

# SYLLABUS

**Cambridge International Level 3  
Pre-U Certificate in  
Geography (Principal)**

**9768**

For examination in 2016, 2017 and 2018

QN: 500/4328/6

## Support

Cambridge provides a wide range of support for Pre-U syllabuses, which includes recommended resource lists, Teacher Guides and Example Candidate Response booklets. Teachers can access these support materials at Teacher Support <http://teachers.cie.org.uk>

## Changes to syllabus for 2016, 2017 and 2018

This syllabus has been revised. Significant changes to the syllabus are indicated by black vertical lines either side of the text.

The order of the components taken by candidates has been changed. Candidates now take Global Environments first, followed by Global Themes, Geographical Issues and Research Topic.

The scheme of assessment for Global Environments has changed from essay format to structured questions and extended writing tasks.

The syllabus content for Global Environments, Global Themes, and Geographical Issues has been revised and updated. The topic 'World of Work' in Global Themes has been replaced by 'People, Place and Conflicts'.

You are advised to read the whole syllabus before planning your teaching programme.

If there are any further changes to this syllabus, Cambridge will write to Centres to inform them. This syllabus is also on the Cambridge website [www.cie.org.uk/cambridgepreu](http://www.cie.org.uk/cambridgepreu). The version of the syllabus on the website should always be considered as the definitive version.

Copies of Cambridge Pre-U syllabuses can be downloaded from our website [www.cie.org.uk/cambridgepreu](http://www.cie.org.uk/cambridgepreu)

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## Introduction

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### Why choose Cambridge Pre-U?

Cambridge Pre-U is designed to equip learners with the skills required to make a success of their studies at university. Schools can choose from a wide range of subjects.

Cambridge Pre-U is built on a core set of educational aims to prepare learners for university admission, and also for success in higher education and beyond:

- to support independent and self-directed learning
- to encourage learners to think laterally, critically and creatively, and to acquire good problem-solving skills
- to promote comprehensive understanding of the subject through depth and rigour.

Cambridge Pre-U Principal Subjects are linear. A candidate must take all the components together at the end of the course in one examination series. Cambridge Pre-U Principal Subjects are assessed at the end of a two-year programme of study.

The Cambridge Pre-U nine-point grade set recognises the full range of learner ability.

### Guided learning hours

Cambridge Pre-U syllabuses are designed on the assumption that learners have around 380 guided learning hours per Principal Subject over the duration of the course, but this is for guidance only. The number of hours may vary according to curricular practice and the learners' prior experience of the subject.

### Why choose Cambridge Pre-U Geography?

- Cambridge Pre-U Geography offers opportunities to explore a range of geographical environments, issues, themes and hazards. Teachers can foster genuine interest in and enjoyment of the subject by selecting syllabus content which builds on KS4 courses of study and increases interest by avoiding repetition.
- Cambridge Pre-U Geography emphasises breadth as well as depth of teaching and learning. The syllabus combines a good grounding in physical processes with challenging and contemporary themes in human geography which provide the depth and rigour required for a university degree course.
- The syllabus encourages the acquisition of specific geographical skills and abilities, in particular the skills of independent research, fieldwork, analysis and effective communication.
- The syllabus encourages independent learning, wider reading and understanding of current issues to support the development of well-informed and independent-minded individuals capable of applying their skills to meet the demands of the world as they will find it.
- The linear assessment structure means that learners are tested at the end of the two-year course. This allows teachers to construct courses which build into a cohesive programme of study encouraging progression through topics without artificial compartmentalisation. This allows learners to approach the examination in a mature and confident way with time to formulate their viewpoints and develop their knowledge, understanding and skills.

## Prior learning

Cambridge Pre-U builds on the knowledge, understanding and skills typically gained by candidates taking Level 1/Level 2 qualifications such as Cambridge IGCSE.

## Progression

Cambridge Pre-U is considered to be an excellent preparation for university, employment and life. It helps to develop the in-depth subject knowledge and understanding which are so important to universities and employers. The Cambridge Pre-U Geography course aims to equip learners with the skills required to make a success of their subsequent studies at university, involving not only a solid grounding in specialist subject knowledge at an appropriate level, but also the ability to undertake independent and self-directed learning and to think laterally, critically and creatively. Although designed for learners intending to continue their studies in higher education, the skills fostered also provide solid grounding for learners intending to progress directly into employment or professional training.

## Cambridge Pre-U Diploma

If learners choose, they can combine Cambridge Pre-U qualifications to achieve the Cambridge Pre-U Diploma; this comprises three Cambridge Pre-U Principal Subjects\* together with Global Perspectives and Research (GPR). The Cambridge Pre-U Diploma, therefore, provides the opportunity for interdisciplinary study informed by an international perspective and includes an independent research project.

first year	second year
<b>CAMBRIDGE PRE-U DIPLOMA</b>	
Cambridge Pre-U Principal Subject	
Cambridge Pre-U Principal Subject*	
Cambridge Pre-U Principal Subject*	
Global Perspectives	Independent Research Report

\* Up to two A Levels, Scottish Advanced Highers or IB Diploma programme courses at higher level can be substituted for Principal Subjects.

Learn more about the Cambridge Pre-U Diploma at [www.cie.org.uk/cambridgepreu](http://www.cie.org.uk/cambridgepreu)

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## Syllabus aims

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The aims of the syllabus, listed below, are the same for all candidates, and are to:

### Knowledge and understanding

- acquire knowledge and understanding of the environments within which people live and the two-way relationship between physical and human environments
- develop an awareness and understanding of the hazards presented by the physical environment and some of the problems facing the world now and in the future from a geographical standpoint
- develop an appreciation of the ways in which these problems can be managed
- acquire knowledge and understanding in a locational context so that candidates have a grasp of where places in the world are in relation to each other and in relation to places they live in and know
- develop an appreciation of the role of temporal and spatial scale in all aspects of geographical study: individual, local, regional, national, international and global.

### Skills

- develop an ability to present and interpret geographical information using a variety of techniques involving maps, photographs, graphs, diagrams and tables and the use of information technology, including Geographical Information Systems (GIS)
- develop an ability to undertake fieldwork as part of geographical investigation
- be able to research topics using appropriate secondary sources, including the internet
- develop an ability to communicate effectively through a variety of different methods, using appropriate geographical terminology.

### Analysis and evaluation

- develop an ability to analyse geographical information, questions and issues
- be able to evaluate information, evidence and arguments to produce reasoned conclusions
- develop an understanding of how geographical outcomes are influenced by complex links between physical and human factors and processes.

## Scheme of assessment

For Cambridge Pre-U Geography, candidates take four components.

Component	Component name	Duration	Weighting (%)	Type of assessment
<b>Paper 1</b>	Global Environments	1 hour 30 minutes	20%	Written paper, externally set and marked, 50 marks
<b>Paper 2</b>	Global Themes	1 hour 30 minutes	20%	Written paper, externally set and marked, 50 marks
<b>Paper 3</b>	Geographical Issues	2 hours 45 minutes	40%	Written paper, externally set and marked, 105 marks
<b>Paper 4</b>	Research Topic	1 hour 30 minutes	20%	Written paper, externally set and marked, 50 marks

### Availability

This syllabus is examined in the June examination series. Contact Cambridge International Examinations (email [info@cie.org.uk](mailto:info@cie.org.uk)) for details of opportunities for candidates wishing to retake the examination in November.

This syllabus is available to private candidates.

### Combining this with other syllabuses

Candidates can combine this syllabus in a series with any other Cambridge syllabus, except syllabuses with the same title at the same level.

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## Assessment objectives

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<b>A01</b>	Show knowledge and understanding of the places, concepts, processes and principles of the syllabus content.
<b>A02</b>	Select and use appropriate skills and techniques (including the use of fieldwork and information technology) to investigate questions and issues and communicate findings.
<b>A03</b>	Analyse and evaluate geographical information, issues and viewpoints; apply understanding in unfamiliar contexts; draw conclusions from evidence presented.



## Relationship between scheme of assessment and assessment objectives

The approximate weightings allocated to each of the assessment objectives are summarised below. The table shows the assessment objectives (AO) as a percentage of each component and as a percentage of the overall Cambridge Pre-U Geography qualification.

Component	AO1	AO2	AO3	Total	Weighting of component in overall qualification
<b>Paper 1</b>	56%	16%	28%	100%	20%
<b>Paper 2</b>	60%	12%	28%	100%	20%
<b>Paper 3</b>	48%	26%	26%	100%	40%
<b>Paper 4</b>	30%	46%	24%	100%	20%
<b>Weighting of AO in overall qualification</b>	48%	25%	27%	–	

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## Grading and reporting

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Cambridge International Level 3 Pre-U Certificates (Principal Subjects and Short Courses) are qualifications in their own right. Each individual Principal Subject and Short Course is graded separately on a scale of nine grades: Distinction 1, Distinction 2, Distinction 3, Merit 1, Merit 2, Merit 3, Pass 1, Pass 2 and Pass 3.

### Grading Cambridge Pre-U Principal Subjects and Short Courses

Distinction	1
	2
	3
Merit	1
	2
	3
Pass	1
	2
	3

## Grade descriptions

The following grade descriptions indicate the level of attainment characteristic of the middle of the given grade band. They give a general indication of the required standard at each specified grade. The descriptions should be interpreted in relation to the content outlined in the syllabus; they are not designed to define that content.

The grade awarded will depend in practice upon the extent to which the candidate has met the assessment objectives overall. Shortcomings in some aspects of the examination may be balanced by better performance in others.

### Distinction (D2)

- Candidates demonstrate wide-ranging, detailed and accurate knowledge of places and environments identified in the syllabus.
- Candidates have clear and critical understanding of how a comprehensive range of geographical concepts, principles and processes apply to geographical issues, environments and global concerns.
- Candidates apply this knowledge and understanding effectively to analyse familiar and unfamiliar contexts.
- Candidates support their responses with the use of detailed examples and case studies at different scales, where appropriate.
- Candidates show an ability to identify and investigate appropriate questions clearly and perceptively.
- Candidates interpret maps, photographs, graphs, diagrams and tables proficiently, demonstrating skills of analysis and synthesis.
- Written communication is clear, concise and organised effectively, using geographical terminology accurately.
- Candidates show clear understanding of the often complex links between factors, processes and outcomes.
- Candidates recognise that outcomes may vary spatially, temporally and between different groups of people.
- Candidates evaluate and assess strategies to address issues and global concerns with insight, making well-reasoned judgements based on evidence to present their conclusions.

### Merit (M2)

- Candidates demonstrate a sound and substantial knowledge of places and environments identified in the syllabus.
- Candidates have a clear understanding of how a range of geographical concepts, principles and processes apply to geographical issues, environments and global concerns.
- Candidates apply this knowledge and understanding soundly to familiar and unfamiliar contexts.
- Candidates support their responses with relevant examples and case studies, some at different scales.
- Candidates show an ability to identify and investigate appropriate questions.
- Candidates can interpret maps, photographs, graphs, diagrams and tables competently.
- Written communication is clear and organised and uses geographical terminology appropriately.
- Candidates show understanding of many of the often complex links between factors, processes and outcomes and recognise the diversity of possible outcomes.
- Candidates are able to evaluate and assess strategies to address issues and global concerns in a balanced manner and present appropriate supported conclusions.

