OCR
RECOGNISING ACHIEVEMENT

GCE

Geography Specification B

Advanced GCE **A2 7833**

Advanced Subsidiary GCE **AS 3833**

Report on the Units

June 2006

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Advanced Subsidiary GCE Geography B (3833)

REPORT ON THE UNITS

Chief Examiner's Report

The OCR GCE AS Geography B specification attempts to provide a coherent course in geography and a solid foundation for further study at A2. The philosophy of the specification is essentially about understanding how physical and human systems operate in order to consider how they might be managed sustainably. As such, the use of contemporary examples is important in considering future geographical challenges.

The June 2006 examinations were sat by a significant number of candidates in each of the units. There were a number of resit candidates in some of the units and it was evident that a significant proportion of these candidates had improved their performance.

Principal Examiners have expressed the view that candidates were generally well prepared in terms of both subject content and examination technique. Standards appear to be quite consistent relative to the cohort being examined. In some of the units an improvement was noted in the middle mark ranges and there were few very poor responses. The following sections will give a more detailed breakdown of the individual units.

2687 - Physical Systems and Their Management

General Comments

The examination was considered appropriate for AS level candidates and almost a full range of marks was achieved. There was still some imbalance in the choices in Section A with just under half the candidates choosing to answer the question on Atmospheric Systems but three quarters answering the Coastal Systems questions. Candidates should be encouraged to look at the whole balance of the specification, including the headings to each module and study section. Care should be taken by A2 candidates who may be re-sitting their AS module that their more recent studies of topics such as Natural Hazards are not used in place of their AS case studies; they are rarely appropriate. Better candidates can demonstrate a synthesis and overview of the physical systems studied. This ability to see the whole picture of any of the physical systems, to understand how the processes interact, and then to appreciate the impact of management upon the system is the quality that characterises the good candidate.

Those candidates that achieved the highest grades:

- Demonstrated consistently good performance throughout the paper
- Showed detailed locational knowledge especially in the extended answers – there was a clear sense of place
- Exemplified, even within shorter section answers
- Used appropriate and accurate geographical vocabulary
- Showed they understood cause-effect relationships

And above all:

- Answered the question set

Section A

The format of each question is the same as in previous examinations and as in the complementary Human Systems module. There is a choice of two from three questions, one on each of the three study units. A resource provides stimulus material and data for parts (a) and (b) to show understanding and skills in different contexts while part (c) requires greater use of knowledge. Parts (a) and (b) have 9 marks each, while part (c) has 12 marks.

Section B

In this longer essay section there is a choice of one from two questions that seek to combine elements of all three physical units, to show the ability to synthesise knowledge and understanding of all aspects of physical geography. There is space in the answer booklet to plan this more demanding task, worth 30 marks, and once again it was evident that the candidates who planned carefully were able to construct a more logical essay that fulfilled the requirements of the question.

There was no evidence of shortage of time, and few rubric errors, although a few candidates failed to complete all sections of some questions. It is advised that the following comments are read in conjunction with the mark scheme.

Comments on Individual Questions

Section A

1) Atmospheric Systems and People

(a) *Study Fig. 1. Use evidence from the map together with your own knowledge to suggest why inter-regional water transfers are necessary in England and Wales.*

Most candidates appreciated that the need to transfer water was a direct reflection of differences in demand and supply of water but often this was only descriptive rather than explanatory:

They are necessary to the different regions due to that different regions in the UK have more water than others for example on the map you can see that most of the water is situated in Wales in the Cambrian mountains were it is stored in a number of large reservoirs.

Far more effective responses were those that offered some explanation of why demand and supply differed in terms of location:

The Cambrian Mountains have high relief rainfall but the low population there means there is little demand unlike the city of Birmingham which has large demand but low rainfall as it is the rain shadow of the mountains.

Few candidates went beyond 'large population' and 'rainfall differences' as their explanations but most candidates did make some reference to the map to illustrate their answers mostly referring to the transfer of water collected in Wales to Birmingham.

(b) *Explain how moisture in the atmosphere is formed.*

This is a difficult concept as it is a temporary store as part of the water cycle and most candidates did see the formation of water in the atmosphere as part of a series of flows rather than as a static store. The most common approach was to look at how evaporation adds to this store and condensation removes it via precipitation. Often these responses were basic:

When the water in the sea is warmed up from the rays of the sun, the water starts to heat up and evaporate into the atmosphere which is where it then cools down and forms water vapour.

This particular candidate then illustrated these concepts with a simple but effective diagram. Higher level responses either explained evaporation and condensation (e.g. role of the dew point) in some detail or looked at the store concept such as cloud formation:

Moisture in the atmosphere is mostly seen as cloud. These consist of water droplets formed as air is forced to rise and cool at the environmental lapse rate until it reaches the dew point when it condenses to form clouds. Some of this moisture condenses around dust particles to form large droplets.

Candidates then often went onto explain different types of uplift that lead to cloud formation such as steep relief. This rarely advanced their explanation being largely descriptive.

(c) *Compare and explain the differences between the climax vegetation of the British Isles with the climax vegetation of a contrasting climatic region of Europe.*

This was a poorly answered question as so few candidates seemed to understand the concept of 'climax vegetation' although it is straight from the specification. There was little evidence of detailed knowledge of either climate or vegetation with too many answers simplistic or inaccurate:

The main vegetation in the Mediterranean is grapes unlike in Britain where they will not grow as it is too cold. Britain has strawberries as it is cool and damp.

Comparisons were thin and often one sided. More candidates could describe and explain how vegetation adapted to drought in Mediterranean areas but far fewer could identify and explain adaptations to the British Isles' climate. Higher scoring candidates identified comparative points linking them to the contrast in climate:

In Britain trees have broad leaves e.g. oak to collect sunlight whilst the hotter, drier climate of Spain makes trees have thick waxy leaves in which to store water and reduce evaporation loss e.g. olive.

This area of the specification needs some attention as it neatly demonstrates some of the types of cause-effect that are so important in the study of geography.

2) Landform Systems and People

(a) *Study Fig.2. Describe the ways water reaches the river channel in the area shown.*

This was a disappointing set of responses. Candidates either offered a generalised version of the surface flows in the hydrological cycle:

There are lots of plants, trees and vegetation which cause water to go into the ground which will then travel through the ground to the river channel.

Or offered a version more based on the area shown in Fig. 2:

There are high hills around which cause the rainwater to soak into the ground and this is helped as these hills are made of permeable limestone.

A disturbingly large number of candidates stated that Limestone was impermeable so the water ran off it! Many confused cause and effect so focused on stores that did little to help water reach the channel:

Rain falls onto trees that store the water releasing it slowly as transpiration. More water is drawn up by their roots from the soil.

Again a well annotated diagram of the hydrological cycles flows could have achieved well especially if it contained references to material drawn from the stimulus material. Candidates were not expected to know the area but be able to apply their generic knowledge to it. Typical of this was the inclusion, in most answers, of reference to the village or long distance footpath:

The village has roads, paths and buildings which create impermeable surfaces so water flows off into the river either directly or via drains.

Many saw farming working in a similar way – field drains but too many referred to excess irrigation water finding its way into the river. This shows some confusion over the nature of the area.

(b) *Referring to Fig.2 suggest why this upper catchment area presents management challenges.*

This proved a challenging question as few understood the meaning of 'management challenges' and those that did struggled to identify such challenges in the area shown. Most listed problems that had to be managed – usually flooding or the development of tourism, or offered problems that prevented the area being managed:

The vast area of woodland will not be able to be cut down or demolished as it is important to keep the vegetation growing so no management schemes can be started.

A few more perceptive candidates recognised the significance of 'upper catchment area' and so identified one of the main challenges – the impact on the area below the upper catchment:

If careless management occurs in the upper catchment then problems such as flooding may increase in the lower catchment e.g. removal of trees on upper slopes increases runoff so the hydrograph lower down becomes flashier.

Candidates should always think about localised challenges (or problems) – local to the area e.g. possible conflicts between land uses or users – and broader or wider challenges either geographical or socio-economic e.g. reconciling local needs of different sections of the local population.

(c) *For a **named** river you have studied outside Europe, explain how human activity has affected the drainage basin.*

This was a more successful section with the Nile and Mississippi the most common choices. Too many spent up to 50% of their answers describing the river – its length, history etc:

The Nile is a river that floods dramatically in some parts of the season but dries up in others. When it floods it causes the floodplains to become over full and become very water logged.

This contains nothing worth any credit yet occupied 5 lines. Most went on to focus on how humans have altered the channel to reduce flooding or to increase the navigability of the river so missing the thrust of impact on the drainage basin. Too much was vague and poorly focused:

With humans building on the river or using the river to transport goods or use the water for crops it will cause it to change and become different and take a different course and become a greater problem downstream.

Those that took a broader view demonstrated a more effective cause/effect impact on the drainage basin:

By cutting down trees, for fuel and farming, in the upper catchment in the Himalayas water runs off quickly and leads to more flashy hydrograph in the lower Ganges with the resulting flooding in large areas of Bangladesh.

Others focused on the increasing urbanisation of the basin with the resulting impact on run-off across the basin. Human activity poses a problem for many candidates and a simple check list would help them think of a greater range of impacts than simply flood prevention. Candidates are unlikely to access the highest level by taking such a limited approach to this type of question.

