

Please check the examination details below before entering your candidate information

Candidate surname					Other names				
Centre Number					Candidate Number				

Pearson Edexcel Level 3 GCE

Tuesday 13 May 2025

Afternoon (Time: 1 hour 45 minutes)

Paper reference **8GE0/01**

Geography
Advanced Subsidiary
PAPER 1: Dynamic Landscapes

You must have:
 Resource Booklet (enclosed)
 Calculator, ruler

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer Question 1 in Section A **and EITHER** Section B **OR** Section C.
- Answer the questions in the spaces provided
 – *there may be more space than you need.*
- Any **calculations** must show **all** stages of **working out** and a **clear answer**.

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
 – *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

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Answer Section A and EITHER Section B OR Section C.

SECTION A

Tectonic Processes and Hazards

Answer ALL questions. Write your answers in the spaces provided.

You must use the Resource Booklet provided.

1 (a) Study Figures 1a and 1b in the Resource Booklet.

(i) Identify the **type** of plate margin shown at Y in Figure 1a.

(1)

(ii) Describe the plate movement shown in Figure 1a and Figure 1b.

(2)

(iii) Suggest **one** way plate tectonic theory helps explain the changing position of the plates shown in Figure 1a and Figure 1b.

(3)

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- (b) For a named location, explain **two** reasons it can be considered a multiple hazard zone.

(4)

Named location:

1

2



(c) Explain how the Pressure and Release (PAR) model helps to explain vulnerability to hazards.

(6)

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(12)



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(Total for Question 1 = 28 marks)

TOTAL FOR SECTION A = 28 MARKS



SECTION B

Glaciated Landscapes and Change

Do not answer Section B (Glaciated Landscapes and Change) if you have answered Section C (Coastal Landscapes and Change).

Indicate which question you are answering by marking a cross in the box ☐. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☐.

If you answer Section B, put a cross in the box ☐.

Some questions must be answered with a cross in a box ☐. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☐.

You must use the Resource Booklet provided.

- 2 (a) State **one** piece of evidence used to reconstruct former ice extent.

(1)

- (b) (i) Study Figure 2 in the Resource Booklet.

Calculate the interquartile range of glacial retreat from 2000–2007.

You **must** show your working.

(2)



P 7 2 9 9 0 A 0 7 3 2

- (ii) Suggest **one** reason why people might be concerned about the rate of retreat shown in Figure 2.

(3)

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- (c) There is a spectrum of approaches used to manage glaciated landscapes.

Explain **two** different approaches that are used.

(4)

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(d) Explain how proglacial landforms are formed by glacial meltwater.

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(e) Assess whether latitude is the main factor influencing the present-day distribution of ice cover.

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(Total for Question 2 = 28 marks)



3 (a) Study Figure 3 in the Resource Booklet.

A group of students were preparing to collect fieldwork data about glacial landform orientation on the Isle of Arran.

As part of their preparations they annotated an Ordnance Survey (OS) map.

- (i) Identify **one** reason to use an OS map like this.

(1)

- (ii) Identify the orientation of the cirque marked **X**.

(1)

- ☐ **A** North-East
- ☐ **B** North-West
- ☐ **C** South-East
- ☐ **D** South-West

- (iii) Calculate the difference in altitude between Waterfall at Sannox and Cir Mhòr.

(1)

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- (iv) Suggest **one** reason why the students should plan to use the recommended footpath up to Cir Mhòr.

(2)

The students used ICT to help manage, collate and process the information from their primary fieldwork.

- (v) Explain **two** ways students could use ICT.

(4)

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(b) You have carried out an investigation into glaciated landscapes and change.

Assess the value of the data collection methods used in your primary fieldwork.

(9)

Geographical enquiry question



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(Total for Question 3 = 18 marks)



Use your knowledge and understanding from across the course of study, along with the information in Figure 4, to answer this question.

4 Study Figures 4a, 4b, 4c and 4d in the Resource Booklet.

Evaluate the extent to which tectonic and glacial processes create more opportunities than challenges in Sangay National Park.

