



# IB Geography Hazards and Disasters

# Extreme Environments [Optional Theme/Paper 2] - Definitions

Term	Definition
<b>Disaster</b>	A major hazard event that causes widespread disruption to a community or region that the affected community is unable to deal with adequately without outside help.
<b>Hazard</b>	A threat (whether natural or human) that has the potential to cause loss of life, injury, property damage, socio-economic disruption or environmental degradation.
<b>Hazard event</b>	The occurrence (realization) of a hazard, the effects of which change demographic, economic and/or environmental conditions.
<b>Risk</b>	The probability of a hazard event causing harmful consequences (expected losses in terms of deaths, injuries, property damage, economy and environment).
<b>Vulnerability</b>	The susceptibility of a community to a hazard or to the impacts of a hazard event.

# Hazards and Disasters [Optional Theme/Paper 2] - Characteristics of hazards

1. Characteristics of hazards		
<ul style="list-style-type: none"><li>• Characteristics</li></ul>	<p>Explain the characteristics and spatial distribution of the following hazards.</p> <ul style="list-style-type: none"><li>• Either earthquakes or volcanoes</li><li>• Hurricanes (tropical cyclones, typhoons)</li><li>• Droughts</li><li>• Any one recent human-induced (technological) hazard (explosion or escape of hazardous material)</li></ul> <p>Distinguish between the chosen hazards in terms of their spatial extent, predictability, frequency, magnitude, duration, speed of onset and effects.</p>	7 hours

# Hazards and Disasters [Optional Theme/Paper 2] - Vulnerability

2. Vulnerability		
• Vulnerable populations	Explain the reasons why people live in hazardous areas.	1 hour
• Vulnerability	Discuss vulnerability as a function of demographic and socio-economic factors, and of a community's preparedness and ability to deal with a hazard event when it occurs.  Explain the reasons for some sectors of a population being more vulnerable than others.	3 hours

# Hazards and Disasters [Optional Theme/Paper 2] - Risk and risk assessment

Sub-topic	Development	Teaching hours
<b>3. Risk and risk assessment</b>		
<ul style="list-style-type: none"><li>Analysis of risk</li></ul>	<p>Examine the relationships between the degree of risk posed by a hazard and the probability of a hazard event occurring, the predicted losses and a community's preparedness for it.</p> <p>Explain the reasons why individuals and communities often underestimate the probability of hazard events occurring.</p> <p>Discuss the factors that determine an individual's perception of the risk posed by hazards.</p>	3 hours
<ul style="list-style-type: none"><li>Hazard event prediction</li></ul>	<p>Examine the methods used to make estimates (predictions) of the probability (in time and space) of hazard events occurring, and of their potential impact on lives and property.</p> <p>Discuss these methods by examining case studies relating to <b>two</b> different hazard types.</p>	3 hours

# Hazards and Disasters [Optional Theme/Paper 2] - Disasters

4. Disasters		
• Definition	Distinguish between a hazard event and a disaster. Explain why this distinction is not always completely objective.	4 hours
• Measuring disasters	Describe the methods used to quantify the spatial extent and intensity of disasters.  Explain the causes and impacts of any <b>one</b> disaster resulting from a natural hazard.  Explain the causes and impacts of any <b>one</b> recent human-induced hazard event or disaster.  Examine the ways in which the intensity and impacts of disasters vary in space and have changed over time.	

# Hazards and Disasters [Optional Theme/Paper 2] - Adjustments and responses to hazards and disasters

5. Adjustments and responses to hazards and disasters		
<ul style="list-style-type: none"> <li>Responses to the risk of hazard events</li> </ul>	<p>Discuss the usefulness of assessing risk before deciding the strategies of adjustment and response to a hazard.</p> <p>Describe attempts that have been made to reduce vulnerability by spreading the risk (aid, insurance) and by land-use planning (zoning).</p>	4 hours
<ul style="list-style-type: none"> <li>Before the event</li> </ul>	<p>Describe strategies designed to limit the damage from potential hazard events and disasters.</p>	
<ul style="list-style-type: none"> <li>Short-term, mid-term and long-term responses after the event</li> </ul>	<p>Describe the range of responses, at the community, national and international levels, during and after a hazard event or disaster.</p> <p>Distinguish between rescue, rehabilitation and reconstruction responses.</p> <p>Explain how these responses are affected by individual and community perceptions.</p> <p>Examine the factors that affected the choice of adjustments before, and responses to, actual hazard events or disasters.</p> <p>Discuss the importance of re-assessing risk, and re-examining vulnerability, following any major hazard event or disaster.</p>	5 hours

# Command Terms

## Analyse

Break down in order to bring out the essential elements or structure.

## Annotate

Add brief notes to a diagram or graph.

## Classify

Arrange or order by class or category.

## Classify

Give an account of the similarities between two (or more) items or situations, referring to both (all) of them throughout.

## Compare and contrast

Give an account of similarities and differences between two (or more) items or situations, referring to both (all) of them throughout.

## Construct

Display information in a diagrammatic or logical form.

## Contrast

Give an account of the differences between two (or more) items or situations, referring to both (all) of them throughout.

## Define

Give the precise meaning of a word, phrase, concept or physical quantity.

## Describe

Give a detailed account.

## Determine

Obtain the only possible answer.

## Discuss

Offer a considered and balanced review that includes a range of arguments, factors or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence.

## Distinguish

Make clear the differences between two or more concepts or items.

<b>Draw</b>	Represent by means of a labelled, accurate diagram or graph, using a pencil. A ruler (straight edge) should be used for straight lines. Diagrams should be drawn to scale. Graphs should have points correctly plotted (if appropriate) and joined in a straight line or smooth curve.
<b>Estimate</b>	Obtain an approximate value.
<b>Evaluate</b>	Make an appraisal by weighing up the strengths and limitations.
<b>Examine</b>	Consider an argument or concept in a way that uncovers the assumptions and interrelationships of the issue.
<b>Explain</b>	Give a detailed account including reasons or causes.
<b>Identify</b>	Provide an answer from a number of possibilities.
<b>Justify</b>	Give valid reasons or evidence to support an answer or conclusion.
<b>Label</b>	Add labels to a diagram.
<b>Outline</b>	Give a brief account or summary.
<b>State</b>	Give a specific name, value or other brief answer without explanation or calculation.
<b>Suggest</b>	Propose a solution, hypothesis or other possible answer.
<b>To what extent</b>	Consider the merits or otherwise of an argument or concept. Opinions and conclusions should be presented clearly and supported with empirical evidence and sound argument.