *rehabilitation* but not *sustainability*. Most were able to use the information in the data that outlined the steps taken to rehabilitate the land. Many students failed to discuss the effects of rehabilitation in terms of sustainability, or offer a definition. They thought that by simply stating that re-planting vegetation was occurring that *sustainability* followed, or said that there was *sustainability* because the plants could grow and animals return to their habitats. Some students claimed *rehabilitation would make the bauxite a sustainable resource by replenishing the bauxite* (thinking that the bauxite would be able to re-grow). The idea of sustainable forest was sometimes confused with commercial logging as the primary purpose of the initial clearing. The concept of sustainability challenged many students – few actually incorporated the notion of the future.

More successful answers were able to explain the rehabilitation process and how that contributed to the sustainability of the forest. Stronger students realised that some form of definition was required, or recognition that, in discussing the term *sustainability*, a reference to the future success of the planting was required, and/or specifically, that the rehabilitation resulted in re-establishment of the plants and ecosystems for future generations to enjoy or use.

Less successful answers did not understand or show knowledge of the rehabilitation process or what sustainability actually meant. They did not consider it to be related to replanting local vegetation. Less successful answers often suggested *taking trees from the adjoining forest and relocating them to the mined region* or referred to replacing the soil and vegetation so that future mining could take place.

Some students' explanation of rehabilitation was clumsy, which was easily avoided by using the definition given on page 5 of the data booklet.

Question 3
a

Marks	0	1	2	3	4	Average
%	13	8	28	12	39	**2.56**

Students had to refer to a specific resource, excluding the Singapore Housing and Development Board buildings and bauxite mining at Weipa, and examine two effects of resource development and use on people or two effects of resource development and use on place.
This type of question has been present on the last few examination papers. It examines a critical part of Unit 3 on Resources. There is a growing understanding of what is being asked but at the same time there remain many students who cannot get more than a few marks for the question. There are lots of prepared 'blurbs', especially on fish/fishing. Some students had information committed to memory and were determined to cut and paste it to the question – regardless of the nuances and emphasis of the question. In the past there was a significant proportion of students who did not attempt this type of question – this number is dwindling but any is still too many.

A wide variety of topics was addressed in Question 3. Most students chose a resource example based on fieldwork and were able to specifically write about the key aspects of the question. This was demonstrated by the use of first hand data. Some students were given zero as they did not follow instructions or attempt the question. Others could only achieve half the marks available, as they did not provide a specific example and only examined general resource topics. Too many answers covered both people and place.

Of concern were the very similar answers to this question (pre-prepared and used regardless of the question); often lengthy and a waste of time on the student's behalf. Teachers need to be aware of the dangers of encouraging students to respond in this manner.

More successful students gave a clear statement of the specific resource to be discussed and then examined concisely two clear effects on either people or place, stating precise examples and/or used statistics to illustrate their effects. Successful responses were those written on fieldwork experiences as well as specific case studies. These answers succinctly stated the name of the resource at the start of the question, for example *The North Atlantic Swordfish; My resource is the Organ Pipes National Park.*

Successful answers clearly stated in the opening sentence/s whether they were looking at effects on people or place.

They used subheadings; for example, Effect 1; Effect 2 or they started each paragraph with a statement such as *The first effect is …, The second effect is …* and then whether each in turn was an effect of development or use. This was a great advantage because it provided students with a structure or plan, and the reader was left in no doubt as to the effects.

The most successful answers provided detailed evidence; for example, *The Colorado Basin storages provide water to irrigate 800 farms in the Imperial Valley, just north of Mexico, and to satisfy the needs of people in Los Angeles.*

The most successful answers indicated the significance of the effect. For example, whether this was a positive or negative effect; the type of effect, for example a social effect. Others discussed it as a short- and/or long-term effect

Less successful students referred to a global phenomenon; for example, Desertification, Over-fishing or referred to a general resource such as Fish rather than a specific fish, such as the Atlantic Cod or Bluefin Tuna. Students also referred to processes such as rainforest destruction, rather than timber. Teachers must emphasise this point to their students.

Others gave general descriptions of a fieldtrip site with no specific mention of people or place. These students did not clearly state their resource at the beginning of their response. Often it was not until well into the response that the resource was stated. They tended to go further than the question and discussed irrelevant information such as why the resource was indeed a resource. These students may have examined an effect but did not indicate if it was an effect on people or place.

