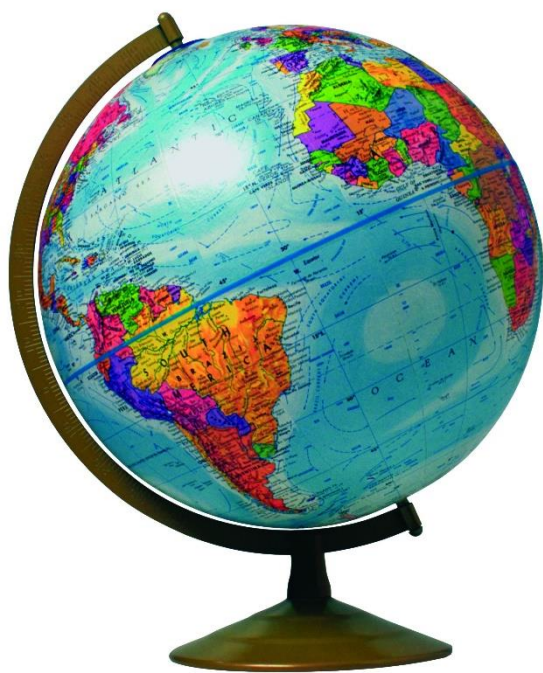


PAPER 1 – LIVING WITH THE **PHYSICAL** **ENVIRONMENT**

PUPIL BOOKLET

(with CASE STUDIES AND EXAMPLES)



NAME

**KEEP
CALM
AND
REVISE
GEOGRAPHY**

PAPER 1 – LIVING WITH THE **PHYSICAL ENVIRONMENT**

TOPIC	SPECIFICATION	CASE STUDIES (X3)	EXAMPLES (X6)
WEATHER HAZARDS	TROPICAL STORM		TYPHOON HAIYAN
WEATHER HAZARDS	EXTREME WEATHER EVENT		SOMERSET FLOODS 2014
NATURAL HAZARDS	EARTHQUAKE (HIC vrs LIC)		NEPAL 2015 vrs CHILE 2010
ECOSYSTEMS	UK SMALL ECOSYSTEM		UK HEDGEROW
ECOSYSTEMS	TROPICAL RAINFOREST	AMAZON RAINFOREST	
HOT DESERTS	HOT DESERTS	THAR DESERT, INDIA	
RIVERS	UK RIVER VALLEY		RIVER TEES
RIVERS	UK FLOOD MANAGEMENT SCHEME		BOSCASTLE, CORNWALL
COASTS	UK COASTLINE		DORSET
COASTS	UK COASTAL MANAGEMENT SCHEME		HOLDERNESS COAST, EAST YORKSHIRE

GCSE GEOGRAPHY – KEY COMMAND WORDS

<u>Assess</u>	Make an informed judgement.	<u>Give</u>	Produce an answer from recall.
<u>Calculate</u>	Work out the value of something.	<u>Identify</u>	Name or otherwise characterise.
<u>Compare</u>	Identify similarities and differences.	<u>Justify</u>	Support a case with evidence.
<u>Complete</u>	Finish the task by adding to given information.	<u>Outline</u>	Set out main characteristics.
<u>Discuss</u>	Present key points about different ideas or strengths and weaknesses of an idea.	<u>State</u>	Express in clear terms.
<u>Evaluate</u>	Judge from available evidence.	<u>Suggest</u>	Present a possible case.
<u>Explain</u>	Set out purposes or reasons.	<u>To what extent</u>	Judge the importance or success of (strategy, scheme, project, etc).

WEATHER

HAZARDS

PUPIL REVISION BOOK



NAME

WEATHER HAZARDS KEY WORDS

Aerial photo		Equator	
Aid		Evacuation	
Atmosphere		Extreme weather	
Atmospheric circulation		Eye (of the storm)	
Cells		Eye wall	
Climate		Flood risk	
Climate change		Flood	
Coriolis effect		Global warming	
Cyclone		Grid reference	
Cyclone shelter		Heatwave	
Depressions		Hurricane	
Dredging		Immediate response	
Drought		Jet stream	
		Latitude	

WEATHER HAZARDS KEY WORDS

Long-term response		Trade winds	
Monitoring		Tropical storm (hurricane, cyclone, typhoon)	
Planning		Tropics	
Hazard prediction		Weather	
Pressure belts		Weather warning	
Primary effects		Weather hazard	
Protection			
Saffir-Simpson Scale			
Secondary effects			
Storm surge			

a. GLOBAL ATMOSPHERIC CIRCULATION

b. TROPICAL STORMS – FORMATION

OCEAN TEMPERATURE	LOCATION AROUND THE WORLD
FEATURES OF TROPICAL STORMS	

c. TROPICAL STORMS – CLIMATE CHANGE

STORM FREQUENCY	GLOBAL SEA TEMPERATURES

d. TROPICAL STORMS – EFFECTS AND RESPONSES

PRIMARY EFFECTS	SECONDARY EFFECTS
IMMEDIATE RESPONSE	LONG TERM RESPONSE

e. REDUCING THE EFFECTS OF TROPICAL STORMS

PREDICTION	PLANNING
PROTECTION	

f. UK WEATHER EVENTS

RAIN	WIND
SNOW AND ICE	THUNDERSTORMS
HAILSTORMS	HEATWAVES
DROUGHT	

**PAPER 1 – LIVING WITH THE
PHYSICAL ENVIRONMENT**

WEATHER HAZARDS

EXAMPLE

Use a named example of a tropical storm to show its effects and responses

TYPHOON HAIYAN, PHILIPPINES

LOCATION

FACTS

PRIMARY EFFECTS

SECONDARY EFFECTS

IMMEDIATE RESPONSE

LONG TERM RESPONSE

PAPER 1 – LIVING WITH THE PHYSICAL ENVIRONMENT	WEATHER HAZARDS
EXAMPLE	<p>An example of a recent extreme weather event in the UK to illustrate:</p> <ul style="list-style-type: none"> • causes • social, economic and environmental impacts • how management strategies can reduce risk.
SOMERSET FLOODS, 2014	

