



**GCSE**

**3110U10-1**

**MONDAY, 22 MAY 2023 – AFTERNOON**

**GEOGRAPHY**

**Unit 1: Changing Physical and Human Landscapes**

**1 hour 30 minutes plus your additional time allowance**

**Surname**

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**First name(s)**

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**Centre Number**

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**Candidate Number**

**0**

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## **ADDITIONAL MATERIALS**

**In addition to this paper you may use a calculator and a ruler if required.**

## **INSTRUCTIONS TO CANDIDATES**

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

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

**Answer BOTH questions in Section A.**

**Answer ONE question from Section B.**

**Write your answers in the spaces provided in this booklet.**

**Additional space is provided for some questions within the booklet (if required). If further space is required for any question, you should use the additional page(s) at the end 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.**

**Your ability to communicate and organise your ideas will be assessed in questions that are worth 6 or 8 marks. The accuracy of your writing will be assessed in your answer to question 2(c).**

**SECTION A – CORE THEMES**

Answer ALL questions in this section.

**THEME 1: LANDSCAPES AND PHYSICAL PROCESSES**

1 (a) Study the map opposite.

- (i) Complete the following sentences using the words below. [2 marks]

headland	landscape	bay	deposition	rocks
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A geology map shows the types of

\_\_\_\_\_ in an area.

The coastal feature between Ramsey Island and

Skomer Island is a \_\_\_\_\_

(Turn over)



**1 (a) (iv) Suggest how geology has made the Pembrokeshire Coast landscape distinctive. Use map evidence. [3 marks]**

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1 (b) (i) Study the photograph opposite. It shows an area along the South Pembrokeshire Coastline.

Identify landforms A, B and C by putting the correct letter in the list below. [3 marks]

LANDFORM	LETTER
Stack	
Arch	
Spit	
Cave	
Wave-cut platform	

(Turn over)

**1 (b) (ii) Explain why stacks form when coastal processes and geology interact. You may use a diagram to help your answer. [6 marks]**

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**(Turn over)**



**Additional space for Question 1(b)(ii) only:**

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**1 (c) Study the graph and map opposite.**

**(i) Describe one method you could use to represent the data from the graph onto the regional map of England. [2 marks]**

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**1 (c) (ii) Give ONE advantage and ONE disadvantage of the method you have chosen. [2 marks]**

**Advantage:** \_\_\_\_\_

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**Disadvantage:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**(iii) Study the resource opposite.**

**Evaluate hard engineering as a method of preventing river floods. You may use the resource and/or refer to other examples you have studied. [6 marks]**

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**(Turn over)**





**THEME 2: RURAL-URBAN LINKS**

**2 (a) Study the map and photograph opposite. They show how a part of Manchester, in the north of England, has changed between 1980 and the present day.**

- (i) Salford Quays is a modern development of residential, retail, and leisure activities.**

**Identify the location on the map where Salford Quays has been built since 1980.**

**Tick (✓) the correct answer in the box below.**

**[1 mark]**

<b>LOCATION ON MAP</b>	<b>SALFORD QUAYS (✓)</b>
<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	

**(Turn over)**

**2 (a) (ii) Give TWO other ways the photo shows that Manchester Docks has changed since 1980.**

**[2 marks]**

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

**(iii) Salford Quays was developed on a brownfield site. Describe how the map shows that this was a brownfield site. [2 marks]**

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**(Turn over)**





- 2 (b) (i) Give the meaning of the following terms by choosing from the definitions in the box below. Write the correct letter in each box. [2 marks]

TERM	LETTER
INTERNATIONAL MIGRATION	
RURAL TO URBAN MIGRATION	

DEFINITION	LETTER
The movement of people from the countryside to the city	A
The difference between the number of people moving into a country and the number moving within a country	B
The movement of people from the city to the countryside	C
The movement of people from one country to another country	D
The movement of people to another country for a holiday	E

(Turn over)



**2 (b) (iii) Describe ONE SOCIAL consequence and ONE ECONOMIC consequence of international migration into the UK. [4 marks]**

**Social:** \_\_\_\_\_

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**Economic:** \_\_\_\_\_

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**2 (c) (i) Give ONE reason why some cities become global cities. [2 marks]**

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**(ii) The growth of global cities can have positive and negative impacts on the way of life of people who live in them. Explain why. [6 marks]**

**The accuracy of your writing will be assessed in your answer to this question. [3 marks]**

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**(Turn over)**









**3 (a) (iii) Explain why rift valleys can form at divergent plate boundaries. You may use a diagram to help your answer. [4 marks]**

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**3 (b) (iii) Explain why planners should be cautious about using hazard risk maps in earthquake zones. [2 marks]**

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**4 (a) (ii) Describe ONE impact of coastal erosion on communities living along coastlines. [3 marks]**

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4 (b) Study the map opposite.