3) Coastal Systems and People

(a) *Draw an outline sketch of Fig.3. Label the features shown and the processes that help create this coastline.*

Outline sketches were broadly effective but some still see this as meaning drawing a map of the area. The candidate who informed me that he:

Didn't take Geography to do art.

Needs reminding that it is less the artistic quality and more the ability to label features in the right place on a broadly recognisable sketch that is the requirement. The instruction to label the features means simply that i.e. cliff, beach etc. Many chose to add extensive annotation especially of the processes:

The water has beated against the rocks to make them wear away. The waves will have started with a little gap and will have grown as air pressure is compressed by the waves.

The use of the term 'hydraulic action' would have been sufficient. Better quality answers went beyond merely marine processes to include sub-aerial ones such as mass movement and weathering.

Candidates are not expected to know or recognise the area (the bay to the west of Lulworth cove in Dorset) so generic labels were acceptable and logical labels (albeit not strictly correct) were accepted. For example some saw a wave cut platform in the background of the photograph, at the base of the cliff, which was credited but those that identified a spit showed a limited understanding of the possible location of that particular feature.

(b) *Explain the factors that may be responsible for the shape of the coastline in Fig.3.*

Few candidates picked up the stress on factors so gave descriptions of marine erosion processes – indeed many went off on to lengthy descriptions of the formation of stacks and stumps. Others offered very vague reference to the area shown:

The severe beating of the rain, wind and sea cause the cliffs face to not have much vegetation on the side where the wind and sea has not got to and the surface it is fully covered in grass.

This gained little credit. Others identified structure as a key factor and gave logical, albeit incorrect, accounts:

Here the structure is at 90 degrees to the sea so hard rocks are left as headlands and weaker clays are eroded by the sea to form bays.

It is actually a pacific coastline where the structure is parallel to the coast – part of the Lulworth Cove system. Credit was still given for the example above as it was logical. Other factors offered and given credit, if well linked to the shape of the coastline or area shown, included: human activity, longshore v onshore drift and a rising sea level:

Humans may have protected the headland in the rear of the photo by adding boulders or gabions at the base of the cliff so reducing its erosion inland.

(c) *With reference to **either** a dune system **or** coastal wetland you have studied, explain how distinctive ecosystems develop in coastal environments.*

This was a disappointing question as so few saw 'distinctive ecosystem' and so offered descriptions of how sand dunes (90% of answers) or wetlands (still not well understood) were formed:

Wind blows across sand exposed at low tide and blows it up into dunes. With them being kept moist the sand particles hold together and the aggressive winds do not blow them away.

Those that did spot ecosystem tended to offer descriptions of transects often provided with sound cross sections of a dune complex. The stress was on explaining why they develop in such environments – their distinctiveness or uniqueness. This is vested in how they adapt to saltwater, wind, drought etc:

Marram grass is ideal as its narrow leaves reduce water loss and its wide and long roots can extract water from great depth (over 50') so surviving water shortages caused by the strong winds.

Some went off onto a tangent and explained how humans protect dune complexes and salt marshes from tourist activity. Studland in Dorset was used extensively as an example in this respect with much reference to the role of the National Trust. It would seem that many Centres and or candidates expect a dune system question every year and so produce it regardless of the wording of the actual question.

4) Section B

Discuss the impact that changes in land use may have on landforms that you have studied.

This proved a challenge to many candidates as they found it difficult to develop both sides of the cause/effect discussion. Many took this to be the sand dunes question and repeated much of the material used in 3c (incorrectly in 3c) to outline how tourism is ruining a particular sand dune complex.

This is not an invalid approach but it wasn't as effective as those that looked at the urbanisation of river valleys or deforestation of upper catchments as these candidates could link it directly to changes in channel form i.e. a clear land form. Others were very vague and offered a version of Q5 by looking at the way that management (or a lack of it) changed a landform. Spurn Head was often used as an example where the distinctive landform was being changed but often it was not linked to a clear change in land use.

Such questions require a clear understanding of cause-effect of the impact of land use changes. All too many candidates find this difficult:

The removal of sand offshore of Halls sands meant that the beach vanished.

Will score appreciably less than:

Dredging of sand offshore meant that the sediment cell was disrupted so the beach was not replenished. This in turn meant that the village of Hall Sands was no longer protected so was eroded by the sea.

Many candidates were very descriptive of locations and landforms rather than strictly explaining the impact on the landform. Land use change was not well understood and again a check list of possible land uses e.g. farming, forestry, settlement, transport etc would help prepare candidates so they could better structure their work

5) *To what extent do physical systems need to be managed? Illustrate your answer with reference to* ***both*** *atmospheric and coastal systems.*

This question required a discursive approach with examples drawn from both systems. Too many became bogged down in their examples so lost the focus of discussing whether they do indeed need to be managed at all or whether it is possible and/or desirable.

Sadly a large number of candidates failed to refer to atmospheric systems (so only could reach level 3 in the marks scheme) or referred to river systems. Again many saw this as the sand dunes question and at times it was not easy to tell if they were answering question 5 or 4! Others saw this as the coastal protection question so described detailed schemes rather than the practicality of, and need for, this management.

So many missed the scale difference so considered it easy to manage atmospheric systems whilst others picked a single feature and suggested, for example, that global warming could be easily managed if we cut greenhouse emissions:

The Kyoto agreement needs signing by America and this will help reduce and so manage greenhouse gases.

In the example above cause-effect is weak and it was hoped that candidates would identify that it is much easier to manage a small local system than global ones such as the atmosphere. This would have injected some evaluation into the answer. Many were descriptive in their answers rather than explanatory and evaluative.

More effective answers suggested coastlines only needed to be managed if lives or property were put at risk or if it was financially viable (reference being made to cost/benefit).

At Fairlight it was too expensive to protect the coast from erosion as it affected only a few retired people but at nearby Hastings a detailed coastal management scheme was developed to protect this large wealthy town. Clearly the cost per person was a lot lower in Hastings.

Few could evaluate the extent physical systems need or can be managed. Candidates need help in understanding the implication and thus the approach to terms such as 'To what extent'.

Candidates should be given practice in this extended writing, as the longer essay gives the examiner the opportunity to assess the quality of written communication to a greater degree than the shorter answers. Crucial in this is the ability to read the question carefully and respond in a focused way to the key concepts or terms used. Fluent use of geographical terminology, the logical structure of the essay, and the ability to draw together elements from all three of the study units of the specification fulfil the requirement to synthesise knowledge throughout the AS course, and provide a good foundation for the higher level skills required in the synoptic paper at A2. It also provides confirmation of progression beyond GCSE in both knowledge and understanding of the subject.

Evident in this session was a lack of revision by some candidates as if they were relying on work done based on previous questions. Those who had revised well and thought carefully about the question wrote answers which were a pleasure to read and reflect the good teaching that is evident in many Centres.

2688/01 - Human Systems and their Management

General Comments

The number of candidates for this summer session was, as usual, larger than for the winter session, and comparable to the summer of 2005. Two candidates achieved full marks, and at the other extreme, there were candidates who scored only in single figures.

Examiners noted that the range and quality of examples given in support of answers improved generally. However, this did vary a good deal by Centre. Judging by the selection of questions in Section A, it appears that some Centres are not covering all of the sections in the specification. This is likely to lead to difficulties in answering questions in Section B, where questions are designed to test two, if not all three sections of the specification. Knowledge of examples of countries from LEDC contexts is good, from NIC contexts only slightly less good, but knowledge of MEDC contexts other than the UK tends to be very poor. Examples drawn from other EU countries are particularly few and far between.

Preparation of candidates for the structure of the paper seems to have been poor in some Centres. In some cases, candidates wrote sound, detailed answers in Section A that could be awarded high marks, only to write brief and superficial answers in Section B, sacrificing almost a third of the marks for the paper.

Some Centres have recognised that certain candidates may be handicapped by their poor handwriting, and an increasing number of answers are word processed. But there are still candidates who lose marks because their answers are illegible, even after careful scrutiny by two or more Examiners.

Comments on Individual Questions

1) (a) *Describe the costs and benefits of development for businesses and the environment, when they locate on Greenfield sites such as Burnfield Industrial Park, shown in Fig. 1*

The question required costs and benefits for both businesses and the environment. Whilst a fully balanced response was not required, some attempt to address all the components was expected for high marks. A small number of candidates noted the 'such as' and used examples of industrial estates that they had studied. These were usually very good and gained high credit. But the majority of the high-scoring marks came from candidates who used the given resource to identify both costs and benefits. For example, many noted that set up costs for businesses might be high in order to meet the stringent regulations, but a benefit was that the park was large, so that future expansion was possible if the firm was successful. Candidates who just copied information from the resource with little additional comment obtained fairly low marks. The most common reason for not gaining high marks was restricting the answer to just one aspect of what was required. For example, a good number of candidates examined only benefits, and those just for businesses. Only slightly less frequent were answers that considered only environmental costs.

1) (b) *Explain why many companies may not wish to locate in established industrial zones close to city centres.*

There were few candidates who did not have the relevant knowledge to answer this question. Candidates who did not score well either neglected to explain, or made areas other than 'zones close to city centres' the focus of their attention. Answers lacking explanation often named relevant points, but provided them almost as a list without clarifying why any noted should deter companies. For example, one answer stated, 'The areas close to city centres are congested. These areas are expensive. Whilst credit could be given, high marks could not be awarded without some explanation. Candidates gaining higher scores stated, congestion near city centres makes it difficult to bring in raw materials and transport finished goods, and employees would not want to be in traffic jams every day. Answers with other areas as the focus of attention usually wrote accurately about the advantages of locations on the rural-urban fringe. But unless these were contrasted with inner areas, it was not possible to award high credit. 'Industrial estates at the edge of towns have room to expand', needed simple additions such as 'unlike sites close to city centres.' to fully make the point. There were some excellent answers concerning the expense of removing old buildings and clearing contamination from earlier users on Brownfield sites.