**Pass (P2)**

- Candidates demonstrate some knowledge of places and environments identified in the syllabus.
- Candidates show some understanding of how a number of geographical concepts, principles and processes apply to geographical issues, environments and global concerns.
- Candidates show some ability to apply this knowledge and understanding to familiar and unfamiliar contexts.
- Candidates support their responses with some relevant examples and case studies which may lack detail and an appreciation of scale.
- Candidates show some ability to identify and investigate questions.
- Candidates offer limited interpretation of maps, photographs, graphs, diagrams and tables.
- Written communication is mostly clear but may lack organisation.
- There is largely accurate use of geographical terminology with some generality of expression.
- Candidates show some understanding of the links between factors, processes and outcomes.
- Candidates are able to evaluate and assess strategies to address issues and global concerns but these assessments may lack depth or not cover all the main relevant areas.
- Candidates are able to draw simple supported conclusions.

## Description of components

Papers 1 and 2 are examined consecutively with a short break between the two.

### Paper 1 Global Environments

Written paper, 1 hour 30 minutes, 50 marks

Paper 1 is divided into two sections, Section A and Section B. Candidates answer questions from one topic in Section A and questions from one topic in Section B. Each topic consists of a two-part structured data response question and two extended writing questions. Within each chosen topic candidates answer the structured questions and choose one of the extended writing questions.

Section A
Hot arid and semi-arid environments
Glacial and periglacial environments
Coastal environments
Section B
Tropical environments
Temperate environments
The atmospheric environment

Paper 1 focuses on different types of physical environment, with an emphasis upon the interrelationships between physical and human components of those environments. The study of these environments aims to develop knowledge and understanding of:

- the relevant physical processes and factors operating in the environment
- how these physical processes and factors influence human activity in the environment
- how human activity influences the environment
- how the environment might be managed sustainably.

In all options on Paper 1, candidates will be expected to be able to use examples and case studies at different scales from a range of places. Where relevant, such exemplar material should include material from countries and areas at different levels of development.

Where it is feasible and if the option lends itself, opportunities should be taken to enhance candidates' learning through fieldwork.

Through studying these options, candidates will be expected to have used and developed the following geographical skills:

- An ability to interpret geographical information using a variety of techniques involving maps, tables, graphs and diagrams, and the use of information technology, where relevant, including Geographical Information Systems (GIS), in order to identify, describe and explain geographical patterns.
- An ability to interpret Survey and other published maps at different scales, and to link them to photographs, aerial photographs and satellite images to identify, describe and explain geographical patterns.
- An ability to evaluate information and arguments and produce reasoned conclusions based upon the evidence assembled.

## Paper 2 Global Themes

Written paper, 1 hour 30 minutes, 50 marks

Paper 2 is divided into six topics, arranged in two sections. Candidates must answer one question in each of Section A and Section B.

	<b>Section A</b>	
	Migration and urban change	
	Trade, debt and aid	
	People, place and conflicts	
	<b>Section B</b>	
	Energy and mineral resources	
	The provision of food	
	Tourism spaces	

Paper 2 focuses on selected aspects of human activity from a geographical viewpoint. The study of these global concerns aims to develop knowledge and understanding of:

- the nature of the issues at different scales associated with these global themes
- how these issues relate to both physical and human environments
- how and why these issues have developed
- how these aspects of human activity might be managed more sustainably.

In all options on Paper 2, candidates will be expected to be able to use examples and case studies at different scales from a range of places. Where relevant, such exemplar material should include material from countries and areas at different levels of development.

Where it is feasible and if the option lends itself, opportunities should be taken to enhance candidates' learning through fieldwork.

Through studying these options, candidates will be expected to have used and developed the following geographical skills:

- An ability to interpret geographical information using a variety of techniques involving maps, tables, graphs and diagrams, and the use of information technology, where relevant, including Geographical Information Systems (GIS), in order to identify, describe and explain geographical patterns.
- An ability to interpret Survey and other published maps at different scales, and to link them to photographs, aerial photographs and satellite images to identify, describe and explain geographical patterns.
- An ability to evaluate information and arguments and produce reasoned conclusions based upon the evidence assembled.

## Paper 3 Geographical Issues

Written paper, 2 hours 45 minutes, 105 marks

Paper 3 is divided into three sections. Candidates answer five questions. Candidates must answer two questions from Section A, two questions from Section B and one question from Section C.

Section A
Tectonic hazards
Meteorological hazards
Hydrological hazards
Section B
Crime issues
Health issues
Spatial inequality and poverty issues

For sections A and B each topic consists of a four-part structured question. Candidates choose two topics from each of section A and B.

Section C consists of three general questions, from which candidates choose one. This section gives an opportunity for extended writing based on more than one of the issues studied.

The focus of this paper is the study of a number of geographical issues that pose a threat to human well-being, activity and life. These issues should be studied in the context of their causes, impacts and management, with an emphasis upon how physical and human environments influence the impact of these issues and how they can be managed to reduce that impact.

The study of geographical issues should recognise the heterogeneity of viewpoints and opinions relating to these issues and that these vary in place, time and between different groups of people.

Candidates will be expected to have studied at least one example of a location where several of these issues are present.

In all options on Paper 3, candidates will be expected to be able to use examples and case studies at different scales from a range of places. Where relevant, such exemplar material should include material from countries and areas at different levels of development.

Through studying these issues, candidates will be expected to have used and developed the following geographical skills:

- An ability to interpret geographical information using a variety of techniques involving maps, tables, graphs and diagrams, and the use of information technology including, where relevant, Geographical Information Systems (GIS), in order to identify, describe and explain geographical patterns.
- An ability to interpret Survey and other published maps at different scales, and to link them to photographs, aerial photographs and satellite images to identify, describe and explain geographical patterns.
- An ability to evaluate information and arguments and produce reasoned conclusions based upon the evidence assembled.

## Paper 4 Research Topic

Written paper, 1 hour 30 minutes, 50 marks

Paper 4 is divided into three topics. Candidates answer structured questions from one topic. Each topic consists of two structured data response questions and two extended writing questions. Candidates answer the structured questions in their chosen topic and choose one of the extended writing questions.

For examination in 2016 the topics are:

- Small-scale ecosystems
- Managing rural environments
- Fluvial geomorphology

For examination in 2017 the topics are:

- Retail patterns
- Managing rural environments
- Fluvial geomorphology

For examination in 2018 the topics are:

- Retail patterns
- Deprivation
- Fluvial geomorphology

In preparation for this written paper, candidates must carry out a research investigation involving fieldwork. Candidates will also be expected to carry out secondary research, both in support of their individual research investigation and in making a wider study of their chosen topic.

Candidates should draw on a variety of resources including textbooks, journals, internet searches and other broadcast media and, where possible, visits to appropriate out-of-classroom locations.



## Research investigation

With guidance from the teacher, candidates identify a suitable geographical question or hypothesis from within one of the prescribed topics for their individual research investigations. Candidates should devise their own individual questions or hypotheses and follow through the investigation independently but it is acceptable for fieldwork to be carried out as a group. The investigation should reflect the following stages in research:

### 1 Identify a suitable geographical question or hypothesis for investigation

Questions/hypotheses should:

- be at a suitable scale
- provide opportunity for research
- be clearly defined, with named location(s)
- be based upon wider geographical theories, ideas or concepts.

### 2 Develop a plan for conducting the investigation

Plans should:

- establish the data needed to examine the question/hypothesis posed
- establish appropriate strategies and methods for collecting the necessary data (including sampling where appropriate)
- understand limitations imposed by resources
- appreciate and minimise potential risks in undertaking research.

### 3 Collect and record data appropriate to the geographical question or hypothesis

Collection and recording of data should:

- make use of primary and secondary data as appropriate to the question/hypothesis posed
- consider issues of accuracy and reliability in relation to the data being collected.

### 4 Present the data collected in appropriate forms

Presentation should:

- use appropriate techniques to present the data collected
- be appropriately organised
- be relevant to the question/hypothesis posed.

### 5 Analyse and interpret the data

Analysis and interpretation should:

- describe the findings of the data presentation
- analyse the data using statistical techniques if appropriate
- interpret the results in relation to the original question/hypothesis posed.

### 6 Present a summary of the findings and an evaluation of the investigation

Summary and evaluation should:

- draw upon evidence presented in previous sections to provide a clear conclusion, which relates back specifically to the original question/hypothesis posed
- evaluate the extent to which the study supports or otherwise the general geographical theories, ideas or concepts being studied
- evaluate the limitations of the study in terms of the methods used and the data collected.

## Research guidance

Since Paper 4 relates to research topics, exhaustive syllabus content is not provided, allowing candidates to follow their own particular interests within the prescribed topic and giving a range of opportunities for fieldwork. However, guidance is published on the Cambridge website in advance to indicate possible ideas for investigation, and possible themes for wider study.

## Examination format

The examination is set in three sections, one on each of the research topics published in advance.

Candidates answer three questions, in the section for their chosen research topic:

- A compulsory structured data response question, on the chosen research topic but in an unfamiliar context.
- One question, divided into two parts, based on the wider research topic.
- One question from a choice of two, based on the individual research investigation.

**Candidates are not permitted to take their research investigation into the examination.**

In studying their chosen research topic, candidates will be expected to have used and developed the following geographical skills:

- An ability to carry out research using both primary and secondary data collection.
- An ability to interpret geographical information using a variety of techniques involving maps, tables, graphs and diagrams and the use of information technology including, where relevant, Geographical Information Systems (GIS), in order to identify, describe and explain geographical patterns.
- An ability to interpret Survey and other published maps at different scales, and to link them to photographs, aerial photographs and satellite images to identify, describe and explain geographical patterns.
- An ability to evaluate information and arguments and produce reasoned conclusions based upon the evidence assembled.

## Core geographical skills

In all four papers, candidates will be expected to be competent in the following core geographical skills.

Use and interpretation of maps:

- Candidates should be familiar with Ordnance Survey maps at 1:50 000 and 1:25 000, but should also be able to react to and interpret Survey maps from other countries, provided with appropriate keys.
- Candidates should be able to select, draw and interpret a variety of thematic maps, including land-use and geology maps, distribution maps (choropleth, isoline, dot, flow-line, desire line).

Use and interpretation of graphic techniques:

- Candidates should be able to select, use and interpret a variety of forms of graphical presentation, including pie charts, bar charts, histograms, scatter graphs, dispersion diagrams, triangular graphs.

Use and interpretation of photographic resources:

- Candidates should be able to annotate and interpret simple photographs, aerial photographs and satellite images.

Use and interpretation of sketch maps and diagrams:

- Candidates should be able to draw, annotate and interpret various forms of sketch map and diagram, including flow diagrams.

