

Please check the examination details below before entering your candidate information

Candidate surname					Other names				
Centre Number					Candidate Number				

Pearson Edexcel International GCSE (9–1)

Wednesday 13 May 2026

Morning (Time: 1 hour 10 minutes) **Paper reference** **4GE1/01R**

Geography
PAPER 1: Physical geography

You must have:
 Resource Booklet (enclosed), calculator

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.
- In Section A, answer **two** questions from Questions 1, 2 and 3.
- In Section B, answer **one** question from Questions 4, 5 and 6.
- Answer the questions in the spaces provided
 – *there may be more space than you need.*
- Calculators may be used.

Information

- The total mark for this paper is 70.
- The marks for **each** question are shown in brackets
 – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.
- You should show all your working out with your answer.

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SECTION A

Answer TWO questions from this section.

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 ☒.

If you answer Question 1, put a cross in the box ☒ .

1 River environments

(a) Identify **one** river landform created by deposition.

(1)

- ☐ A gorge
- ☐ B levee
- ☐ C v-shaped valley
- ☐ D waterfall

(b) Identify the best definition of water deficit.

(1)

- ☐ A more water supply than demand
- ☐ B not enough water to meet demand
- ☐ C to supply crops with water using artificial methods
- ☐ D waste material carried away by sewers

(c) (i) Define the term **watershed**.

(1)

(ii) Study Figure 1a in the Resource Booklet.

Identify the river drainage basin feature which can be found at **X**.

(1)

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(d) Explain **two** types of mass movement that take place in river valley environments.

(4)

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(e) Explain **one** human cause of river water pollution.

(2)

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(f) Study Figure 1b in the Resource Booklet.

Suggest **two** negative impacts of using this dam as a flood prevention strategy.

You **must** refer to the resource in your answer.

(4)

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(g) Explain **one** way climate can affect rates of river erosion.

(3)

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(Total for Question 1 = 25 marks)



If you answer Question 2, put a cross in the box ☐.

2 Coastal environments

(a) Identify **one** coastal landform created by erosion.

(1)

- ☐ **A** bar
- ☐ **B** headland
- ☐ **C** spit
- ☐ **D** tombolo

(b) (i) Identify the best definition of coastal deposition.

(1)

- ☐ **A** dropping sediment
- ☐ **B** sediment moved by water
- ☐ **C** sediment moved by gravity
- ☐ **D** wearing away of land

(ii) Define the term **weathering**.

(1)

(iii) Explain the process of longshore drift.

(3)



(c) Explain **one** advantage of coastal soft engineering.

(2)

(d) Study Figure 2a in the Resource Booklet.

Suggest **two** reasons this shoreline management plan may need to be changed in the future.

You **must** refer to the resource in your answer.

(4)

1

2

(e) Study Figure 2b in the Resource Booklet.

Identify **one** transfer shown on the nutrient cycle.

(1)



(4)

(8)



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(Total for Question 2 = 25 marks)



If you answer Question 3, put a cross in the box ☐.

3 Hazardous environments

(a) Identify the best definition of a tectonic hazard.

(1)

- ☐ **A** hazard that occurs as a result of Earth crust movements
- ☐ **B** hazard that occurs as a result of extreme weather
- ☐ **C** hazard that occurs as a result of human actions
- ☐ **D** hazard that occurs when the climate becomes too hot

(b) (i) Identify **one** characteristic of a tropical cyclone.

(1)

- ☐ **A** crater
- ☐ **B** epicentre
- ☐ **C** trench
- ☐ **D** vortex

(ii) Define the term **Coriolis force**.

(1)

(iii) Explain how wind shear can affect the formation of tropical cyclones.

(2)

(c) Explain **one** reason for the distribution of tropical cyclones.

(3)

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

Suggest **one** advantage and **one** disadvantage of using earthquake hazard mapping.

You **must** refer to the resource in your answer.

(4)

advantage

disadvantage

(e) Study Figure 3b in the Resource Booklet.

Identify the type of hazard this scale is used to measure.

(1)



(4)

(8)

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(Total for Question 3 = 25 marks)

TOTAL FOR SECTION A = 50 MARKS



SECTION B**Geographical Enquiry**

Answer ONE question from this section.

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 ☒.

If you answer Question 4, put a cross in the box ☐ .

4 Investigating river environments

A group of students carried out an enquiry to investigate the similarities and differences between three rivers.

(a) Identify **one** advantage of having a hypothesis for this geographical enquiry.

(1)

- ☐ **A** cannot adapt to unexpected data
- ☐ **B** imply cause and effect relationship
- ☐ **C** increase bias in data
- ☐ **D** prevents research becoming unfocused

(b) State **one** type of sampling strategy the students could have used in their enquiry.

(1)

(c) Explain **one** advantage of using quantitative data in the students' enquiry.

(2)

(d) (i) Study Figure 4a in the Resource Booklet.

Calculate the **lower quartile** for the river velocity at site 4.

Give your answer to **one** decimal place.

Show your working below.

(2)

(ii) Study Figure 4a in the Resource Booklet.

Calculate the **interquartile range** for the river velocity at site 4.

Show your working below.

(1)

..... IQR



(e) Study Figure 4b in the Resource Booklet.

Plot the data for site 3 and site 7 from Figure 4b (shown in the Resource Booklet) to complete Figure 4c in the Question Paper.