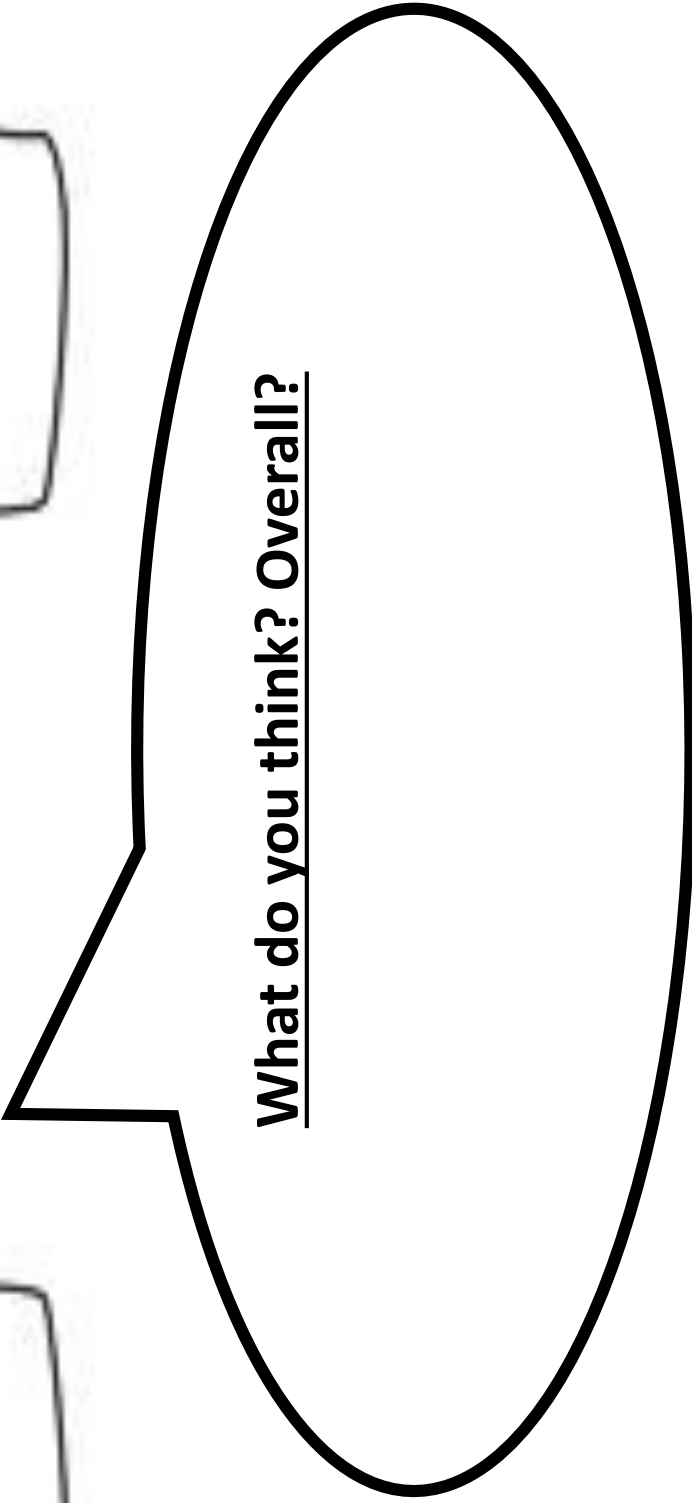
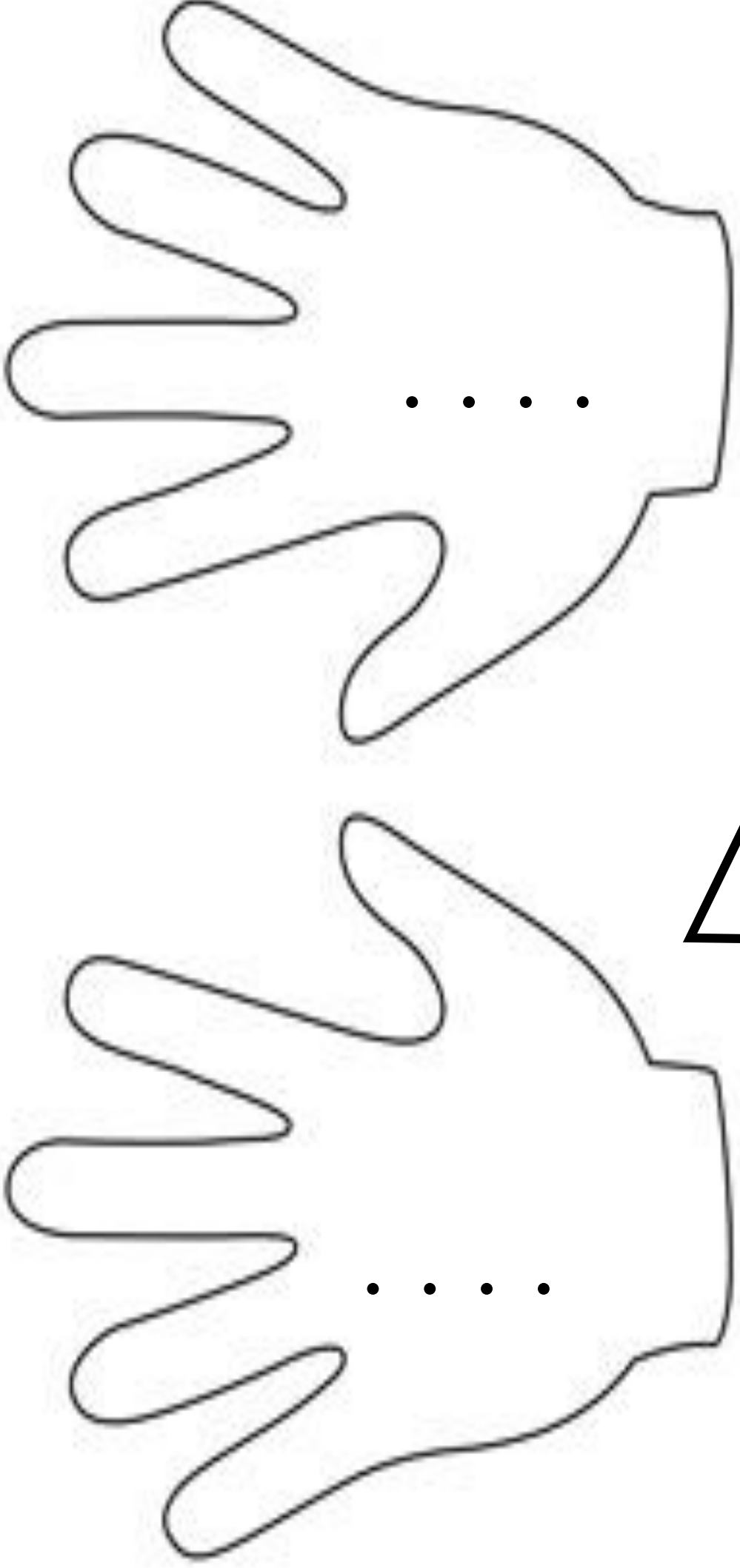
LOCATION OF SOMERSET LEVELS	CAUSES OF THE FLOODS
SOCIAL IMPACTS	ECONOMIC IMPACTS
ENVIRONMENTAL IMPACTS	MANAGEMENT STRATEGIES TO REDUCE FLOODING

'The weather of the UK is becoming more extreme.'
Discuss using evidence to support this statement
(6 Mark)

Discussion is likely to focus on the relative facts and non-facts

Write down 3 pieces of evidence that support the above statement and explain them.

What facts don't support this statement. You don't need as many for this!



CLIMATE CHANGE

PUPIL REVISION BOOK



NAME

CLIMATE CHANGE KEY WORDS

Adaptation		Greenhouse gases	
Alternative energy		Ice cores	
Atmosphere		Milankovitch cycles	
Axial tilt		Mitigation	
Carbon capture and storage (CCS)		Precession	
Carbon sinks		Quaternary period	
Climate change		Renewable energy	
Eccentricity		Solar flare	
Enhanced greenhouse effect		Sunspots	
Fossil fuel		Volcanic eruption	
Global warming			
Greenhouse effect			

a. CLIMATE CHANGE – THE EVIDENCE

QUATERNARY PERIOD	GLOBAL TEMPERATURES
GLOBAL TEMPERATURES AND CARBON DIOXIDE	

b. CLIMATE CHANGE – THE EVIDENCE

ICE AND SEDIMENT CORES	TEMPERATURE RECORDS
POLLEN ANALYSIS	TREE RINGS

c. CLIMATE CHANGE - NATURAL CAUSES

SOLAR OUTPUT	VOLCANIC ACTIVITY
ORBITAL CHANGES	

d. CLIMATE CHANGE – HUMAN CAUSES

FARMING	BURNING FOSSIL FUELS
DEFORESTATION	CEMENT PRODUCTION

e. THE GREENHOUSE EFFECT

--

g. CLIMATE CHANGE – THE EFFECTS (PEOPLE)