1) (c) *With reference to examples, explain how the global location of economic activity is changing as a result of new technology in transport* ***and*** *telecommunications.*

There were a pleasing number of good answers to this question. Answers not gaining high level marks did so for a number of reasons. Firstly, some answers did not deal with the 'global location' aspect of the question. These answers tended to continue the themes of (a) and (b) and explain why many firms were leaving inner city sites to go to urban fringe locations. Some credit could be given, especially if good information about transport and telecommunications was included. Secondly, some answers dealt with global changes in location but made no mention of any link with technologies of transport or telecommunication. Whilst there was no requirement for extensive details of these, some mention of containerisation or long haul jets, the internet or video conferencing, or other technology was needed as a starting point. Thirdly, the question started with 'With reference to examples', but all too often this was no more precise than MEDCs and LEDCs. Examples could either be specific firms, or named countries, or particular industries. Some of the very best, that provided more than would be needed for full marks, often gave great detail on all three of these.

2) (a) *With reference to Fig. 2, describe the impacts on rural and urban settlements in LEDCs resulting from population movements*.

Candidates, who made impacts on settlements in both rural and urban areas the focus of their answer, had little difficulty in achieving high marks. The most common way candidates failed to gain high marks was by ignoring either the rural or the urban context. Some, for example, wrote very good answers on rural areas, showing that with fewer people, overcrowding and pressure on resources was reduced but that it was offset by a loss of the most energetic source of labour from young males. They then either wrote nothing about urban areas, or wrote only very briefly on urban areas making few real points. Other candidates did not answer the question set. A number wrote answers explaining why people move from rural to urban areas, often not mentioning impacts at all and only gaining a little credit by incidental reference to impacts on settlements. Similarly, only incidental credit was gained by candidates who made impacts on people the focus of the answer. Such candidates more often touched on matters relevant to settlements, and tended to score rather better than those who just tried to explain the movements.

2) (b) *Explain how counter urbanisation and urban renewal are changing the function of large towns and cities in MEDCs.*

There was a very wide range of responses to this question. There were some superb answers that clearly showed how functions were changing, and a pleasing number illustrated this by reference to actual places. Candidates could achieve full marks without references to actual places, as this was not a requirement of the question. But it was a good example of '*Even where not specifically asked for, credit will be given for … examples of places you have studied, provided they illustrate your answer*.' Some candidates did not score well because they explained only why counter urbanisation and urban renewal were taking place. Other candidates starting in the same way sometimes included material on changing functions and gained credit for those parts. A small number of candidates wrote about the changing functions of villages as a result of counter urbanisation. Some of these were quite accurate but could not be rewarded well. A very small number of candidates did not seem to know the meaning of either counter urbanisation or urban renewal, and as a result, found it impossible to make any comment on changing the function of places.

2) (c) *Explain the difficulties urban planners face in one LEDC that you have studied.*

Examiners commented on many well-informed, detailed answers here which could readily have been awarded more than 12 marks if this had not been the maximum. Many of these had place specific detail of difficulties that had been encountered. Not all candidates produced such answers, and as usual, there were a number of ways in which this arose. Some candidates, who had a sound knowledge of LEDC urban areas, did not focus on difficulties planners face. They often wrote accurate material about problems of an LEDC city that they had studied, but just did not relate these to how they might create difficulties for planners. Such answers could be rewarded, but not to the highest levels. Answers that did not score well usually showed little knowledge of actual places. For example, the name of a country might be given, but the information that followed could apply almost anywhere, and was often expressed in very general terms. 'Cities in Brazil have huge slums. People move there for the bright lights but can't get a job.' Cairo is strongly challenging Rio de Janeiro as the favoured example of an LEDC city.

3) (a) *Describe the population trends in the UK reflected in the redevelopment of land shown in Fig. 3.*

This was generally well answered, but there was a good range of marks, with a small number with low scores. Most candidates identified trends of increasing life expectancy and a low and falling birth rate. Some mentioned trends in movements of people. Whilst this was usually sound in relation to retirement to rural areas by the old, there were some confused thoughts over the younger people. A number of candidates who had stated in 2 (b) that families were moving out of cities for more pleasant rural environments stated they were doing the reverse in this answer. There was also a lack of realism in some of the answers, 'There are no longer enough children because they are moving to the cities where there is a chance of an education unlike in rural areas.'

3) (b) *Explain how economic development is affecting fertility and mortality.*

A good number of candidates were able to score well here. Those who did not gain high marks fell into one of two groups. Some produced an excellent answer on fertility (or mortality) and then either did not consider mortality (or fertility), or gave it a very superficial treatment in one brief sentence. Others wrote about trends in fertility and mortality, usually with a fair degree of accuracy, but introduced no, or very few, notions of economic development. As with 2 (b), candidates who selected a country, especially one undergoing rapid economic development, found it very easy to gain good marks.

3) (c) *Explain the need for and effects of, population policies in one or more countries that you have studied.*

The majority of answers used China as a case study. Some of these gained full marks as they were clear and accurate. Those who did not score high marks most frequently did not explain the need for a policy, or dealt with it in a very superficial way. Indeed, some wrote a considerable amount about the policy itself, but gave little attention to either the need for it, or effects it produced. It is still common to come across candidates who write that the one child policy has reduced the population of China. Although some candidates scored full marks using China, most candidates gaining full marks used more than one country. Sweden was a popular second choice. Candidates who had studied Singapore in both its anti-natalist and pro-natalist phases, usually scored very well. Perhaps the change of stance by the government made the need for policy and its outcome more readily a focus of the account. It was noted here that the range of examples used is increasing; Russia, Pakistan and France were noted for more than one Centre.

4) '*Economic change can have many impacts, for example social and environmental. 'How can impacts, both positive and negative, be managed?'*

Examiners reported a wide range of responses to this question ranging from a number of full marks down to some in single figures. Any economic change was acceptable as a starting point, and Examiners readily accepted a wide range here. In order to gain the top level, candidates needed to show impacts with sufficient range that some could be seen as positive and others as negative. References to impacts of a social and environmental nature were included in the question to help prompt candidates, but any impacts were acceptable. For the highest marks some consideration of their management was required too. Those with a good knowledge of a case study found it quite easy to adapt the material to answering this question. A number of Centres used the decline of steel around Sheffield very well and produced competent essays. Those not scoring very highly neglected either the positive or negative aspect of the impacts, or, more frequently, did not consider how they were managed. Candidates who wrote in a generic way, without reference to actual places, found it very difficult to make a range of points. Recall of actual places seemed to prompt a greater range of impacts. One or two answers at the lower end identified no economic change, either in a real place, or in principle, as a starting point, which made it difficult to define impacts.

5) *Comparing the development of countries is difficult. How far do you agree that this is true for countries that you have studied? You may use information from settlement, population and economic studies that you have undertaken*

Several approaches could be made to answering this question, for example, it was possible to compare the process of development over time in different countries, or compare the level of development of countries at one point in time. Any approaches that compared development allowed candidates to achieve full marks. A good number of candidates took the demographic transition model and considered how well it reflected the development of countries. Several good answers came from this approach but some candidates rather lost sight of comparing development and shifted their answer to an assessment of the usefulness of the DTM. Others examined the usefulness and limitations of indicators such as persons per doctor, and many good answers argued for the use of compound measures such as the Human Development Index. Another fruitful line was to consider how uniform the development of a country might be, contrasting homogeneity in many MEDCs, with extremes of core and periphery, or rich and poor in some LEDCs and oil rich states. All of these yielded good answers for some candidates. The principal weaknesses did not come from the approach, but the amount and depth of relevant information candidates had at their disposal to support their arguments. Some good general answers scored mid-range marks, but reference to real places helped candidates to the higher levels. A small number of candidates knew very little about development and wrote answers that were of little relevance to the question.

2689 - Geographical Investigations 1

General Comments

The overall standard of the paper demonstrated was similar to January 2006 and May 2005. Candidates are generally able to address all the assessment objectives of the Report. Where a choice exists (Questions 1 to 3), Question 1 was the most popular choice and overall it was answered well. Question 2 was the least favoured question, but most of the responses were well thought out. However, the responses for Question 3 were noticeably poorer as many candidates did not relate their answer to the choice of sites for data collection. Question 4 presents the challenge of a varying format and content of question between sessions. Many Candidates responded well this question, which required generic knowledge of sampling methodology in an urban area and not specific knowledge about the subject of the survey (use of leisure centres).

The Report

Guidance given to Candidates:

As expected for AS Level, nearly all Reports are guided by the Centre or a field centre with group collection of data, to some extent, reflects the expertise of the Centre or field centre. The assessment criteria achieve differentiation by outcome, although there is necessarily commonality in the reports and subsequent marks at each Centre. There was sufficient differentiation between candidates at most Centres to suggest that an appropriate level of support had been offered to candidates. Nearly all Centres stated how candidates had been assisted, usually by selecting the general topic, study location and sampling points. Candidates were responsible for developing the methodology for planning, undertaking data collection and analysing the outcomes.