(2)

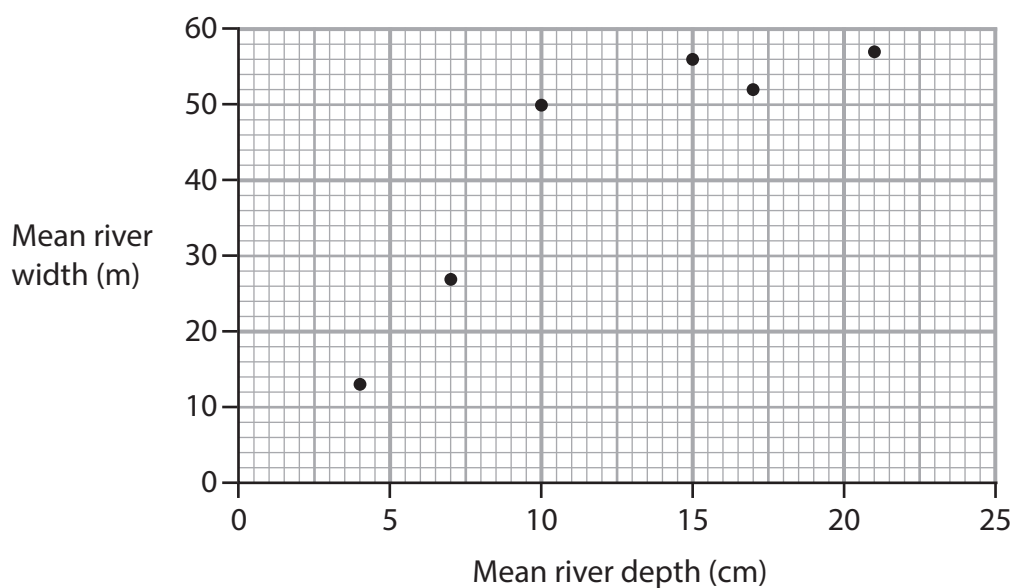


Figure 4c

(f) Explain **one** reason secondary data could have improved the reliability of the students' conclusions.

(3)

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- Evaluate how effective your data presentation techniques were in helping you to analyse your data and reach a conclusion.

(8)

Title of your geographical enquiry

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(Total for Question 4 = 20 marks)



If you answer Question 5, put a cross in the box ☐.

5 Investigating coastal environments

A group of students carried out an enquiry to investigate the influence of longshore drift on three beaches along the coast.

(a) Identify **one** advantage of having a hypothesis for this geographical enquiry. (1)

- ☐ **A** cannot adapt to unexpected data
- ☐ **B** imply cause and effect relationship
- ☐ **C** increase bias in data
- ☐ **D** prevents research becoming unfocused

(b) State **one** type of sampling strategy the students could have used in their enquiry. (1)

(c) Explain **one** advantage of using quantitative data in the students' enquiry. (2)



(d) (i) Study Figure 5a in the Resource Booklet.

Calculate the **lower quartile** for the beach profile (gradient) at site 4.

Give your answer to **one** decimal place.

Show your working below.

(2)

(ii) Study Figure 5a in the Resource Booklet.

Calculate the **interquartile range** for the beach profile (gradient) at site 4.

Show your working below.

(1)

..... IQR

(e) Study Figure 5b in the Resource Booklet.

Plot the data for site 3 and site 7 from Figure 5b (shown in the Resource Booklet) to complete Figure 5c in the Question Paper.

(2)

Power's roundness
index (class score)