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(Total for Question 4 = 16 marks)

TOTAL FOR SECTION B = 62 MARKS



SECTION C

Coastal Landscapes and Change

Do not answer Section C (Coastal Landscapes and Change) if you have answered Section B (Glaciated Landscapes and Change)

Indicate which question you are answering by marking a cross in the box ☐. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☐.

If you answer Section C, put a cross in the box ☐.

Some questions must be answered with a cross in a box ☐. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☐.

You must use the Resource Booklet provided.

- 5** (a) State **one** piece of evidence showing that the sea level has changed.

(1)

- (b) (i) Study Figure 5 in the Resource Booklet.

Calculate the interquartile range of the rate of coastal retreat from 1873–2005.

You **must** show your working.

(2)

- (ii) Suggest **one** reason why people might be concerned about the rate of retreat shown in Figure 5.

(3)



- (c) Complex policy decisions have to be made about coastal management. One example of a policy is No Active Intervention.

Explain **two** different policy decisions that are made.

(4)

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(6)

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(e) Assess whether geology is the main factor influencing the rate of coastal recession.

(12)

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(Total for Question 5 = 28 marks)



6 (a) Study Figure 6 in the Resource Booklet.

A group of students were preparing to collect fieldwork data about coastal sediment and management at Seaford, on the south coast of England.

As part of their preparations they consulted a website with information about the local sediment cell.

- (i) Identify **one** reason to use this map of the sediment cell.

(1)

- (ii) Identify the direction of longshore drift at location X.

(1)

- ☐ **A** North-East
- ☐ **B** North-West
- ☐ **C** South-East
- ☐ **D** South-West

- (iii) Calculate the difference in the rate of sediment moved per year at locations X and Y.

(1)

..... m³

- (iv) Suggest **one** reason why students should plan ahead before visiting locations X and Y.

(2)

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- (v) The students used ICT to help manage, collate and process the information from their primary fieldwork.

Explain **two** ways students might have used ICT.

(4)

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(b) You have carried out an investigation into coastal landscapes and change.

Assess the value of the data collection methods used in your primary fieldwork.

(9)

Geographical enquiry question

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(Total for Question 6 = 18 marks)



Use your knowledge and understanding from across the course of study, along with the information in Figure 7, to answer this question.

7 Study Figures 7a, 7b, 7c and 7d in the Resource Booklet.

Evaluate the extent to which tectonic and coastal processes create more opportunities than challenges in the Galápagos Islands.

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(Total for Question 7 = 16 marks)

TOTAL FOR SECTION C = 62 MARKS
TOTAL FOR PAPER = 90 MARKS



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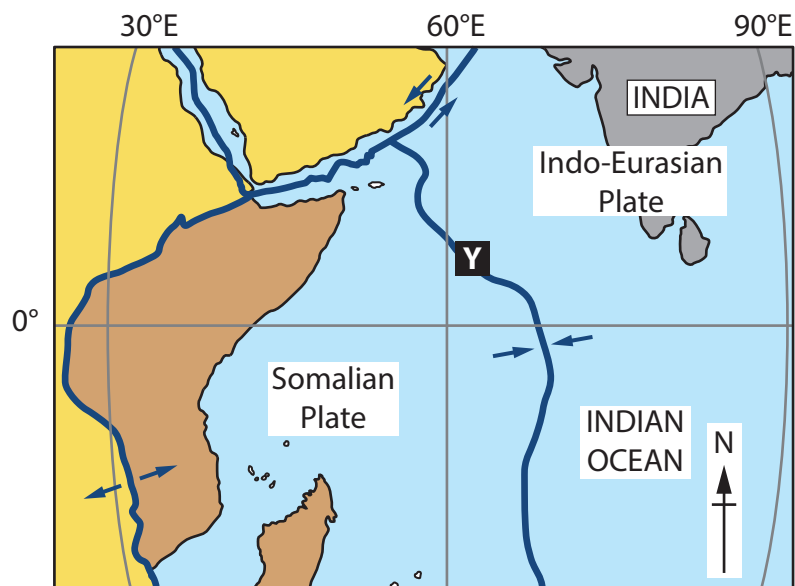
Pearson Edexcel Level 3 GCE**Tuesday 13 May 2025**

Afternoon (Time: 1 hour 45 minutes)

**Paper
reference****8GE0/01****Geography****Advanced Subsidiary****PAPER 1: Dynamic Landscapes****Resource Booklet****Do not return this Booklet with the question paper.***Turn over* ►**P72990A**©2025 Pearson Education Ltd.
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SECTION A

The following resource relates to Question 1.