Length of Report:

There were still a number of rubric infringements, concerning the 1,500 word limit. Candidates that substantially exceeded the word limit were penalised under the guidelines given that Reports of excessive length will not enter Level 3.

Supporting figures:

A maximum of two pages of relevant figures in support of the text is required. Once again, it is pleasing to report that more Centres are adhering to the guidelines, without any detrimental impact on the mark awarded. Credit is awarded for presenting the most appropriate data in the most appropriate formats that enable like for like variables to be compared readily on the same page. Figures should not be photocopied and reduced in size in order to continue to submit excessive quantities of data. The inclusion of raw data such as field notes and completed questionnaires is not required. However, templates for data collection, e.g. a blank questionnaire, are useful.

Content:

A maximum of three hypotheses gives the most successful outcomes, as this enables deeper analysis and evaluation than is possible with more than three hypotheses. Data collection and analysis should relate to the aims and hypotheses that the Candidate has proposed at the beginning of the Report. Average and good candidates now produce little irrelevant material. As in previous years the majority of Reports covered physical topics, typically rivers, coasts or psammomeres. Human geography Reports were mostly based on the CBD or urban environment.

Benefit from experience:

If re-sitting, it is a good opportunity for candidates to improve the Report submitted or even to submit a new one based on a different topic or improved data collection.

Preparing for the Report:

A good set of field notes can provide valuable explanations for the outcomes of the data analysis – particularly any anomalies that are present.

The Written Paper

The answer booklet clearly states that material from the Report is to be extended and not repeated in Questions 1/2/3, which is still improving with successive examination sessions, but remains a characteristic of lower ability candidates. For May 2006 repetition from the Report was a small risk for all the questions – provided the candidate had read them properly.

1) the most popular question, many answers discussed what went wrong, whilst better quality ones went on to say how it related to its usefulness and the best also linked this to specific organisations/others. Weaker candidates only considered problems and errors, with repetition from the Report. Other acceptable, but not good answers, identified what the problem was but then went on to discuss how it could be improved. This question was answered much better than similar ones in previous years which asked how the results were useful to others – candidates clearly relished evaluating the reality of their work!

2) was by far the least favourite choice of question. Most candidates referred to geographical theory (rather than maps and data) leading to competent, relevant answers.

3) many candidates did not take note of the need to discuss the impact of human/physical factors on the choice of study area and sites for data collection, opting instead to discuss how human/physical factors affect the outcomes of the investigation. Good answers typically considered factors such as accessibility, man made structures that would give inappropriate data and the need to tailor the number/location of sites to time and resources available.

4) was generally well answered making good use of the map. Good candidates took account of the distribution of housing or if opting for on-street or at facility surveys, considered factors such as age/gender and residency. Weaker candidates omitted consideration of the sample size; they also forgot about residency and the need to sample non users; they also assumed that proximity to a facility automatically increased their usage of it. Many answers deviated from the question by providing sample questionnaires.

Differentiation in the answers was achieved through their understanding of the general principles of how to present data effectively and meaningfully, by being able to identify both good and practice. All Candidates referred directly to the data throughout the response. No candidates completely misunderstood the question.

All candidates attempted all parts of the paper and followed the rubric. Very few appeared to mismanage the time available. There was an improvement in consistency of quality between questions, particularly for intermediate and high ability candidates.

Detailed Comments

The Report

Once again, these comments regarding the Report have been made for previous examinations. Many candidates have the potential to benefit substantially by addressing these issues outlined below, most of which are simple to act upon.

1) Coursework Cover Sheet CCS205

(a) Cover Sheet CCS205 must be used (it replaced GCW024 in September 2004).

(b) A Cover Sheet was used by most Centres. It is used to identify the context of the studies, the conduct of group work and special circumstances relating to the conduct of the study.

(c) Centres should ensure that the following information is provided:

- The number of words in the Report should be entered. Titles and headings are excluded from the word count. Text presented as sentences or detailed notes in tables are included in the word count.
- The Reports are signed and dated individually, i.e. not photocopied, by a member of staff at the Centre.

2) Authentication Sheet CCS160

The Authentication Sheet was introduced in November 2003: not all Centres are using it.

3) Overall performance

(a) The vast majority of candidates entered Level 2; few candidates fell in Level 1. Stronger candidates constructed fluent and well argued Reports that were able to link their outcomes with theory and their expectations when accepting or rejecting hypotheses. Weak candidates included little analysis and the structure was poor, with weak hypotheses that were ignored in the remainder of the Report.

(b) Most Reports represented a substantial development from GCSE, showing independent thinking when analysing and evaluating outcomes.

4) Presentation

(a) The standard of presentation in the Reports was generally good and show continued improvement. Good characteristics are:

- Easy to read text.
- Use of the third person rather than the first person.
- The sheets are in the order in which they should be read. Page numbering is used.
- Cross-reference the figures and tables at the appropriate place in the text.

(b) The use of ***excessive text*** describing data collection and the evaluation of the method in a tabular format can attract a penalty against entering Level 3 if the word count is not adhered to. However, this technique is highly effective when used carefully.

(c) The recommendation for two pages of ***supporting material*** was still not adhered to by many candidates. These figures should:

(i) Provide evidence of the data collected.

(ii) Relate to the stated aims and hypotheses of the investigation.

(iii) Show an awareness of appropriate methods of representing data, e.g:

- One map extract of an appropriate scale (not the UK) should show the location of the investigation and/or sampling sites.
- Insert figures/tables at the appropriate place within the text so that it complements rather than detracts from the text.
- Do not photocopy and reduce the size of figures in order to put in more information in the recommended space: this leads to loss of quality in information.
- Do not spread graphs over a number of pages, making it difficult to compare like for like variables, e.g. if 10 river cross sections are made, they should be presented on the same page using the same scale.
- Do not use more than one technique to present the same data.

(d) Word processing skills continue to improve, but proof reading must not be neglected. In a few cases the standard of English was weak.

5) Length

(a) At a few Centres many Reports exceeded 1,500 words. The word count must be adhered to and an accurate word count is to be stated. Fairness for all candidates is paramount. Candidates should think carefully about how to use the word resource effectively.

(b) As noted in 0, the use of tables to describe and evaluate data collection may be used to "save words" – but such tables with continuous text are part of the word count.

6) Format

Most candidates used a recognisable format based upon the Specification: introduction, aims and/or hypothesis, data collection, analysis, and evaluation. The essay style approach without headings was used by few candidates – this approach often makes the structure of the Report less methodical and more difficult to understand.

7) Content

(a) The subject matter of Reports was nearly always appropriate. At AS level candidates have not covered a great variety of topics. Physical studies such as rivers and psammomeres continue to be very popular and make suitable topics.

(b) Many Reports continue to have a weak introduction. It should be short and balanced, summarising the context of the study by stating: (i) where the study is based; (ii) something about the study area; and (iii) why it was selected.

(c) The aims were given in nearly all Reports, but in some cases the hypothesis is not given or it is not clearly linked to the aims. A simple hypothesis demonstrates an understanding of what is expected to happen, according to theoretical knowledge, e.g. the velocity of a river will increase downstream; larger shopping centres have a greater sphere of influence. Additional justification can be given here. Expectations presented here can be used to explain the results later in the Report. The purpose of the null and alternative hypothesis, when stated, continues to be misunderstood. The null hypothesis should state that there is not a relationship expected between two variables, whilst the alternative hypothesis should state that a relationship is expected, and preferably indicate the direction/nature of this expected relationship.

All relationships to be analysed should be stated clearly in this section.

One or two hypotheses are adequate. Highly diverse and/or numerous hypotheses do not lend themselves to an easily managed Report, often leading to lengthy methodology and limited data analysis / evaluation sections.

The hypothesis must precede the methodology; otherwise it is not possible for the reader to know whether appropriate variables are being collected.

(d) The **method** was usually presented well (as in previous years). Appropriate methods of enquiry were used. The following are good characteristics:

- How the sites/transects for measurement were **selected**.
- **Type of sampling** used (random, systematic, stratified – Candidates often confuse these definitions).
- **Sample size** for each sampling site [frequently omitted].
- The data collected is **relevant** to the aims/hypotheses; otherwise the analysis is not relevant to the aims. When groups collect many variables, individual Candidates should only refer to variable relevant to their chosen hypotheses both in data collection and analysis.
- A precise **definition** is given for the variables.
- Template of **questionnaires** and **survey forms**, e.g. environmental impact.
- Make **field notes** whilst collecting data, to be referred to in explanations of results.