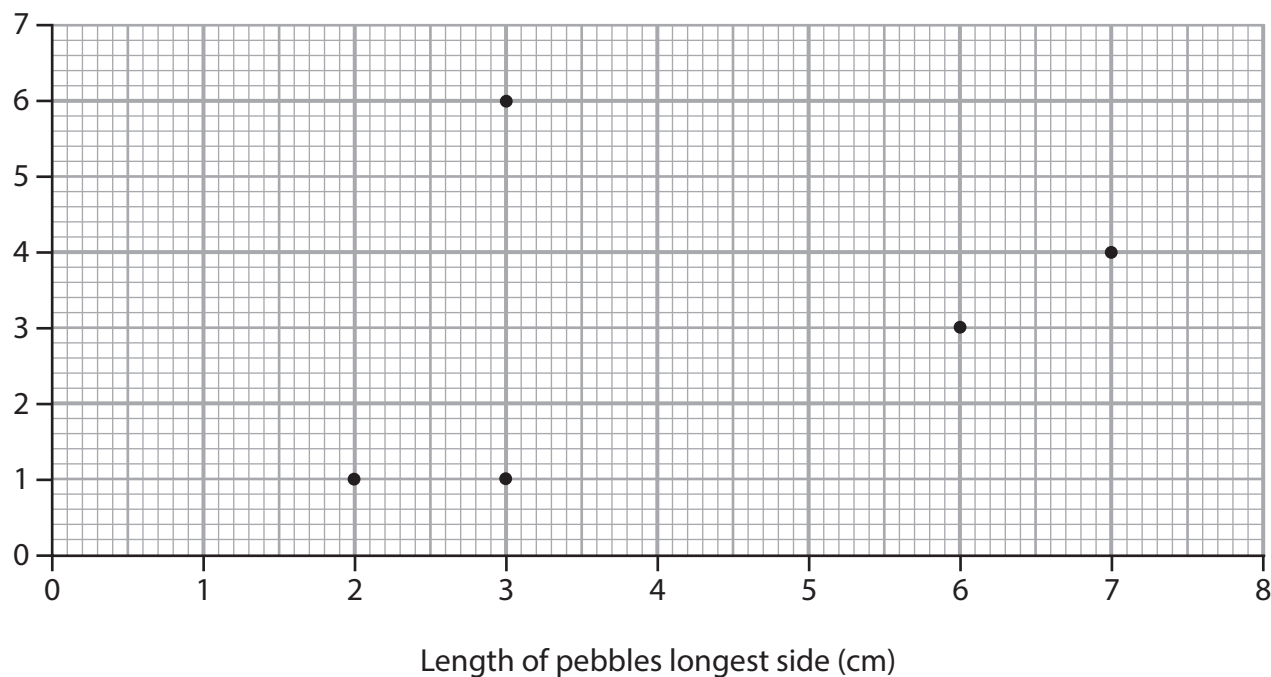


Figure 5c

(f) Explain **one** reason secondary data could have improved the reliability of the students' conclusions.

(3)

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- Evaluate how effective your data presentation techniques were in helping you to analyse your data and reach a conclusion.

(8)

Title of your geographical enquiry

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(Total for Question 5 = 20 marks)



If you answer Question 6, put a cross in the box ☐.

6 Investigating hazardous environments (weather hazards)

A group of students carried out an enquiry to investigate the similarities and differences in weather at three locations at risk from a tropical cyclone.

(a) Identify **one** advantage of having a hypothesis for this geographical enquiry.

(1)

- ☐ **A** cannot adapt to unexpected data
- ☐ **B** imply cause and effect relationship
- ☐ **C** increase bias in data
- ☐ **D** prevents research becoming unfocused

(b) State **one** type of sampling strategy the students could have used in their enquiry.

(1)

(c) Explain **one** advantage of using quantitative data in the students' enquiry.

(2)

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

Calculate the **lower quartile** for the temperature at site 4.

Give your answer to **one** decimal place.

Show your working below.

(2)

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

Calculate the interquartile range for the temperature at site 4.

Show your working below.

(1)

..... IQR



(e) Study Figure 6b in the Resource Booklet.

Plot the data for site 3 and site 7 from Figure 6b (shown in the Resource Booklet) to complete Figure 6c in the Question Paper.

(2)

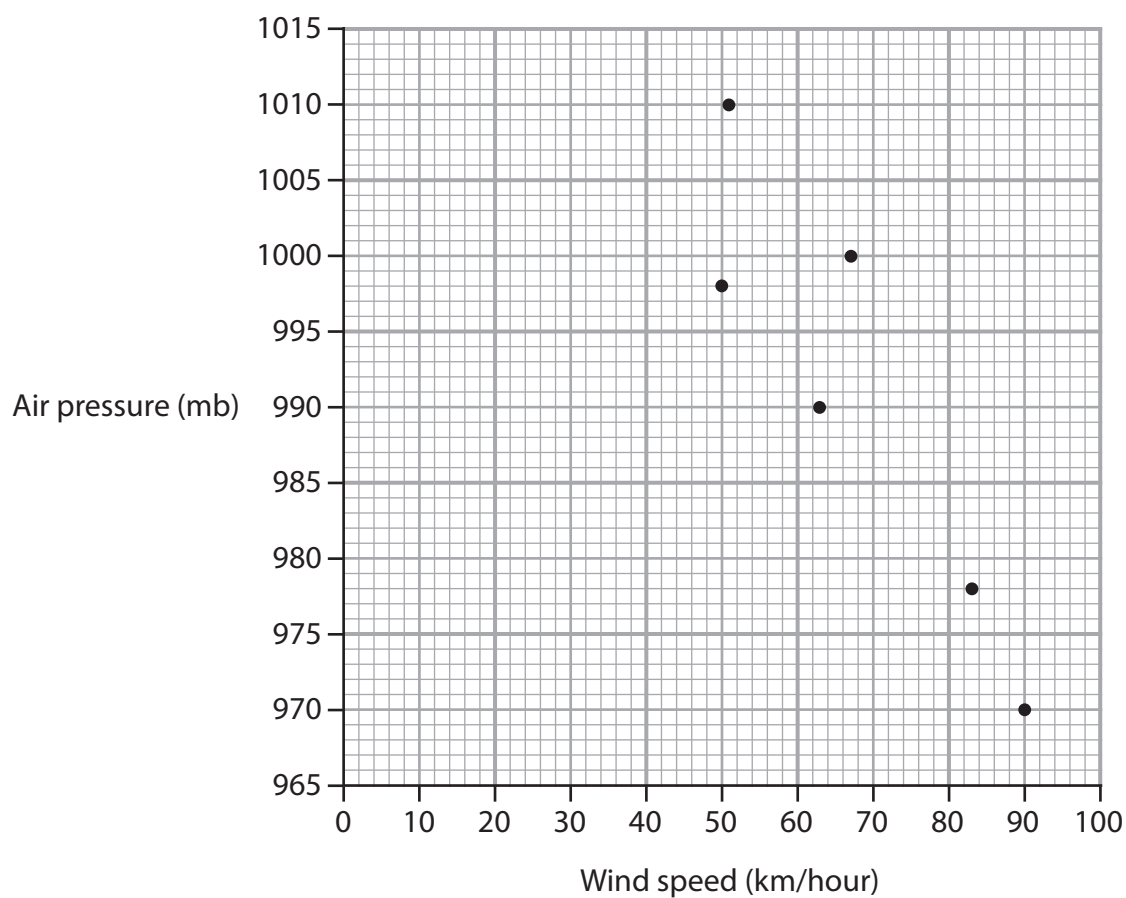


Figure 6c

(f) Explain **one** reason secondary data could have improved the reliability of the students' conclusions.

