Assessment Objectives Grid for Geography - G1

Summer 2014

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)	**0**	**2**	**3**	**5**	**1.5**
(b)	**8**	**2**		**10**	**1.3**
(c)	**7**	**3**		**10**	**1.4**
	15	**7**	**3**	**25**	
Question 2					
(a)	**0**	**2**	**3**	**5**	**2.5**
(b)	**8**	**2**		**10**	**2.2**
(c)	**7**	**3**		**10**	**2.6**
	15	**7**	**3**	**25**	
Question 3					
(a)	**1**	**1**	**5**	**7**	**2.2**
(b)	**2**	**1**	**5**	**8**	
(c)	**3**	**2**	**5**	**10**	
	6	**4**	**15**	**25**	
	36 (48%)	**18 24%)**	**21 (28%)**		

Using the mark bands

The aim is to find the descriptor that conveys most accurately the level attained by the candidate, using the best-fit model. A best-fit approach means that marks should be awarded for a response that most fairly matches different aspects of the descriptor.

GCE GEOGRAPHY G1

MARK SCHEME

SUMMER 2014

Q.1 (a) Use *Figure 1* to describe the changing distribution of dzuds in Mongolia. [5]

The maps, 1a and 1b show that there is a change from a more even distribution to one that is concentrated in the north west of the country in 1b. These maps also show that the frequency of dzuds will increase, especially in the north west. There is a decrease in the frequency in the south west. Map 1c allows comment on the link between topography and changing distribution of dzuds. Dzuds increase in frequency in the more mountainous areas of Mongolia. Use of data may include latitude/longitude/direction/scale.

Allow (1 mark) per comment on the changing distribution with (1 mark) for use of data and each linked comment from Figure 1. For example: increase (1 mark), in the north west/latitude/longitude (1 mark), from 0 –1 and 4 – 7 (1 mark), in mountainous area (1 mark), 3000 metres (1 mark).

(b) Outline the characteristics and cause(s) of *one* short-term climate change. [10]

Candidates will have been taught a variety of examples so be prepared to accept a flexible definition of short term. Some candidates may approach short term from the view of change that is in the form of 5–7 years and review El Niño whilst others may approach short term from a geological angle and address fluctuations over the last 1000 years. Other approaches may address climate change induced by volcanic activity and recent climate change seen as a result of human induced global warming.

The question contains two elements – the characteristics of the selected short-term climate change and the associated causes. Both of these elements need to be addressed to access Level 3. Descriptions of climate change will vary with the example selected. In the case of El Niño, comment may be made on changing patterns of rainfall, temperature, storm activity and drought. Be prepared to accept answers that examine climatic change with reference to a limited geographical area in this context. Some candidates may focus on change in South America or Peru whist others may refer to Australia. Those that review climatic change over the past 1000 years may examine the characteristics of the Medieval Warm Period and/or the Little Ice Age. Detail here may look at temperature and precipitation patterns over hundreds of years and thus be more general in character than accounts of more recent change. Comment may refer to changes in seasons, increased snowfall and storm activity. Some answers may address single events such as droughts associated with El Niño events but these need to be linked to overall change. Another valid approach may see recent increases in temperature as a pattern. These answers may provide detail of the changing climate which results from this increase in the form of temperature, precipitation and extreme weather events.

Causes of climate change will need to be appropriate to the example chosen. In the case of El Niño the role of ocean currents and sea temperature will be the most common explanation. The causes of the Little Ice Age and Medieval Warm Period there are a variety of explanations that have been put forward that include sun spot activity, volcanic activity, changing surface albedo, Milankovitch cycles and the changing ocean/atmosphere conveyor in the Atlantic.

Outlines of causes of recent increases in temperature will probably focus on human activity. To access Level 3 there must be a good outline of causes(s) linked to the selected climate change.

Level 3 8-10 marks	Good description of characteristics and outline of causes of short-term climate change. Understanding of process with integrated link to short-term pattern of climate change. Good use of example.
Level 2 4-7 marks	Some description of characteristics and outline of causes of short-term climate change. Some integration of process and consequent short-term climate change. Some use of example. There may be an imbalance between description and explanation.
Level 1 0-3 marks	Basic description of characteristics and outline of causes of short-term climate change. Basic use of example.

(c) Describe and explain *two* impacts of climate change on society. [10]

This question has two elements – description and explanation. The question looks for two impacts. The material presented as impacts will vary according to the society or societies chosen but there will be some common elements such as economy, work, migration, disease, traditions etc.