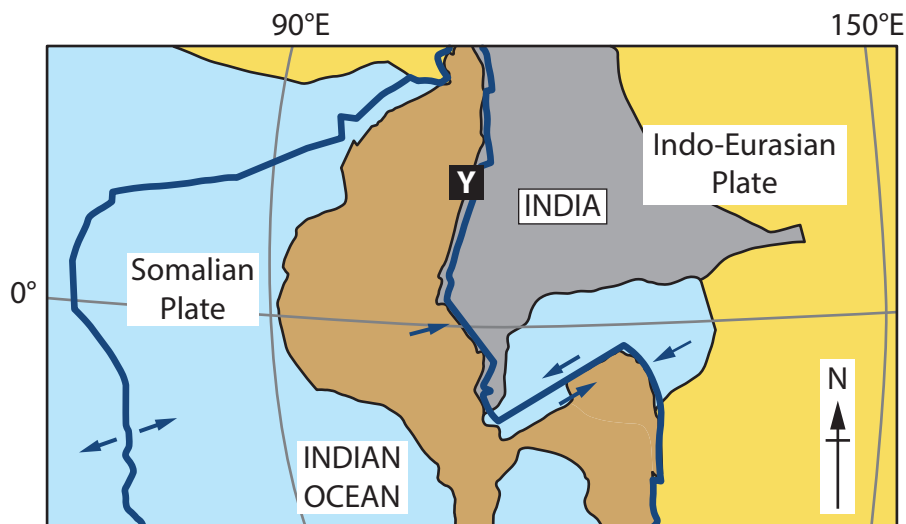


Key

- Plate movement
- Plate boundary

Figure 1a

Present day plate distribution and movements of the Somali and Indo-Eurasian Plates



Key

- Plate movement
- Plate boundary

Figure 1b

A projection of the distribution and movements of the Somali and Indo-Eurasian Plates in the long-term geological future

SECTION B

The following resources relate to Questions 2–4.

Glacier	Annual rate of retreat (metres per year)
A	9
B	15
C	17
D	20
E	27
F	44
G	74

Figure 2

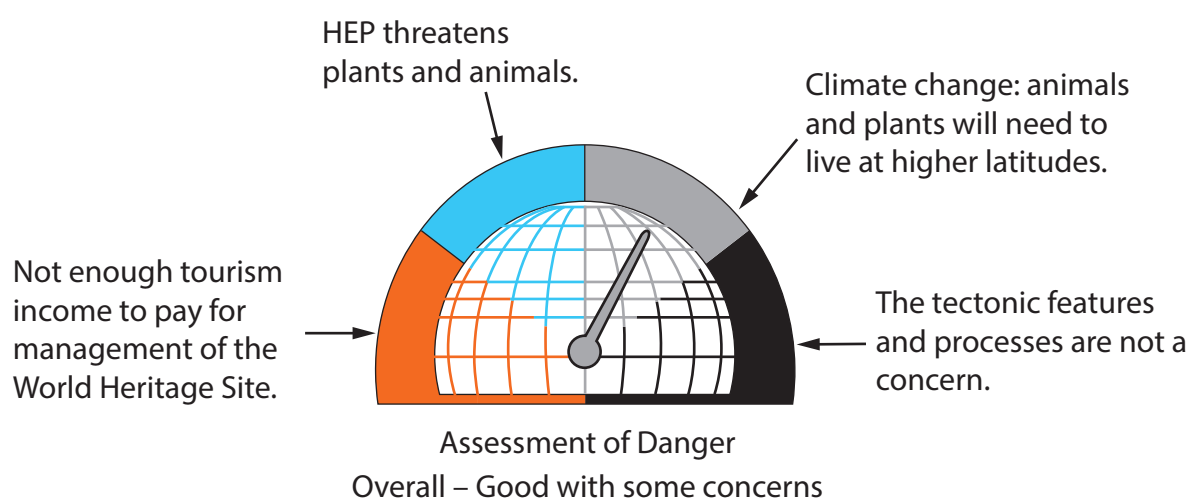
Annual rates of retreat for selected glaciers in the Himalayas from 2000–2007

The following resources relate to Question 4.