(3)

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- (g) You have studied a hazardous environment as part of your own geographical enquiry.

Evaluate how effective your data presentation techniques were in helping you to analyse your data and reach a conclusion.

(8)

Title of your geographical enquiry



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(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS
TOTAL FOR PAPER = 70 MARKS



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Morning (Time: 1 hour 10 minutes)

**Paper
reference**

4GE1/01R

Geography

PAPER 1: Physical geography

Resource Booklet

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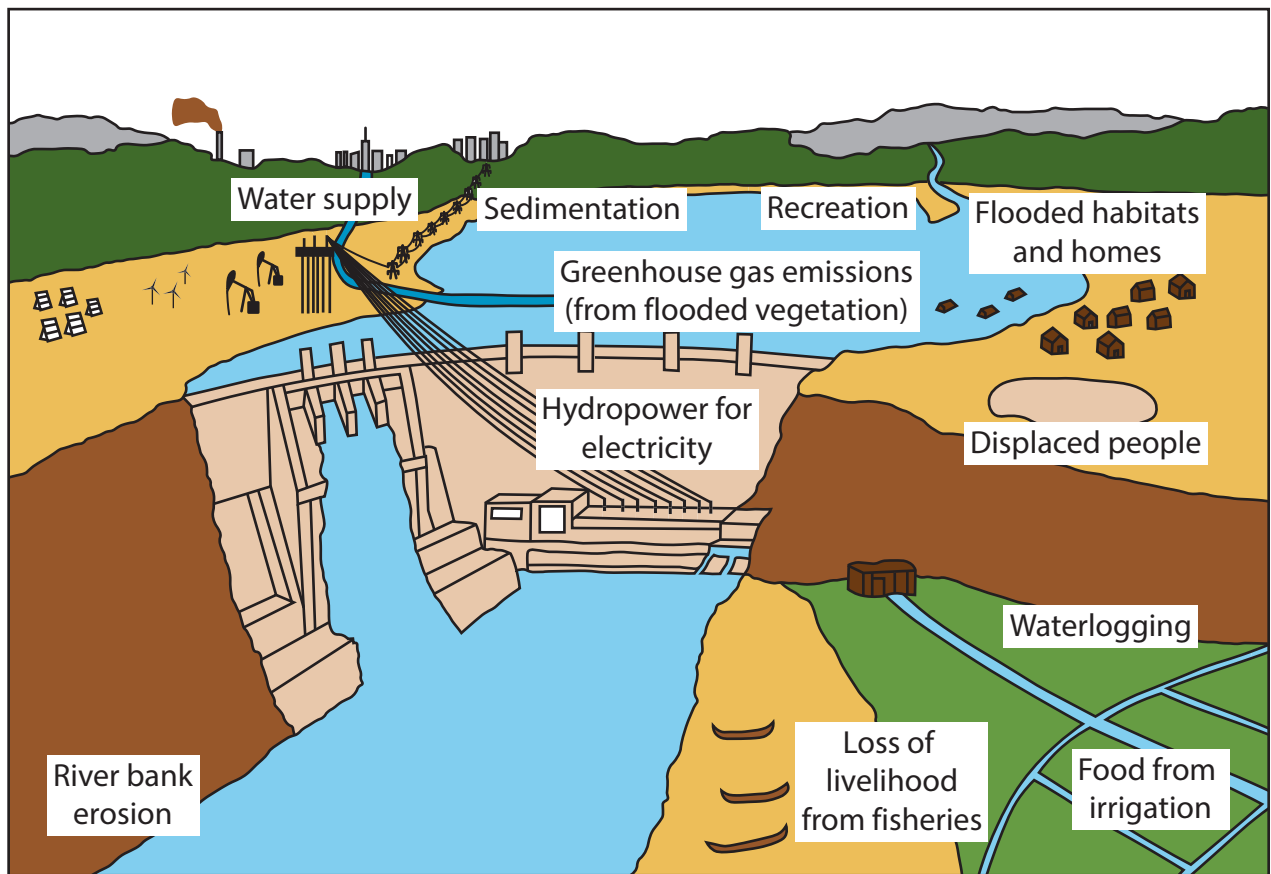
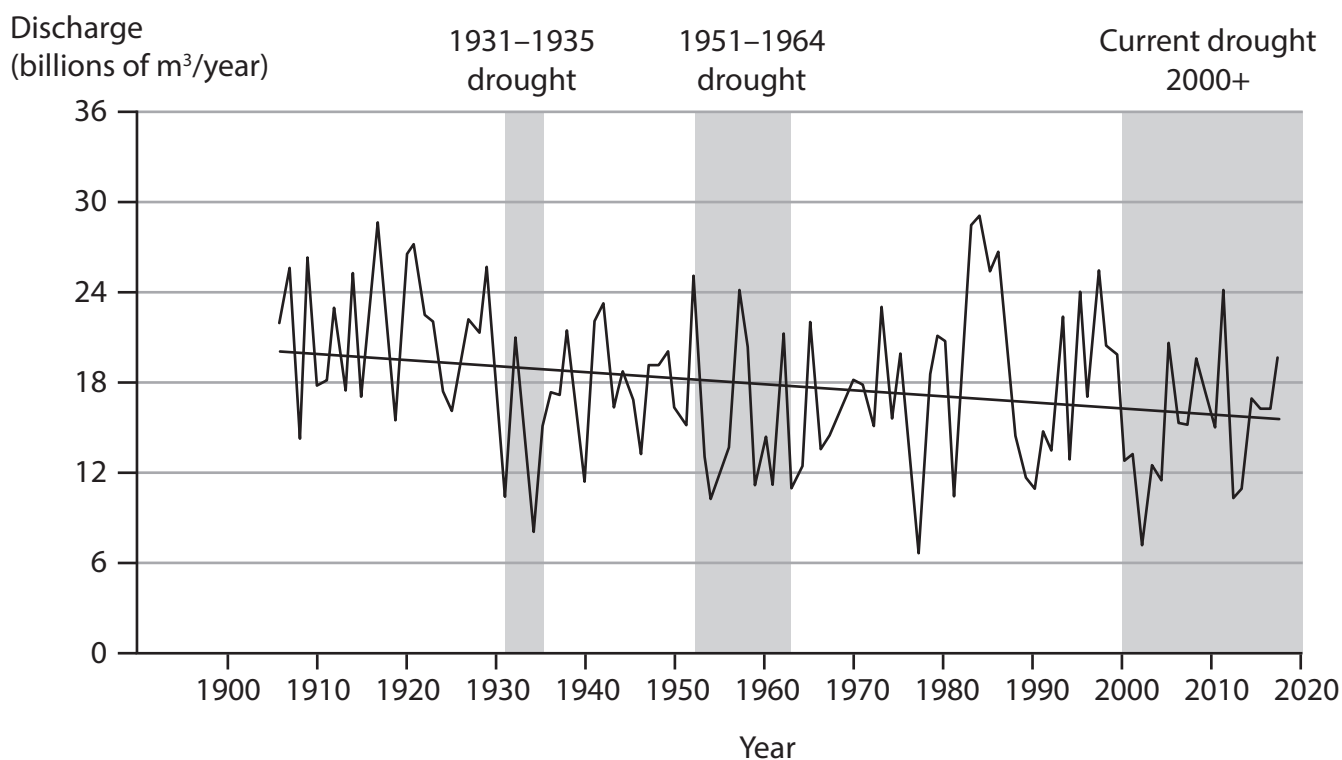