FARMING	POVERTY
URBAN AREAS	

f. CLIMATE CHANGE – THE EFFECTS (ENVIRONMENTAL)

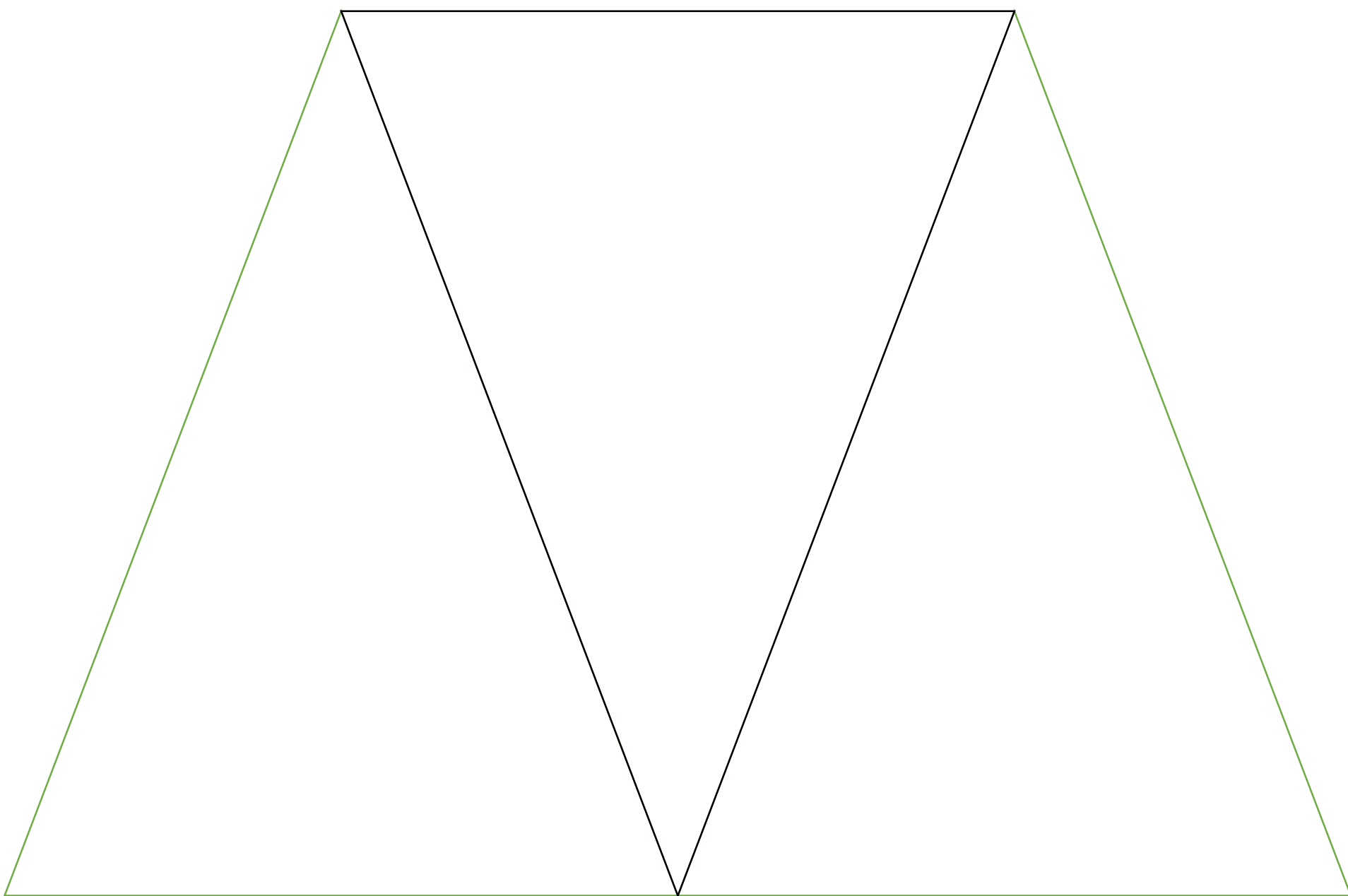
CHANGING WEATHER PATTERNS	RISING SEA LEVELS
CORAL REEFS	RISING TEMPERATURES
INCREASE IN DISEASE	

h. MANAGING CLIMATE CHANGE (MITIGATION STRATEGIES)

CARBON CAPTURE	PLANTING TREES
ALTERNATIVE ENERGY PRODUCTION	INTERNATIONAL AGREEMENTS
CHANGING AGRICULTURAL SYSTEMS	MANAGING WATER SUPPLY
COPING WITH RISING SEA LEVELS	

Choose either the risk of reduced water supply or rising sea levels, evaluate the strategies used to manage them. (6 Marks)

“evaluate”, which means to consider a mix of



NATURAL HAZARDS

PUPIIL REVISION BOOK



NAME

NATURAL HAZARDS KEY WORDS

Atmospheric hazards		Social impact	
Drought		Tropical storm (hurricane, cyclone, typhoon)	
Earthquake		Tsunami	
Fatalities		Urbanisation	
River flood		Volcano	
Geological hazards			
Hazard risk			
Landslides			
Mudflow			
Natural disaster			
Natural hazard			
Poverty			

a. NATURAL EVENT vrs NATURAL HAZARDS

NATURAL EVENT	NATURAL HAZARDS
METEOROLOGICAL	GEOLOGICAL

c. PLATE TECTONICS

PLATE TECTONICS	CRUST
OCEANIC PLATE	CONTINENTAL PLATE

b. FACTORS AFFECTING NATURAL HAZARDS

VULNERABILITY	CAPACITY TO COPE
POVERTY	NATURE OF NATURAL HAZARD

d. TYPES OF PLATE BOUNDARIES (PLATE MARGINS)

DESTRUCTIVE	CONSTRUCTIVE
CONSERVATIVE	CONVECTION CURRENTS

e. EARTHQUAKES

LOCATION TO PLATE MARGINS	RICHTER SCALE
MERCALLI SCALE	

g. VOLCANOES EFFECTS AND RESPONSES

PRIMARY EFFECTS	SECONDARY EFFECTS
IMMEDIATE RESPONSE (SHORT TERM)	LONG TERM RESPONSE

f. EARTHQUAKES EFFECTS AND RESPONSES

PRIMARY EFFECTS	SECONDARY EFFECTS
IMMEDIATE RESPONSE (SHORT TERM)	LONG TERM RESPONSE

h. LIVING WITH TECTONIC HAZARDS EARTHQUAKES

MONITORING	PREDICTION
PROTECTION	PLANNING

i. LIVING WITH TECTONIC HAZARDS VOLCANOES

MONITORING	PREDICTION
PROTECTION	PLANNING

j. LIVING WITH TECTONIC HAZARDS

GEOTHERMAL ENERGY	TOURISM
POVERTY	FARMING

PAPER 1 – LIVING WITH THE PHYSICAL ENVIRONMENT

NATURAL HAZARDS

EXAMPLE

Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth.