A number of less successful students did not read the instructions carefully and used bauxite mining at Weipa or Housing and Development buildings at Singapore as their resource. They also did not give supporting evidence but spoke in generalities.

These students did not quantify general statements; for example, just stating the *development of the park has attracted people* without going on to specify what was developed to attract people and what activities were undertaken.

b

Marks	0	1	2	3	4	Average
%	19	18	19	19	25	**2.15**

Students had to evaluate one policy designed to manage the impact of the effects of using the resource analysed in 3a.

Question 3b was much more challenging for students to answer. Many students wrote about strategies and other aspects of resource use, but did not provide a policy for managing the use of the resource. They then failed to evaluate the effectiveness of the policy. The 'policy' was often a strategy. There was often no link between the effects of 3a and the policies of 3b, e.g. the negative effects of the Snowy Scheme in the north and the policy of water restrictions for Melbourne. Those who discussed one or two positive effects in 3a had considerable difficulty in answering part 3b.

Assessors were often confronted with a matrix table that only gave a numerical weighting to particular criteria. The acronym SAFFEIT appeared quite often – sustainable, affordable, flexible, fair, enforcement, incentive, time-frame. By using such a planned response students appeared to be rote-learning material without much understanding. Also these responses were often much more detailed than required. Students and teachers need to be more aware that drawing up a matrix table does not constitute the evaluation of a policy.

Some of the more successful students stated the policy, listed the criteria used to evaluate it, and then proceeded to assess the policy in a table format. This assessment was then concluded by an overall statement about the effectiveness of the policy in relation to managing the impact of using the resource.

Generally, appropriate criteria were used to evaluate but many students did not see the linkage between Question 3a and b. However, these did appear to be quite 'formula like' in their approach. Successful evaluations were in simple tables which listed the strengths and weaknesses of the policy and how it related to impacts of the effects of using the resource.

The most successful answers stated the policy in their opening sentence and even better, included the name of the body responsible for the policy, for example:

> The Victorian, NSW and Federal governments have agreed on a policy of increasing the flow of the Snowy River to 28%,

or with regard to the Werribee Gorge National Park, the opening sentence in this response was:

> Policy: To control and direct the movement of visitors along paths.

The most successful answers:
- clearly linked the stated policy to the effects as directed. They used a subheading such as 'Management of the effect of …' then discussed the intended purpose of the policy.
- clearly stated the criterion to be used to evaluate the policy, for example for unsustainable fishing at Corner Inlet, *Does the policy of a marine park address the problem of unsustainable commercial fishing?*
- used a subheading ' Evaluation' and then clearly made a statement as to the degree of success of the policy in achieving its purpose; for example, *This policy is only partially successful as there is evidence that ...* before going on to give supporting evidence/argument for their evaluation of the policy in various ways. These students gave detailed evidence in their evaluation of the degree of success of the policy and, sometimes, did an evaluation using a number of criteria, finishing with an overall conclusion.

Less successful students did not clearly state a policy and its goal or the policy did not relate to the resource mentioned in a); did not make it clear whose policy it was; stated more than one policy then evaluated each of them (only the first one was assessed) and did not evaluate the policy at all or in insufficient detail. Others decided they were being instructed to create a policy themselves.

Question 4
a

Marks	0	1	2	3	Average
%	5	19	37	39	**2.11**

Describe the distribution of passenger car production in 1959.
The general description of the distribution of passenger car production was well done. Most students understood the meaning of the Key Geographic Idea of distribution and could describe what was shown on Map 3a. They used the data and quantification to support their descriptions. Many responses were very geographic in their nature. However, some also attempted to explain the distribution. The most common error was to describe the levels of production and not the distribution. More work on KGIs is still needed. The most successful answers referred specifically to distribution patterns and were able to separate this from the amount of car production. More successful students did not explain the distribution but only *described* the production areas.

The most successful answers began with an overview statement, For example:
> Car production in 1959 is unevenly distributed-most taking place in the Northern Hemisphere, small amounts in the Southern Hemisphere, or, Car production in 1959 takes place on every continent with the exception of Africa.

These answers then went on to identify the two regions of the world that were major car producers – USA and Western Europe (UK, France, Germany, Italy, Sweden). Successful answers then mentioned the smaller car production countries, i.e. Brazil, Canada, Australia, Japan and USSR.