Figure 1b

Positive and negative impacts of building a dam on a river as a flood prevention strategy

Colorado River Discharge

Average temperature has risen by 1.3°C between 1980–2022 in the Colorado drainage basin.



Reasons for water removal from the Colorado river

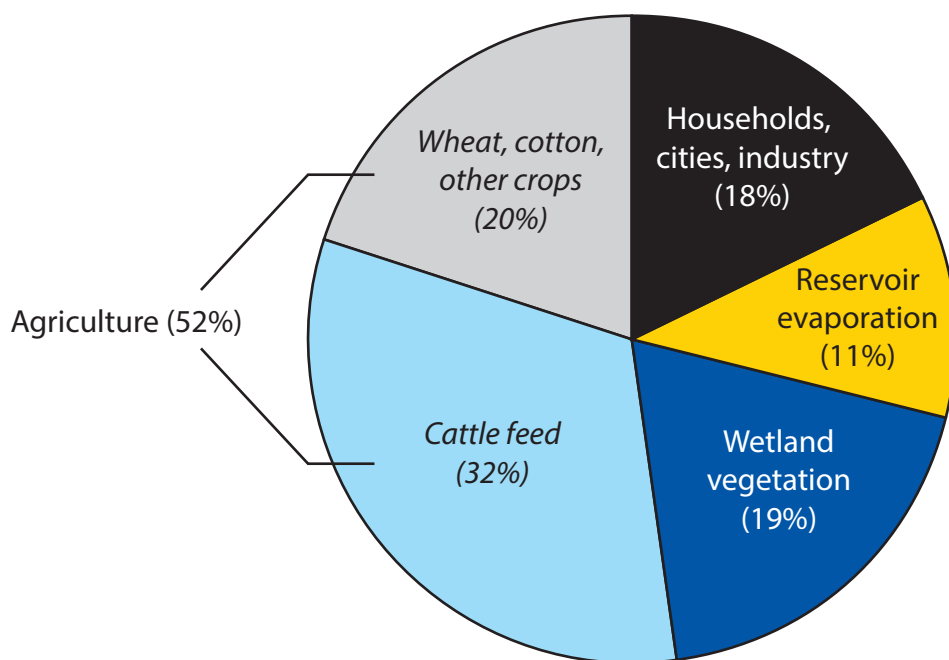


Figure 1c

River discharge of the Colorado River and information on climate and water use

Location	Strategy for 2012–2025	Strategy for 2026–2055
Lowestoft North (to Ness Point)	Hold the line through maintaining and if necessary replacing existing defences (£23.4 million)	Hold the line through maintaining, replacing and upgrading existing defences (£29.9 million)