NEPAL 2015 vrs CHILE 2010

NEPAL

CHILE

EFFECTS

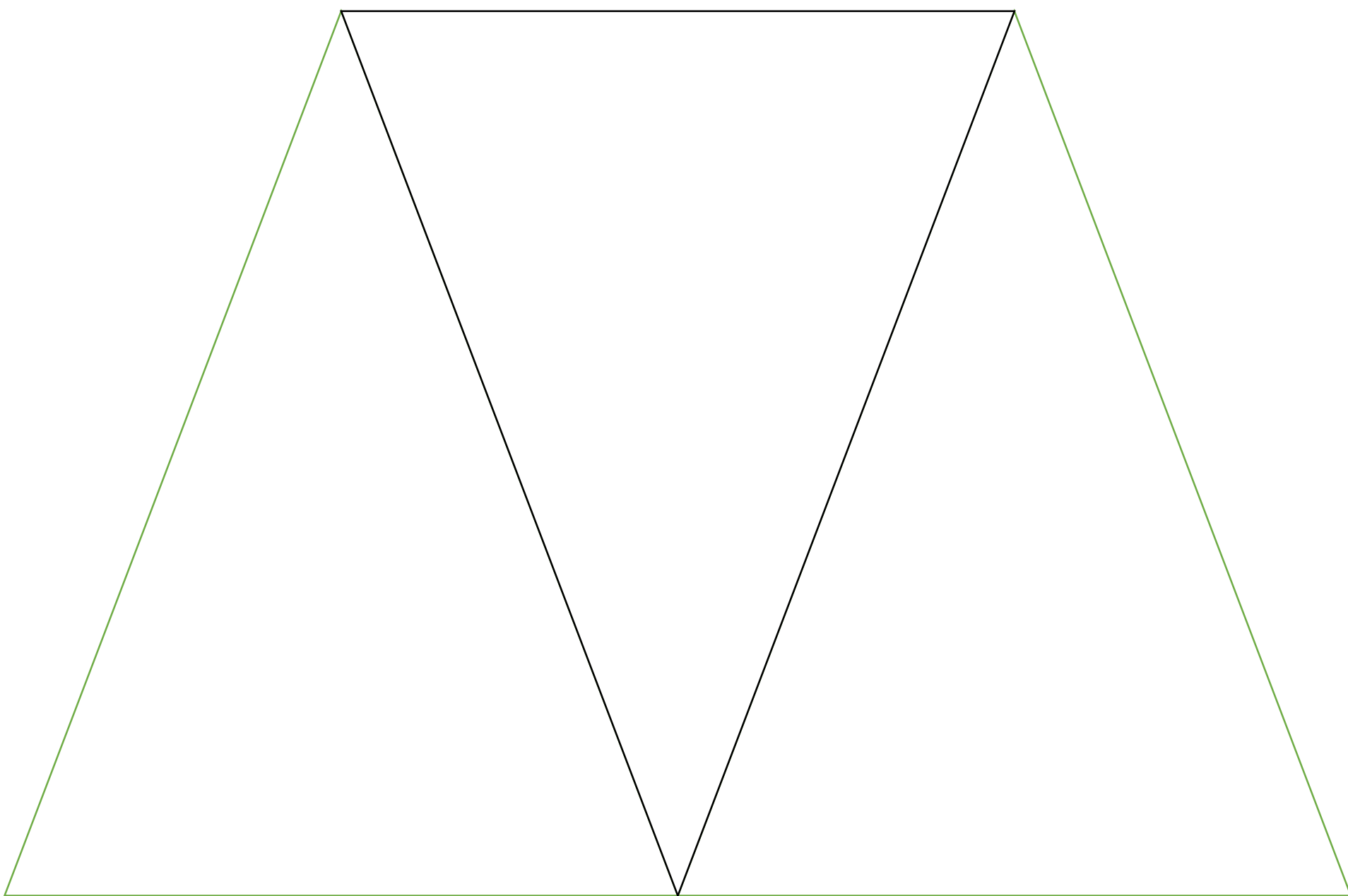
EFFECTS

RESPONSES

RESPONSES

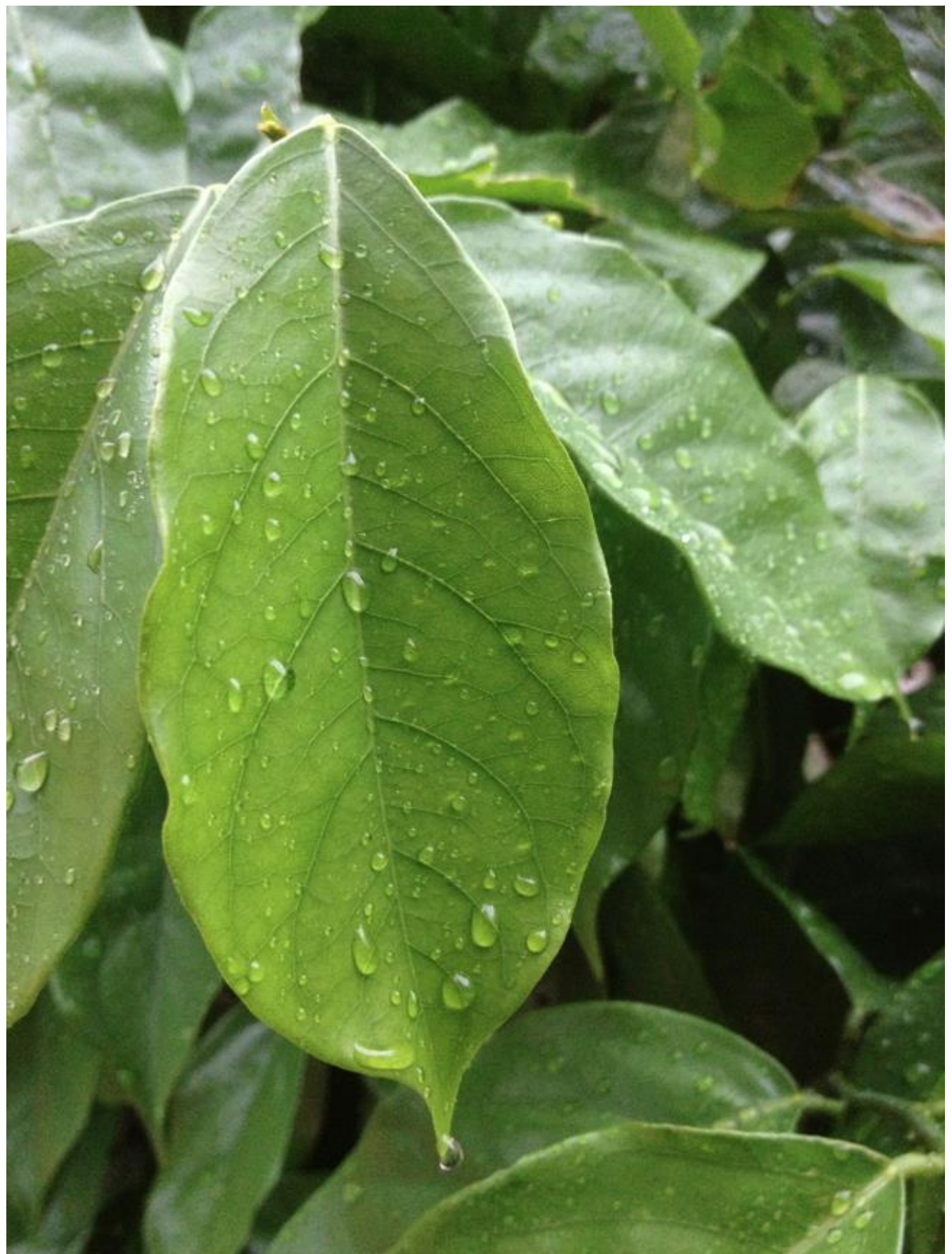
With the use of a named example, **justify** why primary effects are more significant than secondary effects. (9 Marks)

so answers should reach a conclusion and substantiate the choice made.