(e) ***Analysis*** continues to be of variable quality. Good characteristics include:

- A clear indication of the hypothesis being discussed.
- Link the text describing the results of the investigations to graphs, tables, figures or photographs.
- Use theoretical knowledge to explain the outcomes.
- Look for **anomalies** and try to explain them by referring to **secondary knowledge** and **field notes**. It should be clear which form of explanation is being offered.
- Link the outcomes from more than one hypothesis/aim – this is a Level 3 type response.
- Refer to **all the data** that had been collected and is relevant to the hypotheses.
- State when **supplementary data** (i.e. secondary and anecdotal evidence) is used to support the interpretation of data. This is often omitted with coastal management schemes and responses to questionnaires.
- **Statistical tests**:
    - Numerical evidence to demonstrate that a test has been carried out.
    - The term "significant" is used carefully. The **level of statistical significance** of a relationship (if any) is stated when carrying out a suitable test such as Spearman's Rank Correlation.
    - Check calculations carefully. A logic check by the candidate will quickly reveal unrealistic results, e.g. the direction and strength of an appropriate relationship based upon Spearman's Rank Correlation should be checked against scatter graphs. Units should be checked, e.g. discharge is often miscalculated.
    - Use appropriate formulae to calculate results, e.g. the calculation of velocity based on the number of propeller counts or the time taken for a float to travel over a given distance must be converted to metres per second.
    - Make sure both variables are ranked from high to low (or low to high) for Spearman's Rank Correlation.
- The Conclusion does **not repeat information** verbatim from the analysis.
- Candidates should be aware of geographical theory, e.g. velocity increases with distance from the source of a river; rain on the day preceding data collection does not make the results inaccurate or incorrect.

(f) Nearly all candidates ***evaluated*** the project by considering two main aspects: (i) difficulties in selecting the sample and field data collection, and (ii) possible modifications and extensions to the study. Weaker candidates continue to state that the study went well and that the outcomes were as predicted. Most studies can be linked to a geographical theory, but this third area of evaluation was usually not mentioned or the theory stated early in the Report was not linked to the outcomes – particularly in the case of land use models.

(g) The presentation of ***maps*** is reasonable, e.g. title, scale and key. Few candidates used the map to show precise locations of sampling sites on, for example, rivers or sand dunes. However, many did not include any map – yet maps are a fundamental part of Geography.

(h) ***Graphs***: as in previous years candidates usually selected appropriate ways of presenting data, but most made one or more of the following errors:

- Used more than one technique to present the same data.
- Poor choice of scale for variables with small variations.
- Variable scales for the same pairs of variables on different graphs, so that comparisons were difficult and/or misleading.
- Axes not labelled or inaccurately labelled.
- Two types of graph used to represent the same variables at two different sites, thereby making comparison difficult.
- Independent variable placed on y-axis.
- Poorly ordered graphs make it difficult to compare like with like.
- Line graphs should not purport to show a link between qualitative descriptors such as types of land use or a set of 10 randomly selected pebbles on a river bed.
- Do not use titles starting "A graph to show…" The graph obviously shows something!
- Graphs and diagrams not relevant to the variables used.

➲ Use Question 4 from January 2006 as an exercise in selecting and presenting graphs.

The Written Paper: Comments on Individual Questions

Choice of Question 1 or 2 or 3

Very few candidates remained in Levels 1 and 2 and a good number entered Levels 4 and 5. Questions 1/2/3 must be read carefully by the candidate to ensure that they understand what the question requires – rather than attempt to use an answer that has been rehearsed as part of examination preparation.

Question 1 was the most popular choice, with fewer attempting Question 3 and very few answering Question 2. Most Candidates clearly understood the requirements of Questions 1 and 2. The level of attainment for Questions 1 and 2 was good, with most responses entering Level 3 and a good number entering Levels 4 and 5. The level of attainment was somewhat lower for Question 3.

Acceptable responses were the same as previous examinations: credit is gained either by considering a few issues in detail or by looking at a range of ideas in less depth. These questions consistently differentiate between candidates that understand how to carry out and analyse AS level research, as opposed to those who have mechanically followed instructions.

The answer booklet clearly states that material from the Report is to be extended and not repeated, which is improving with each examination session. For May 2006 repetition from the Report was a risk in Questions 1 if misinterpreted.

1) *Explain why the results of your investigation may be limited in their usefulness to others.*

Many candidates reached Level 4; a good number entered Level 5; very few stayed in Levels 1 and 2.

Indicative content: aspects of the limited nature of the results for others include: a limited sample size; the one off nature of the investigation; probable sampling errors; difficulties with fieldwork skills; an inappropriate location.

Qualities of A grade Candidates: Either two or more aspects of the limited nature of the results of the investigation to others are discussed well / quite well or more aspects are discussed in less depth. Specific reference is made to organisations. The answer is generally logically ordered and well presented.

Other Comments: The majority of candidates were able to identify two or more reasons for the results of the investigation being of limited usefulness to others. Typical responses referred to the limited size of the dataset, the likelihood that that it only represented a small area on one occasion, and errors made when collecting data, making it unreliable. Organisations typically referred to include the local council, farmers, residents, builders.

Many answers were presented in terms of what went wrong – weaker candidates did not progress, they only considered problems and errors and were prone to repeat material from the Report. Better quality responses went on to say how it related to its usefulness and the best discussions also linked this to specific organisations/others. Other acceptable, but not good answers, identified what the problem was but then went on to discuss how it could be improved – some did not clearly link this to other possible users of the data. Weaker candidates did not apply their answer to specific groups or organisations or suggested that their improvements would make the outcomes useful to others – in reality they would not be useful. The weakest responses devoted some of the question explaining why the outcomes would be useful to others.

2) *Secondary information (data and/or geographical theory) is often used as part of a geographical investigation. Describe what secondary information you used and the extent to which it contributed to your investigation.*

Many Candidates reached Level 4; a few entered Level 5; very few stayed in Levels 1 and 2.

Indicative content: appropriate secondary data includes: maps to locate the study area and individual sites in the planning and field work stages; textbooks to establish expected geographical theory; data from government and statutory organisations to act as the main or corroborative data source, e.g. Office of National Statistics; Meteorological Office; English Nature; Environment Agency; police force; district and county councils; Websites to establish geographical theory and collect secondary data sets; library archives and newspapers for local information.

Qualities of A grade Candidates: Either two or more sources of secondary information are discussed well / quite well in terms of a description of the data and the extent to which they contributed to the investigation or more sources are discussed in less depth. The answer is generally logically ordered and well presented.

Other Comments: Most candidates referred to relevant geographical theory (rather than maps and data) leading to competent, relevant answers. Better quality responses referred to sources such as the Internet and published population statistics. Good responses went on to show how the secondary data contributed to the investigation, referring to how the geographical theory was used to prepare the methodology and evaluate the outcomes. Strong candidates clearly addressed the question's requirement to discuss the extent of the contribution by secondary data. Weaker candidates did not understand the difference between primary and secondary data, sometimes regarding secondary data as a second set of data collection by the candidate.

3) *Discuss the impact of human and/or physical factors upon your choice of study area and sites for data collection.*

Some candidates entered Level 3; few entered Level 4; many remained in Level 2.

Indicative content: factors that have an impact on the choice of study areas and data collection sites include the human impact on the physical landscape, e.g. avoidance of canalised rivers, man made beaches; human impact on the human landscape, e.g. location of roads, buildings and barriers (fences, private grounds), dammed river, cars parked in the way, affects where data can be collected from in order to address the hypotheses. Physical problems, e.g. unable to climb down steep slope, traverse boggy area or walk through woods, impeller will not work in shallow rivers, river too deep to measure. Climatic factors, e.g. too cold/hot to conduct work, river in spate. Temporal factors: tide in or spring tide affect how much of a beach can be sampled from.

Qualities of A grade Candidates: Either two or more human and/or physical factors are discussed well / quite well in relation to how they had an impact on the choice of study area and data collection sites; or more factors are discussed in less depth. The answer clearly refers to choice of area and sites. The answer is generally logically ordered and well presented.

Other Comments: The best responses clearly demonstrated how human and physical factors affected the choice of study area and sites for data collection. Good answers typically considered factors such as poor accessibility making them change the site chosen, avoiding man made structures that would give inappropriate data for the investigation, and the need to tailor the number and location of sites to the time and resources available.

However, many candidates did not take note of the need to discuss the impact of human/physical factors on the choice of study area and sites for data collection, opting instead to discuss how human and physical factors affected the outcomes of the investigation. More acceptable suggestions noted how factors affected what the sites were like, e.g. the building of groynes leads to the build up of beach sediment on one side, but did not go on to say how this affected their choice of site, e.g. whether they wanted to measure the impact of groynes or not. Most candidates considered both human and physical factors.

4) *With reference to Fig. 1, justify the suitable sampling method and sample size to collect the data.*

Many candidates reached Level 4; a good number entered Level 5; very few stayed in Levels 1 and 2.

Indicative content: Sampling method: choice between: random, systematic, stratified random, stratified systematic, opportunistic; choice between: point, line, area sampling; choice between: doorstep (face-to-face, leave for self completion), telephone, postal, non-household locations (on street in town, at leisure activities). There may be discussion of the potential impact of choices on response rates and the accuracy of data supplied. Non-household sampling locations must ensure that the respondent lives in Hexham. Collection at leisure activities is unlikely to pick up non users. Household locations: it is hard to catch the potential respondent at home. Sampling locations and times should be identified. Conduct a pilot survey. Sample size: large enough to be able to carry out statistical tests and construct meaningful graphical representation; manageable given the resources available: time and manpower.

Qualities of A grade Candidates: Either with some or good reference to the data given in the map resource the candidate discusses an appropriate sampling method and sample size well / quite well; or one of an appropriate sampling method and sample size is discussed well and the other moderately well. Sampling locations will be clearly identified, appropriate and feasible for an AS investigation. The answer is generally logically ordered and well presented.