- Sangay National Park, Ecuador, (a World Heritage Site since 1983) is in the Andes Mountains, South America close to a destructive plate boundary. There are several major explosive volcanoes, some of which erupt frequently.
- There are three major zones, at different altitudes, each with different climates and landforms with different endangered wildlife species. The park is hard to access, reaching 5,300m above sea level. At the base is dense tropical rainforest; glacial processes operate in the highest zones.
- It is estimated there are less than 5,000 Quichuas-Puruhá people who live in the Mid and Higher Altitude zones as self-sufficient farmers; some additionally work as tour guides. The Shuar people live in the lower altitudes.
- The only major towns are outside of the Park, especially Banos – a geothermal spa town which is also the gateway to the Park and a major hub for tourism. Hydroelectric power (HEP) is expected to generate significantly more income to fund the area's World Heritage Status in the future.

Figure 4a

Information about the Sangay National Park



Key

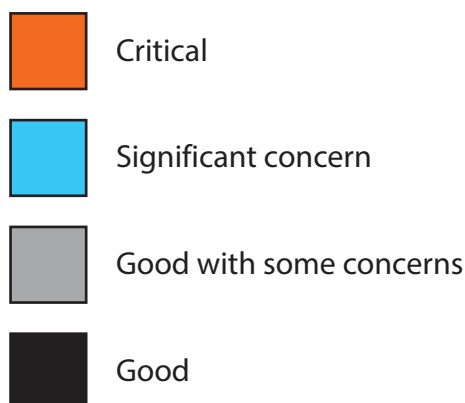


