



GCE AS/A LEVEL

2110U10-1

TUESDAY, 16 MAY 2023 – AFTERNOON

**GEOGRAPHY – AS UNIT 1
CHANGING LANDSCAPES**

2 hours plus your additional time allowance

Surname

First name(s)

Centre Number

Candidate Number

2

ADDITIONAL MATERIALS

A calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink, black ball-point pen or your usual method.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces on the previous page.

Write your answers in the spaces provided in this booklet.

In Section A, answer EITHER questions 1 and 2 OR questions 3 and 4.

Answer ALL questions in Section B.

If further space is required you should use the additional page(s) at the back of this booklet. The question number(s) should be clearly shown.

(Turn over)

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part-question; you are advised to divide your time accordingly.

THIS PAPER REQUIRES THAT YOU MAKE AS FULL USE AS POSSIBLE OF APPROPRIATE EXAMPLES AND REFERENCE TO DATA TO SUPPORT YOUR ANSWERS. SKETCH MAPS AND DIAGRAMS SHOULD BE INCLUDED WHERE RELEVANT.

Two plain pages are available near the back of the booklet for you to add any relevant sketch maps and diagrams you may wish to include. The question number(s) should be clearly shown.

(Turn over)

SECTION A: CHANGING LANDSCAPES

Answer EITHER questions 1 and 2 OR questions 3 and 4 from your chosen landscape.

Make the fullest possible use of examples and data to support your answers.

COASTAL LANDSCAPES

Answer questions 1 and 2 if this is your chosen landscape.

1 (a) (i) Use FIGURE 1 opposite to describe the pebble's movement from 4 November to 30 November.

[5 marks]

(Turn over)

1 (a) (ii) Suggest ONE PHYSICAL reason for the rapid movement of the pebble from Location 1 to Location 2. [3 marks]

(Turn over)

1 (b) Examine how constructive waves differ from destructive waves. [8 marks]

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Additional space for Question 1(b) only:

2 (a) (i) Use FIGURE 2 opposite to describe geographical variations in the level of protection along coastlines in England and Wales. [5 marks]

(Turn over)

2 (a) (ii) Suggest ONE PHYSICAL reason why the option of 'managed retreat' has been chosen for some places. [3 marks]

(Turn over)

2 (b) Examine the role of sea level change in the development of ONE coastal landform. [8 marks]

(Turn over)

Additional space for Question 2(b) only:

GLACIATED LANDSCAPES

Answer questions 3 and 4 if this is your chosen landscape.

3 (a) (i) Use FIGURE 3 opposite to describe the movement of the glacier between 1960 and 2010 [5 marks]

[illegible]

(Turn over)

3 (a) (ii) Suggest ONE reason for the rapid retreat of the glacier during the 1950s. [3 marks]

(Turn over)

3 (b) Examine how cold-based glaciers differ from warm-based glaciers. [8 marks]

(Turn over)

Additional space for Question 3(b) only:

4 (a) (i) Use FIGURE 4 opposite to describe geographical variations in the severity of glacial erosion in England and Wales. [5 marks]

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(Turn over)

4 (a) (ii) Suggest ONE PHYSICAL reason why intense glacial erosion only occurred in certain areas.
[3 marks]

(Turn over)

4 (b) Examine the influence of post-glacial processes on ONE glacial landform. [8 marks]

[illegible]

(Turn over)

Additional space for Question 4(b) only:

SECTION B: TECTONIC HAZARDS

Answer ALL questions.

Make the fullest possible use of examples and data to support your answers.

5 (a) (i) Use FIGURE 5 opposite to describe the distribution of volcanoes in Guatemala.

[5 marks]

(Turn over)

**5 (a) (ii) State the nature of the relationship shown in
FIGURE 6 opposite. [1 mark]**

(Turn over)

5 (a) (iii) Name and justify a valid statistical test that could be used to analyse these data.

Name of statistical test : _____

[1 mark]

Justification:

[1 mark]

(Turn over)

5 (a) (iv) Use FIGURES 5 and 6 to suggest why the impacts of volcanic activity may vary within Guatemala. [9 marks]

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Additional space for Question 5(a)(iv) only:

5 (b) Explain how volcanoes form at converging plate margins. [10 marks]

[illegible]

(Turn over)

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Additional space for Question 5(b) only:

(Turn over)

Volcanic ash is a major hazard in the form of both pyroclastic flows and volcanic ash fall

6 (a) Use FIGURE 7 opposite to describe the impacts of the eruption on San Miguel Los Lotes. [5 marks]

[illegible]

(Turn over)

6 (b) Use FIGURE 8 opposite to outline variations in the potential economic losses caused by volcanic ash fall. [6 marks]

[illegible]

(Turn over)

Additional space for Question 6(b) only:

(Turn over)

6 (c) Use FIGURES 7 to 9 to examine why the impacts of volcanic ash vary. [10 marks]

(Turn over)

Additional space for Question 6(c) only:

(Turn over)

7 (a) Outline the local and global impacts of ONE earthquake event. [8 marks]

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Additional space for Question 7(a) only:

7 (b) Examine the role of depth of focus in determining the impact of an earthquake. [8 marks]

(Turn over)

(Turn over)

Additional space for Question 7(b) only:

END OF PAPER

(Turn over)

Question Number	Additional page, if required for diagrams. Write the question number(s) in the left-hand margin.