Use of information from secondary sources:

- Candidates should be able to access, interpret and draw relevant information from secondary sources, including textbooks, articles, censuses, the internet and Geographical Information Systems (GIS).

Use of written skills:

- Candidates should be able to contrast and compare resources, places and ideas, and be able to evaluate ideas and strategies.

These skills should be taught as an integral part of the content of the options within the syllabus.

## Syllabus content

### Paper 1 Global Environments

#### Section A – Hot arid and semi-arid environments

Main themes	Specified content
Definitions, classification and distribution	<p>The meaning of aridity and an aridity index. The current global distribution of hot arid and semi-arid areas.</p> <p>The concept of dryland environments.</p> <p>Definition of desertification and the global distribution of desertified and desertifying areas.</p> <p>Past changes in the extent of aridity relating to climatic change: tertiary and quaternary deserts and pluvials.</p>
Controlling factors: Climate and the hydrological cycle	<p>The causes of aridity:</p> <ul style="list-style-type: none"> <li>• Pressure and wind systems: high pressure and subsidence; subtropical areas</li> <li>• Ocean currents: continentality; rain shadow effect</li> <li>• Drought periodicity</li> </ul> <p>The characteristics of typical desert climates:</p> <ul style="list-style-type: none"> <li>• Temperature ranges and extremes</li> <li>• Rainfall totals and reliability (including extreme rainfall events)</li> <li>• Evapotranspiration</li> </ul> <p>The hydrological cycle and water balance in hot arid and semi-arid environments:</p> <ul style="list-style-type: none"> <li>• Desert hydrological system and regime</li> <li>• Episodic rainfall, flash floods</li> </ul> <p>The role of climate in influencing natural sources of water in hot arid and semi-arid environments.</p> <p>Natural sources of water in hot arid and semi-arid environments:</p> <ul style="list-style-type: none"> <li>• Aquifers</li> <li>• Coastal mist and fog</li> <li>• Dew</li> </ul>
Processes and landforms in hot arid and semi-arid environments	<p>Weathering processes:</p> <ul style="list-style-type: none"> <li>• Thermal fracture, exfoliation, frost shattering, wetting and drying, chemical weathering, salt weathering</li> </ul> <p>Processes of erosion:</p> <ul style="list-style-type: none"> <li>• By wind (abrasion, deflation)</li> <li>• By water (sheet runoff, abrasion)</li> </ul> <p>Processes of transportation:</p> <ul style="list-style-type: none"> <li>• Saltation, suspension, surface creep</li> </ul>

Main themes	Specified content
Landforms and landscapes of the past and present	<p>The variety of hot arid and semi-arid landscapes:</p> <ul style="list-style-type: none"> <li>• Mountain deserts, sand deserts, shield deserts, stony deserts</li> </ul> <p>The formation of erosional landforms:</p> <ul style="list-style-type: none"> <li>• By wind (deflation hollows, ventifacts, rock pedestals and zeugen, yardangs)</li> <li>• By water (wadis, arroyos, canyons, mesas, buttes, inselbergs, surface crusts, pediments)</li> </ul> <p>The formation of depositional and transportational landforms:</p> <ul style="list-style-type: none"> <li>• By wind (dunes: including barchans/crescent, transverse, seifs, longitudinal/linear, star and draa)</li> <li>• By water (alluvial fans, bajadas, playas, washes, salt flats)</li> </ul>
Human activity and its impact on hot arid and semi-arid environments	<p>Human interaction with hot arid and semi-arid environments:</p> <ul style="list-style-type: none"> <li>• Traditional lifestyle of societies which could include Tuareg, Masai and Fulani</li> <li>• Impact of change in the last 50 years on these societies</li> </ul> <p>Opportunities and constraints for human activity.</p> <p>The contribution of humans to desertification including:</p> <ul style="list-style-type: none"> <li>• Overgrazing, over-cultivation and tree or shrub vegetation clearance</li> <li>• Resource use: water collection and storage, irrigation, mineral extraction</li> <li>• Secondary, tertiary and quaternary sectors: manufacturing, tourism, scientific research, space and defence industries</li> <li>• Urban development</li> <li>• Climate change</li> </ul> <p>The consequences, including:</p> <ul style="list-style-type: none"> <li>• Rates of soil degradation and erosion (including salinisation)</li> <li>• Feedback mechanisms: albedo change through denudation, atmospheric dust</li> <li>• People: migration, traditional response and preparation, famine and drought</li> </ul>
Management	<p>Management strategies in hot arid and semi-arid environments illustrated by:</p> <ul style="list-style-type: none"> <li>• The issues associated with settlement, transport and infrastructural development</li> <li>• The issues associated with economic development, including oil extraction and water supply</li> <li>• The role of sustainable development</li> </ul>

## Paper 1 Global Environments

## Section A – Glacial and periglacial environments

Main themes	Specified content
Definitions, classification and distribution	<p>The meaning of glacial and periglacial environments.</p> <p>Recognition of the range of glacial environments (including relict glacial landscapes, ice cap environments, upland and lowland glacial environments).</p> <p>The present distribution of periglacial and glacial environments.</p> <p>The past distribution of periglacial and glacial environments:</p> <ul style="list-style-type: none"> <li>• Climatic change through geological time with particular emphasis on the Quaternary Ice Age (glacial and interglacial cycles and stadial periods)</li> </ul>
Causes of distribution and glacial movement	<p>The possible causes of global climate change during the Quaternary.</p> <p>The process of glacial advance and movement:</p> <ul style="list-style-type: none"> <li>• Internal deformation, basal sliding and subglacial deformation, surge conditions, compressional/extensional flow</li> </ul>
Glacial processes and landforms	<p>The processes of weathering (frost shattering), erosion (abrasion, fracturing, plucking, dilatation, regelation), transportation and deposition.</p> <p>Glacial budget and the mass balance:</p> <ul style="list-style-type: none"> <li>• Snowfields, névé and firn</li> <li>• Accumulation and ablation zones</li> <li>• The states of net accumulation and net ablation</li> </ul> <p>The formation of erosional landforms:</p> <ul style="list-style-type: none"> <li>• Corries or cirques, arêtes, pyramidal peaks, truncated spurs, U-shaped valleys, Alp benches, glacial troughs, rock basins, ribbon lakes, hanging valleys, roches moutonnées, crags and tails, striations</li> </ul> <p>The transportation of moraine (supraglacially, englacially and subglacially).</p> <p>The formation of glacially deposited landforms:</p> <ul style="list-style-type: none"> <li>• Till deposits, erratics, moraines, drumlins</li> </ul> <p>The formation of fluvio-glacial landforms of deposition:</p> <ul style="list-style-type: none"> <li>• Outwash plains, varves, kames and kame terraces, eskers, kettles, braided streams</li> </ul>
Periglacial processes and landforms	<p>Permafrost, the active layer and their importance in the formation of specific periglacial landforms.</p> <p>Ground ice formation and landforms associated with it:</p> <ul style="list-style-type: none"> <li>• Involutions, ice lenses, ice wedge polygons, patterned ground, pingos, thermokarst landscape</li> </ul> <p>Landforms associated with frost weathering and mass movement:</p> <ul style="list-style-type: none"> <li>• Blockfields, tors, scree slopes, gelifluction lobes, head and coombe deposits, asymmetrical valleys</li> </ul>
Human activity and its impact on glacial and periglacial environments	<p>Human interaction with glacial and periglacial environments:</p> <ul style="list-style-type: none"> <li>• Traditional lifestyle of societies which could include Inuit and Saami</li> <li>• Impact of change in the last 50 years on these societies</li> </ul> <p>The opportunities and constraints of glacial and periglacial environments:</p> <ul style="list-style-type: none"> <li>• Tourism, water supply, energy, agriculture, mining and quarrying and settlement, infrastructural developments</li> <li>• The significance of the active layer</li> <li>• Military, strategic and geopolitical factors</li> </ul> <p>The role of human-induced climate change in changing glacial and periglacial landscapes.</p>

Main themes	Specified content
Management	<p>Management in glacial and periglacial environments.</p> <p>Issues associated with:</p> <ul style="list-style-type: none"> <li>• Environmental fragility</li> <li>• Scenic value and tourism</li> <li>• Settlement, transport and infrastructural development</li> <li>• Economic development, including oil extraction</li> <li>• Disputed territories</li> </ul> <p>The role of sustainable development:</p> <ul style="list-style-type: none"> <li>• Conservation</li> <li>• Nature reserves and parks</li> <li>• International agreements</li> </ul>

## Paper 1 Global Environments

## Section A – Coastal environments

Main themes	Specified content
Factors influencing coastal environments	<p>Definitions of coastal environments.</p> <p>The range of factors which can influence coastal environments.</p> <p>Temporal variations:</p> <ul style="list-style-type: none"> <li>• Diurnal: tides</li> <li>• Long term: isostatic and eustatic influences on sea level</li> </ul> <p>Wind-generated waves:</p> <ul style="list-style-type: none"> <li>• Formation, structure and energy</li> <li>• The shoaling translation; swash, backwash, refraction, reflection</li> <li>• Classification of different wave types: spilling, plunging, surging</li> </ul> <p>Currents: wave induced, shore normal, long-shore, rip cell circulation, offshore and onshore currents.</p> <p>Temperature and salinity variation within oceans: the North Atlantic Ocean Temperature Conveyor.</p> <p>Processes of marine erosion, transport and deposition:</p> <ul style="list-style-type: none"> <li>• Hydraulic action, wave quarrying, corrasion, attrition, corrosion or solution</li> <li>• Longshore drift, sediment transport, sorting and deposition, sediment cells</li> </ul> <p>Sub-aerial processes:</p> <ul style="list-style-type: none"> <li>• Weathering (chemical, wetting and drying, biological, frost shattering)</li> <li>• Mass movements (falls, slides, slumps, flows)</li> </ul> <p>Structure, lithology and coastal morphology:</p> <ul style="list-style-type: none"> <li>• Variation in resistance of coastlines to marine processes, differential erosion</li> <li>• Variation of supply and characteristics of sediment in the marine environment</li> </ul> <p>Human influence on coastal processes, e.g. dredging and exposure, construction of hard defences, reclamation, land use change.</p>
Landforms produced in coastal environments	<p>Coastal landforms as associated with different coastal environments:</p> <ul style="list-style-type: none"> <li>• Macrotidal environment landforms (range above 4 metres): mudflats, saltmarshes, sand dunes</li> <li>• Microtidal environment landforms (range under 2 metres): spits, barrier islands</li> </ul> <p>Wave-induced landforms independent of the tidal environment:</p> <ul style="list-style-type: none"> <li>• Beaches in profile and plan</li> <li>• Cliffs and shore platforms</li> </ul> <p>Concordant/Pacific and discordant/Atlantic coastlines.</p> <p>Features associated with relative sea level change:</p> <ul style="list-style-type: none"> <li>• Emergent and submergent coastlines: rias, fjords, estuaries, raised beaches, relict cliff lines</li> </ul>
Ecosystems produced in coastal environments	<p>The formation and development of different coastal ecosystems produced within a range of coastal environments:</p> <ul style="list-style-type: none"> <li>• Psammoseres: coastal sand dunes</li> <li>• Haloseres: coastal salt marshes and mangroves</li> <li>• Coral coastlines: coral reefs</li> </ul>