Other Comments: This was generally well answered with candidates making good use of the map. More able candidates took account of the distribution of housing or – if opting for on-street or at leisure facility surveys – considered factors such as age/gender and residency in Hexham. A variety of sampling methods were suggested. The most convincing ones made stratified samples at the main housing estates or chose transect lines using door-to-door contact with the respondents; issues such as whether there was anyone at home and the return of completed questionnaires (if mailed to the houses) were discussed. Either implicitly or explicitly the candidates ensured that the sample only looked at residents of Hexham, captured users and non users of leisure facilities, and elicited a non-biased sample across the full socio-economic range. Candidates who opted to collect data at various locations in the town needed to be more explicit about the validity of their methodology, e.g. screening people on the street for residency and obtaining a representative socio-economic sample. Those who chose to sample at the leisure facilities also needed to be clear about how the question was addressed: such candidates almost always did not acknowledge the need to sample users and non users. Good suggestions included going to all the sites at the same time for the same period of time. Weaker suggestions only made use of some sites or decided to sample only from houses nearby (working on the erroneous basis that only people living near the facility would use it.)

Other methods included obtaining data from schools (of some but limited value); from the library (not clear what was being collected) and from the facility managers. Again, this last option did not account for non users and many did not recognise that some sites were not staffed.

Some candidates were somewhat undecided and offered several methods – without necessarily considering how the data could be combined successfully when being analysed.

Sample size was not discussed well by many candidates: the responses were often unrealistic for an AS project, e.g. 1200 questionnaires, or the sample size was not explicitly stated, e.g. they would collect data from a leisure centre for an hour. Appropriate sampling methods were not necessarily linked to appropriate sample sizes.

Weaker candidates did not consider the sample size at all; they also forgot about residency and the need to sample non users; they also assumed that proximity to a facility automatically increased their usage of it. Many answers deviated from the question by providing sample questionnaires.

2690 - Geographical Investigation 2

General Comments

The standard of entries was generally very sound with many candidates showing a variety of skills and an understanding of investigative design. The two areas of difficulty still seem to be in identifying suitable topics for study and either no focus at all or too many key questions and hypotheses. Elaborate topics do not always lend themselves to a good investigation. It is often a case of 'the simpler the better'. Some candidates tended to lose their way by formulating too many hypotheses which led to eventual confusion, loss of focus and very lengthy studies. Physical topics seem to be more popular than urban and produced the better results this session. Some candidates still insist on choosing topics about the potential for future developments or broad topics that yield very little opportunity to collect varied primary data. The vast majority of Centres and candidates obviously worked very hard and are to be commended on a successful session.

Considerations for next session

There is still a tendency to spot the assessment criteria and simply award a level for it. Such references must be expanded upon and form an integral part of the text. They are not worthy of marks if they are simply quoted. For example, mention of an anomaly in a graph or mention of error and bias does not automatically constitute a level three mark. As the criteria implies these must be evaluated perceptively and discussed in the geographical context of the analysis.

Marking tended to be generous against the criteria regarding the use of a 'wide range of different techniques' both in the analysis and the data presentation sections. This is a key area in the investigation and will not be successful if the topic is inappropriate or too narrow. Planning at this stage is essential and conducting a pilot study is useful to see if enough varied data can be collected. If it can't then adjustments at this stage are necessary rather just stating in the evaluation that this is what should have been carried out. A collection of repetitive graphs and a descriptive analysis will not attract higher level marks. The key to variation is to include, where relevant, graphical, descriptive, statistical and cartographic analysis and presentation.

Urban studies were plagued with difficulties this session. Many seemed to take the form of land use surveys, interviews and questionnaires which produced repetitive data presentations in the form of spider diagrams and many photographs, and did not provide for varied analytical opportunities. For high level three marks more than questionnaires and interviews are expected.

There were a number of basic mistakes on data presentations. Namely, omission of titles, incorrect use of axes for scatter graphs, joining scatter graph dots, poorly presented site maps generated from multi map and not showing any cartographic skills. Hand drawn maps that were included were of particularly poor quality. The terms correlation and trend were often misused.

Obtaining a focus remains a problem for a few candidates. If the format of the investigation is strictly adhered to then there should no reason to omit aims, key questions or hypotheses. By far the most common problem was maintaining focus because there were too many key questions or hypotheses.

Examples of inappropriate key questions for investigation which address methodology rather than enquiry:

- What is river pollution?
- What chemicals would be suitable for a pollution test?
- Where is X located?
- How can nitrates in soil be tested for?
- What is the population of a particular town?
- How deep is the river?
- How many people shop in this particular location?

A good question will not only establish a focus, but will lead to some data collection and most importantly, some data presentation and geographical analysis.

Rivers topics were generally well done, but one or two cautionary words;

Doing just one variable in a river is really not comprehensive enough. It does not provide enough for an A Level length study does not address the dynamics of a river and certainly does not provide for any comparative data in an analysis.

Some candidates chose to study river variables that did not directly relate to each other and as a consequence their studies were rather disjointed and did not allow them to display their knowledge of river systems. Those candidates who aimed to observe the influences on velocity of a couple of directly related variables produced very successful investigations. (See successful topics)

A number of Centres chose to collect data in groups. This is quite acceptable as long as each individual writes their own report. In a number of cases reports were very similar simply because there was not enough variation in questions to be considered or data to be collected. It is advisable to plan a field day that will cater for 2 or 3 different questions (or variations of a question) per candidate.

There was a general tendency to explain methodology and use of statistical methods at great length. These sections should not constitute the longest part of the investigation. Centres may find that the use of methodology tables will solve this problem.

IT studies were perhaps not as good this session. There were a number of good ideas, but the problem still lies with candidates not actually doing anything with the data other than analysing it in lengthy descriptive form. Cartographic, graphic and statistical analysis can be successfully applied to this type of data.

A final word about length of studies. While there is not a strict adherence to length so as to maintain the individuality of the investigations it was noticeable that candidates who wrote very lengthy projects tended to lose their focus.

Moderators will be scrutinising the word count more carefully for the January session.

Successful topics this session:

1) To investigate the differences in tourists' mental maps of a given area using Lynch's 5 elements of mental maps. (An interesting range of maps was incorporated)

2) An investigation into how velocity of a given river changes downstream.
Hypotheses:
- As velocity increases downstream so does river depth and width
- As hydraulic radius increases so does velocity
- The gradient of the river will become less steep.
- Channel roughness will decrease as velocity increases.

(The study was based on the use of the Bradshaw Model of long profile river trends.)

3) Application of the Mann urban model to a given area with a focus on housing.
Hypotheses:
- Housing prices will increase towards the edge of the area.
- The environmental quality increases towards the edge of the given area.
- Houses are bigger and more sparsely spaced further from the CBD

4) To compare sand dune vegetation in a given area to the idealised dune profile
Key Questions:
- Will there be a zonation of plants with increasing distance from the sea?
- How does the species diversity change with increasing distance from the sea?
- How do abiotic factors change with increasing distance from the sea?

(Simpson Yule Species Diversity Index was used)

5) An investigation into the nature and extent of the CBD of a given area.
Key Questions:
- What is the extent of the CBD?
- How does environmental quality change in and around the CBD?
- Can a PLVI be established in the CBD?

There are many more questions that could be considered in this topic and models that could be examined like the Bid Rent Model and the Core Frame Model.

Scope for primary data collection – urban transects, environmental quality, traffic counts, pedestrian counts, shop frontage measurements, Goad map comparisons, sphere of influence investigations, shop quality indices, rate indices, building heights and many more. Much of this lends itself to creative data presentation and statistical analysis.

Format Reminder:

- Title
- Synopsis if relevant
- Introduction – with geographical context of study
- Aims
- Key questions or Hypotheses (which ever is the more relevant)
- Method – sampling strategies
- Presentation of Data
- Analysis
- Conclusion
- Evaluation – validity, alternative strategies, extension and usefulness
- References and acknowledgements.

Administration Reminders

Comments on the course work cover sheets are encouraged. Prediction of marks, however, is not acceptable practice.

Moderators will be scrutinising the 2,500 word limit more closely next session.

Please avoid presentations in separate plastic sleeves. Moderators would appreciate loose sheets to look through. Work in a single plastic sleeve or document folder is recommended.

2691 - Issues in the Environment

Introduction

The majority of candidates appear to have had no difficulty in completing the paper within the allocated time. Very few candidates failed to complete four questions as required. There were no rubric errors. The majority of candidates attempted question numbers 1 and 7. In Section A a small number of candidates attempted question numbers 3 and 4; question number 2 was attempted by only isolated candidates. In Section B, a small number of candidates attempted question numbers 5, 6 and 8.

The general quality of responses was good and very few answers showed a total lack of understanding. At the highest level candidates showed an impressive level of understanding and used locational examples to develop their ideas. Differentiation was largely due to how effective the individual commands were addressed and the use of appropriate locational case studies.

Comments on Individual Questions

1) (a) *To what extent does Fig. 1 illustrate the vulnerability of LEDCs to natural hazards?*

Candidates showed a good general understanding about the vulnerability of LEDCs to natural hazards by considering the relative impact of economic development. The resource was effectively used by most candidates to identify the lack of planning and preparation in Iran and a considerable number of candidates made comparative judgements by using the short reference to the California earthquakes. As such responses showed a good general appreciation of the difficulties faced by LEDCs in the light of natural hazards. At the higher levels candidates brought in other examples or developed their ideas to consider primary and secondary impacts. This was often a useful way of considering the idea of 'extent', which was clearly a discriminating idea. A small number of candidates failed to use the resource effectively or simply copied from it with little development and isolated candidates failed to pick up the locational context of LEDCs.