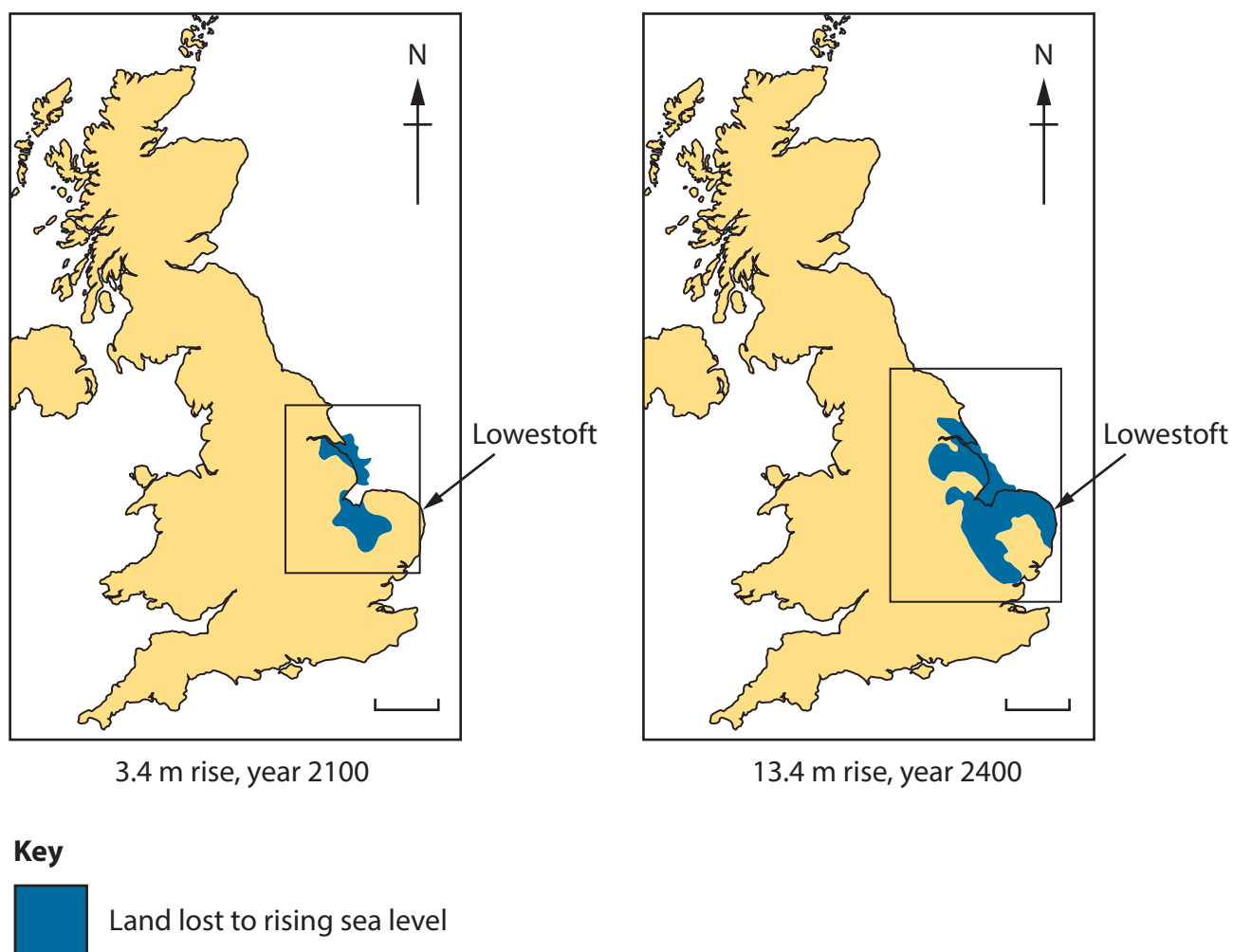


Figure 2a

**Extract of a shoreline management plan for a location in east England
and predictions of sea-level rise**

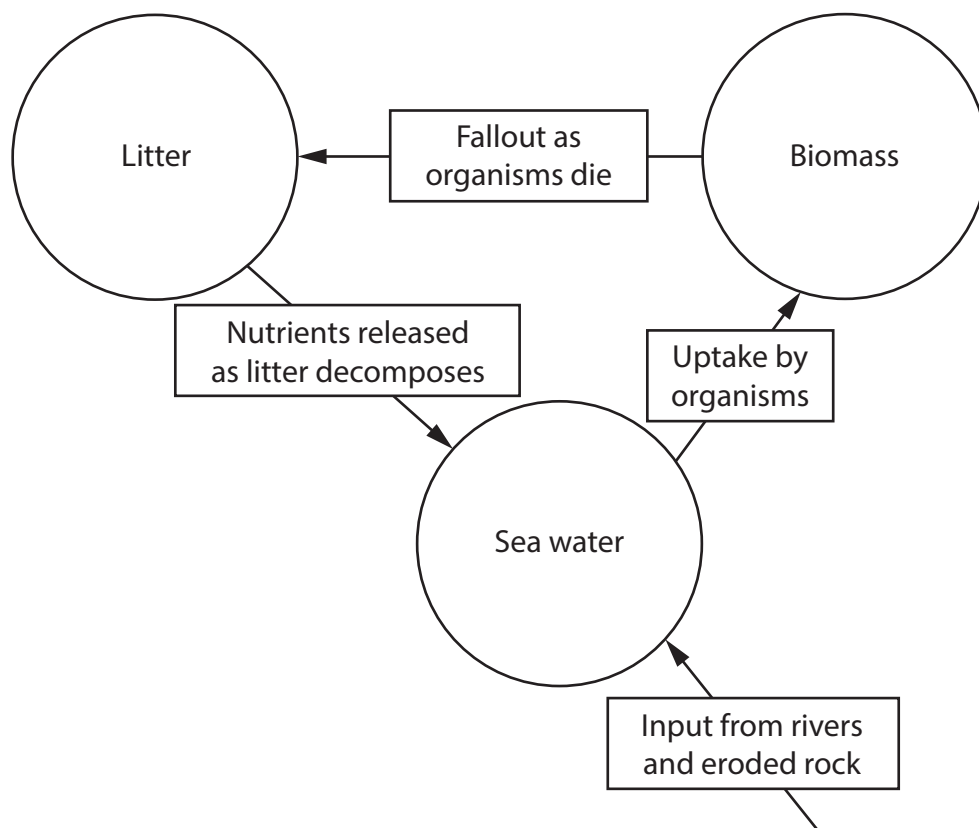
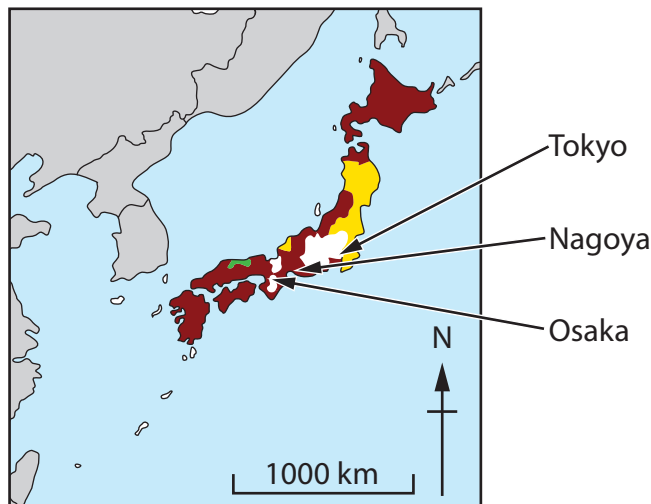


Figure 2b
Nutrient cycle of a coastal environment

Predicted level of coastal flood risk



Key



Damage of high tide disasters under the worst-case scenarios

	Building damage (Billion US\$)	Economic damage (Billion US\$)	Death toll	Population flooded (million)
Tokyo	420	300	8,000	1.4
Nagoya	70	60	1,300	0.7
Osaka	390	430	1,000	1.8

Coastal flood prediction and prevention methods



Floodgates installed can be closed when there is flood danger due to storm surge or other factors.



Sea wall protects a city area from tsunamis and storm surges.



Port of Tokyo disaster preparedness centres make it possible to remotely operate floodgates and other facilities during storms.