Main themes	Specified content
Human activity and its impact on coastal environments	<p>The opportunities for and constraints on human activity including:</p> <ul style="list-style-type: none"> <li>• Resource exploitation in relation to fishing</li> <li>• Manufacturing and energy industries</li> <li>• The tertiary sector, including recreation</li> <li>• Settlement and port development</li> </ul> <p>The impacts of various economic developments on the coastal environment including:</p> <ul style="list-style-type: none"> <li>• Coastal flooding</li> <li>• Rapid coastal erosion</li> <li>• Degradation of marine ecosystems</li> </ul>
Management	<p>Management strategies in coastal environments.</p> <p>Contrasting approaches:</p> <ul style="list-style-type: none"> <li>• Non-intervention</li> </ul> <p>Coastal protection – soft engineering vs hard engineering</p> <ul style="list-style-type: none"> <li>• Soft engineering: beach nourishment, sand dune stabilisation and vegetation</li> <li>• Hard engineering: sea walls, revetments, rip-rap, gabions, breakwaters, groynes, jetties, floodgates, tidal barriers</li> </ul> <p>Managing coastal environments for sustainability and adaption to climate change:</p> <ul style="list-style-type: none"> <li>• Managed realignment</li> </ul>

## Paper 1 Global Environments

## Section B – Tropical environments

Main themes	Specified content
Definitions, classification and distribution	<p>The focus of this topic is on the tropical rainforest but other environments should be considered by way of an introduction and as an appreciation of the tropical environment as a whole.</p> <p>Different tropical environments and their location today:</p> <ul style="list-style-type: none"> <li>• Tropical lowland evergreen rainforest, tropical semi-evergreen rainforest, the montane rainforest, freshwater swamp forest; tropical savanna (tree, bush, scrub)</li> </ul>
Tropical climates	<p>Factors affecting tropical climates and their impact on the distribution of tropical environments:</p> <ul style="list-style-type: none"> <li>• Atmospheric circulation in the tropics – related to the Hadley Cell, the equatorial trough and the inter-tropical convergence zone (ITCZ)</li> <li>• The influence of relief on tropical mountain climates</li> </ul> <p>Patterns of precipitation and temperature in different tropical environments.</p>
The tropical rainforest ecosystem	<p>The abiotic environment:</p> <ul style="list-style-type: none"> <li>• Tropical rainfall, tropical storms</li> <li>• Plant nutrients and nutrient cycling</li> <li>• The structure and formation of tropical soils</li> </ul> <p>The biotic environment:</p> <ul style="list-style-type: none"> <li>• Biological diversity and theories explaining it</li> <li>• Forest structure (vertical stratification, shade tolerance and altitudinal changes)</li> <li>• Plant life and the factors influencing it</li> <li>• Animal life of the forest (richness and diversity, modes of coexistence, carrying capacity of the forest) and adaptations made to suit tropical environments</li> <li>• The interconnections between plants and animals (pollination, dispersal, food webs)</li> </ul>
Human activity and its impact on tropical rainforests	<p>Human interaction with tropical rainforest:</p> <ul style="list-style-type: none"> <li>• Tribal communities, hunter-gatherers and sustainable interaction</li> <li>• Shifting cultivation</li> <li>• Modernisation and change and the impact on tribal communities</li> </ul> <p>Unsustainable use of tropical rainforest:</p> <ul style="list-style-type: none"> <li>• Rates of disappearance</li> <li>• Logging and the timber trade, plantations and intensified tropical agriculture, animal production and utilisation (including ranching), construction (including dams, infrastructure), mineral extraction</li> </ul> <p>The impact of unsustainable development on natural cycles and its implications at different scales for people:</p> <ul style="list-style-type: none"> <li>• Soil erosion and leaching, changes to hydrology, desertification, species loss and extinction, climate change, impacts on society</li> </ul>
Management	<p>Management for sustainability:</p> <ul style="list-style-type: none"> <li>• International, governmental and non-governmental organisations' (NGOs') responses</li> <li>• Strategies for sustainability at regional and national scales</li> <li>• Conservation schemes</li> <li>• Ecotourism</li> <li>• Selective logging and timber management</li> <li>• Collection of forest products including for medicinal use</li> </ul> <p>Sustainability at individual and local scales:</p> <ul style="list-style-type: none"> <li>• Traditional responses within existing cultures</li> <li>• Responsible tourism</li> </ul>

## Paper 1 Global Environments

### Section B – Temperate environments

Main themes	Specified content
Definitions, classification and distribution	<p>Definition of temperate environments.</p> <p>The range of temperate environments including:</p> <ul style="list-style-type: none"> <li>the temperate deciduous forest (TDF) biome</li> <li>the northern coniferous forest biome (taiga)</li> <li>temperate grassland biomes (prairies and steppes)</li> <li>heathland and moorland</li> </ul> <p>The current global distribution of temperate environments and their main associated zonal soils: brown earths, podzols and chernozems.</p>
Temperate climates	<p>Factors affecting the climate:</p> <ul style="list-style-type: none"> <li>Atmospheric circulation in mid-latitudes – Ferrel cells, prevailing westerlies, polar front and jet streams</li> <li>Continentality</li> <li>Relief</li> </ul> <p>Precipitation and temperature in different temperate environments (Köppen classification: Df, Dw, Cf and Bsk):</p> <ul style="list-style-type: none"> <li>Seasonal patterns</li> </ul> <p>Impact of climate on the distribution of temperate environments.</p>
Temperate ecosystem structure and function	<p>The structure and functioning of temperate deciduous woodland, northern coniferous forest, and temperate grasslands (prairies and steppes):</p> <ul style="list-style-type: none"> <li>Characteristic vegetation communities</li> <li>Associated fauna</li> <li>Food chains and webs</li> <li>Nutrient cycling</li> <li>Development of associated zonal soils, to include brown earths, podzols and chernozems</li> </ul> <p>The principles of succession and development of different climax communities (subclimax and seral stages), and the reasons for the development of plagioclimax vegetation.</p> <p>Natural causes of ecological change, which may be cyclical, such as Dutch elm disease and natural disturbance theory.</p>

Main themes	Specified content
Human activity and its impact on temperate environments	<p>The range, variety and consequences of economic uses of temperate deciduous woodland:</p> <ul style="list-style-type: none"> <li>• Exploitation for timber</li> <li>• Clearance for agriculture</li> <li>• Coppice and pollard management</li> <li>• Recreation</li> </ul> <p>How and why deliberate and accidental introduction of non-native species has occurred.</p> <p>The role of forest clearance for agriculture and its consequences in changing the natural landscape for economic exploitation:</p> <ul style="list-style-type: none"> <li>• Removal of hedgerows</li> </ul> <p>Livestock farming and the creation of plagioclimactic communities.</p> <p>The reasons for and impact of human activities in changing the natural landscape:</p> <ul style="list-style-type: none"> <li>• Environmental degradation of forests due to acid deposition</li> <li>• Climate change</li> <li>• Recreational use of forest, heath and moorland</li> <li>• The role of fire</li> <li>• The introduction of conifers</li> </ul> <p>The role of the American Mid-West and other regions as 'bread baskets' in supplying world grain needs and the impact of this, such as the development of the dustbowl in the 1930s.</p>
Management	<p>The range of responses to deforestation and other changes to vegetation, such as:</p> <ul style="list-style-type: none"> <li>• Conservation initiatives by governments, non-governmental organisations (NGOs) and international organisations at different scales</li> <li>• Low-impact farming initiatives</li> </ul> <p>These schemes should be evaluated in terms of sustainability.</p>

## Paper 1 Global Environments

### Section B – The atmospheric environment

Main themes	Specified content
Definitions, classification and distribution	The spatial distribution of global climate zones: equatorial, semi-arid tropical, arid tropical, arid temperate, humid temperate, boreal, arctic.
Processes in the atmospheric environment	<p>The atmospheric system: inputs, transfers, stores and outputs.</p> <p>Processes in the atmospheric environment and the global energy budget:</p> <ul style="list-style-type: none"> <li>Vertical energy budget: inputs (solar ultra-violet radiation), transfers (direct and diffuse radiation, scattering, reflection), stores (role of ozone and other atmospheric gases, clouds, buildings/roads), outputs (terrestrial infrared radiation, convection, conduction, latent heat, reflected radiation and albedo)</li> <li>Horizontal energy budget and the redistribution of energy: <ul style="list-style-type: none"> <li>Atmospheric energy transfers in global atmospheric circulation (tri-cellular model)</li> <li>The formation, location and characteristics of high/low pressure zones</li> <li>Ocean energy transfers by warm and cold ocean currents</li> </ul> </li> <li>Spatial differences in the energy budget and reasons for them</li> </ul> <p>Determinants of climate:</p> <ul style="list-style-type: none"> <li>latitude, position relative to continents and oceans, position relative to the global circulation model, altitude, local geographical features</li> </ul>
Short term change in the atmospheric environment and its impact on human activity	<p>The atmospheric characteristics of the cool temperate western maritime environment, and short term changes that result in variations in weather.</p> <p>Atmospheric characteristics, processes and associated weather:</p> <ul style="list-style-type: none"> <li>Jet stream</li> <li>Air masses</li> <li>Polar front</li> <li>Depressions</li> <li>Mid-latitude storms</li> <li>Anticyclones</li> </ul> <p>The impact of short term day-to-day changes and periods of persistent low or high pressure in the cool temperate western maritime environment on human activity.</p> <p>Opportunities for, and constraints on, human activities including:</p> <ul style="list-style-type: none"> <li>Agriculture</li> <li>Consumer/commercial spending patterns</li> <li>Travel and transport</li> <li>Leisure and tourism</li> <li>Construction industry</li> <li>Water supply and flooding</li> </ul> <p>Management strategies including:</p> <ul style="list-style-type: none"> <li>Agriculture: irrigation, drainage, artificial/protected agricultural environments</li> <li>Commercial spending patterns: online shopping, shared and local transport</li> <li>Travel and transport: local government contingency planning, national weather warnings and advice</li> <li>Leisure and tourism: alternative activities, insurance</li> <li>Construction industry: managing impacts of weather and seasonal suitability for building work</li> <li>Water supply and flooding: national and regional organisations e.g. flood protection; environment agency; utility supply companies (including water restrictions)</li> </ul>