ECOSYSTEMS

PUPIL REVISION BOOK



NAME

ECOSYSTEMS KEY WORDS

Abiotic		Achuar tribe	
Biome		Biodiversity	
Biotic		Canopy	
Component		Carbon sink	
Consumer		Climate	
Decomposer		Climate change	
Ecosystem		Conservation	
Food chain		Debt reduction	
Food web		Deforestation	
Global atmospheric circulation		Ecotourism	
Global ecosystems		Equator	
Lines of latitude		Global warming	
Nutrient cycle		Hardwood	
Producer		Indigenous tribes	

ECOSYSTEMS KEY WORDS

Infertile soil

International agreements

Leaching

Mineral extraction

Oil palm

Protection

Selective logging

Slash and burn

Soil erosion

Subsistence farming

Sustainability

Transmigration

Tropical rainforest

a. ECOSYSTEMS ARE LIVING AND NON LIVING

BIOTIC /ABIOTIC	PRODUCER
CONSUMER	DECOMPOSER

b. GLOBAL BIOMES (ECOSYSTEMS)

POLAR	TUNDRA
TROPICAL RAINFORESTS	GRASSLANDS
DECIDUOUS FOREST	HOT DESERTS

c. TROPICAL RAINFORESTS

SOIL	CLIMATE
PLANTS	PEOPLE
ANIMALS	

d. RAINFOREST BIODIVERSITY

BIODIVERSITY	RAINFOREST WATER CYCLE
NUTRIENT CYCLE	

e. Tropical Rainforests Adaptations

PLANTS	ANIMALS
---------------	----------------

f. DEFORESTATION (CAUSES)

POPULATION PRESSURE	ENERGY DEVELOPMENTS
COMMERICAL FARMING	COMMERCIAL LOGGING
SUBSISTENCE FARMING	MINERAL EXTRACTION

g. DEFORESTATION

ENVIRONMENTAL	ECONOMIC
----------------------	-----------------

h. RATES OF DEFORESTATION

--

i. TROPICAL RAINFORESTS SUSTAINABLE MANAGEMENT

--

j. SUSTAINABLE MANAGEMENT

SELECTIVE LOGGING	REPLANTING
ECOTOURISM	INTERNATIONAL HARDWOOD AGREEMENTS

k. SUSTAINABLE MANAGEMENT

EDUCATION	REDUCING DEBT
CONSERVATION	

AMAZON RAINFOREST

CASE STUDY

Changing rates of deforestation.

A case study of a tropical rainforest to illustrate:

causes of deforestation –

- subsistence and commercial farming
- Logging
- road building
- mineral extraction
- energy development
- Settlement
- population growth

impacts of deforestation –

- economic development
- soil erosion
- contribution to climate change

a. AMAZON

LOCATION	FACTS ABOUT DEFORESTATION IN THE AMAZON
----------	---

b. DEFORESTATION IN THE AMAZON

MINERAL EXTRACTION	COMMERCIAL FARMING
POPULATION PRESSURE	SUBSISTENCE FARMING
LOGGING	ROAD BUILDING
ENERGY	CATTLE FARMING

d. IMPACTS OF DEFORESTATION

Soil erosion	Loss of biodiversity
Contribution to climate change	

e. ECONOMIC DEVELOPMENT OF THE RAINFOREST

ECONOMIC GAINS	ECONOMIC LOSSES
----------------	-----------------

**PAPER 1 – LIVING WITH THE
PHYSICAL ENVIRONMENT**

ECOSYSTEMS

EXAMPLE

An example of a small scale UK ecosystem to illustrate the concept of interrelationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling.

UK HEDGEROW

BIOTIC

ABIOTIC

FOOD WEB

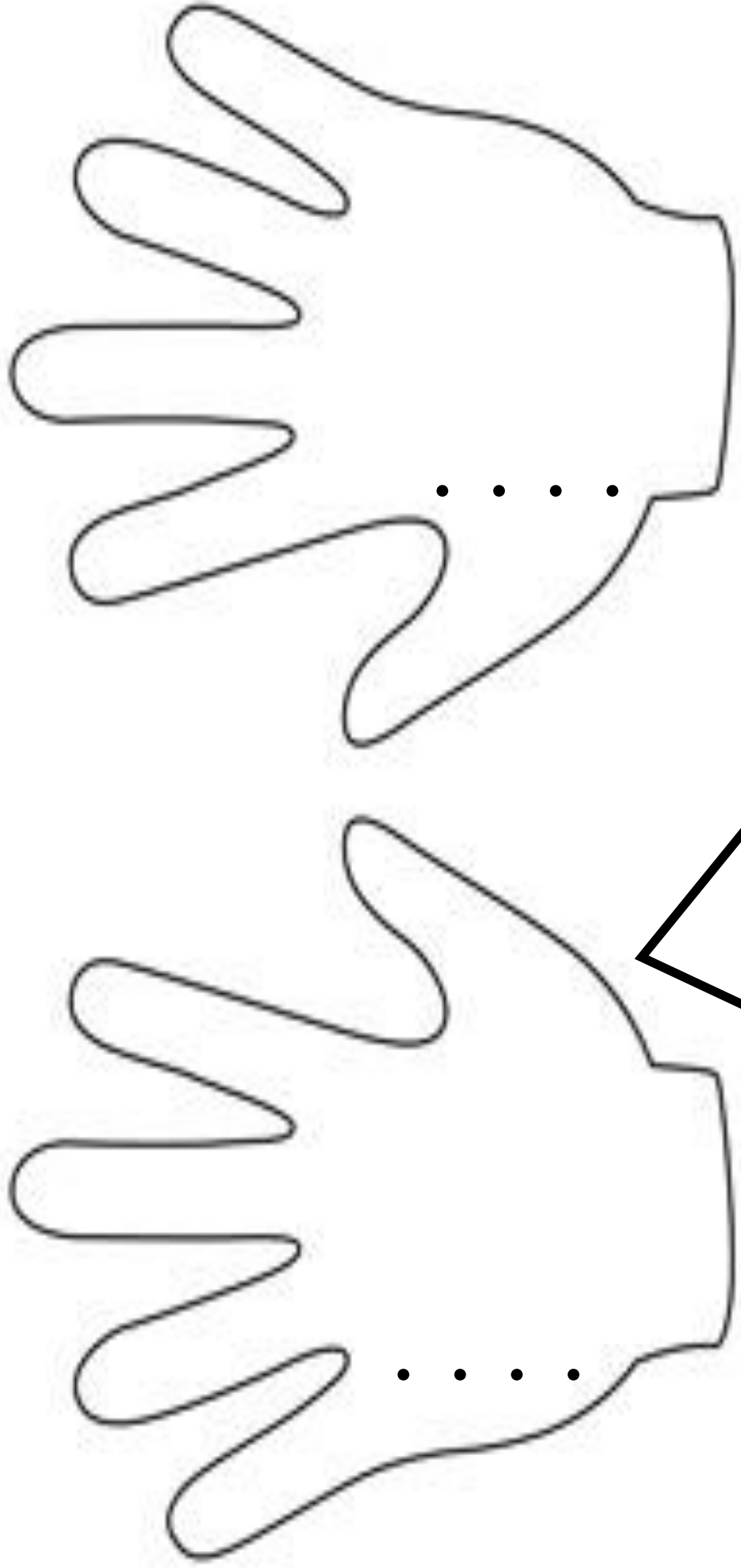
FOOD CHAIN

‘ The Rainforest is more valuable when left intact than destroyed’. Assess this statement using a named example.