Good answers should display depth of knowledge of the link between the effects of climate change and the impacts on selected elements of society. This depth of understanding may come in the form of detailed descriptions of the impacts. Elements of explanation should link focus on why the climate change characteristics has an impact on society. For example answers may refer to sea level change which may cause migration and this could be described in some detail. The explanatory link to society may refer to who is leaving and the resultant impact on society e.g. loss of workforce. The changing climate of the tundra may lead to changes in the cultural workings of the Inuit.

Some approaches can be seen below but be prepared to credit valid alternatives.

- Rising sea level may lead to migrations
- Agriculture may be affected by salinisation of soils
- Patterns of hunting may be altered
- Settlements may be threatened and urbanisation may result
- Reliance on aid and food supplies from outside the area may change diet and ways of life
- Reef damage may lead to changes in tourism and economic problems
- Extreme weather may lead to criminal activity
- Changing climate may lead to changing patterns of disease
- Productivity may decrease
- Drought may cause issues with health and mortality in Africa
- Mortality

Answers may focus on impacts or location.

Level 3 8-10 marks	Good knowledge and understanding of climate change on society. Good explanation of impacts. Good integrated development of examples.
Level 2 4-7 marks	Some knowledge and understanding of climate change on society. Some explanation of impacts. Some use of examples. Maximum Level 2 if response covers only one impact.
Level 1 0-3 marks	Basic knowledge and understanding of climate change on society. Little use of examples.

Q.2 (a) Use *Figure 2* to describe variations in earthquake mortality. [5]

The table shows variations in mortality caused by earthquakes in four categories. These variations are also grouped by factors that may have an effect on the magnitude of mortality.

The first part of the table shows variations in relation to levels of development. In response to this candidates may identify that most mortality is found in middle income countries. The table also shows that higher income countries have a higher percentage (%) of events that result in 'no deaths' than 'over 100 deaths'. The opposite is true of low income countries.

The second part shows that higher mortality events have higher magnitude earthquakes.

Award (1 mark) for valid comment with further (1 mark) for evidence from the resource.

Variation can be shown by comparison of data (1 mark) e.g. earthquakes that resulted in no deaths are 70.6% in MICs and/whereas HICs are 22.9%; earthquakes that resulted in no deaths are 70.6% in MICs and lower in HICS at 22.9% (2 marks).

(b) Compare local and regional impacts of *one or more* tectonic events. [10]

The question involves a number of elements – knowledge of both local and regional impacts plus the ability to compare these impacts. Answers should display an awareness of the differences in scale required in the question. Examiners should be flexible in the interpretation of local and regional.

Answers will probably look at the local element in the form of impacts that are found in the area surrounding the epicentre of an earthquake or the area adjacent to the volcanic eruption. These impacts can be social, economic, demographic and/or physical. Regional impacts examine those that are wider in extent. For instance the economic impacts can have a broader scale – Kobe had an impact in the Eastern Asian region as did the Sendai earthquake and tsunami. The eruption of Eyjafjallajökull had a social and economic impact at a European scale. Be prepared to look at impacts from the view of the aid that is generated in response to hazard – aid came from the USA and other Caribbean countries as a response to the Haitian earthquake.

The comparison element requires candidates to look at similarities and/or differences at the stated scales. This comparison could take the form of an examination of the relative importance of social, economic physical etc. at local and regional scales. Other candidates may compare the scale impacts of different events. Part of the comparison may refer to the reasons for similarities and differences. This could take the form of a comparison of events – Haiti v Christchurch – with a description and reasoning for the comparison. It is important to note however that this approach needs to address both scale elements of the question.

Accept answers that approach the question through an examination of a single case study as well as those that choose to refer to a number of examples to illustrate each element of the question.

Candidates that give a detailed review of the impacts without covering the required scales or comparison should be confined to Level 2.

Level 3 8-10 marks	Good knowledge and understanding of impacts at both scales. Good comparison. Good use of examples.
Level 2 4-7 marks	Either: some knowledge and understanding of impacts at both scales. Or: good knowledge of impacts at one scale. Some comparison. Examples are evident.
Level 1 0-3 marks	Basic knowledge of impacts at both/either scales. Little use of examples.

(c) Outline *two* strategies used to manage *either* tectonic *or* flood hazards. [10]

There will be a great variety of strategies used depending on the hazard(s) selected and the examples that have been studied. Credit strategies that address prediction, prevention, preparation, adaptation and land use planning. The focus of the question is outline so expect to see answers that describe the identified strategy and how it manages the hazard. The management may refer to how the strategy allows people to avoid the hazard, to absorb the impacts of the hazard or to alleviate the impacts of the hazard after it has occurred.