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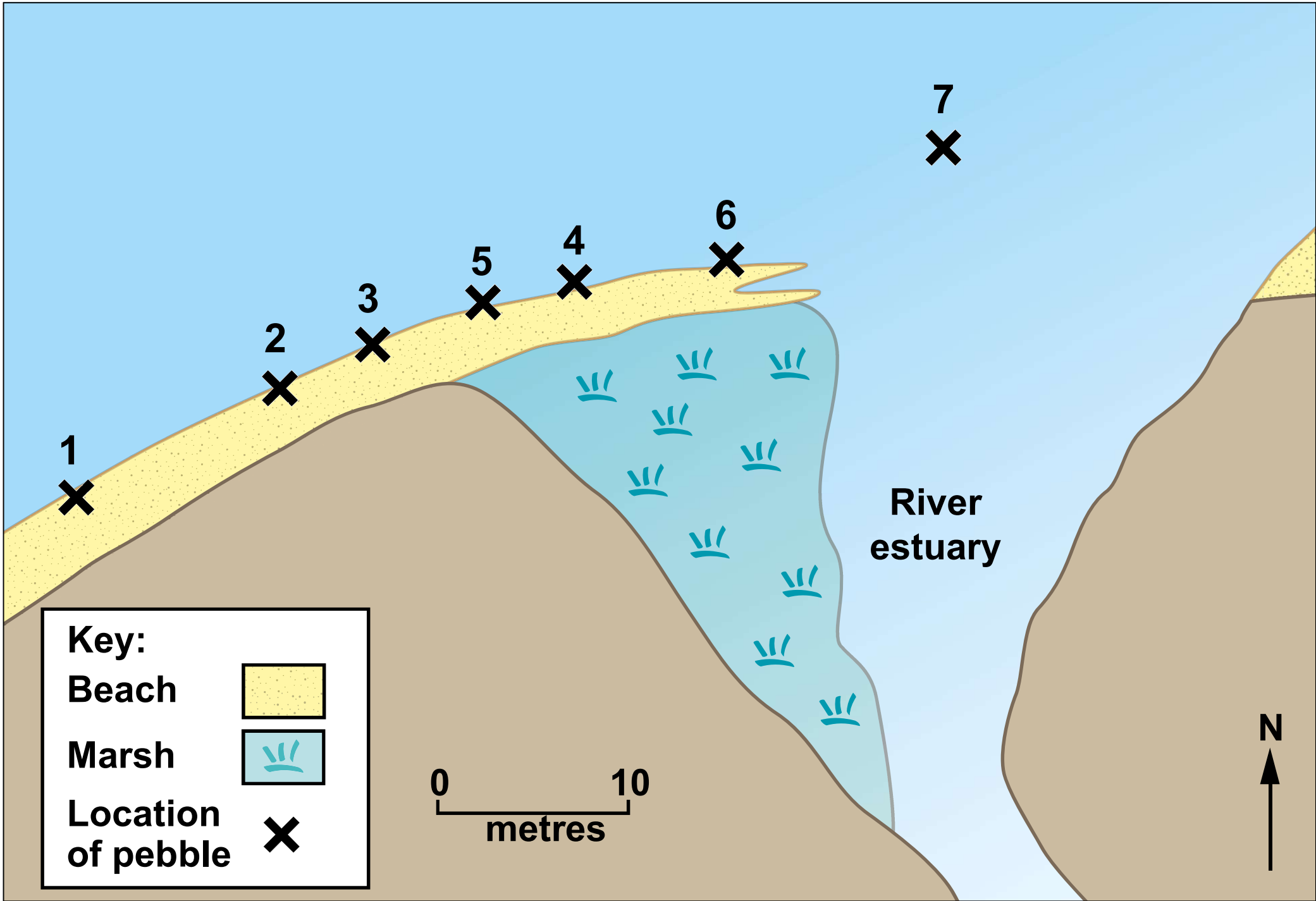
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