Figure 2c

Coastal flood risk and management in Japan

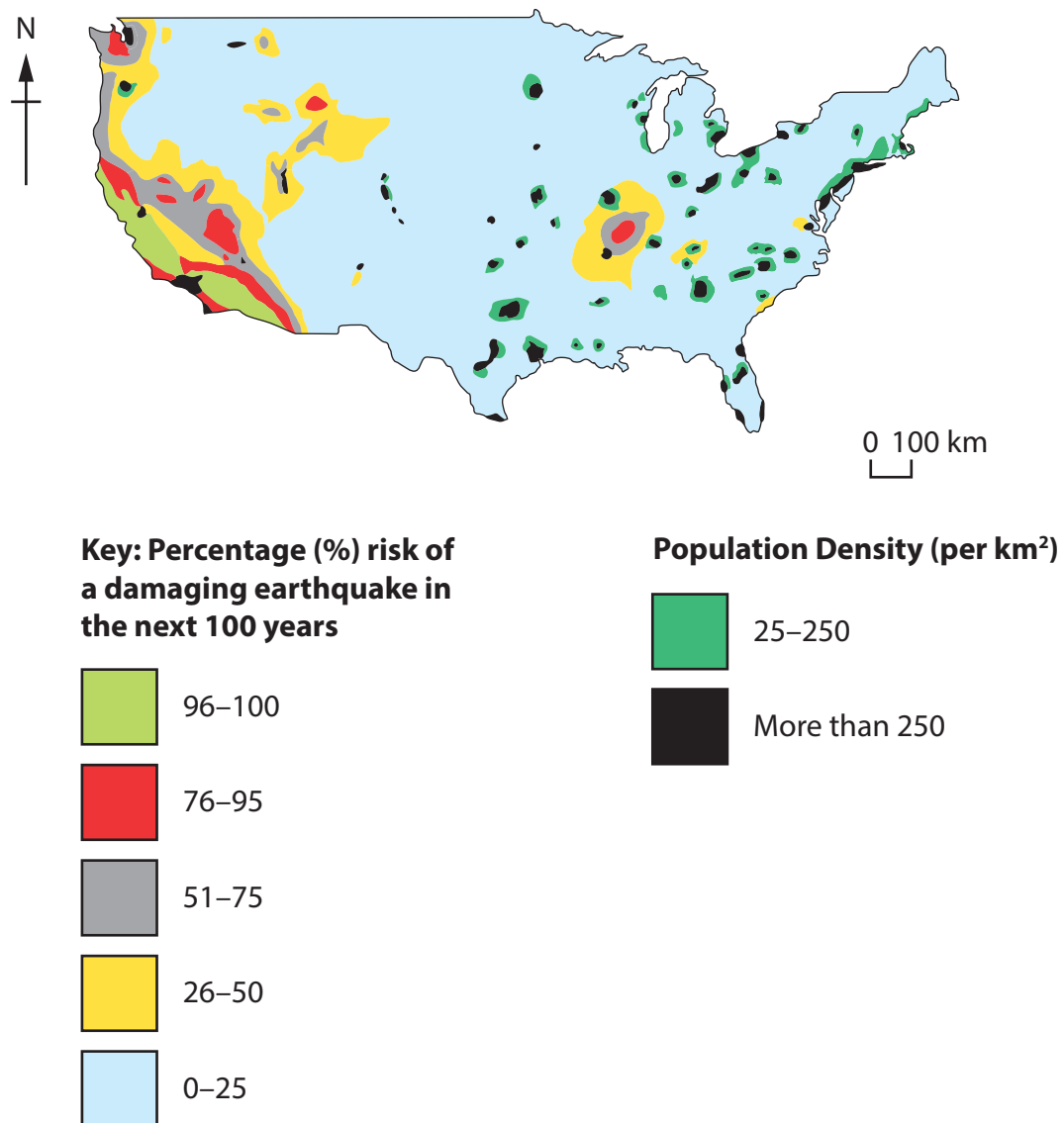


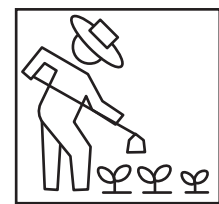
Figure 3a
Earthquake hazard mapping of selected states of the USA

Category	Wind (km/h)
1	119–153
2	154–177
3	178–209
4	210–249
5	250+

Figure 3b
Scale used to measure strength of wind



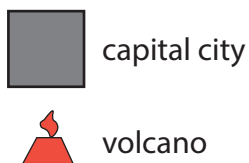
Mexico is the largest silver mining country in the world, producing 18% of total silver supply in 2020. Silver is the product of plate tectonic activity.



Volcanic soils are some of the most fertile on earth. Volcanic ash deposits around Popocatépetl make the region good for growing corn, beans, coffee and avocados due to being rich in nutrients such as silica and potassium.

There have been 6 volcanic eruptions in Mexico since the year 1900.

Key



Year	Volcano in Mexico	VEI score
2022	Popocatépetl	2
1996	Popocatépetl	3
1982	El Chichôn	5
1943	Paricutin	4
1919	Popocatépetl	1
1913	Colima	4

Figure 3c

Volcanic explosivity index (VEI) of 20th–21st century Mexico eruptions and selected facts

Day of data collection	Velocity (m/second)	
Day 1	0.1	
Day 2	0.3	
Day 3	0.6	
Day 4	0.7	
Day 5	0.8	Median = 0.8
Day 6	0.9	
Day 7	1.0	Upper quartile = 1.1
Day 8	1.2	
Day 9	1.2	

Figure 4a

River velocity data at Site 4 collected on 9 different days

Site	Mean river depth (cm)	Mean river width (m)
1	4	15
2	7	27
3	9	40
4	10	50
5	15	56
6	17	52
7	18	55
8	21	57

Figure 4b

River width for each site of a river

Day of data collection	Beach profile (gradient) (°)	
Day 1	1.2	
Day 2	1.5	
Day 3	1.7	
Day 4	1.8	
Day 5	1.9	Median =1.9
Day 6	2.0	
Day 7	2.1	Upper quartile = 2.4
Day 8	2.6	
Day 9	2.7	

Figure 5a

Beach profile data at Site 4 collected on 9 different days

Site	Length of pebble longest side (cm)	Power's roundness index (class score)
1	2	1
2	3	1
3	4	2
4	6	3
5	9	4
6	7	4
7	8	5
8	3	6

Figure 5b

Pebble size and shape for each site along the beach

Day of data collection	Temperature (°C)	
Day 1	22.6	
Day 2	23.8	
Day 3	25.8	
Day 4	26.2	
Day 5	26.3	Median = 26.3
Day 6	27.0	
Day 7	33.4	Upper quartile = 34.1
Day 8	34.8	
Day 9	38.2	

Figure 6a

Temperature data at Site 4 collected on 9 different days

Site	Wind speed (km/hour)	Air pressure (mb)
1	90	970
2	83	978
3	70	980
4	63	990
5	50	998
6	67	1000
7	60	1005
8	51	1010

Figure 6b

Wind speed and air pressure for each site near the coast

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Figure 1c: adapted from www.insideclimatenews.org

Figure 2b: adapted from www.savemyexams.com

Figure 2c: adapted from www.thinkhazard.org, © Thomas Kyhn Rovsing Hjørnet/Alamy, ©Aflo Co. Ltd./Alamy, © Associated Press/Alamy

Figure 3c: data from www.worlddata.info