(i) What are environmental refugees? [1 mark]

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(ii) Give ONE reason why climate change increases the vulnerability of many coastal communities. [2 marks]

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4. (b) (iii) Describe the location of the islands of Tuvalu shown on the map. [3 marks]

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<b>QUESTION NUMBER</b>	<b>ADDITIONAL PAGE, IF REQUIRED. WRITE THE QUESTION NUMBER(S) IN THE LEFT-HAND MARGIN.</b>

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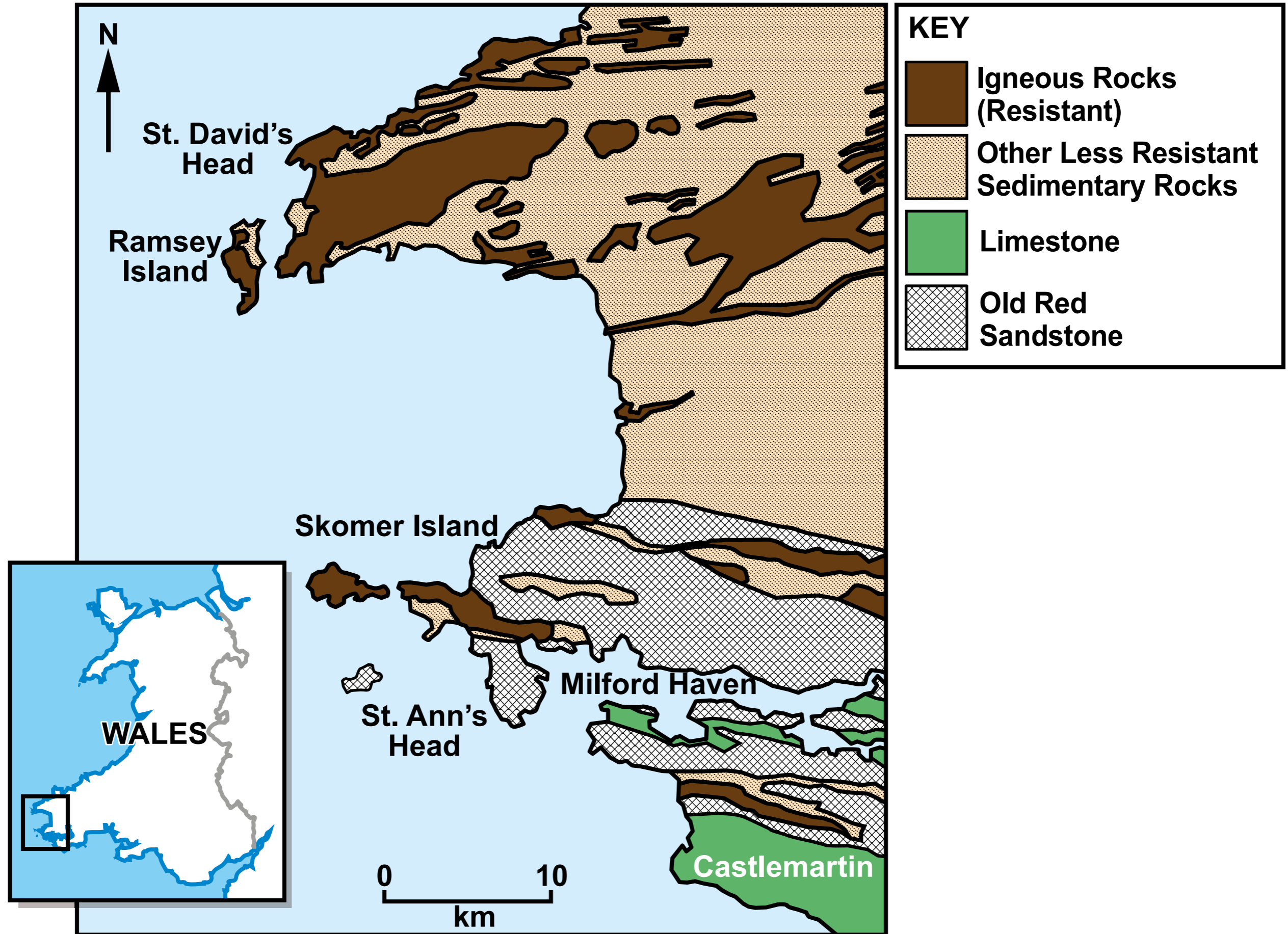
<b>QUESTION NUMBER</b>	<b>ADDITIONAL PAGE, IF REQUIRED. WRITE THE QUESTION NUMBER(S) IN THE LEFT-HAND MARGIN.</b>