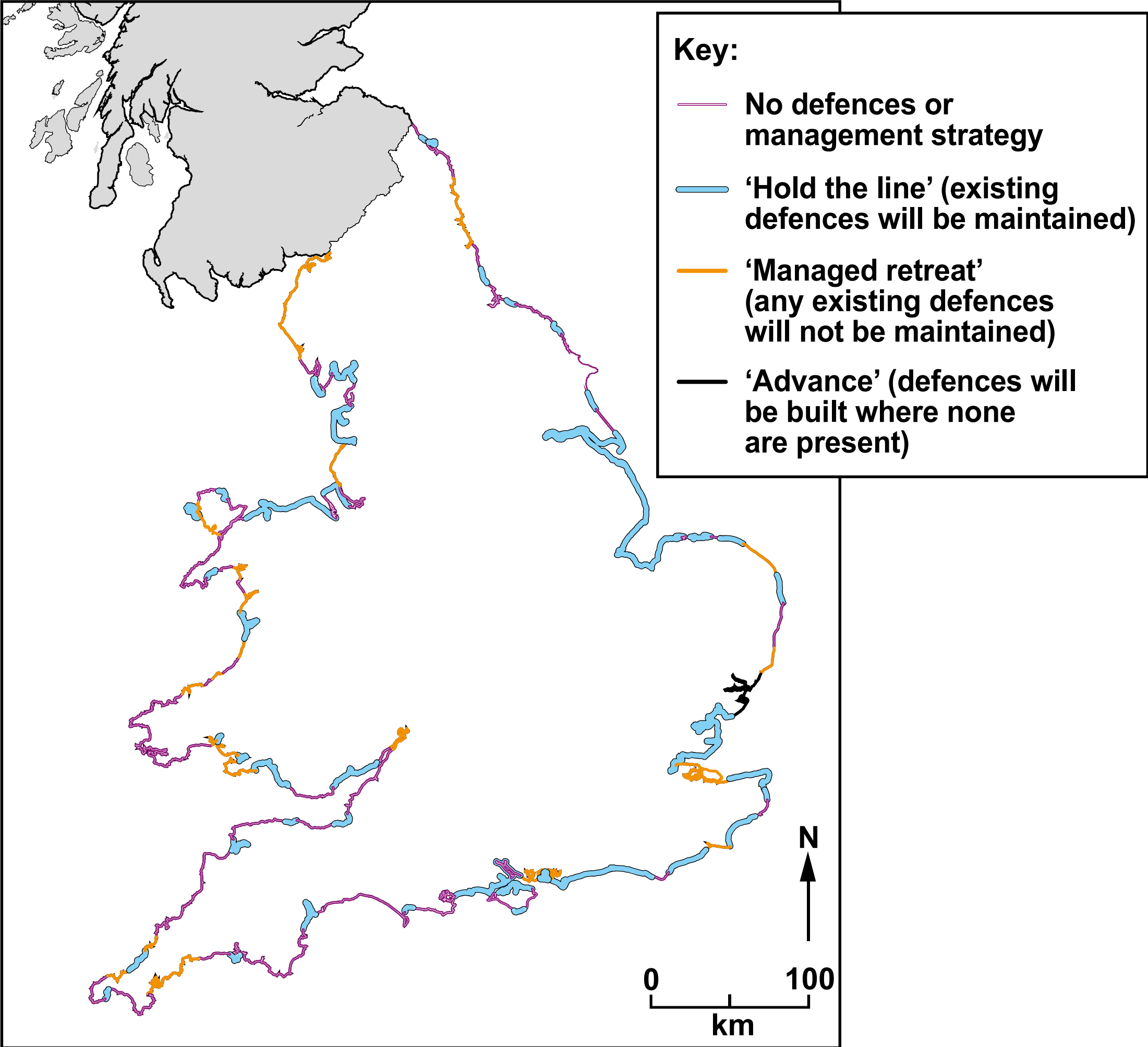
For Examiner's use only		
Question	Maximum Mark	Mark Awarded
Either 1 and 2 or 3 and 4	16	
	16	
	16	
	16	
5	27	
6	21	
7	16	
Total	96	