1) (b) (i) *Discuss the view that human activities have increased the frequency and impact of natural hazards.*

This was the most popular section b question and there were some excellent responses. At the higher levels candidates began a clear debate about the question and showed a good understanding of both frequency and impact. Middle ranging responses tended to merge the ideas together and simply agree with the basic concept, often in a descriptive way. The use of case studies was variable, at times candidates built their responses around particular case studies and this approach was often very successful. Other candidates used descriptive case studies and then tried to link the question to them. This approach worked quite well in some cases, but at times showed up inappropriate choices of case studies. The more popular ideas were based upon human habitation, the development of flood plains and global warming issues.

1) (b) (ii) *What part does perception play in the management of natural hazards?*

Relatively few candidates attempted this question and responses were variable. Those candidates who clearly understood the terminology were able to put together very effective responses; often linking the idea of perception and preparation, both in general and individual terms. A significant proportion of candidates however, failed to show that they clearly understood the terminology and the word 'perception' was often interpreted as 'preparation'. This approach did not fully address the question and was consequently self-limiting.

2 (a) *Compare the usefulness of each weather map in Fig. 2.*

Very few candidates attempted this question.

The level of understanding shown was often quite impressive with some candidates showing a very detailed appreciation of synoptic charts. In general terms candidates identified the variations in complexity between the three weather maps and made general observations about the level of understanding required to use each of them. The 'usefulness' of each of them was not always well considered and often quite simplistic and generalised observations were made.

2) (b) (i) *Discuss the view that climate change is a result of both natural events and human activities.*

2) (b) (ii) *To what extent do the impacts of short and long term climate hazards differ?*

Very few candidates attempted either of these questions and responses were often quite generalised and lacking in detailed understanding or locational exemplification.

3) (a) *How far does Fig. 3 illustrate both opportunities and constraints for the development of leisure activities in cold environments?*

A small number of candidates attempted this question. The use of the resource was variable. In some cases a range of physical characteristics and linking them back to the idea of 'opportunities' and 'constraints'. In other cases candidates simply used the resource as a general stimulus to develop a broader range of possibilities. Given the nature of the resource, both of these approaches proved to be successful in many cases.

3) (b) (i) *Using examples you have studied, examine the extent to which cold environments are threatened by economic development.*

The general understanding of the question was good with many candidates identifying a range of examples where economic development is putting pressure on the physical environment. Examples used included Alaska, Antarctica, the Alps in Europe and Siberia. Responses ranged from descriptive observations about issues to more complex observations about relative impacts and the importance of management. Those candidates who adopted the more comparative approach were often able to consider the idea of 'extent' more successfully.

3) (b) (ii) *Examine the environmental impacts on landscapes where fluvio-glacial deposits are extracted and suggest how these landscapes might be restored.*

No candidates attempted this question.

4) (a) *To what extent does Fig. 4 represent the issues associated with the sustainable development of tourism in tropical environments?*

A very small number of candidates attempted this question. Candidates generally used the resource effectively t describe some of the issues associated with the sustainable development of tourism in tropical areas. A small number of candidates made relative judgements about the different issues or used additional exemplars to express different issues. This approach was often enough to take the responses to the higher levels.

4) (b) (i) *Discuss the view that large scale development projects in tropical environments often degrade natural systems.*

Responses to this question varied from complex observations about the fragility of tropical ecosystems and how specific projects (often in the Amazon region) put pressure on natural systems, to quite general comments, often with little exemplification. A small number of candidates showed a very detailed understanding of the physical ecosystem and its constituent parts with in-depth analysis of how large scale projects can affect the equilibrium of such systems.

4) (b) (ii) *Examine the challenges faced by farmers in tropical environments.*

Very few candidates attempted this question and responses were often superficial and lacking in any knowledge or locational detail.

5) (a) *To what extent is short term aid important in resolving food shortages in LEDCs? Use Fig. 5 to support your answer.*

The resource was generally used effectively to identify the importance of short-term aid and a number of candidates brought in additional observations – often based upon other non-government organisations (NGOs). Ideas were often linked to either climatic (drought) hazards or political situations (civil war), and the use of these types of examples was often successful in making a strong case for short-term aid. Those candidates who considered the importance of longer term development aid in relation to food security were able to enter a broader discussion. This was often a successful avenue in considering the idea of 'extent'.

5) (b) (i) *How do large companies influence food production and supply?*

A small number of candidates attempted this question and the majority showed quite a superficial appreciation of the question. Most were able to suggest that large companies do influence food production and supply, but few used specific examples to illustrate the point and show how this influence worked in practice.

5) (b) (ii) *'Modern agricultural practices often lead to environmental degradation.' Discuss.*

The majority of responses tended to focus on either the Green Revolution or the development of intensive farming in Western Europe. These approaches gave candidates a good opportunity to develop ideas about habitat loss, soil erosion or the impact of increasing chemical use. When linked to the specific examples these responses were often quite sound. At the highest level candidates began to consider the recent growth of organic farming as a 'modern practice' and argued, quite successfully, that this type of farming had only marginal impacts on the environment.

6) Changing Urban Places

No candidates attempted this question.

7) (a) *To what extent does mass tourism present both a challenge and an opportunity for LEDCs? Use Fig. 7 to support your answer.*

This question was generally answered very successfully with candidates able to identify a range of 'opportunities' and 'challenges' expressed in the resource. At the highest level candidates brought in comparative examples to develop their ideas, often their examples were very detailed and showed a high level of sophistication. A small number of candidates made the point that eco-tourism can reduce the negative impacts of tourism, even when the concept was applied to 'mass' – tourism. A very small number of candidates either failed to use the resource or addressed the question with reference to MEDCs. Both of these approaches were self-penalising.

7) (b) (i) *Discuss the view that the British leisure and tourism industry has had to adapt to survive.*

A significant proportion of candidates did not fully address the question. Many tended to get stuck in the historical decline of tourism in the United Kingdom and offered often very complex descriptions of why this decline happened. The consequence of this was that the idea of responding to decline or 'adapting' was not fully considered. Those candidates who fully addressed this aspect of the question usually did very well. There were many examples of adaptation used, including heritage tourism, short-breaks, sporting and recreational activities and institutional examples like Center Parcs. All of these ideas proved to be successful avenues of approach to this question. The highest marks were often achieved by showing an understanding of redevelopment/rejuvenation policy based on specific examples such as Brighton or Blackpool. A number of candidates used National Parks for exemplification – not always successfully since the focus of the example was not appropriate to the question.

7) (b) (ii) *Discuss the view that for many tourist areas in MEDCs the environment is an important resource and must be managed carefully.*

This was a very popular question and there were some excellent responses, often based upon very detailed case studies. The avenue of approach for most candidates was to use specific examples to identify key issues and problems and explain how some of these problems are being managed. In using this approach, the concept of sustainability was often considered and as such the responses were usually quite sound. At the highest level, candidates showed a very clear appreciation of the 'environment as a resource' and identified the specific reasons why people are attracted to particular environments. As such the link between management and sustainability was then seen as far stronger since it was considered in both environmental and economic terms. This approach generated some excellent responses which showed a very high level of understanding.

8) (a) *To what extent does Fig. 8 illustrate the range of goods and services controlled by transnational corporations?*

Very few candidates attempted this question. Candidates often used the resource in a descriptive way to identify the range of goods and services produced or controlled by transnational corporations. Very few candidates went far beyond the resource by using other examples of goods/services or companies to express the extent to which 'Hitachi' is a 'typical' transnational corporation.

8) (b) (i) *Evaluate the view that transnational corporations are an important part of the development process in LEDCs.*

Most candidates were able to identify a number of companies across the world and considered their influence. A range of both positive and negative factors were considered including, links to development and socio/economic and environmental exploitation. As such resources were often quite descriptive and did not fully explore the idea of 'evaluation' expressed in the question.

8) (b) (ii) *'Changing labour costs and shifts in demand can lead to regional economic decline.' Explain this statement and examine the impacts of regional economic decline.*

No candidates attempted this question.

2692 - Issues in Sustainable Development

General Comments

The topic for this year's synoptic paper on Oceans as a Threatened Resource proved popular with candidates, linking well with their studies of Tourism and Hazards in module 2691 and providing the opportunity for better candidates to demonstrate their own knowledge and research on current issues facing the World's oceans. A good number of candidates gained very high marks, writing with fluency and understanding that made the task of producing the Resource Booklet a worthwhile venture. There are clearly some first class geographers in several Centres, and their teachers should also take some credit for encouraging their development.

Performance was governed by Centre expectation more than anything else. It was clear that some Centres did not really have much idea of the standard and demand required by this paper. For those Centres which may be a little disappointed with their results, note should be taken of this report. There is now a body of support available from the published mark schemes and the INSET that OCR offers each year. These three resources, together with the guidance in the booklet itself should help Centres to prepare students for the depth of study that this paper requires. The following report should be read in conjunction with the mark scheme.