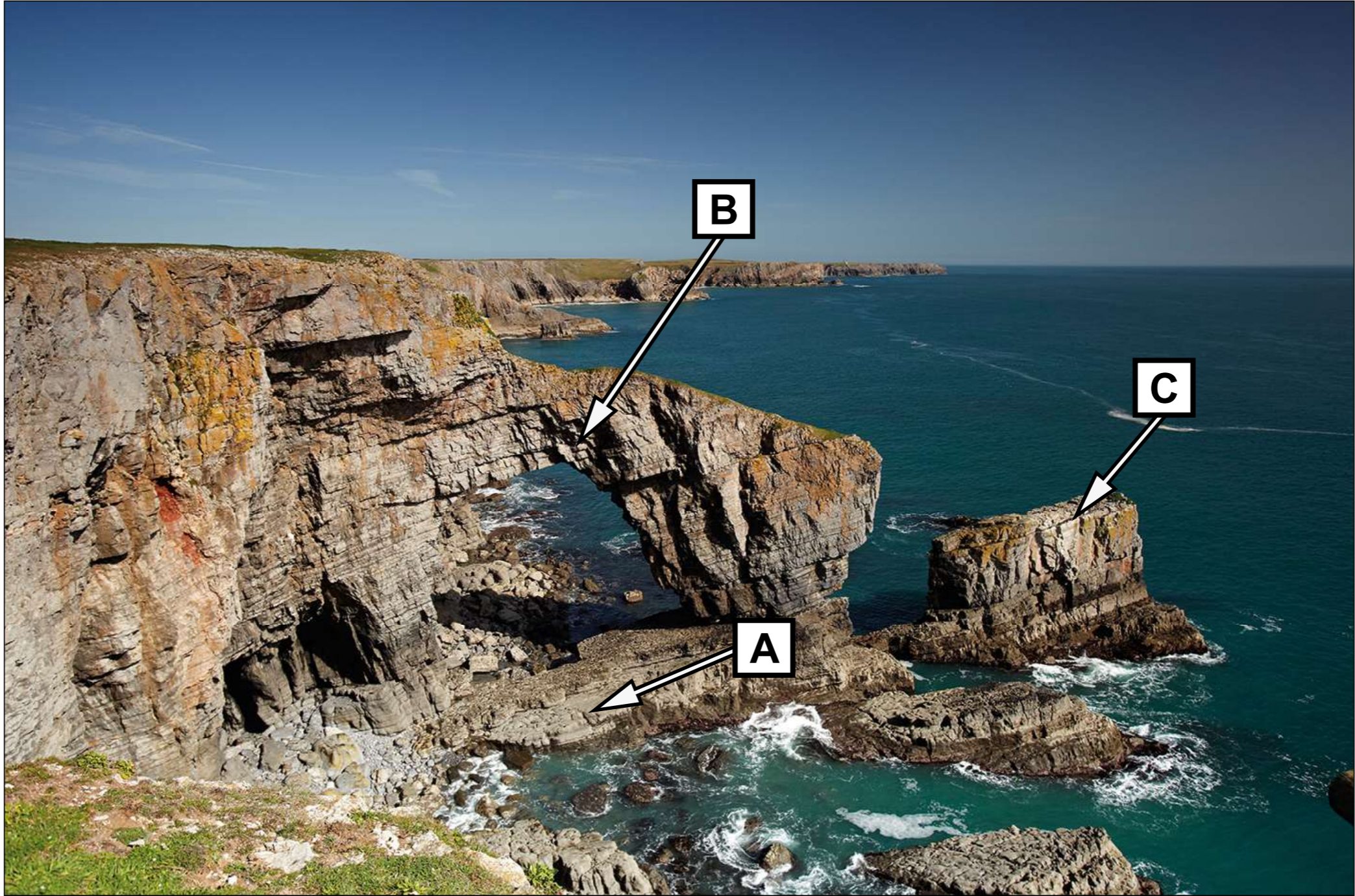
<b>QUESTION NUMBER</b>	<b>ADDITIONAL PAGE, IF REQUIRED. WRITE THE QUESTION NUMBER(S) IN THE LEFT-HAND MARGIN.</b>