FIGURE 1: AN AERIAL VIEW OF THE MOVEMENT OF A PEBBLE ALONG A COASTLINE, NOVEMBER 2019



Date (November)	1	4	13	19	21	28	30
Location of pebble	1	2	3	4	5	6	7

FIGURE 2: PLANNED LEVELS OF PROTECTION ALONG COASTLINES IN ENGLAND AND WALES, 2020-2030



Source: www.theguardian.com

FIGURE 3: A SKETCH MAP SHOWING THE CHANGING POSITION OF THE FRONT OF A GLACIER, 1950-2010

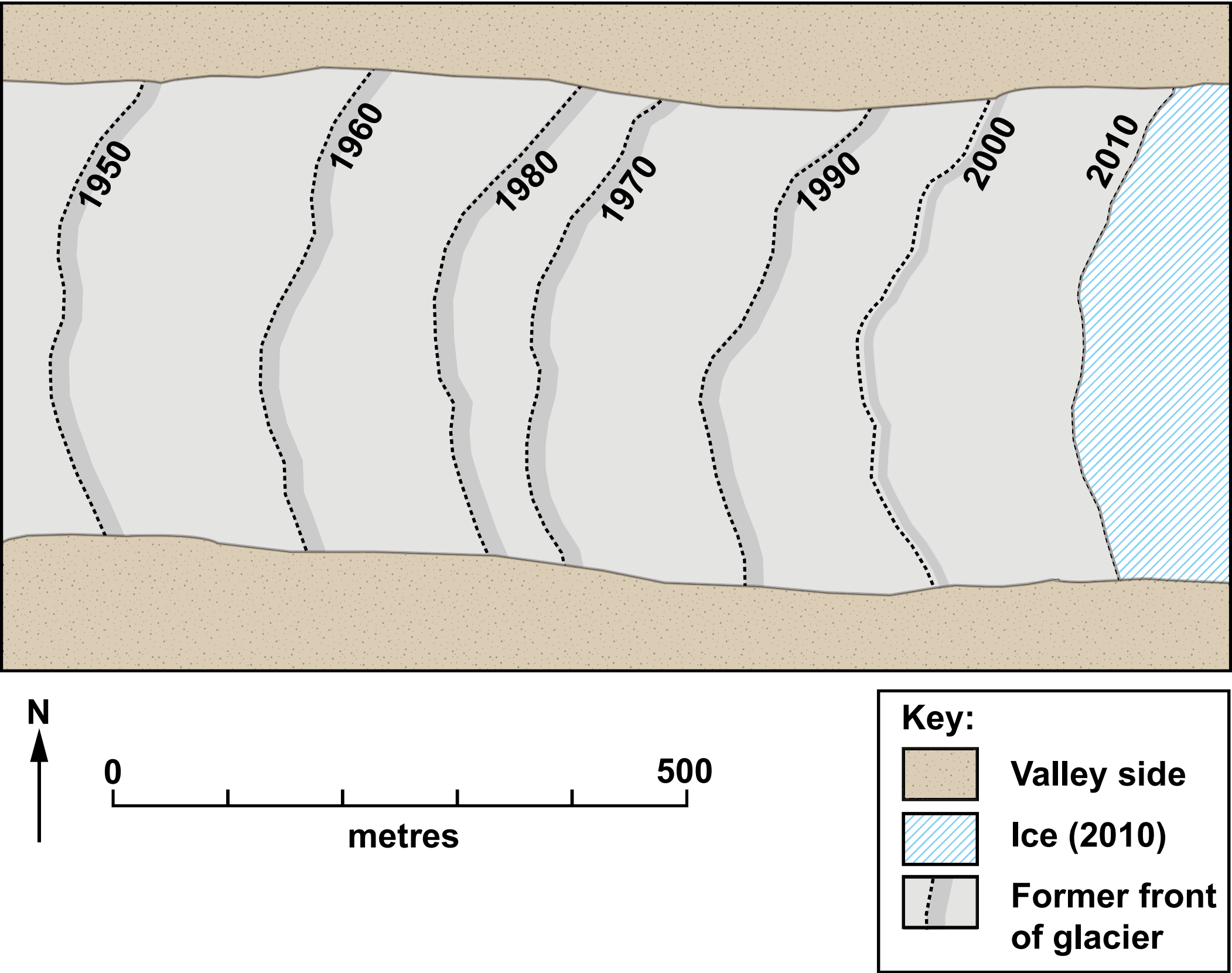


**FIGURE 4: LANDSCAPE EVIDENCE SHOWING THE SEVERITY OF PAST GLACIAL EROSION
IN ENGLAND AND WALES**

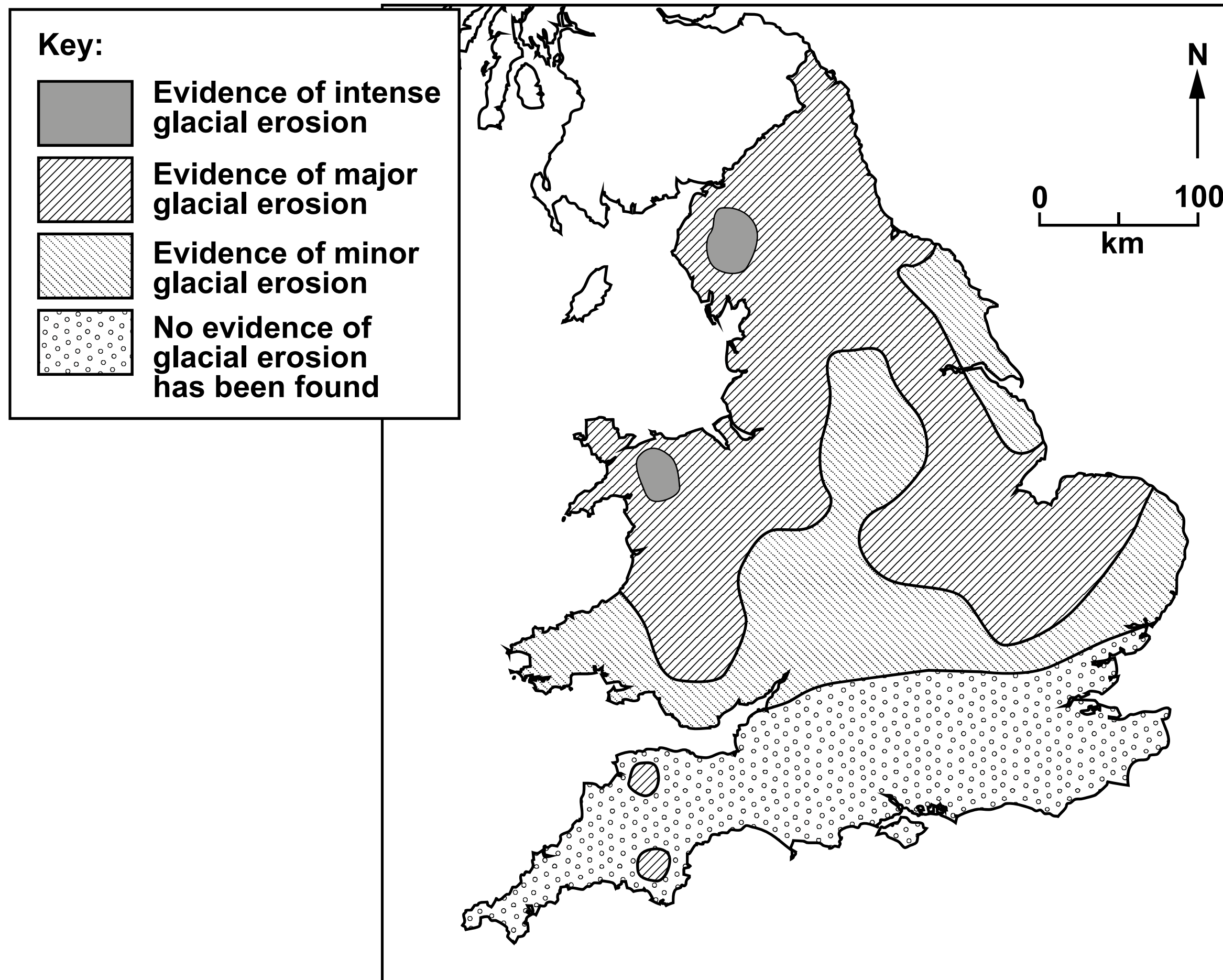
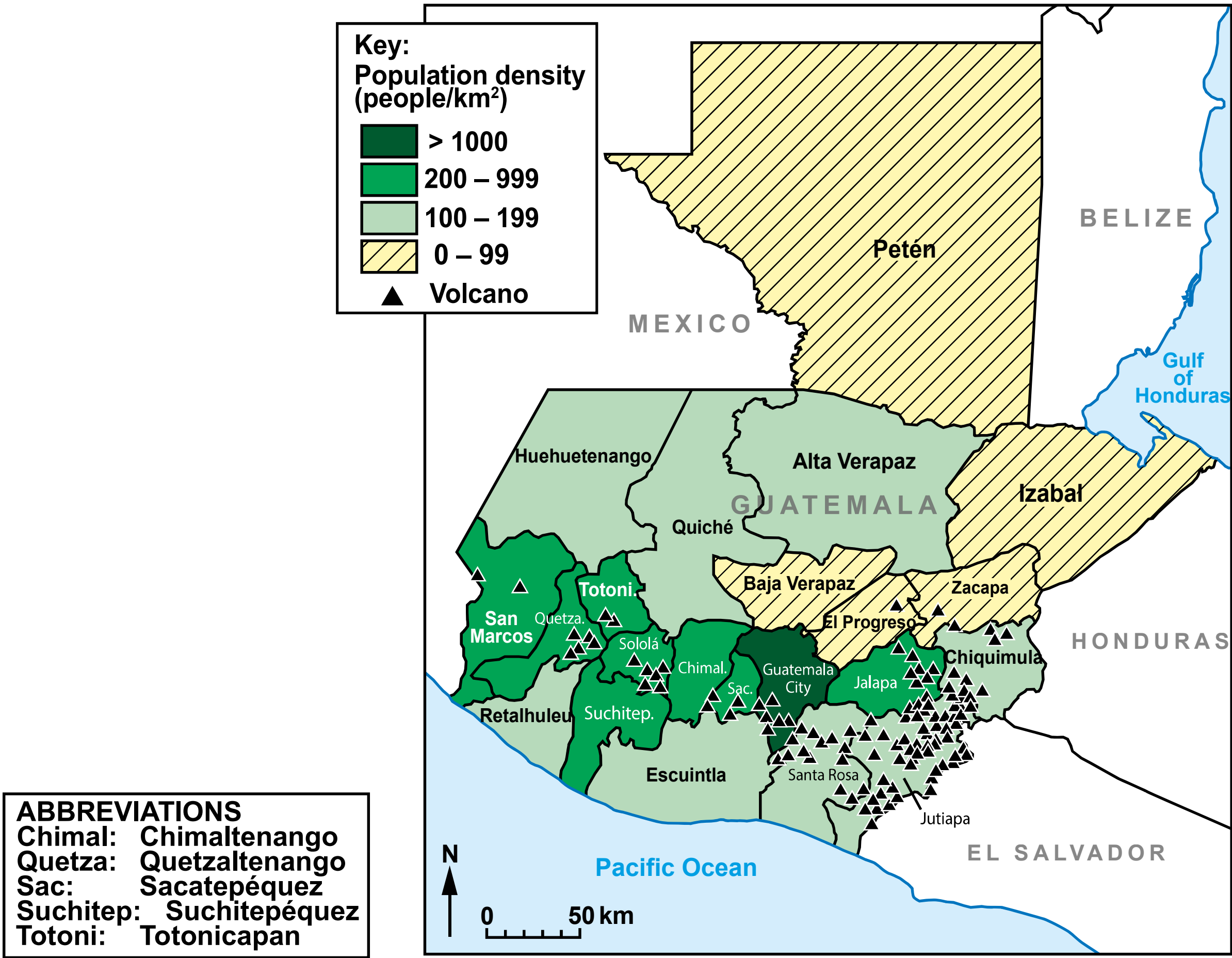