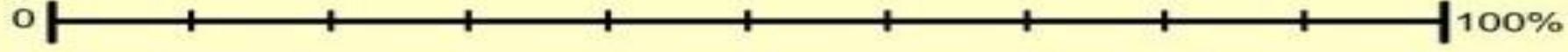
(9 Marks)

Write bullet [points to disagree with the statement. Make reference to the case study.

Use the Case Study on Malaysia to write bullet points to support this statement.



What do you think? Overall?



HOT DESERTS

PUPIL REVISION BOOK



NAME

HOT DESERTS KEY WORDS

Adaptation	
Appropriate technology	
Aquifer	
Arid	
Commercial farming	
Contour traps	
Evaporation	
Extreme temperatures	
Fuelwood	
Irrigation	
Johads	
Nocturnal	

HOT DESERTS KEY WORDS

Over-cultivation	
Overgrazing	
Ponding banks	
Salinisation	
Soil erosion	
Sustainability	
Tobas	

a. LOCATION OF DESERTS

--

b. CHARACTERISTICS OF DESERTS

CLIMATE	
SOIL	
PLANTS	
ANIMALS	
PEOPLE	

c. PLANT AND ANIMAL ADAPTATIONS

PLANTS
ANIMALS

d. HOT DESERTS ARE FRAGILE, INTERDEPENDENT ECOSYSTEMS

--

e. BIODIVERSITY IS HIGHER IN AREAS WITH WATER

--

f. DESERTIFICATION

WHAT IS DESERTIFICATION?	
CAUSES?	
HOW IT CAN BE REDUCED?	

HOT DESERT

THAR DESERT, INDIA

CASE STUDY

A case study of a hot desert to illustrate:

development opportunities in hot desert environments

- mineral extraction
- energy
- farming
- Tourism

challenges of developing hot desert environments:

- extreme temperatures
- water supply
- inaccessibility.

a. THAR DESERT, INDIA

WHERE IS THE THAR DESERT?

FACTS ABOUT THAR DESERT

--	--

b. OPPORTUNITIES FOR DEVELOPMENT IN THE THAR DESERT

MINERAL EXTRACTION

TOURISM

--	--

COMMERCIAL FARMING

ENERGY

--	--

c. CHALLENGES FOR DEVELOPMENT IN THE THAR DESERT?

EXTREME TEMPERATURES

WATER SUPPLY

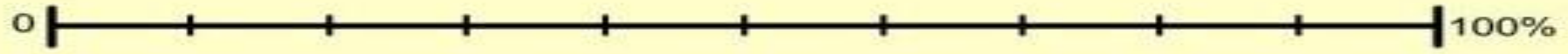
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SOURCES OF WATER

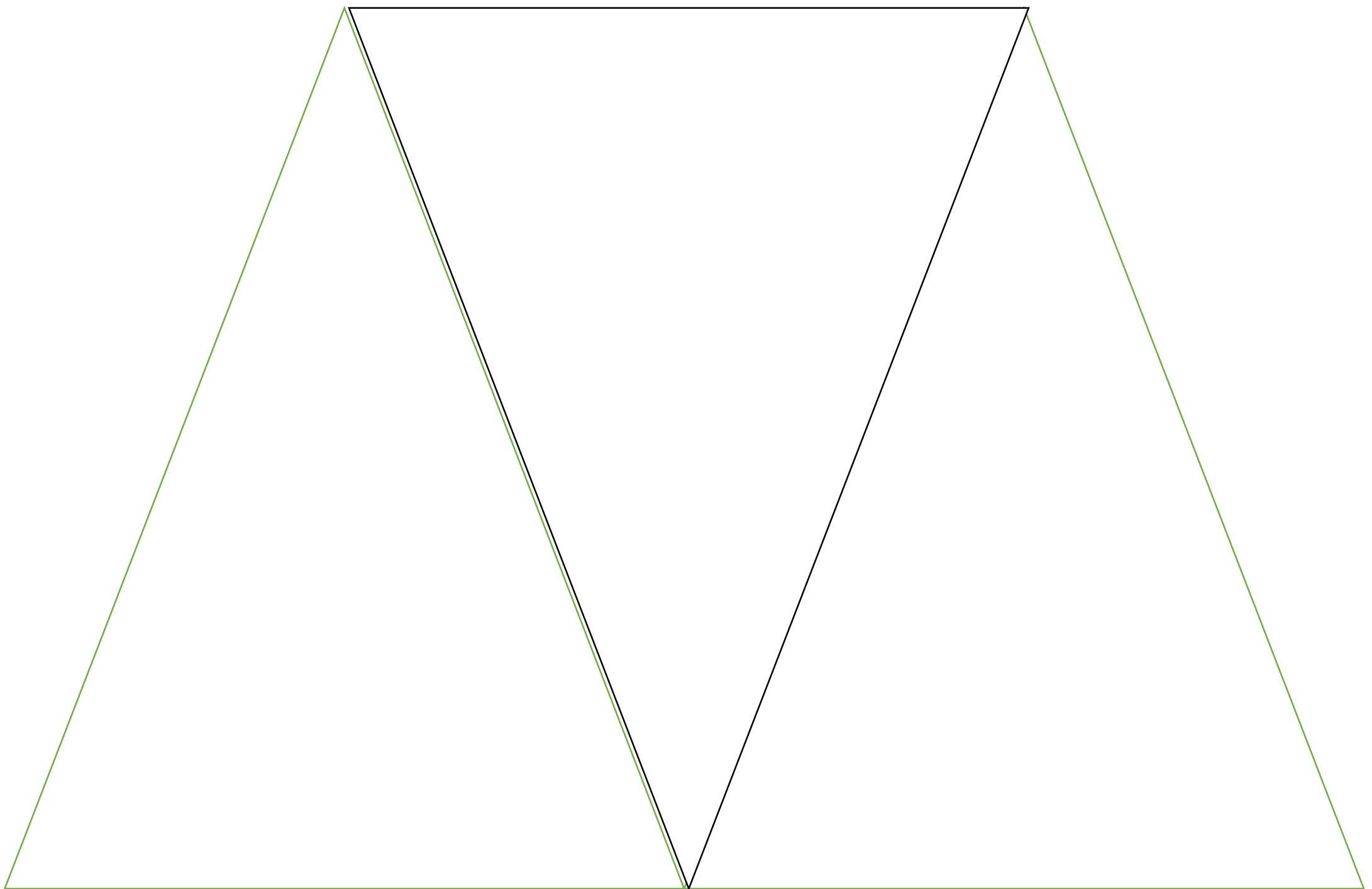
ACCESSIBILITY

--	--

To what extent is your chosen environment at risk from human activity? (9 Marks)



Step three: what do you think? Overall.



Step one: How is Svalbard at risk from human activity?

Step two: How is Svalbard being managed and not at risk from human activity?