Main themes	Specified content
Seasonal change in the atmospheric environment and its impact on human activity	<p>Seasonal changes that result in the atmospheric characteristics of the tropical monsoon environment.</p> <p>Characteristics and processes of the tropical monsoon climate:</p> <ul style="list-style-type: none"> <li>• The migration of the inter-tropical convergence zone (ITCZ) and changes in the trade winds</li> <li>• The differential heating of land and sea</li> <li>• Wet and dry monsoons</li> </ul> <p>The influence of areas of relief.</p> <p>The impact of the tropical monsoon environment on human activity.</p> <p>Opportunities for, and constraints on, human activities including:</p> <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Cattle herding management</li> <li>• Tourism</li> <li>• Water supply</li> <li>• Settlement and housing development</li> </ul> <p>Management strategies in areas affected by the tropical monsoon climate to cope with:</p> <ul style="list-style-type: none"> <li>• Seasonal changes</li> <li>• The unreliable nature of monsoons</li> <li>• The risk of flooding</li> <li>• Short term and long term management</li> </ul>
Cyclical changes in the atmospheric environment and their impact on human activity	<p>El Niño and La Niña (ENSO) events.</p> <p>Atmospheric processes occurring in the Pacific region during these events.</p> <p>The impact of El Niño and La Niña on human activity in the Pacific region and worldwide:</p> <ul style="list-style-type: none"> <li>• Socio-cultural</li> <li>• Economic</li> <li>• Political</li> </ul> <p>The environmental impact of El Niño and La Niña.</p> <p>Short term and long term management strategies associated with these events at regional, national and global levels:</p> <ul style="list-style-type: none"> <li>• Prediction through monitoring of changes in the atmosphere–ocean environment</li> <li>• Preparation to minimise the impacts of the change in the atmospheric environment</li> <li>• Rescue and recovery through minimising the loss caused by changes in the atmospheric environment</li> </ul>
Long term change in the atmospheric environment and its impact on human activity	<p>Changes to the global energy budget through the enhanced greenhouse effect and global warming:</p> <ul style="list-style-type: none"> <li>• The range of views and attitudes regarding the existence and causes of the enhanced greenhouse effect</li> <li>• The natural and human causes of the enhanced greenhouse effect</li> </ul> <p>The predicted impacts of global warming at different scales on:</p> <ul style="list-style-type: none"> <li>• Human activity: socio-cultural, economic</li> <li>• The physical environment</li> </ul> <p>Management of the enhanced greenhouse effect and the impacts of global warming:</p> <ul style="list-style-type: none"> <li>• A range of strategies at different scales</li> <li>• The relative success of different strategies</li> </ul>

## Paper 2 Global Themes

## Section A – Migration and urban change

Main themes	Specified content
Definition and classification of migration, suburbanisation and counter urbanisation	<p>Types of population movements:</p> <ul style="list-style-type: none"> <li>• Scale: local, internal, international</li> <li>• Direction: rural–urban, urban–rural, urban–urban, periphery–core, core–periphery</li> <li>• Motivation: forced, impelled, free (voluntary)</li> <li>• Spatial: step migration, migration streams and counter-streams</li> <li>• Temporal: daily and weekly commuting, seasonal, periodic, permanent</li> </ul> <p>Suburbanisation and counter urbanisation:</p> <ul style="list-style-type: none"> <li>• Definitions: urbanisation, suburbanisation, counter urbanisation</li> </ul> <p>The growth of dormitory, commuter and suburbanised settlements.</p>
Patterns and causes of migration	<p>Examples of population movements:</p> <ul style="list-style-type: none"> <li>• Major international migration streams, including migrations within international confederations</li> <li>• Examples of intra-national migration streams</li> </ul> <p>The factors influencing migration, illustrated at a variety of spatial and temporal scales:</p> <ul style="list-style-type: none"> <li>• Push/pull factors, intervening opportunities and obstacles</li> <li>• Economic, socio-cultural, environmental and political influences including reference to forced migrations, asylum-seeking, refugees, internally displaced persons (IDPs)</li> </ul> <p>The relative importance of rural–urban migration and natural increase in urbanisation and urban growth in different countries.</p>
Consequences and impacts	<p>Costs and benefits to source and recipient areas and to the migrants at different scales.</p> <p>The impacts of international migration:</p> <ul style="list-style-type: none"> <li>• Economic: employment/unemployment, remittances, the ‘brain drain’ and ‘brain gain’</li> <li>• Social: provision of services, deprivation, social tension, family, community, distinctive urban enclaves in recipient countries, spatial segregation of migrant groups from host populations and each other</li> <li>• Political resentment and integration</li> <li>• Environmental: resource pressure, congestion, housing demand</li> </ul> <p>The impacts of internal migration:</p> <ul style="list-style-type: none"> <li>• Rapid urbanisation – advantages and disadvantages</li> <li>• Primacy and the economic dominance of urban areas</li> <li>• The provision of housing amenities and services – advantages and disadvantages</li> <li>• The development of slums, shanty towns and other informal settlements – advantages and disadvantages</li> <li>• Strain on urban infrastructure</li> <li>• Effects on source areas including any effects of rural depopulation</li> </ul> <p>Suburbanisation and counter urbanisation:</p> <ul style="list-style-type: none"> <li>• Pressure for development in the countryside</li> <li>• Impacts on rural services</li> </ul>

Main themes	Specified content
Management	<p>Managing migration flows through strategies to encourage or restrict population movement:</p> <ul style="list-style-type: none"> <li>• International: immigration controls, 'points/quota schemes', international agreements, financial incentives</li> <li>• Rural–urban: rural development schemes, urban planning</li> <li>• Urban–rural: rural housing developments, urban regeneration and re-urbanisation</li> </ul> <p>Management of forced migration:</p> <ul style="list-style-type: none"> <li>• The United Nations High Commission for Refugees (UNHCR) and its role in managing refugees/IDPs; involvement of other non-governmental organisations (NGOs)</li> <li>• The international legal position of refugees and the obligations of governments</li> </ul> <p>Managing the impacts of internal migration flows:</p> <ul style="list-style-type: none"> <li>• Housing, infrastructure, self-help schemes</li> <li>• Green belts, new towns/cities, zoning</li> </ul>



## Paper 2 Global Themes

### Section A – Trade, debt and aid

Main themes	Specified content
Global capital transfers	<p>Global transfers of capital occur in a variety of ways including trade, foreign direct investment (FDI), remittances and aid.</p> <p>Global capital transfers can create debt.</p> <p>Different types of debt including trade deficits.</p> <p>The global pattern of debt.</p>
Patterns of world trade, their consequences and management	<p>Patterns of world trade:</p> <ul style="list-style-type: none"> <li>• Major importers and exporters of raw materials, commodities, manufactured products, services, hi-tech goods</li> <li>• Global trade balances</li> </ul> <p>Changing patterns of world trade since 1900:</p> <ul style="list-style-type: none"> <li>• Colonial and neo-colonial patterns</li> <li>• The rise of newly industrialised countries (NICs)</li> <li>• Terms of trade</li> <li>• The changing importance and nature of goods being traded</li> </ul> <p>Factors responsible for patterns of world trade:</p> <ul style="list-style-type: none"> <li>• The principle of comparative advantage</li> <li>• Levels of economic development</li> <li>• The influence of trade blocs, protectionism, the World Trade Organization (WTO)</li> </ul> <p>The benefits and problems of trade for exporters and importers:</p> <ul style="list-style-type: none"> <li>• Balance of payments and trade deficits/surpluses</li> <li>• The significance of foreign currency</li> <li>• Overdependence on primary products</li> <li>• Neo-colonial control and trade as a political weapon</li> </ul> <p>The management of global trade:</p> <ul style="list-style-type: none"> <li>• World Trade Organization (WTO)</li> <li>• The role of Fair Trade, e.g. World Fair Trade Organization (WFTO)</li> </ul>
Patterns of foreign direct investment (FDI), its consequences and management, including the issue of debt	<p>The global patterns of foreign direct investment:</p> <ul style="list-style-type: none"> <li>• Major donors and recipients of investment, outward FDI and inward FDI</li> <li>• Changing patterns of investment over time</li> </ul> <p>Reasons for the patterns of FDI:</p> <ul style="list-style-type: none"> <li>• The benefits for both recipient and donor</li> <li>• The role of transnational corporations (TNCs) and global financial institutions such as the World Bank and the International Monetary Fund (IMF)</li> </ul> <p>The impact of FDI:</p> <ul style="list-style-type: none"> <li>• Economic growth and development</li> <li>• The problem of debt</li> </ul> <p>The management of FDI and its impacts; the debt crisis and debt relief, including the Heavily Indebted Poor Countries (HIPC) initiative.</p>

Main themes	Specified content
Patterns of international aid and their consequences	<p>Different forms of aid:</p> <ul style="list-style-type: none"> <li>• Long term development aid</li> <li>• Short term relief aid</li> <li>• Bilateral/multilateral aid</li> <li>• Tied aid</li> </ul> <p>The global pattern of aid:</p> <ul style="list-style-type: none"> <li>• Major donors, major recipients and reasons aid is given to specific countries/projects</li> <li>• The role of international institutions, governments and non-governmental organisations (NGOs) in giving aid</li> </ul> <p>The consequences of aid for recipient countries:</p> <ul style="list-style-type: none"> <li>• Socio-economic effects on local people, agriculture, markets</li> <li>• Political dependence on foreign governments and NGOs, corruption</li> </ul>
Economic globalisation	<p>The roles of trade, FDI, remittances and aid in the globalisation of the world economy.</p> <p>The advantages and disadvantages of economic globalisation.</p> <p>The social and environmental consequences of globalisation.</p>

## Paper 2 Global Themes

### Section A – People, place and conflicts

Main themes	Specified content
Definitions and classifications	<p>Origins and current relevance of common (metageographical) labels used to divide up the world: 'West', 'East', 'Middle East', 'Far East', 'First World', 'Second World' and 'Third World'.</p> <p>Definitions of a nation and a state (role, functions and purpose).</p> <p>Types of nationalism:</p> <ul style="list-style-type: none"> <li>• Primordial (ancient ties and common ancestry of an ethnic group)</li> <li>• Modernist (sustained through everyday practices, signs and symbols, e.g. monarchy, national anthem, currency, flag, stamps, passports, sport, etc.)</li> </ul> <p>Types of border and political frontier:</p> <ul style="list-style-type: none"> <li>• Boundary</li> <li>• Frontier</li> <li>• Border/borderland</li> </ul> <p>Ethnicity:</p> <ul style="list-style-type: none"> <li>• Ethnic groups</li> <li>• Ethnic segregation</li> <li>• Ethnic cleansing</li> <li>• Social polarisation</li> <li>• Ghettoisation</li> </ul> <p>Types of conflict: non-violent, political activity, riots, terrorism, war and insurrection.</p> <p>Asylum seekers and refugees.</p>
Patterns of conflict	<p>Scale and distribution of conflict: local, regional, national, transnational, global.</p> <p>Territorial disputes, including separatism.</p> <p>Global distribution of refugees.</p>
Causes of conflict	<p>Identity (nationalism, regionalism and localism):</p> <ul style="list-style-type: none"> <li>• Case study of 'English' nationalism: <ul style="list-style-type: none"> <li>– Englishness vs Britishness</li> <li>– Reasons for the development of multicultural society in Britain; issues related to multicultural societies</li> <li>– Challenges to Englishness posed by multiculturalism</li> <li>– Challenges to Englishness posed by the British National Party (BNP) and English Defence League (EDL)</li> <li>– Responses of 'British' politics, e.g. UK Independence Party (UKIP)</li> </ul> </li> </ul> <p>Ethnicity, including racial and tribal, discrimination.</p> <p>Culture, including separatism.</p> <p>History, including colonisation, imperialism.</p> <p>Territory, including Scottish and Welsh devolution.</p> <p>Ideology, including political (Communism vs Capitalism), religious and economic.</p> <p>Resources, including water, energy.</p> <p>Globalisation (cultural, economic, social, political, environmental) and its role in reducing/increasing conflicts.</p>