FIGURE 5: POPULATION DENSITY AND LOCATION OF VOLCANOES BY DEPARTMENT IN GUATEMALA



Source: <http://www.insivumeh.gob.gt/folletos/FVQGT.pdf>

FIGURE 6: INDICES OF VULNERABILITY AND ABILITY TO COPE WITH NATURAL HAZARDS FOR THE DEPARTMENTS OF GUATEMALA

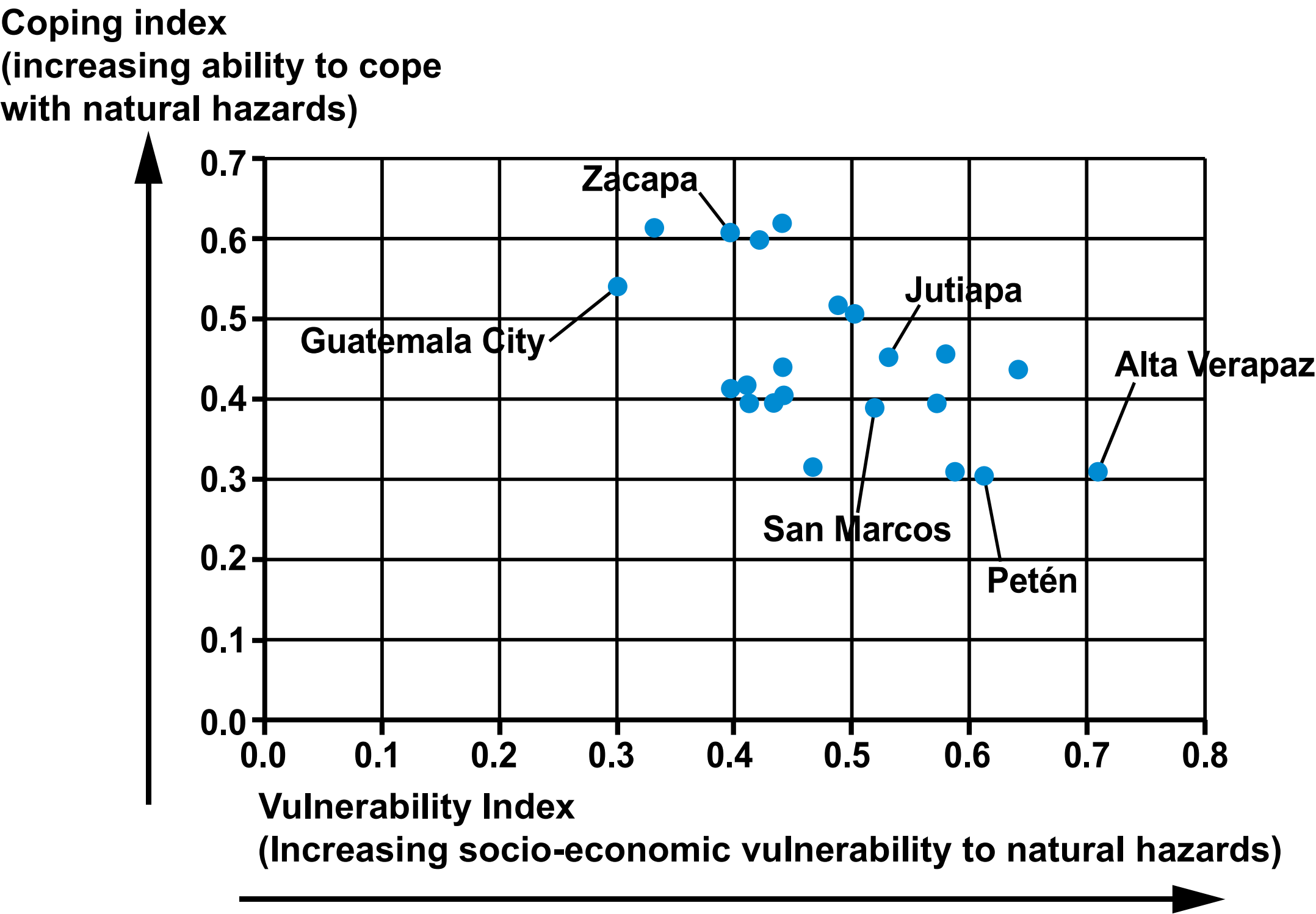