RIVERS

PUPIL REVISION BOOK



NAME

RIVERS KEY WORDS

Abrasion		Deposition	
Aerial photo		Discharge	
Alluvium		Drainage basin	
Attrition		Embankment	
Benefits		Estuary	
Channel		Flash flood	
Channel straightening		Flood	
Confluence		Flood relief channel	
Costs		Flood risk	
Course		Flood storage areas	
Cross profile		Flood warnings	
Dam		Floodplain	
		Floodplain zoning	
		Flow control	

RIVERS KEY WORDS

Gorge		Plunge pool	
Gradient		Pools and riffles	
Hydraulic action		Precipitation	
Hydrograph		Prediction	
Interlocking spurs		Reservoir	
Knick point		River restoration	
Lateral erosion		Saltation	
Levee		Saltmarshes	
Load		Solution	
Long profile		Source	
Meander		Suspension	
Mouth		Thalweg	
Mudflats		Time lag	
Ox-bow lake		Traction	

RIVERS KEY WORDS

Transportation

Tributary

Velocity

Vertical erosion

V-shaped valley

Waterfall

Watershed

Wetlands

a. UPPER, MIDDLE AND LOWER RIVER

UPPER
MIDDLE
LOWER

b. EROSION

HYDRAULIC POWER	ABRASION
ATTRITION	SOLUTION

c. DEPOSITION

DEPOSITION

d. TRANSPORTATION

TRACTION	SALTATION
SUSPENSION	SOLUTION

e. RIVER LANDFORMS – WATERFALLS

WATERFALLS AND GORGES

f. RIVER LANDFORMS

MEANDERS

OX BOW LAKES

g. RIVER LANDFORMS FORMED BY DEPOSITION

LEVEES

FLOODPLAINS

ESTUARIES

h. HARD ENGINEERING

DAMS AND RESERVOIRS

CHANNEL STAIGTENING

EMBANBKMENTS

FLOOD RELIEF CHANNELS

DREDGING

i. SOFT ENGINEERING

FLOOD WARNINGS

PREPARATION

FLOOD PLAIN ZONING

PLANTING TREES

RIVER RESTORATION

DO NOTHING

I

j. RIVER DISCHARGE

DISCHARGE

FLOODING

k. RIVERS FLOODING

PROLONGED RAINFALL

GEOLOGY (ROCK TYPE)

HEAVY RAINFALL

RELIEF (SHAPE OF THE LAND)

LAND USE

DEFORESTATION

URBANISATION

PAPER 1 – LIVING WITH THE PHYSICAL ENVIRONMENT

RIVERS

EXAMPLE

An example of a river valley in the UK to identify its major landforms of erosion and deposition.

RIVER TEES

LOCATION

HIGH FORCE WATERFALL AND GORGE

RIVER MEANDERS

FLOOD PLAINS AND LEVEES

PAPER 1 – LIVING WITH THE PHYSICAL ENVIRONMENT

RIVERS

EXAMPLE

An example of a flood management scheme in the UK to show:

- why the scheme was required
- the management strategy
- the social, economic and environmental issues.

BOSCASTLE, CORNWALL

LOCATION OF BOSCASTLE

SOCIAL IMPACTS OF FLOODING

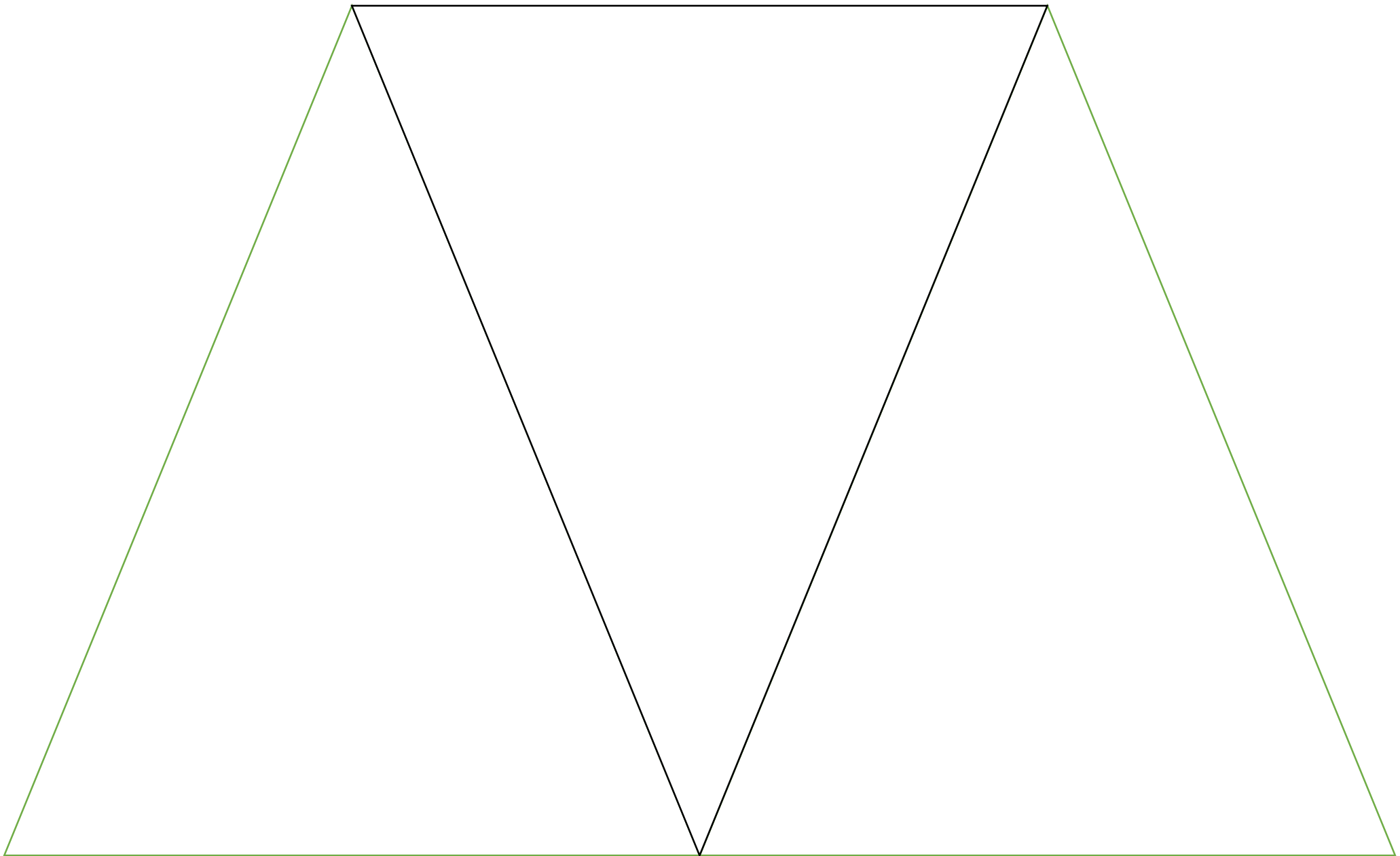
ECONOMIC IMPACTS OF FLOODING

ENVIRONMENTAL IMPACTS OF FLOODING

MANAGEMENT STRATEGY

Using a named example, evaluate the immediate and long-term responses to river flooding. (9 Marks)