Main themes	Specified content
Consequences and impacts of conflicts and globalisation	<p>Economic consequences:</p> <ul style="list-style-type: none"> <li>• Gain/loss of land</li> <li>• Gain/loss of resources</li> <li>• Changes in population</li> <li>• Changes in productive capacity</li> </ul> <p>Social consequences including alienation, migration, feminisation of labour, changes in working practices.</p> <p>Environmental consequences including destruction of oil wells, draining marshes, deforestation, 'water wars'.</p> <p>Cultural consequences: reassertion of national/regional/local cultures, including language, global cultures in the media, the arts, sports, food.</p> <p>Political consequences including 'failed' states; re-location/establishment of capital cities; civil society movements and protest (anti-capitalism, anti-globalisation, environmental); the role of the nation in a globalised world.</p> <p>Recent boundary movements and their causes and consequences, e.g.</p> <ul style="list-style-type: none"> <li>• Iraq (role of British in establishing boundaries in 1922, genesis of Kurdish, Sunni and Shia issues)</li> <li>• Changes in boundaries of European states during Second World War; the creation of Eastern and Western bloc borderland; the breakup of the Soviet Union</li> <li>• The breakup of Yugoslavia and Czechoslovakia</li> </ul>
Management	<p>Managing the impacts of refugee movements: United Nations High Commission for Refugees (UNHCR), refugee camps, non-governmental organisations (NGOs).</p> <p>Managing governed spaces: devolved government, federal government.</p> <p>Contemporary governments in exile, e.g. Tibet, Chagos Islanders.</p> <p>Conflict resolution including the role of governments, United Nations (UN), North Atlantic Treaty Organization (NATO), NGOs, civil society, local planning issues (e.g. NIMBYism ('not in my backyard')).</p>

## Paper 2 Global Themes

## Section B – Energy and mineral resources

Main themes	Specified content
Classification	<p>Energy and mineral resources.</p> <p>Metallic and non-metallic mineral resources.</p> <p>Renewable and non-renewable resources, finite and infinite resources.</p> <p>Flow resources.</p> <p>Non-renewable resources in terms of stocks and reserves.</p> <p>The influence of economic and technological factors on the availability of energy and mineral resources.</p> <p>The resource continuum.</p>
Energy resources: supply and demand	<p>Distribution patterns of supply and demand of selected energy resources, including oil and at least one renewable resource.</p> <p>The variations in energy resource mix between countries in relation to development and resource availability.</p> <p>Changing sources of energy over time both globally and within individual countries:</p> <ul style="list-style-type: none"> <li>• The shift from coal to oil and gas</li> <li>• The growth of renewables and alternative sources of energy</li> <li>• Variations in the use of nuclear power</li> </ul>
Mineral resources	<p>Distribution patterns and changes over time of supply and demand of a range of mineral resources both metallic and non-metallic.</p> <p>Factors influencing these:</p> <ul style="list-style-type: none"> <li>• Price</li> <li>• Geological conditions</li> <li>• Levels of economic and technological development</li> <li>• The role of foreign direct investment (FDI) and transnational corporations (TNCs)</li> <li>• The cycle of exploitation</li> <li>• Product cycles</li> </ul>
The impact of resource exploitation	<p>The national impact of energy and mineral resource exploitation:</p> <ul style="list-style-type: none"> <li>• Economic benefits, such as foreign exchange earnings, employment, the multiplier effect, debt payment</li> <li>• Social, economic and environmental problems, such as living conditions and environmental degradation</li> </ul> <p>The balance between domestic and imported energy resources:</p> <ul style="list-style-type: none"> <li>• Attempts to increase the proportion of energy from renewable sources</li> <li>• Arguments over the energy mix, including the debate over nuclear and renewable solutions</li> </ul> <p>The global impact of changing energy and mineral demand: resource depletion, climate change, increasing economic costs, geo-political implications.</p>

Main themes	Specified content
Management	<p>Managing energy and mineral resource exploitation at different scales:</p> <ul style="list-style-type: none"> <li>• International commodity organisations, such as the Organization of the Petroleum Exporting Countries (OPEC)</li> <li>• National resource policies, such as nationalisation, rationalisation, subsidies</li> </ul> <p>Managing the environmental impact of energy and mineral resource exploitation at different scales:</p> <ul style="list-style-type: none"> <li>• International agreements and protocols, such as Brundtland, Club of Rome, international climate change conferences, Antarctic Treaty</li> <li>• The application of international agreements at a national scale</li> <li>• National policies, such as resource substitution, promotion of alternative energy use</li> <li>• Local approaches, such as the application of Agenda 21, land reclamation schemes</li> </ul> <p>Managing the socio-economic impact of energy and mineral resource exploitation at different scales:</p> <ul style="list-style-type: none"> <li>• National policies, such as minimum wages, regeneration grants, inward investment, import tariffs</li> <li>• Local approaches, such as regeneration schemes, local employment initiatives</li> </ul>

## Paper 2 Global Themes

## Section B – The provision of food

Main themes	Specified content
Classification and distribution patterns	<p>The physical constraints on food supply. The patterns of agricultural production globally and nationally resulting from these constraints.</p> <p>The concept of carrying capacity with reference to the theories of Malthus and Boserup, to Brundtland, and sustainability.</p> <p>The difference between subsistence and commercial agriculture.</p> <p>The location of major marine fish stocks and the reasons for their location.</p> <p>The location of fish farming and reasons for its location.</p>
The supply of food in countries at higher levels of development	<p>The modernisation of food production after 1950 and its consequences:</p> <ul style="list-style-type: none"> <li>• Agribusiness</li> <li>• Increased yields to the point of overproduction</li> <li>• Changes in land tenure and farm size</li> <li>• Significant landscape change</li> </ul> <p>The 'post-productionist' phase of food production and its influence on food production systems and policy:</p> <ul style="list-style-type: none"> <li>• Farm diversification schemes (food and non-food)</li> <li>• The introduction of top-down stewardship schemes, e.g. milk quotas, set-aside, Environmentally Sensitive Areas (ESAs) and Nitrate Sensitive Areas (NSAs) in the UK</li> <li>• The growth of bottom-up approaches such as low impact techniques and organic farming</li> </ul> <p>The 'neo-productionist' phase of food production and its influence on food production systems and policy:</p> <ul style="list-style-type: none"> <li>• Continued large-scale subsidies</li> <li>• Continued intensification of production (e.g. mega-ranches/dairies) and resultant ethical concerns</li> <li>• Increasing food insecurity</li> </ul> <p>The exploitation of marine resources and the depletion of fish stocks as a result of:</p> <ul style="list-style-type: none"> <li>• The difficulties inherent in the working of fisheries policies</li> <li>• The development of larger and more efficient trawlers</li> </ul> <p>The growth of fish farming and its economic and environmental impacts.</p>
The supply of food in the wider world	<p>Changes in the means of supplying food in the wider world, with particular regard to:</p> <ul style="list-style-type: none"> <li>• The application of fertilisers, herbicides, insecticides and other pesticides</li> <li>• How the Green Revolution served to increase food production in selected countries with reference to: <ul style="list-style-type: none"> <li>– The development of high yielding varieties of wheat, maize and rice</li> <li>– The extension of irrigation, drainage and terracing schemes</li> <li>– The use of machinery in place of manual or animal labour</li> <li>– Evidence of negative consequences</li> </ul> </li> <li>• Different approaches to land reform, including 'land grabs', and the benefits and drawbacks for agrarian communities of such reform</li> <li>• The pressure to replace subsistence agriculture with cash crop production and the social, economic and environmental implications of the commercialisation of agriculture</li> <li>• The range of alternative, appropriate technology solutions to food shortages including intercropping and polyculture and addressing post harvest losses</li> </ul>

Main themes	Specified content
The supply of food: the globalisation of production and supply	<p>The increasing demand for food as global population increases and the mismatch between population distribution and food availability.</p> <p>The concept of food security.</p> <p>Issues of food supply in the 21st century, such as:</p> <ul style="list-style-type: none"> <li>• Ethical issues, such as exploitation of animals, organic production; vegetarianism/veganism, religious and cultural differences in diets (and resultant health issues), exploitation of migrant labour and the introduction of genetically modified (GM) crops</li> <li>• Environmental issues, such as the loss of tropical forests and mangroves, the introduction of monocultures, tropical prawn fisheries, air transport and food/fair miles, the potential impact of global climate change on food production</li> <li>• Economic issues, such as Fair Trade, the pressure to replace subsistence production with commercial and the roles of transnational corporations (TNCs), e.g. food trading</li> <li>• Political issues, such as the roles of TNCs, non-governmental organisations (NGOs) and food aid in relation to agricultural aid</li> </ul>



## Paper 2 Global Themes

### Section B – Tourism spaces

Main themes	Specified content
Classification	<p>The definitions of tourism; as distinct from recreation and leisure.</p> <p>Classifying tourism using a variety of criteria, including destination, activity, scale, tourist age, socio-economic group, personal characteristics, ecological impact.</p>
Change over time	<p>The changing nature of the tourism industry from 1800 to the present day, including its changing scale and the changing demands of tourists. Reference should be made to the Butler life-cycle model.</p> <p>The reasons for these long term changes in relation to:</p> <ul style="list-style-type: none"> <li>• Social and economic changes, including paid holidays, shorter working weeks, earlier retirement, increasing affluence</li> <li>• Socio-cultural values and attitudes, including tourist motivations and behaviour</li> <li>• Technological developments, including transport</li> <li>• Logistical nature of the holiday product, such as package tourism</li> <li>• Political influences, including political instability</li> <li>• Role of the media</li> </ul> <p>The reasons for short term changes in relation to:</p> <ul style="list-style-type: none"> <li>• Economic conditions, including the impact of recessions</li> <li>• Unforeseen events, e.g. natural disasters, terrorist attacks, civil unrest</li> </ul>
Socio-cultural impacts and management in tourism spaces	<p>The factors influencing the level of socio-cultural impact:</p> <ul style="list-style-type: none"> <li>• Scale of tourism/number of tourists</li> <li>• Size/population of the destination</li> <li>• Level of interaction between tourists and local communities</li> <li>• Similarity between the culture of the home and destination countries</li> <li>• Attitudes of tourists towards local communities</li> </ul> <p>Positive socio-cultural impacts and the associated management strategies:</p> <ul style="list-style-type: none"> <li>• Community benefits through social development projects including health and education</li> <li>• Local cultural promotion and preservation</li> </ul> <p>Negative socio-cultural impacts and the associated management strategies:</p> <ul style="list-style-type: none"> <li>• Destruction of traditional local socio-cultural patterns including social demographic changes and cultural tensions between tourists and local communities</li> <li>• Commodification of culture as a tourist resource</li> <li>• Development of anti-social and illegal activities including crime, prostitution and sex tourism</li> <li>• Attempts to alleviate these impacts including those by governments, non-governmental organisations (NGOs) and travel companies</li> </ul>