FIGURE 7: THE SETTLEMENT OF SAN MIGUEL LOS LOTES BEFORE AND AFTER THE ERUPTION OF VOLCÁN DE FUEGO IN GUATEMALA, 2018

FIGURE 7a: SAN MIGUEL LOS LOTES BEFORE THE ERUPTION

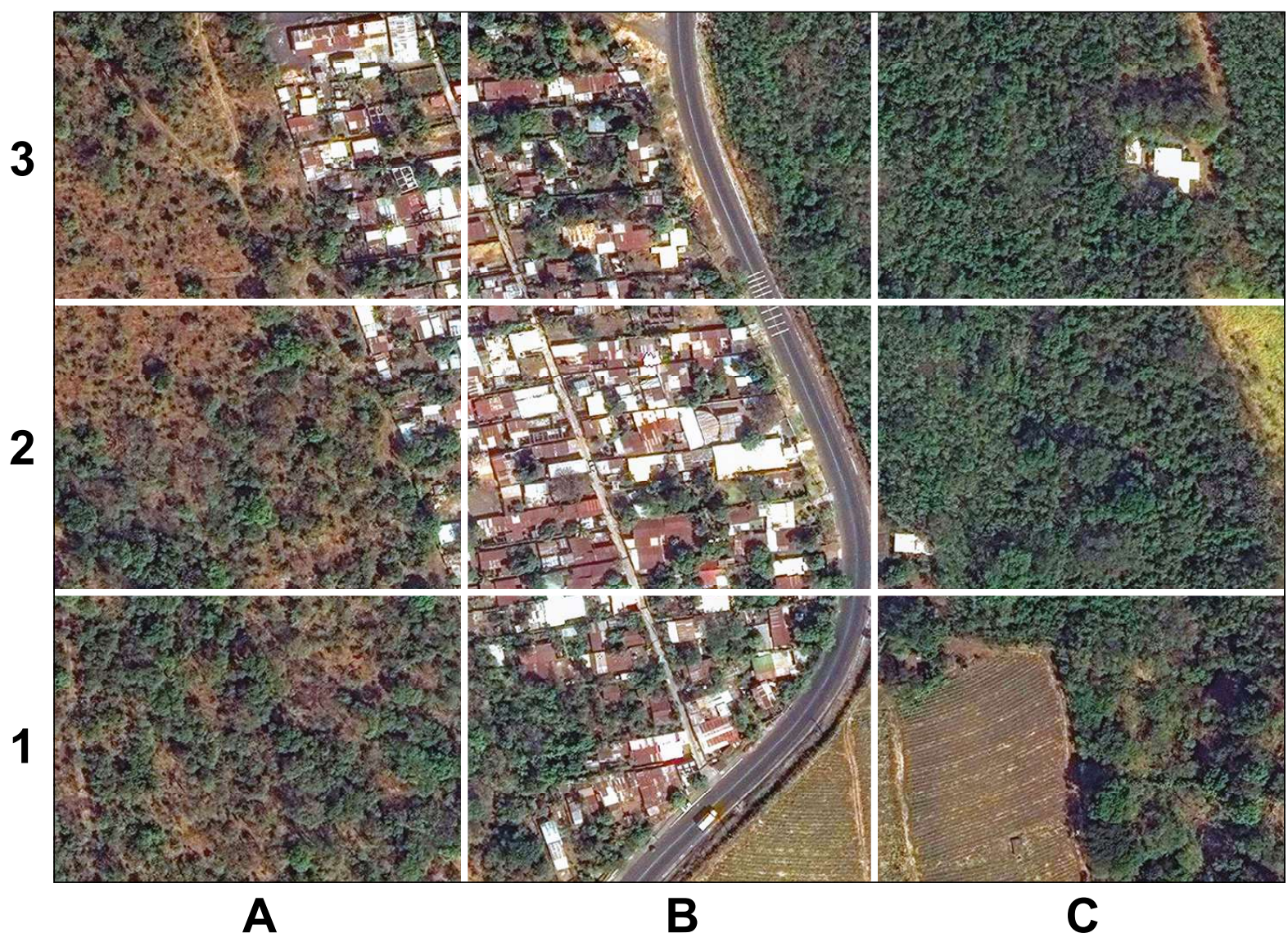


FIGURE 7b: SAN MIGUEL LOS LOTES AFTER THE ERUPTION