Popular strategies that may be used are:

Earthquakes: building engineering, earthquake preparedness, household seismic safety, seismic retrofit, education for citizens, emergency service training, evacuation for tsunamis, land-use plans, aid and earthquake prediction.

Volcanoes: early warning systems, evacuation, emergency plans, education for citizens, emergency service training, building engineering, land-use plans and aid.

Floods: strategies may include the use of dykes, washlands, arrangements of rooms in housing next to rivers, evacuation, afforestation, specific aid projects etc.

Accept approaches that have a case study structure.

Level 3 **8-10 marks**	Good knowledge and understanding of two strategies. Good understanding of the link between strategies and how they are used to manage the tectonic hazard. Good use of examples.
Level 2 **4-7 marks**	Some knowledge and understanding of two strategies. Some understanding of the link between strategies and how they are used to manage the tectonic hazard. Good knowledge and understanding of one strategy – lacks balance. Some use of examples.
Level 1 **0-3 marks**	Basic knowledge of strategies Little use of examples.

Q.3 (a) Use evidence from *Figure 3* to describe *three* potential economic impacts of the River Ouse flooding. [7]

Accept a broad interpretation of economic but do not credit impacts that are firmly in the realms of social, demographic or physical.

The map provides ample opportunity to describe economic impacts which will probably focus on:

- the economic losses caused by damage to housing/ accommodation
- economic loss caused by damage to utilities
- costs of damage to transport systems – repair and increased time of journeys
- loss of heritage leading to tourism decline
- impacts on leisure facilities
- cost of loss of employment
- economic losses caused by flooding of farmland.

Accept other valid **economic** impacts.

To gain full credit these need to be linked to the map using areas that could realistically be flooded.

Level 3 **6-7 marks**	Three valid economic impacts that are supported with evidence from the map [7]. Three valid economic impacts, two that are supported with evidence from the map [6].
Level 2 **3-5 marks**	Three valid economic impacts with one supported with evidence from map [5]. Two valid economic impacts both supported with evidence from map [5]. Two valid economic impacts with one supported with evidence from map [4]. Three valid impacts not supported [3]. One valid economic impact supported from map [3].
Level 1 **0-2 marks**	Less than three valid impacts, not supported from map.

(b) Outline how Ordnance Survey maps can be used in an investigation into changing physical environments. [8]

Candidates could cover a variety of stages in the collection of information. In the planning stage there could be reference to a number of uses – the establishment of the suitability of the area for study, for risk assessment and for the establishment of sampling procedure and sites. Candidates may discuss the information that is available on OS maps such as height, slope, vegetation and the amount of settlement. OS maps can also be used as a base map for recording data. Some candidates may refer to Digimap as basis for collecting information on land use or similar maps that can be used to record information via GIS.

The command is 'outline' so for full credit the response needs only to give a developed description of how the OS map can be used. The quality of the answers will depend upon the nature of the outline which could be one use of OS maps developed in detail or a variety of uses in less detail but giving a broader understanding.

Level 3 6-8 marks	Good knowledge of use(s) of OS maps. Good development of link to investigation.
Level 2 3-5 marks	Some knowledge of use(s) of OS maps. Some development of link to investigation.
Level 1 0-2 marks	Basic knowledge of use(s) of OS maps.

(c) Evaluate the main conclusions of an investigation into a changing physical environment that you have completed.

You should state clearly the question that you have investigated **[10]**

The content of the answer will vary greatly as individual centres will engage in a wide variety of investigation but the content should have a link to the substance of the specification.

The question is looking for the main conclusions and the better answers will refer to the outcomes of the investigation in relation to the original question, issue or hypothesis set by the candidate or centre. These responses may comment on patterns that were identified, processes that were proved, relationships that were recognised or characteristics that were distinguished. Other valid conclusions should be credited.

The second element of the question requires the candidate to evaluate the conclusions. This evaluation may take a number of formats. Some will develop the assessment of the results in relation to the original hypothesis in detail and this is a valid approach. Others will evaluate the conclusions against the sampling method, collection techniques and accuracy of acquisition and recording. This is also a valid approach.

Level 3 8-10 marks	Good description of conclusions related to identified investigation. Good evaluation of conclusions
Level 2 4-7 marks	Some description of conclusions related to identified investigation. Some evaluation of conclusions.
Level 1 0-3 marks	Basic description of conclusions.