Figure 4b

Judgements about World Heritage Site status in 2020

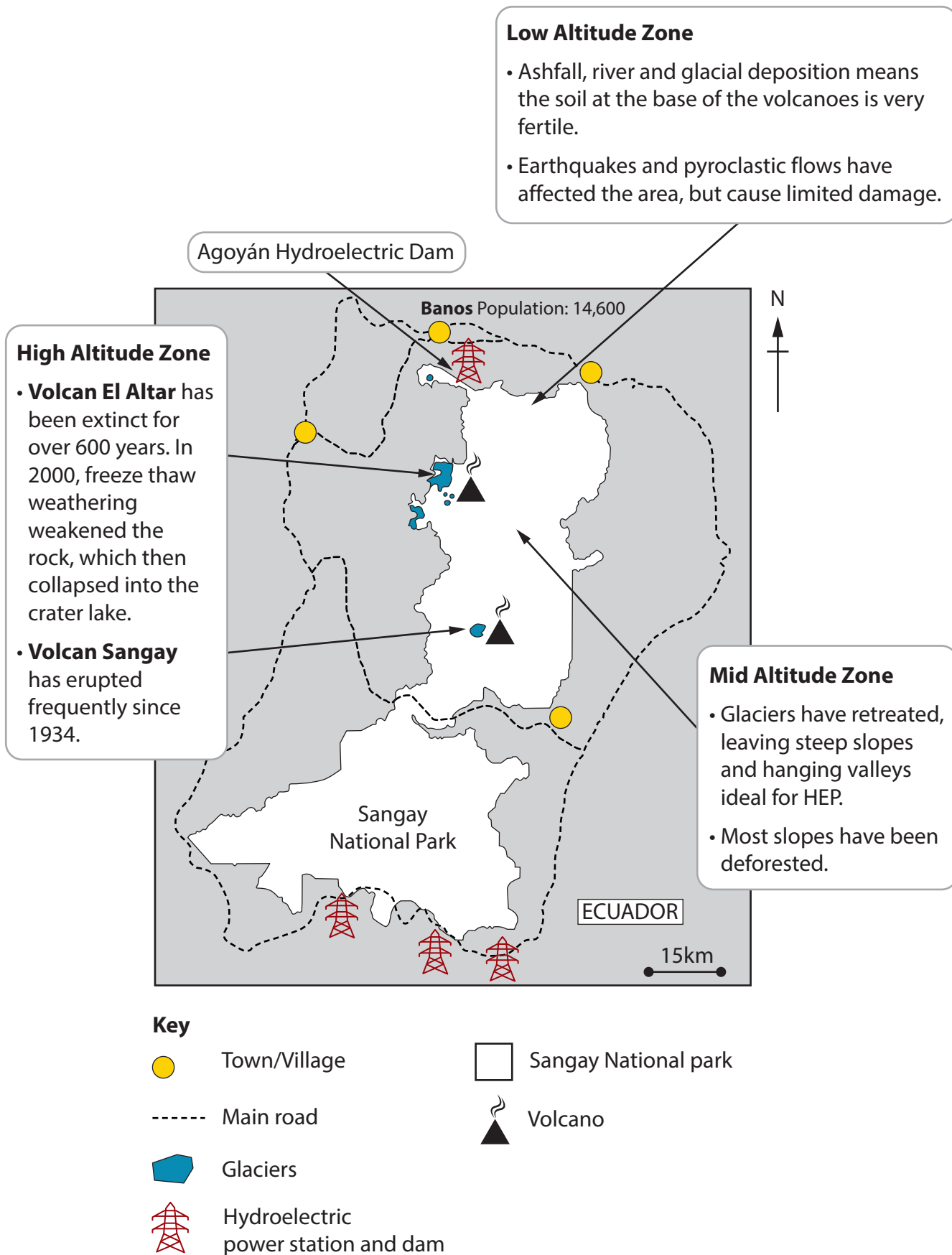


Figure 4c

Three different zones of Sangay National Park, Ecuador

High Altitude Zone



- Volcan El Altar is a glaciated volcano. When lake walls collapse, debris flows can bury local communities.
- The volcanoes in Ecuador are some of the highest in the world. Steep slopes and high precipitation mean river and glacial erosion are considerable.

Mid Altitude Zone



- Agoyán Hydroelectric Dam is one of eight new dams planned to be built in the glacial valleys.
- The income earned from this project can help sustain the World Heritage Site. The dams damage local ecosystems.

Low Altitude Zone



- Fertile soil and grasslands have formed as a result of ash fall. In Banos, locals live with the eruptions, frequently evacuating and returning.
- Income from tourists fluctuates; most are seeking adventure experiences or hiking. However volcanic activity causes numbers to drop.

Figure 4d

Three scenes from Sangay National Park

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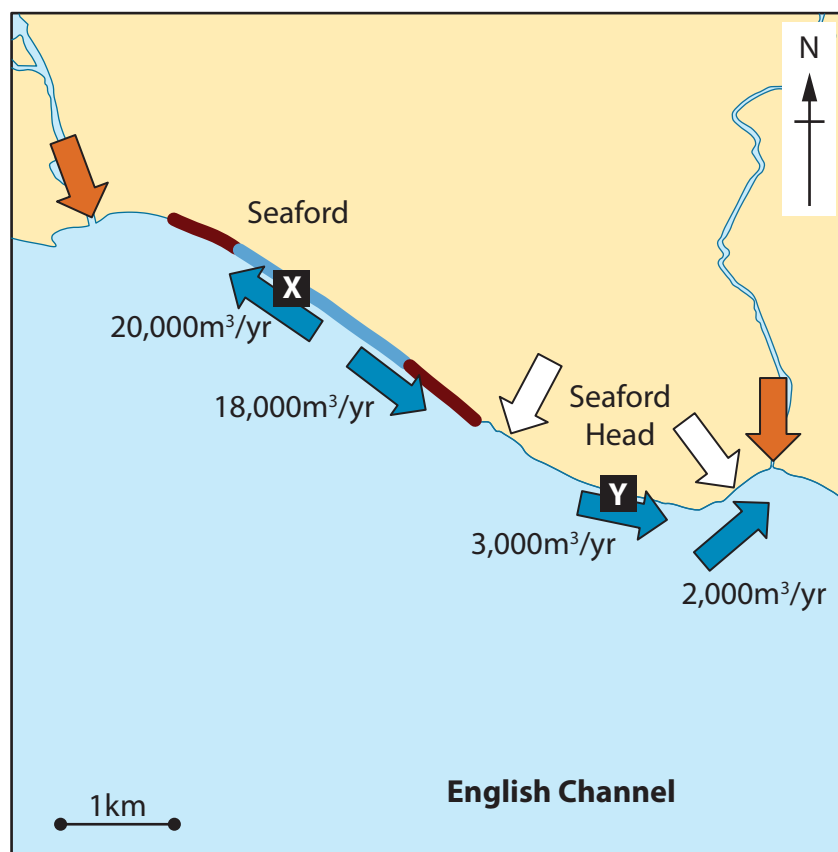
SECTION C