Less successful students tended to confuse the number of cars produced with distribution. These responses failed to identify particular groupings and trends. These answers attempted to explain (give reasons for) the data; listed a whole series of countries without trying to distinguish between major/minor producers and/or gave too much emphasis to the actual amount of cars produced by each country. Overall, these students had limited understanding of the concept of *distribution* and the term describe.

Some students were determined to apply an understanding of *spatial association* although this was not required in the question.
b

Marks	0	1	2	3	4	Average
%	7	12	39	19	23	**2.37**

Students had to evaluate one policy designed to manage the impact of the effects of using the resource analysed in part a.
Many students were not able to understand the difference between Question 4a and 4b. In 4a, students were asked about a distribution pattern, and in 4b they were asked how this distribution pattern had changed. Many students were tempted to quantify the car production levels, rather than say which regions or countries were now producing cars compared to the 1959 map.

Most students were able to see there was significant change between 1959 and 2001. Some students, in seeing the changes, did not always mention where the most obvious changes had occurred but gave a few unusual examples such as Iran, and neglected the more obvious changes.

Overall, 4b was not well handled and it appeared that students' deeper understanding of the KGI of distribution was lacking. Sometimes, *distribution* was often confused with *location/scale*.

Successful responses identified the patterns of change to the distributions of car productions and supported their comments with specific country names. Most identified Asia as an emerging car production area, North America, Japan and Europe with large-scale production and Africa as a new area of production. For example:

> In 2001, Asia has become more prominent in this industry mainly throughout South East Asia. Japan scaled from about 300000 in 1959 to a large scale of more than 5000000 in 2001. In 1959 Africa has no countries which produced passenger cars, but in 2001 it has changed over time with South Africa producing about 800000.

Another good example:

> Car production has increased significantly and is distributed more widely across the globe i.e. the previously dominant regions of USA and Western Europe (UK, France, Italy, Germany) continue to do so. Spain has increased its production significantly too in this region .The Asian region has become very significant especially Japan, South Korea and China with a number of smaller producers in SE Asia- India, Taiwan, Thailand, Malaysia and Indonesia. The Middle Eastern region is producing cars in 2001 in Iran, as is South Africa. Neither of these countries was producing cars at all in 1959. Car production in South America has increased too. Both Brazil and Argentina have increased the number of cars they are producing.

Another good response was:

> In 1959 there were only 3 countries in the Southern Hemisphere that produced cars on a small scale, namely Australia, Argentina and Brazil, but in 2001 there are 5 countries that produce cars on a much larger scale namely South Africa, Indonesia, Australia, Brazil and Argentina, especially Brazil with 2 million cars. In 1959 there were no car producers in S E Asia, except India. In 2001 there is India, Thailand, Malaysia, Indonesia and Taiwan all making cars on a relatively large scale.

Less successful responses confused quantity (volume of cars produced) with distribution of passenger car production. Less successful answers did not support general statements with specific country/region names and attempted to explain the data, for example:

> Developing countries such as Thailand/China's car producing industry commenced because of the cheap labour available and low to medium income.

These students also focused on the concept of spatial association rather than distribution, for example:

> In 1959 there was a weak spatial association between the Asian region and car production,

and made a list of countries with the actual numbers of cars being produced.

c

Marks	0	1	2	Average
%	16	29	55	**1.38**

Students had to describe one factor that could explain the differences in the distributions of passenger car production shown on the two maps.

Students could, generally, name a factor. Most responses identified social, economic, or changed access to technology as factors for the explanations of the contrasts in distributions. Some gave population increase leading to increasing demand, but without relating it to the ability to buy cars. However, few successfully described how the factor could contribute to the differences in the distributions of passenger car production.

A range of answers was possible for this question. Students who presented logical answers that explained the differences in car production were generally successful with this question. It was not necessary for the answer to refer to the SHEEP factors in order to gain marks, although many successful answers tended to do this.

Possible answers**:**
* increase in the income level of the population leading to an increase in demand for and production of cars
* globalisation – cheap labour found in many of the developing nations leading to an increase in the production of cars in countries like China and South Korea
* political factors, e.g. government policies that may promote local car production, e.g. tariffs
* social factors – the car is the socially acceptable form of transport in the developing and developed world.