Comments on Individual Questions

1 (a) ***Briefly*** *describe the part played by the oceans in* ***three*** *of the following:*

- *Hydrological cycle*
- *Global energy transfer*
- *Carbon Cycle*
- *Nitrogen cycle*

The hydrological cycle and heat and energy transfer are both phrases and concepts used in the AS module 2687, Physical Systems and their Management. This was the first test of synoptic understanding of processes fundamental to geographical studies and for life on Earth and in the oceans. As it is expected that this module builds on knowledge from previous studies it was not necessary to repeat this information in the booklet. The penultimate bullet point in the guidance section makes it clear that candidates are expected to use the knowledge that they have gained from earlier studies. Some candidates felt that they had to bring in an explanation of the El Nino phenomenon, possibly because it was there in the booklet, but which was not necessary to answer this question. The carbon cycle is more extensively covered than the hydrological cycle, but the nitrogen cycle is merely mentioned, although extremely important in the balance of nutrients in the ocean, as further research would have made clear. Red tides, coastal eutrophication and nitrogen as a fertiliser are all mentioned in the first section of the booklet.

Thus the nitrogen cycle was rarely selected, when it was, answers were polarised. Good candidates knew it well and soon got onto algal growth. The weaker group had no idea. Some candidates took the hydrological cycle to be energy transfer. Others took global energy transfer to be the transmission of energy through different trophic levels of an ecosystem, which could be credited to a low level if clearly explained, as energy is transferred in this way, but not in the global scale required. A number of candidates did not differentiate clearly what topic(s) they were writing about, leaving the Examiner to decide. This is not a strategy to be recommended. A few candidates wrote on just two, and very occasionally, just one function. So the oft-repeated advice is to answer the question set, having made sure that they have understood all the key commands. Frequently good answers made use of annotated diagrams, which fulfilled the instruction of 'briefly describe'. Good written answers were similar to the following:

Oceans are an important part of the hydrological cycle. This is how water moves around the planet in the atmosphere, on land and in the oceans. The oceans are a store of water. Solar heat evaporates water from this store into the atmosphere. This can happen at different rates according to the climate. This water eventually condenses and finds its way onto land and eventually into rivers through precipitation... and into oceans to be stored again.

Oceans also play an important part in global energy transfer. Tropical and Equatorial regions receive a surplus of solar energy, compared to the Polar Regions' deficit of energy as shown in Res.7. To correct this and even out the energy deficit, the oceans carry warm water with more energy to wards the Polar Regions and return as cold currents. Res. 9 shows how a current in the Atlantic is acting in this way.

This candidate did not explain the role of the oceans in the carbon cycle quite as clearly, but still well enough to approach the A grade boundary on this section

(b) *Explain how **two** of the processes you described in (a) contribute to the ocean being a rich source of food for people.*

Only two processes needed explaining here, but the point of the introductory section was to show how important a resource we have in the oceans. One of our most easily accessible sources of protein comes from fish. Fish will only thrive if they have the right conditions and nutrients. So this section was the basis for understanding of the whole module, but least time seems to have been spent on it.

Global energy transfer was the most popular choice for this question. Many good answers on upwelling were seen. A good number seemed not to respond to 'being a rich source'. They dwelt on the El Niño conditions and their capacity to *diminish* sources of food – the opposite to the requirement of the question - without mention of normal conditions. The carbon cycle came a close second and was often well answered. A few tackled the hydrological cycle with some getting it spot on. Once more, the nitrogen cycle was not popular and rarely scored well.

A weaker answer but in a positive vein began:

The ocean has always been a rich source of food for people and still is in some LEDC countries. The carbon that is in the ocean can contribute as some of the microscopic animals and plants in the ocean feed on it. These are all part of the food chain, the phytoplankton that fish feed on.

This candidate then went on to confuse the hydrological cycle with global energy transfer, another fairly common error among weaker candidates.

A much better attempt explained the process of upwelling to create 'the most biologically productive zones which are heavily fished.' The candidate also understood the role of carbon in the provision of nutrients and its role in the formation of coral, providing another rich area for aquatic life.

2 *Analyse ways in which the oceans could be managed sustainably. Support your views with evidence from the resource booklet and your own knowledge.*

Being the focus of this topic, most Centres were prepared for a question along the lines of this one. As a result, Centre guidance was very clear here. However, for just a few Centres it appeared that very little research had taken place, and certainly not with the whole group. In one Centre no candidate wrote anything that was not in the Resource Booklet, and almost all made no reference to any specific example taken from the booklet and wrote only in generic terms. Fortunately this was rare, but failing to include anything 'from your own knowledge' was a common occurrence. Where 'own knowledge' is stated as a requirement of the question, credit to the higher levels cannot be gained without it. On the other hand it was clear that other Centres had studied some material together. They all wrote some core material concerning the way one supermarket was supporting sustainably sourced marine products, but most also added some detail that was unique to their own answer. Amongst good candidates, some achieved high marks by demonstrating a very wide range of knowledge. Others wrote with great depth and authority on a narrower range. It was pleasing to read a few answers that did both and these had no difficulty in gaining a full 40 marks.

Many started by outlining current threats to the oceans, which was fine as long as it was just for introductory purposes. Weaker candidates, however, would get carried away with this section and fail to address the question on sustainable management, and certainly did not attempt any analysis. A good introduction started with a definition of sustainability and continued:

Current fishing methods are not sustainable. With 20% of our fisheries over-fished, we must look for ways to feed an ever-growing global population, whilst ensuring that fish stocks remain at a healthy level.

This candidate went on to explain and to give points for and against quotas, fish net sizes, legislation, marine parks and to highlight the fact that managing tourism in coral reef areas relies on education and awareness of the importance of these fragile areas. Suitable reference was made to the case studies provided in the Resource Booklet and some own knowledge was evident, probably calling on case study material gained from module 2691, using the tourism unit for an example on Australia. Each of these points was appropriately illustrated and linked to the next in excellent essay style.

A conclusion is vital to round off a successful essay:

Some present management strategies that seek to manage the oceans sustainably are successful to an extent. However they are often fraught with difficulties, such as the lack of co-operation from locals in the Ban Don Bay (Thailand) fishing regulations. Integrated management and public support is important in resolving conflicts of interest

3 *Using a resource* ***other than oceans,*** *evaluate the impacts of habitat loss and environmental damage from both natural and human processes. Use examples at a range of scales.*

This presented more of a hurdle than question 2 in that it had more components. It is also clearly expecting synthesis of the candidate's geographical knowledge. No resource can be used without some impact on the environment. Habitat loss is only too evident in the destruction of forests, the quarrying of building stone or extraction of coal; the building of reservoirs both destroys and creates habitats. Candidates recognising the importance of this aspect of sustainability, highlighted in the third Key Idea, found it easy to get to higher levels. Very few, but still some candidates brought in the theme of oceans again, which it is clearly stated should not be done. Many candidates seemed not to have noticed either 'natural' processes, or 'range of scales', and frequently both. Where 'natural' was responded to, it was often not the starting point. Very often 'this leaves it open to erosion by rain' was added to a rather more detailed human cause of habitat loss or environmental damage. It was a delight to read cases of specific natural damage. Some excellent accounts of the damage caused by the eruption of Mt St Helens were given, or the Asian tsunami, although this was less specific in the type of habitat loss.

It was noticeable that if one candidate in a centre responded well to 'natural', most others did too, and unfortunately the converse was true as well. A good number of candidates who were attending to scale pointed this out overtly as part of their essay. Many others achieved a range of scales incidentally, purely because of the examples they had chosen - it may or may not have been intended. At A2 it was so disappointing to read from so many candidates that 'carbon dioxide causes a hole in the ozone layer that lets extra heat in', or equivalent. It was also disappointing that many candidates can still lose sight of the question altogether, and would start offering suggestions of how habitat loss could be resolved rather than evaluating the impact of its loss as the question required.

As is generally the case, the questions are based on Questions for Investigation or Key Ideas and Concepts as stated in Section 5.6 of the specification. These suggestions should be followed carefully in any preparatory work for this module. The paper is **synoptic** and its intention is to bring together as many strands as possible of the candidate's A level studies. It is not just a study of the Resource Booklet which is provided as something fresh, current and as a vehicle for allowing candidates to explore further the issues that affect them now and will continue to do so in the future by applying their geographical knowledge and understanding.

Time did not seem to be an issue for the majority of candidates. Weaker ones seem to make it an excuse, but for those who performed well, there were some excellently constructed, knowledgeable essays, which were often an inspiration to read. It is strongly recommended that Centres try to attend an Inset for this Specification where much valuable help and advice can be gained through feedback on this season's examination and which will provide further examples of good practice.

June 2006 Assessment Series

Unit Threshold Marks

Unit		Maximum Mark	a	b	c	d	e	u
2687	Raw	90	59	52	45	38	31	0
	UMS	90	72	63	54	45	36	0
2688	Raw	90	70	61	53	45	37	0
	UMS	90	72	63	54	45	36	0
2689	Raw	60	45	40	36	32	28	0
	UMS	120	96	84	72	60	48	0
2690	Raw	90	71	62	54	46	38	0
	UMS	90	72	63	54	45	36	0
2691	Raw	90	68	61	54	48	42	0
	UMS	90	72	63	54	45	36	0
2692	Raw	120	90	81	72	64	56	0
	UMS	120	96	84	72	60	48	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
3833	300	240	210	180	180	120	0
7833	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
3833	22.5	45.3	65.5	80.3	92.0	100	479
7833	21.9	51.9	75.7	91.5	99.0	100	512

For a description of how UMS marks are calculated see;
www.ocr.org.uk/OCR/WebSite/docroot/understand/ums.jsp

Statistics are correct at the time of publication

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