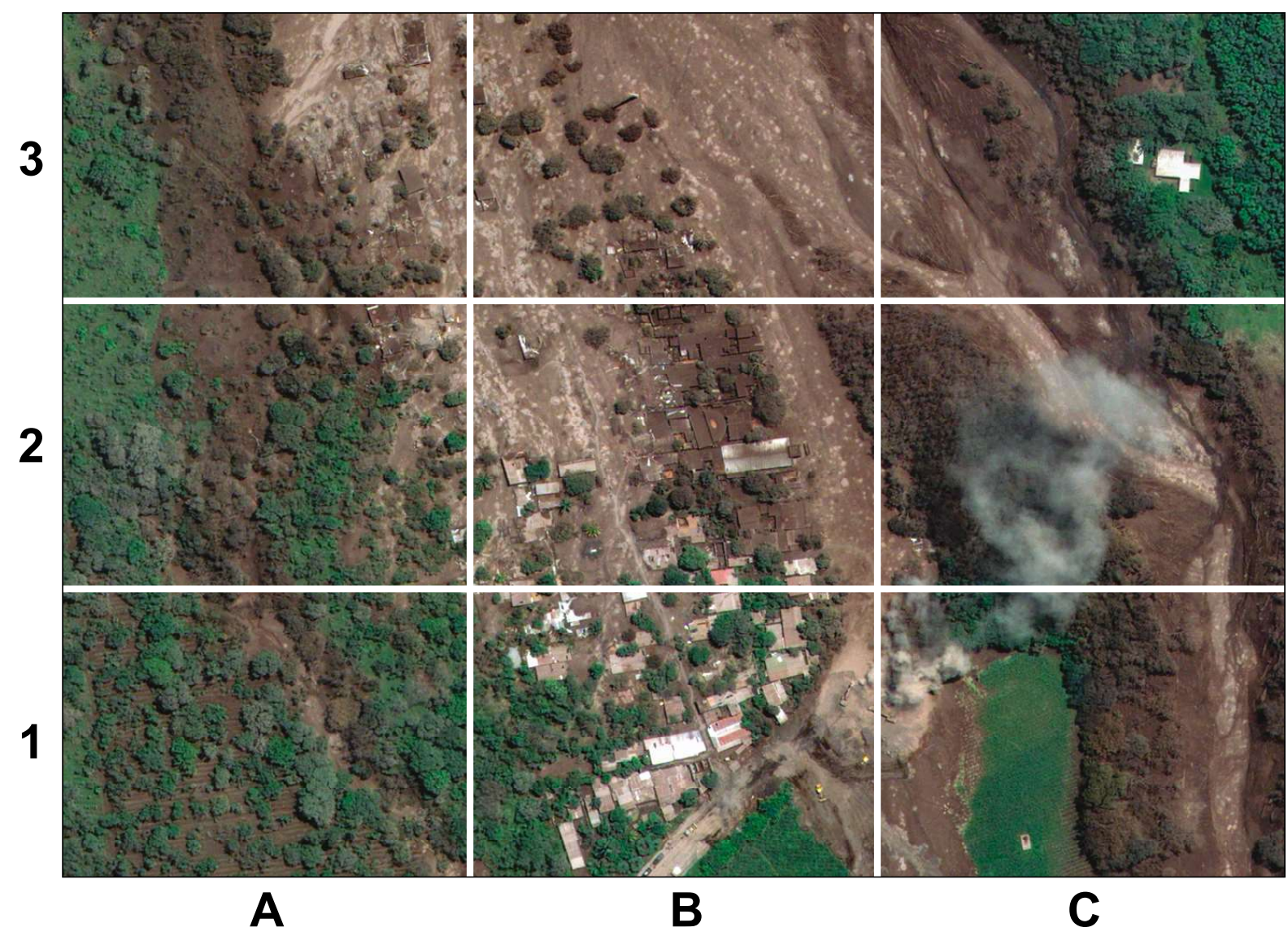
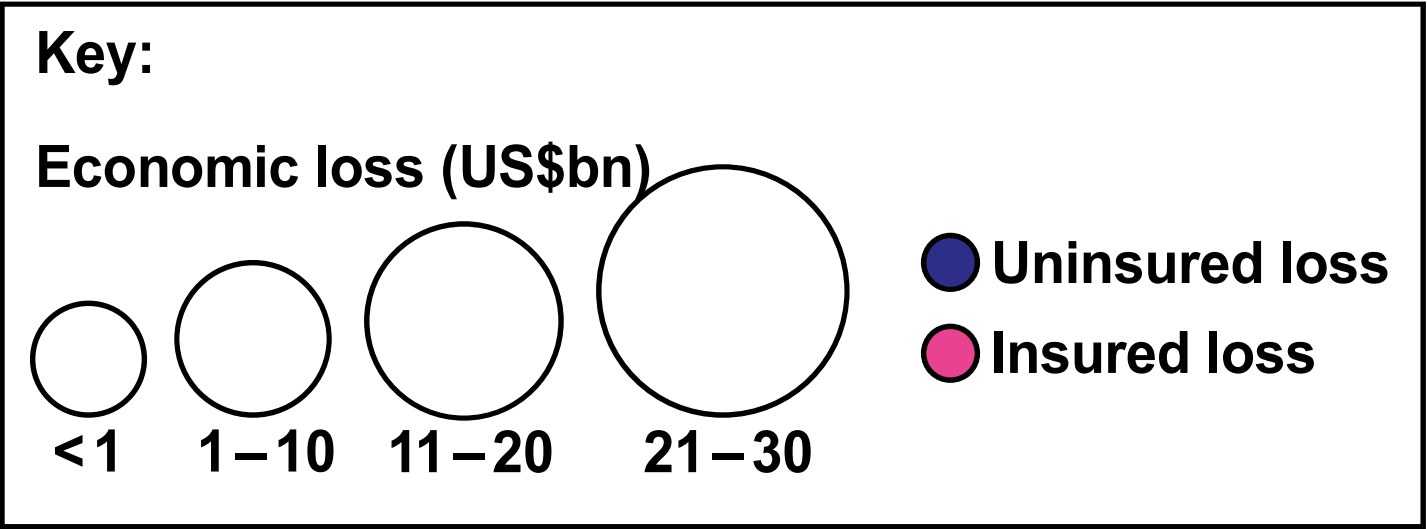
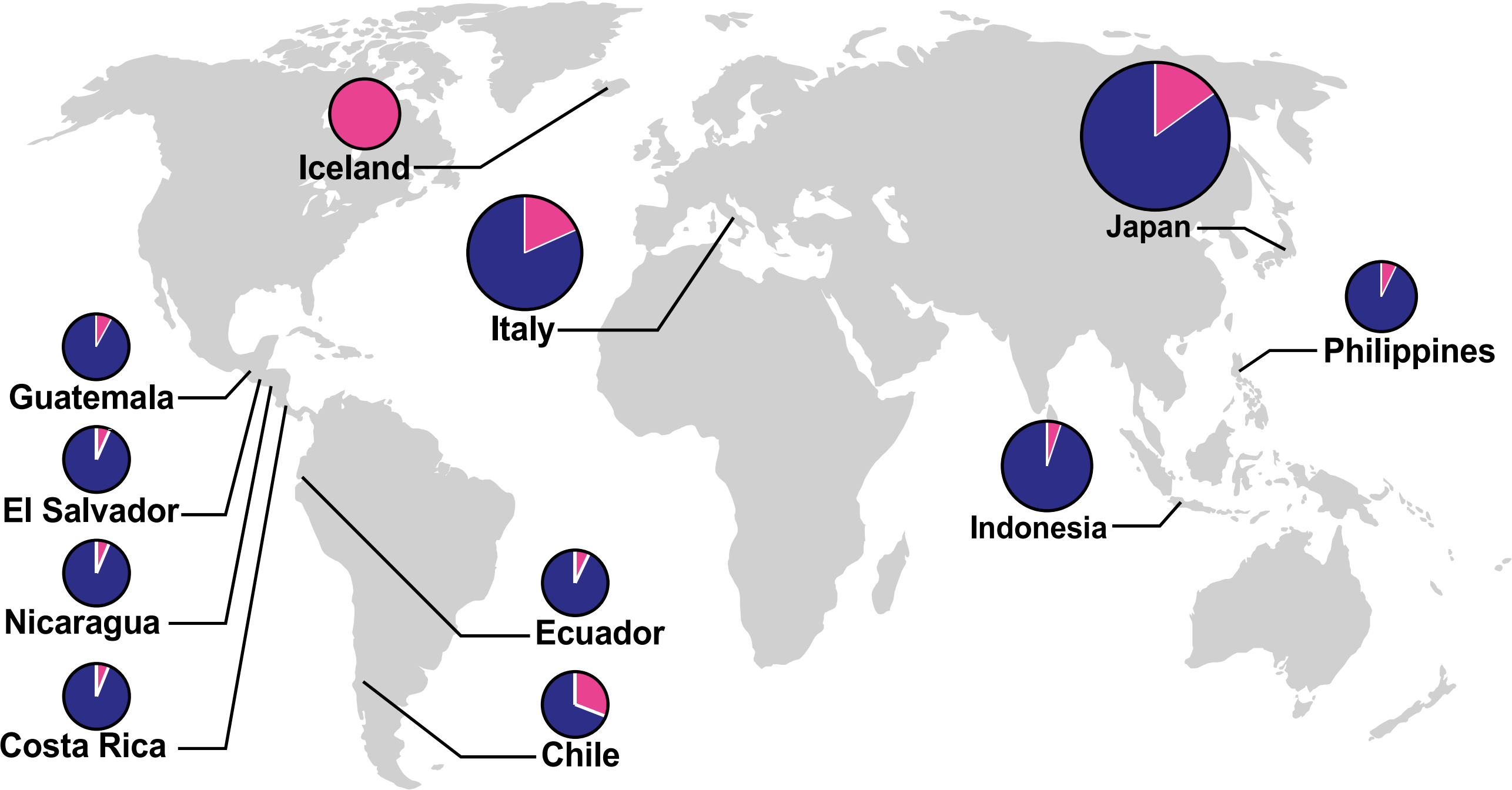


FIGURE 8: POTENTIAL ECONOMIC LOSSES CAUSED BY VOLCANIC ASH FALL FOR SELECTED COUNTRIES



Source: <https://www.preventionweb.net>

FIGURE 9: POTENTIAL IMPACTS OF VOLCANIC ASH FALL