The following resources relate to Questions 5–7.

Time period	Rate of retreat (centimetres per year)
1873–1891	1
1892–1910	3
1911–1929	5
1930–1948	11
1949–1967	38
1968–1986	64
1987–2005	94

Figure 5

Rates of retreat for selected chalk cliffs in southern England



Key



River



Cliff erosion



River material



Longshore drift

2,000m³/yr Rate of sediment movement per year

Material removed for beach replenishment

Beach replenishment

Figure 6

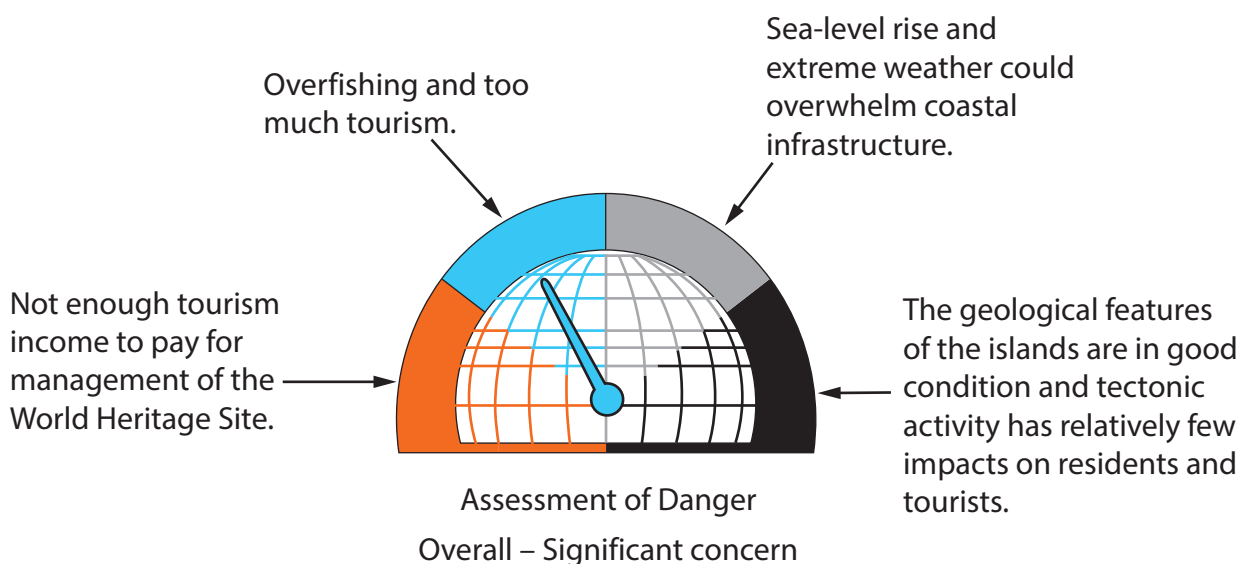
Local sediment cell for Seaford, south coast of England

The following resources relate to Question 7.

- The Galápagos Islands are in the Pacific Ocean, near South America, situated on the Nazca Plate which is moving over a hotspot. The islands are at different distances from the hotspot. The islands furthest east are the least tectonically active.
- Eruptions occur every 4–5 years. Minor earthquakes are frequent. Marine processes operate on all of the islands. In 2011 an earthquake off the coast of Japan initiated a tsunami wave that travelled as far as these islands.
- The area is a Marine Protected Area and World Heritage Site. The coastline of each island is unique; there are different endangered species on each, such as marine iguanas and giant tortoises.
- 30,000 people live on only 3% of the island area but get much of their income from approximately 170,000 tourists who visit the islands each year. Tourism has doubled over the last decade.