The less successful answers did not support general statements with specific country/region names, attempted to explain the data, or just made a list of countries which produced cars.

d

Marks	0	1	2	3	4	5	Average
%	3	3	12	43	9	30	**3.43**

Students had to (on the outline map provided) map and name one country that showed a strong spatial association between passenger car production in 2001 and GNP per capita; map and name one country that showed a weak spatial association between passenger car production in 2001 and GNP per capita; and to complete the map using the conventions of legend (key), title and source.

This question was generally well handled. Students were able to see the association between income and passenger car production levels. Students had a good understanding of strong spatial association. Weak spatial association provided a

stronger challenge with a large number of students incorrectly using India as an example. It was pleasing to note this improved quality in students' understanding.

Students' maps were generally of a very high standard. Given the limited time factor of completing maps under such conditions the quality of the maps was generally very encouraging. Students are encouraged to be accurate when mapping countries such as the USA (i.e. the need to include Alaska). The mapping conventions, i.e. legend, key and source were evident in most responses.

The most successful students named the countries accurately and mentioned if there was a strong or weak spatial association. Many students used the USA as an example of strong spatial association as represented by high GNP per capita and high car production. Other examples were Japan, Germany, France, UK, Italy, Spain, and Canada. Indonesia was also used (low GNP per capita and low car production). Successful answers generally mapped and named Australia as an example of a country with weak spatial association (high GNP per capita, low car production). Other possible but less used examples were China, Argentina and Sweden.

Less successful students identified countries incorrectly, for example Indonesia as having a weak spatial association. Some students shaded countries without naming them. Careless errors occurred when students named a country but shaded in another on the map. Some referred to countries with no car production as their example of weak spatial association: New Zealand, Finland, Iceland, Madagascar, Iceland, Norway and Saudi Arabia. This was not acceptable.

Only a few students had trouble locating and naming countries whether they were correctly or incorrectly placed in the appropriate spatial association category.

e

Marks	0	1	2	3	Average
%	8	14	32	46	**2.15**

This question asked students to identify one global impact, one regional or national impact, and one local impact, of the global phenomenon of increasing passenger car production.
Almost all students responded in an informed way to this question. Successful responses showed an understanding of scale: global, regional/national and local. Some possible answers included:
Global
−   environmental damage of car production leading to ozone depletion and additional greenhouse gases
−   car production generates waste.
Regional/National
−   building more roads and freeways that consume raw materials and may destroy natural habitats
−   boost to the economy, i.e. employment and exports.
Local
−   traffic congestion in cities leading to controls on cars
−   increase in employment, e.g. Elizabeth, South Australia.

Less successful students were confused by the classification of scale – some could not successfully differentiate between global, national/regional or local impacts. Students who made up their own responses, other than referring to the data booklet, were less successful. A common error was to confuse the regional and local impacts. Teachers should be aware that the key word in this question was *identify* yet many students elected to make up the impact rather than extract them from the given data.

Question 5
ai–bi
(Average mark 2.75/Available marks 4)
Students had to answer either Question 5a (natural) or Question 5b (human).
Students had to use the world outline map provided to map the distribution of a <u>natural/human</u> global phenomenon they had studied.
On the whole the maps were well done. Many students scored highly with well presented, accurate and BOLTed maps. A poor map had no key, a title which had little to do with a global phenomenon and just a few lines of shading on it. An excellent map had an easily identifiable global phenomenon in the title, accurate shading of the regions, often a second locating factor (deserts for desertification or plate boundaries for earthquakes/volcanoes) annotations and used simple colour. Some maps gave no indication that they were a natural or a human phenomenon.

Less successful students confused the natural/human aspect of this question, for example presented overfishing as a natural phenomenon. Students should be sure that the topic they are presenting is obviously a natural or a human phenomenon. A few students presented information that was clearly not global, such as the Mt St Helens volcanic eruption, refugee movements in Africa.

Students appeared to have a better understanding of the class case studies. However, some students did not include relevant information on the maps for the explanation of the factor determining the distribution of their phenomenon, e.g. volcanoes and earthquakes and plate boundaries, existing deserts and areas of increasing desertification.

Teachers should be careful about presenting students with desertification as a global phenomenon. Many presented this as natural, but then discussed overgrazing or population increase as the main causes.

Global warming is another such topic which can be misinterpreted. Clearly it can be presented as a natural phenomenon, but, in doing so, students should not map increasing carbon dioxide levels. Students generally found this topic difficult to present as a natural phenomenon.