Main themes	Specified content
Economic impacts and management in tourism spaces	<p>Positive economic impacts and the associated management strategies:</p> <ul style="list-style-type: none"> <li>• Tourism and development through income generation and employment</li> <li>• Redistribution of wealth spatially within a country including the roles of urban tourism in regenerating areas of urban deprivation and of rural tourism</li> </ul> <p>Negative economic impacts and the associated management strategies:</p> <ul style="list-style-type: none"> <li>• Problems of seasonal tourism; tackled through various types of diversification</li> <li>• Lack of political and economic ownership; local empowerment and ownership</li> <li>• Uneven spatial distribution of tourism investment and growth, including Britton's core-periphery model and enclave development</li> <li>• The decline of tourist areas over time</li> <li>• Attempts to alleviate these impacts including those by governments, NGOs and travel companies</li> </ul>
Environmental impacts and management in tourism spaces	<p>The factors influencing the level of environmental impact:</p> <ul style="list-style-type: none"> <li>• Scale of tourism, number of tourists and tourist awareness</li> <li>• Nature of the tourist activity</li> <li>• Fragility of the local environment or ecosystem</li> <li>• Local community perceptions of the value of the environment</li> <li>• Management strategies in place</li> </ul> <p>Positive environmental impacts:</p> <ul style="list-style-type: none"> <li>• Preservation and conservation of tourism spaces, including landscapes, biodiversity, natural resources and heritage</li> </ul> <p>Negative environmental impacts:</p> <ul style="list-style-type: none"> <li>• Pressures on rural and urban landscapes/habitats</li> <li>• Pressures on ecosystems, with a particular focus on coral reef management</li> <li>• Pressures on protected and wilderness environments</li> <li>• Pollution, including visual, light, noise, air and water pollution</li> </ul> <p>Associated management strategies:</p> <ul style="list-style-type: none"> <li>• Local, e.g. zoning and agenda 21; with special emphasis on sustainable, responsible tourism and ecotourism</li> <li>• National, e.g. planning laws and protected areas, such as National Parks, wildlife refuges and forest/nature reserves</li> <li>• Global, e.g. international co-operation and legislative designations</li> <li>• United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites</li> </ul>

## Paper 3 Geographical Issues

### Section A – Tectonic hazards

Main themes	Specified content
Definitions, classification and distribution	<p>The main tectonic hazards and their global distribution:</p> <ul style="list-style-type: none"> <li>• Volcanoes</li> <li>• Earthquakes</li> </ul>
Explanation and causes of tectonic hazards	<p>The evidence in support of plate tectonic theory:</p> <ul style="list-style-type: none"> <li>• Continental drift and the 'jigsaw' fit of continents</li> <li>• Geological and fossil records</li> <li>• Palaeomagnetism</li> </ul> <p>The mechanisms, directions and rates of plate movement.</p> <p>The processes operating and the landforms created at different types of plate margin:</p> <ul style="list-style-type: none"> <li>• Constructive: sea floor spreading, mid-ocean ridges, rift valleys, volcanic activity, faulting</li> <li>• Destructive: subduction zones, earthquakes, deep ocean trenches, island arcs, fold mountains, volcanoes and volcanic activity</li> <li>• Conservative: faults, earthquakes</li> <li>• Hot spots</li> <li>• Supervolcanoes</li> </ul>
Consequences and impacts	<p>A range of primary and secondary impacts of tectonic activity on the landscape, people, economy and the built environment, with examples to explain the nature of the volcanic hazard:</p> <ul style="list-style-type: none"> <li>• Types of eruption and their products</li> <li>• Pyroclastic flows (nuées ardentes), lava flows, tephra, ash falls, lahars, jökulhlaups, toxic gases</li> </ul> <p>A range of primary and secondary impacts of tectonic activity on the landscape, people and the built environment, with examples to explain the nature of the earthquake hazard, variations in level of magnitude including the Mercalli scale and Richter scale and their outcomes:</p> <ul style="list-style-type: none"> <li>• Ground-shaking</li> <li>• Liquefaction</li> <li>• Landslides</li> <li>• Tsunami</li> </ul> <p>The short term and long term consequences of tectonic hazards and how these may differ according to the level of development.</p>
Management and mitigation	<p>A range of mitigation strategies for tectonic hazards at different scales, including:</p> <ul style="list-style-type: none"> <li>• Prediction and risk identification: including hazard mapping and analysis</li> <li>• Protection, control and reduction of impacts during the event by planning, hard and soft engineering including minimising risk by environmental modification and building modification</li> <li>• Rescue and recovery, including insurance and aid</li> </ul>

## Paper 3 Geographical Issues

### Section A – Meteorological hazards

Main themes	Specified content
Definitions, classification and distribution	<p>The definition of a meteorological hazard and methods of classification:</p> <ul style="list-style-type: none"> <li>• By scale (regional/local) and frequency</li> <li>• By nature of the hazard (wind, precipitation including drought and flood, temperature)</li> <li>• By scale of intensity for wind hazards (Saffir-Simpson and Fujita)</li> <li>• By wind speed for wind hazards (depressions, tropical depression, tropical storms, tropical cyclones)</li> </ul> <p>The distribution of these meteorological hazards at different scales.</p>
Explanation and causes of regional scale meteorological hazards	<p>Regional scale meteorological hazards (tropical storms and cyclones).</p> <p>The causes of the global distribution of regional scale atmospheric hazards linked to the global energy budget:</p> <ul style="list-style-type: none"> <li>• Vertical transfers of energy: conduction, convection, radiation, latent heat</li> <li>• Horizontal transfers of energy: global meteorological circulation (tri-cellular model), ocean currents, jet stream</li> <li>• The role of the Coriolis force</li> <li>• The structure and characteristics of tropical storms and cyclones</li> </ul> <p>The formation of tropical storms and cyclones, including the role of the Coriolis force and the Bernoulli effect.</p> <p>The seasonality of regional scale atmospheric hazards.</p> <p>The changing nature of the regional scale atmospheric hazards: patterns of intensity, periodicity, location of hazards, the changing nature of tropical cyclones in recent years, possible links to enhanced greenhouse effect and climate change.</p>
Explanation and causes of local scale meteorological hazards	<p>The characteristics, location, processes of formation and reasons for occurrence of:</p> <ul style="list-style-type: none"> <li>• Tornadoes (including super-cell formation)</li> <li>• Hail</li> <li>• Blizzards</li> <li>• Fog: (radiation and advection), photochemical smog</li> </ul> <p>Examples of relevant extreme events and their location.</p>
Consequences and impacts	<p>The primary and secondary impacts and consequences of meteorological hazards and the variations in the impact on people, the economy and the environment which may differ according to level of development.</p>
Management and mitigation	<p>Management of meteorological hazards at different scales with examples from a variety of places at different levels of development:</p> <ul style="list-style-type: none"> <li>• Modifying the risk: monitoring, prediction, prevention</li> <li>• Modifying the hazard: preparation, protection and reduction of impacts</li> <li>• Modifying the loss: rescue, relief and recovery</li> </ul>

## Paper 3 Geographical Issues

### Section A – Hydrological hazards

Main themes	Specified content
Definitions, classification and distribution	<p>The main hydrological hazards and their global and regional distribution:</p> <ul style="list-style-type: none"> <li>• Floods</li> <li>• Water deficit</li> </ul> <p>The movement of water through the hydrological cycle using a systems approach.</p> <p>Definitions of key terms:</p> <ul style="list-style-type: none"> <li>• Transfers: interception, infiltration, percolation, stemflow, throughfall, overland flow/surface runoff, throughflow, groundwater flow/baseflow, evaporation, transpiration, condensation, precipitation</li> <li>• Stores: atmosphere (clouds), vegetation (interception and through roots), surface (channel, lake, ocean), soil, bedrock</li> </ul> <p>Definitions of – water table, permeable, impermeable, pervious and porous in relation to both soils (clay, silt, sand) and rock types (granite, limestone, chalk, sandstone, clay).</p> <p>The patterns of precipitation at global and national scales and the impact of these on annual water budgets at the local or regional scale.</p> <ul style="list-style-type: none"> <li>• River regimes and storm hydrographs</li> </ul>
Explanation and causes of hydrological hazards	<p>Hazards occur at different points in the hydrological cycle due to both natural and human causes:</p> <p>Floods:</p> <ul style="list-style-type: none"> <li>• Natural causes: prolonged rainfall, snowmelt, intense storms leading to flash flooding, storm surges, monsoon rainfall</li> <li>• Human causes: changing land-use, river mismanagement, dam failures</li> </ul> <p>Water deficit:</p> <ul style="list-style-type: none"> <li>• Meteorological causes: seasonal and non-seasonal variation</li> <li>• Human causes: depleting aquifers and surface water resources by inappropriate agricultural, urban and industrial abstraction</li> </ul> <p>People modify the hydrological cycle through agriculture, deforestation or afforestation, urbanisation, industrialisation, water abstraction and flood management.</p>
Consequences and impacts	<p>There are both short term and long term impacts and consequences of flooding and of water shortages and these may differ according to level of development.</p>
Management and mitigation	<p>There are a range of management strategies for flooding and water shortage at different scales and different levels of development:</p> <ul style="list-style-type: none"> <li>• Emergency responses</li> <li>• Hard engineering solutions</li> <li>• Soft engineering solutions</li> <li>• Managed retreat and 'do nothing' options</li> </ul>