Figure 7a

Information about the Galápagos Islands



Key



Critical



Significant concern



Good with some concerns



Good

Figure 7b

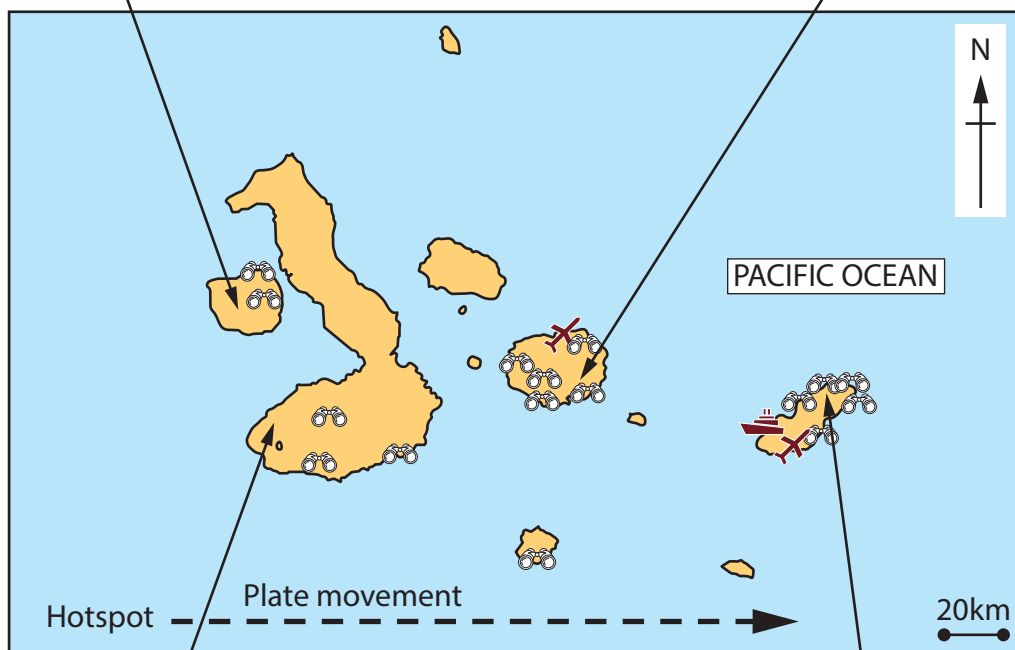
Judgement about World Heritage Site status in 2020

Fernandina (youngest island)

- The most recent volcanic eruption was in 2020.
- The unusual wildlife attracts large number of tourists.

Santa Cruz (most populated island)

- A long dormant shield volcano with many craters and exposed magma chambers.
- This island has many of the Galapagos's unique species.
- Puerto Ayora is the largest (and fastest growing) town.

**Isabela (largest island)**

- Lava from five volcanoes has fused together. Hikers walk to the top of the volcanoes.
- Divers visit the caves, bays and lagoons.
- In 1954 an earthquake uplifted the land by 5 metres, creating a new shallow shoreline.

San Cristóbal (oldest island)

- The last eruption here was over 1,000 years ago.
- The development of this island means new species of plants and animals arrive via the port and airports, causing a threat to existing wildlife.

Key

-  Major tourist sites
-  Airport
-  Port

Figure 7c**The Galápagos Islands, Ecuador**

Fernandina (youngest island)



- Lava flows from an eruption in 2009 destroyed much of the vegetation – rock pools dominate the coast.
- A tsunami in 2011 destroyed the breeding sites of local wildlife. A rise in sea temperature will reduce the nutrients available for marine species such as iguanas.

Isabela (largest island)



- Wind and waves from the Pacific Ocean erode the coastline creating headlands and bays.
- Mangroves protect part of the coastline from tsunami and stronger storm waves.

San Cristóbal (oldest island)



- The cooled lava forms steep cliffs with sandy beaches, popular with tourists who disturb wildlife and cause pollution.
- Coastal populations were largely unaffected by tsunami waves because of sea walls and well organised evacuation to higher ground.

Figure 7d

Three scenes from the Galápagos Islands

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