Topics such as global tourism and refugee movement presented problems to students when mapping the data. Often major tourist destinations or refugee movements (e.g. Iraq and Afghanistan) were omitted from the map. Landmine maps were often poorly drawn with countries such as China and India covered in landmines but not Cambodia or Mozambique.

If rising sea levels were mapped, the factor explaining the distribution should have been low-lying land because global warming does not explain the distribution without this. Few students who had this as their primary map mentioned any plans to stop inundations, e.g. the Netherlands or the Thames Barrier when discussing part iii.

aii–bii
(2.01/4)
Students had to explain the importance of one factor in determining the distribution of the <u>natural/human</u> phenomenon they had mapped.
Students generally were able to identify the factor determining the distribution of the phenomenon. The most successful answers in this question used a SHEEP factor in their answer and were able to say why this factor was important.

The most successful answers had that factor mapped in 5ai, i.e. deserts near to regions of desertification, plate boundaries near to earthquake zones. This distribution or locating factor made the question deceptively more difficult than most students realised. Many students attempted to use a social factor without identifying its location on their map. Use of named regions was often poor and this made it difficult for students to score full marks for this question. Students were better able to explain the importance of the factor than the reason why it was important in determining the distribution.

Many students failed to link the factor to the distribution pattern shown on their map. A common error was to describe the impact that the global phenomenon had on the factor instead of vice versa. Some referred to the effect of the factor on the development of the global phenomena but did not refer to its distribution.

A number of students who chose a natural phenomenon used a human factor to explain the distribution and vice-versa – students used a natural factor to explain the distribution of a human phenomenon. On some occasions, for example, the map showed a suspiciously human phenomenon but in part ii, the student explained how it could be a natural phenomenon. This occurred particularly in the case of Global Warming and Desertification. Some weaker answers described the distribution instead of dealing with a factor that explained the distribution.

aiii–biii
(3.30/6)
Students had to compare and evaluate the policies developed to manage the effects of this <u>natural/human</u> global phenomenon at two of the following scales: global, regional/national, local.
The comparison and evaluation of the policies developed to manage the effects of the phenomenon provided a significant challenge for students. There was still confusion over *policies* and *strategies*.

Teachers must remind their students to read the questions. Many students had prepared three scale answers and gave just that, despite the question asking for only two scales. Many others came up with a table evaluating policies that was full of figures but which were never really discussed. Some prepared the policies but did not compare and did not evaluate. Often those answers, which had straightforward policies, scored easy full marks, whereas the convoluted mini essays, complete with tables, struggled to meet the half marks.

More successful answers explained or outlined the policies at two of the scales provided. They used a table or set of criteria to analyse the success of policies, e.g. short term, long term, financial cost, number of people affected. They compared and evaluated the policies, for example better answers said which policy was more effective and why or used simple criteria such as *cost effective, sustainability and long term* to decide which scale was most effective and why.

Less successful responses used this process without explaining or outlining what the policy actually was and who was involved, e.g. they simply talked about global policies and said they were effective because they were long term and helped more people. Many did not compare the two policies.

Some students 'churned out' pre-prepared responses that were too lengthy (a large number of students did all three scales and misread the question). These students generally failed to compare the policies and misunderstood the task. Some responses were quite superficial. Many of the local, regional global examples were vague and lacked specific locations.

Other students confused the scales and discussed United Nations policies to combat desertification in local communities such as tree planting and improved farming techniques as global policies. These less successful answers said what could be done rather than outlining actual current policies.

Some students knew a lot more about evaluation of policy than they knew about the policy. Some students spent a page evaluating the policies using SAFFEIT without explanation of what the letters stood for (sustainability, affordability, flexibility, fairness, effectiveness, initiatives/incentives, timeframe).

Some policies were hypothetical or suggestions for the future. For example, they *should do X to stop desertification spreading further*. Some gave quite reasonable policies but did not give a correct name and did not indicate where it was being implemented. This was particularly apparent at the local level. Sometimes there were general comments like, they *come here and take our jobs or* some *places only take a certain number of refugees* or *locals are encouraged to ...* with no mention of a specific policy or place.

Tables were common for the last section but still needed some overall statements to compare. They often made the explanation/description of the policy being discussed hard to decipher.