## Paper 3 Geographical Issues

## Section B – Crime issues

Main themes	Specified content
Definitions, classification and distribution	<p>Definition of crime.</p> <p>Types of crime and their spatial characteristics:</p> <ul style="list-style-type: none"> <li>• International: terrorism, drug trafficking, people-smuggling</li> <li>• Crimes against people: violence, racial crimes, child prostitution</li> <li>• Crimes against property: burglary, car crime, graffiti</li> <li>• Anti-social crime: vandalism, alcohol and drug-induced crime</li> <li>• Environmental crimes: fly tipping, pollution spills</li> </ul> <p>Distribution patterns can vary:</p> <ul style="list-style-type: none"> <li>• Spatially: internationally, nationally, regionally, locally</li> <li>• Temporally: day versus night, special events, seasons</li> </ul>
Explanation and causes of crime	<p>The causes of crime can be understood in terms of the relationship between the victim, the criminal and their environment.</p> <p>Causes of crime:</p> <ul style="list-style-type: none"> <li>• Vulnerability of the victim: gender, ethnicity, household/family structure, socio-economic circumstances, household occupation, accommodation type, location of housing, housing tenure</li> <li>• Socio-economic characteristics of the criminal: spatial disparities (at a variety of scales), marginalisation and social inequalities, including poverty and illiteracy</li> <li>• The characteristics of the physical and built environment may promote vulnerability to crime: street layout and lighting, building design, height and density, presence of vegetation and the amount of open space</li> </ul>
Consequences and impacts	<p>The consequences of high criminal activity with regard to:</p> <ul style="list-style-type: none"> <li>• The social impacts on communities</li> <li>• The economic impacts on communities</li> <li>• The physical impacts on the natural and built environments</li> </ul> <p>Perception of the crime hazard and the influence of the media and politicians on people's perception.</p>
Management and mitigation	<p>Strategies designed to minimise the risk, or perception of risk, of crime and reduce the amount of crime at different scales:</p> <ul style="list-style-type: none"> <li>• International scale initiatives: border control, airport security, terrorism databases, role of international media, co-operation between countries</li> <li>• National scale initiatives: increased visibility and CCTV (closed circuit television), privatisation of public space including shopping centres and gated communities, increased policing on the streets, strategies to alleviate socio-economic deprivation</li> <li>• Local scale initiatives: philosophy of 'defensible space', reducing the risk of crime by improved design, target-hardening, mobilisation of communities, Neighbourhood Watch</li> </ul>

## Paper 3 Geographical Issues

### Section B – Health issues

Main themes	Specified content
Definitions, classification and distribution	<p>Definition of key terms: epidemic, pandemic, endemic, contagious, infectious, viral, bacterial, parasitic, death/mortality rate, infant mortality rate, life expectancy, attack rate (with reference to age-sex pyramids)</p> <p>The geographical variation in the prevalence of disease and famine; its human and environmental causes.</p>
Explanation and causes of spatial variation in health and disease	<p>The ways in which diseases spread – patterns of diffusion, and the work of early epidemiologists.</p> <p>The spread of emergent diseases including HIV/AIDS, SARS, Ebola fever and potentially pandemic influenza with reference to case fatality rate</p> <p>The factors (anthropogenic, environmental, lifestyle and living conditions) influencing health, welfare, mortality, the spread of disease:</p> <ul style="list-style-type: none"> <li>• Demographic – age structure, sex ratio</li> <li>• Environmental – climate change, pollution, water-borne diseases</li> <li>• Economic – including level of development (poverty), role of transnational corporations (TNCs), socio-economic status and employment, housing conditions, diet and access to clean water</li> <li>• Social/cultural – lifestyle choices (including binge drinking), diet, population density and mobility</li> </ul> <p>The geographical causes of variation in health:</p> <ul style="list-style-type: none"> <li>• Industry: industrial diseases, including silicosis, associated with mining and industrial accidents</li> <li>• The influence of TNCs in exploiting weak legislation and unprotected markets</li> <li>• Effect of variations in affluence on diet and health, linked to obesity, osteoporosis, coronary heart disease, malnutrition and deficiency diseases</li> <li>• The incidence of water-based diseases including cholera, typhoid, malaria, dysenteric diseases</li> <li>• The potential for spread of diseases including HIV/AIDS and tuberculosis (TB) as a result of increase in international migration</li> </ul>
Consequences and impacts	<p>The demographic, social and economic impacts of disease, famine and illness with reference to:</p> <ul style="list-style-type: none"> <li>• Population structure</li> <li>• Socio-economic status</li> <li>• Family structure</li> <li>• Migration patterns</li> <li>• Local and national economies</li> </ul> <p>Examples of such impacts at international and national scales, with reference to historic incidence of disease and famine, as well as to newly emergent diseases.</p>

Main themes	Specified content
Management and mitigation	<p>The management of health, disease and famine.</p> <p>Differences in welfare and health care provision can be and have been improved through:</p> <ul style="list-style-type: none"> <li>• Increasing the number of doctors, nurses and hospitals</li> <li>• Greater awareness of the importance of good diet</li> <li>• Extending access to clean water</li> <li>• Use of vaccinations to eradicate diseases including measles, whooping cough, polio, TB, smallpox</li> <li>• Other preventative measures including the distribution of condoms, use of mosquito nets and changes in land-use such as draining swamps</li> <li>• The role of the World Health Organization (WHO)</li> <li>• The role of government, such as in facilitating and encouraging family planning</li> <li>• The role of non-governmental organisations (NGOs) including Médecins Sans Frontières, charities including WaterAid and Comic Relief</li> </ul>



## Paper 3 Geographical Issues

### Section B – Spatial inequality and poverty issues

Main themes	Specified content
Definitions, classification and distribution	<p>Definition of inequality and poverty (absolute and relative), deprivation and social exclusion.</p> <p>Measuring poverty and inequality: composite indices, including Human Development Index (HDI), Human Poverty Index (HPI), Multidimensional Poverty Index (MPI): single criterion indices, including Gross Domestic Product (GDP) per person, Gender Inequality Index (GII), adult literacy rate, infant mortality rate.</p> <p>Patterns of inequality and poverty at different scales:</p> <ul style="list-style-type: none"> <li>• Global patterns: the validity of the North/South divide; the development continuum</li> <li>• Regional patterns: core and peripheral areas within countries</li> <li>• Intra-urban patterns: areas of social exclusion; inner city and peripheral areas of poverty</li> </ul>
Explanation and causes of poverty and inequality	<p>Global scale:</p> <ul style="list-style-type: none"> <li>• Rostovian and neo-Marxist theories</li> <li>• Colonialism and neo-colonialism</li> <li>• The environmental dimension: long term environmental disadvantage/degradation; short term environmental events</li> <li>• Internal and external political influences</li> </ul> <p>Regional scale:</p> <ul style="list-style-type: none"> <li>• Friedmann's concept of core and periphery and cumulative causation</li> <li>• The role of economic decline and growth</li> <li>• The environmental dimension: long term environmental disadvantage/degradation; short term environmental events</li> <li>• Internal and external political influences</li> </ul> <p>Local scale:</p> <ul style="list-style-type: none"> <li>• The concepts of social exclusion and marginalisation</li> </ul>
Consequences and impacts	<p>Global scale:</p> <ul style="list-style-type: none"> <li>• The development gap and its continuation</li> <li>• Poverty in countries at lower levels of economic development and its economic and social consequences: access to employment; access to health and education; mortality and life expectancy; crime and prostitution; social tension</li> </ul> <p>National scale:</p> <ul style="list-style-type: none"> <li>• Emergence of regions of economic disadvantage</li> <li>• Outmigration</li> <li>• Access to basic services and amenities</li> </ul> <p>Local scale:</p> <ul style="list-style-type: none"> <li>• Emergence of areas of multiple deprivation</li> <li>• The poverty trap</li> <li>• Poor-quality housing and lack of basic amenities</li> </ul>
Management and mitigation	<p>The management of inequality and poverty.</p> <p>The UN Millennium Development Goals.</p> <p>Approaches to reducing poverty and inequality: top-down and bottom-up strategies; international aid; intermediate/appropriate technology</p> <p>Development strategies at different scales and their impacts:</p> <ul style="list-style-type: none"> <li>• Promotion of economic development: industrialisation, resource exploitation, tourism</li> <li>• Major international events (such as sporting events), cities of culture/heritage</li> <li>• Infrastructural investment: transport, health, education, local services</li> </ul>

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## Additional information

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### Equality and inclusion

Cambridge has taken great care in the preparation of this syllabus and related assessment materials to avoid bias of any kind. To comply with the UK Equality Act (2010), Cambridge has designed this qualification with the aim of avoiding direct and indirect discrimination.

The standard assessment arrangements may present unnecessary barriers for candidates with disabilities or learning difficulties. Arrangements can be put in place for these candidates to enable them to access the assessments and receive recognition of their attainment. Access arrangements will not be agreed if they give candidates an unfair advantage over others or if they compromise the standards being assessed. Candidates who are unable to access the assessment of any component may be eligible to receive an award based on the parts of the assessment they have taken. Information on access arrangements is found in the *Cambridge Handbook (UK)*, for the relevant year, which can be downloaded from the website [www.cie.org.uk/examsOfficers](http://www.cie.org.uk/examsOfficers)

### Entries

For entry information, please refer to the *Cambridge Administrative Guide (UK)*, for the relevant year, available from the website [www.cie.org.uk/examsOfficers](http://www.cie.org.uk/examsOfficers)

### If you are not yet a Cambridge school

Learn about the benefits of becoming a Cambridge school at [www.cie.org.uk/startcambridge](http://www.cie.org.uk/startcambridge). Email us at [info@cie.org.uk](mailto:info@cie.org.uk) to find out how your organisation can register to become a Cambridge school.

### Language

This syllabus and the associated assessment materials are available in English only.

### Procedures and regulations

This syllabus complies with our *Code of Practice* and *Ofqual General Conditions of Recognition*.

Further information about the regulations for Cambridge Pre-U can be found in the *Cambridge Handbook (UK)*, for the relevant year. The *Cambridge Administrative Guide (UK)*, for the relevant year, gives details about the administration of Cambridge Pre-U syllabuses. Both of these documents can be downloaded from the website [www.cie.org.uk/examsOfficers](http://www.cie.org.uk/examsOfficers) or obtained by contacting [info@cie.org.uk](mailto:info@cie.org.uk)

## Spiritual, moral, ethical, social, legislative, economic and cultural issues

The worldwide examples studied in the topic areas will enhance candidates' awareness of these issues. Candidates can gain an appreciation of the variation in attitudes and values across different parts of the world, as well as reflecting on and developing their own attitudes and values with regard to spiritual, moral, ethical, social and cultural issues.

Examples of topics under which such issues can be explored include:

- Paper 2, Section B, The provision of food, including ethical issues such as exploitation of animals and the introduction of genetically modified crops.
- Paper 3, Section B, Crime issues, including the study of international terrorism, the illegal drug trade, illegal immigration and racial harassment.
- Paper 3, Section B, Health issues, including the study of the spread of HIV/AIDS.

## Sustainable development, health and safety considerations and international developments

The syllabus, with its emphasis on the physical environment and the relationship of people with their environment, provides considerable support for the more general development of environmental education and raises awareness of the issue of sustainable development.

Examples where sustainable development can be explored include:

- Paper 1, Section B, Tropical environments, including strategies for sustainability in relation to tropical rainforest and responsible tourism.
- Paper 1, Section B, Temperate environments, including Countryside Stewardship Schemes in the UK.

Investigative work, carried out either in support of syllabus topics or in fieldwork in preparation for the Research Topic, provides opportunities to raise awareness of health and safety issues through risk assessment.

Cambridge has developed this syllabus in line with UK, European and international legislation and agreements. This syllabus provides opportunities to consider both the European dimension and the international dimension, especially through case studies which candidates pursue in support of syllabus topics.

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