“evaluate”, which means to consider a mix of



COASTS

PUPIL REVISION BOOK



NAME

COASTS KEY WORDS

Abrasion		Cavitation	
Adaptation		Chemical weathering	
Aerial photo		Cliff	
Arch		Coastal management	
Attrition		Coastal realignment	
Backwash		Concordant coastline	
Bar		Constructive waves	
Barrier beach		Corrosion	
Bay		Deposition	
Beach		Destructive waves	
Beach nourishment		Discordant coastline	
Berm		Dune	
Biological weathering		Dune fencing	
Carbonation			
Cave			

COASTS KEY WORDS

Dune regeneration		Marram grass	
Erosion		Mass movement	
Fault		Mechanical weathering	
Fetch		Mudflats	
Freeze-thaw weathering		Mudflow	
Gabions		OS map	
Geological structure		Recurved end	
Grid reference		Reprofiling	
Groyne		Rock armour	
Headland		Rockfall	
Hydraulic power		Rotational slip	
Jurassic Coast		Salt weathering	
Landform		Saltation	
Landslide		Saltmarshes	
Longshore drift		Scree	
		Sea wall	

COASTS KEY WORDS

Sliding	
Solution	
Spit	
Stack	
Suspension	
Swash	
Traction	
Transportation	
Tsunami	
Wave refraction	
Waves	
Wave-cut platform	

a. WEATHERING

MECHANICAL	CHEMICAL
MASS MOVEMENT	

b. EROSION

HYDRAULIC POWER	ABRASION
ATTRITION	SOLUTION

c. DEPOSITION

DEPOSITION	SAND BEACHES
SHINGLE BEACHES	

d. TRANSPORTATION

TRACTION	SALTATION
SUSPENSION	SOLUTION

e. WAVES

CONSTRUCTIVE WAVES	DESTRUCTIVE WAVES
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I

f. COASTAL LANDFORMS FORMED BY EROSION

WAVE CUT PLATFORMS	HEADLANDS AND BAYS
CAVE, ARCH AND STACK	

h. HARD ENGINEERING

SEA WALL	GABIONS
ROCK ARMOUR	GROYNES

g. LANDFORMS FORMED BY DEPOSITION

LONGSHORE DRIFT	SAND DUNES
SPITS AND BARS	

i. SOFT ENGINEERING

BEACH NOURISHMENT	DUNE REGENERATION
MARSH CREATION	MANAGED RETREAT

**PAPER 1 – LIVING WITH THE
PHYSICAL ENVIRONMENT**

COASTS

EXAMPLE

An example of a section of coastline in the UK to identify its major landforms of erosion and deposition.

DORSET COAST

LOCATION

ROCK TYPE

DURDLE DOOR

LULWORTH COVE

CHESIL BEACH

SWANAGE BAY

PAPER 1 – LIVING WITH THE PHYSICAL ENVIRONMENT

COASTS

EXAMPLE

An example of a coastal management scheme in the UK to show:

- the reasons for management
- the management strategy
- the resulting effects and conflicts.

HOLDERNESS COAST, EAST YORKSHIRE

HOLDERNESS LOCATION

ROCK TYPE

EROSION AT HOLDERNESS

SEA DEFENCES

MANAGEMENT STRATEGY

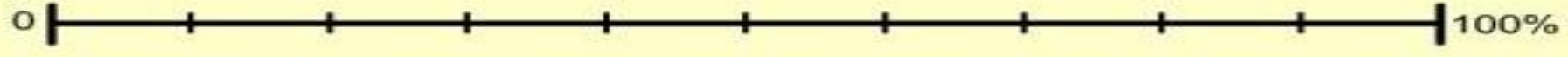
EFFECTS AND CONFLICTS

'Hard engineering strategies are effective in protecting the coastline.'

Do you agree with this statement?

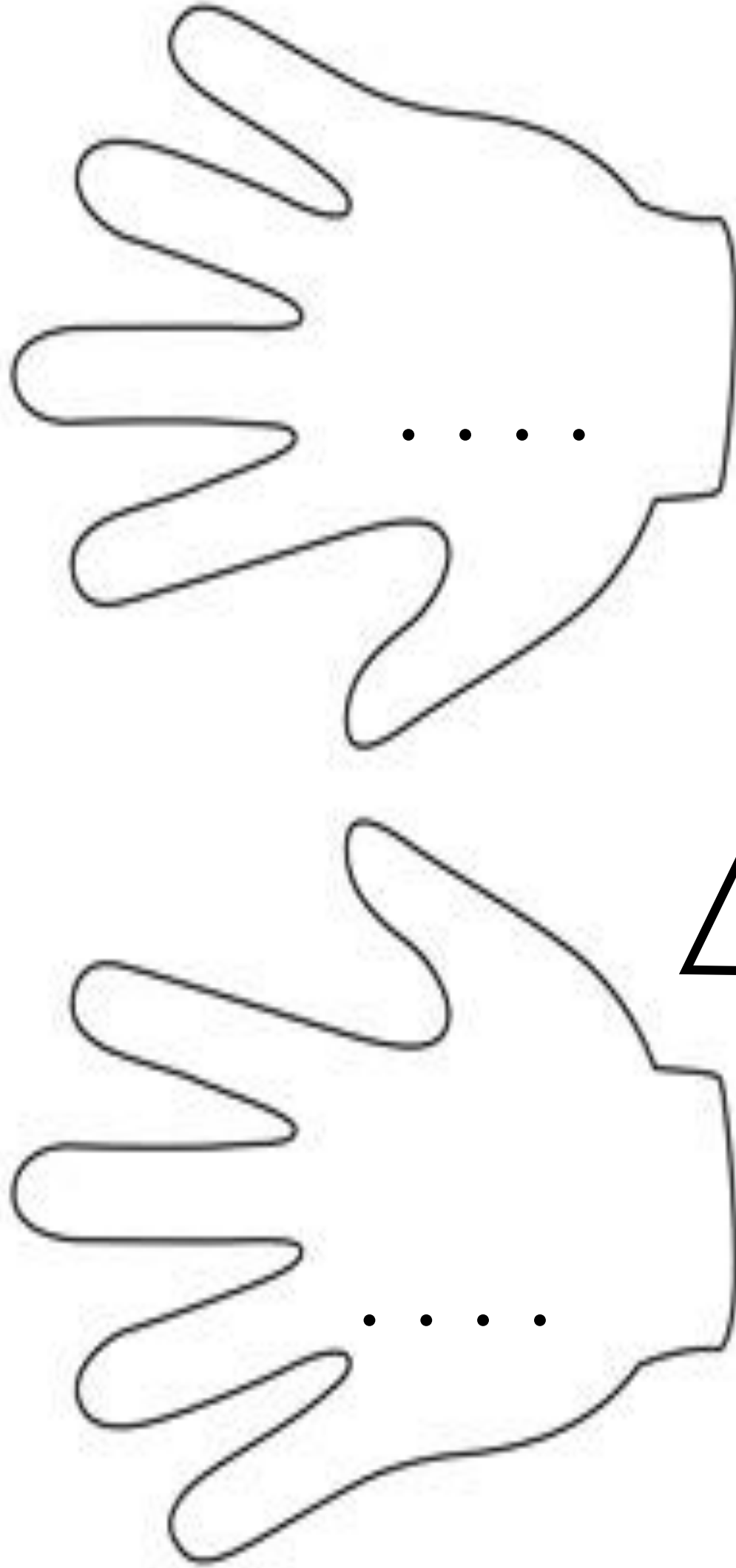
Explain your answer

[6 marks]



Write 4 bullet points that support the use of Hard engineering.

Write as many bullet points that disagree with the statement.



What do you think? Overall?