<b>For Examiner's use only</b>		
	<b>Maximum Mark</b>	<b>Mark Awarded</b>
<b>Question 1</b>	<b>28</b>	
<b>Question 2</b>	<b>28</b>	
<b>Writing accurately</b>	<b>3</b>	
<b>Question 3</b>	<b>24</b>	
<b>Question 4</b>	<b>24</b>	
<b>Total</b>	<b>83</b>	

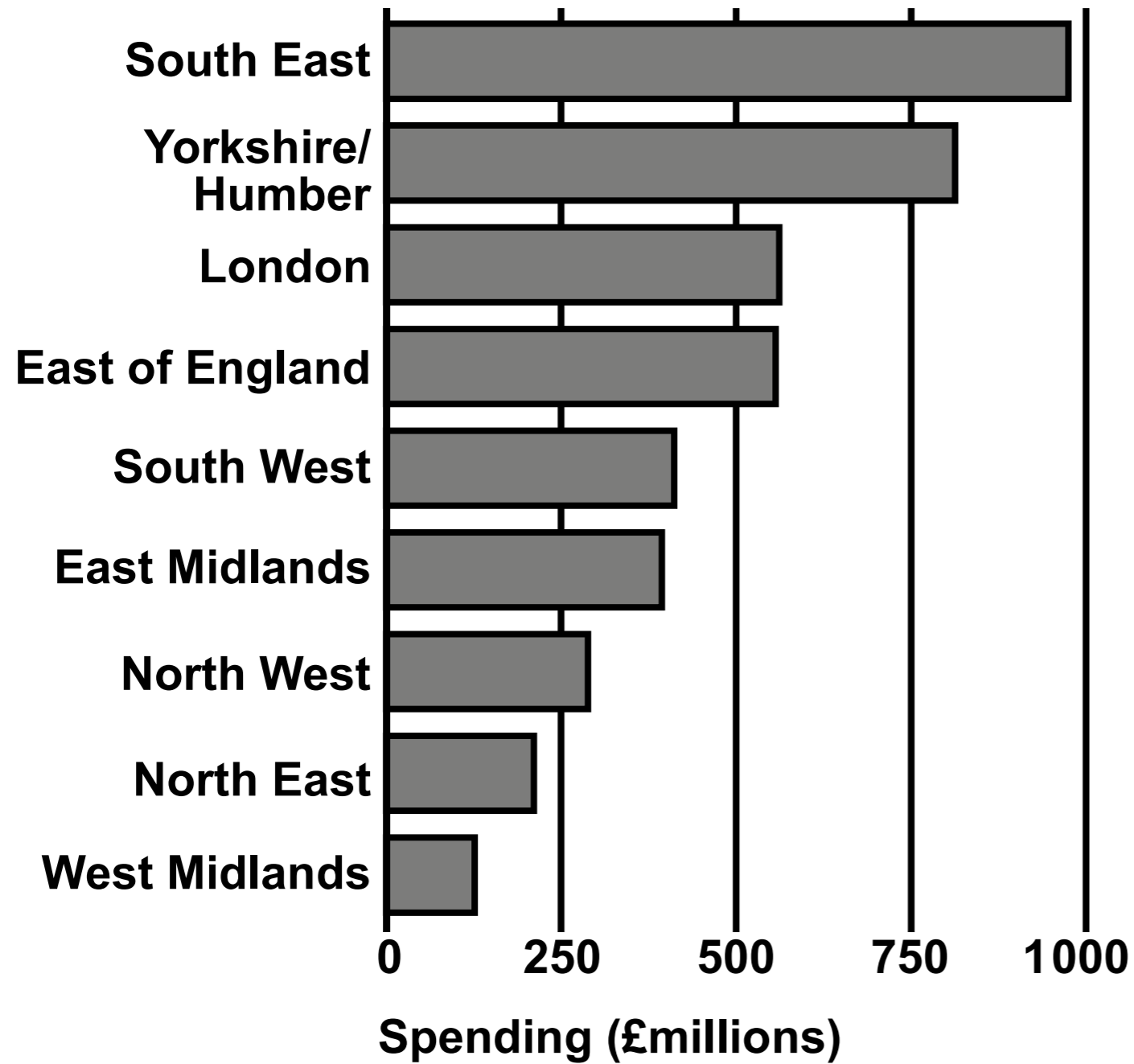
either  
or

# GEOLOGY OF THE PEMBROKESHIRE COAST

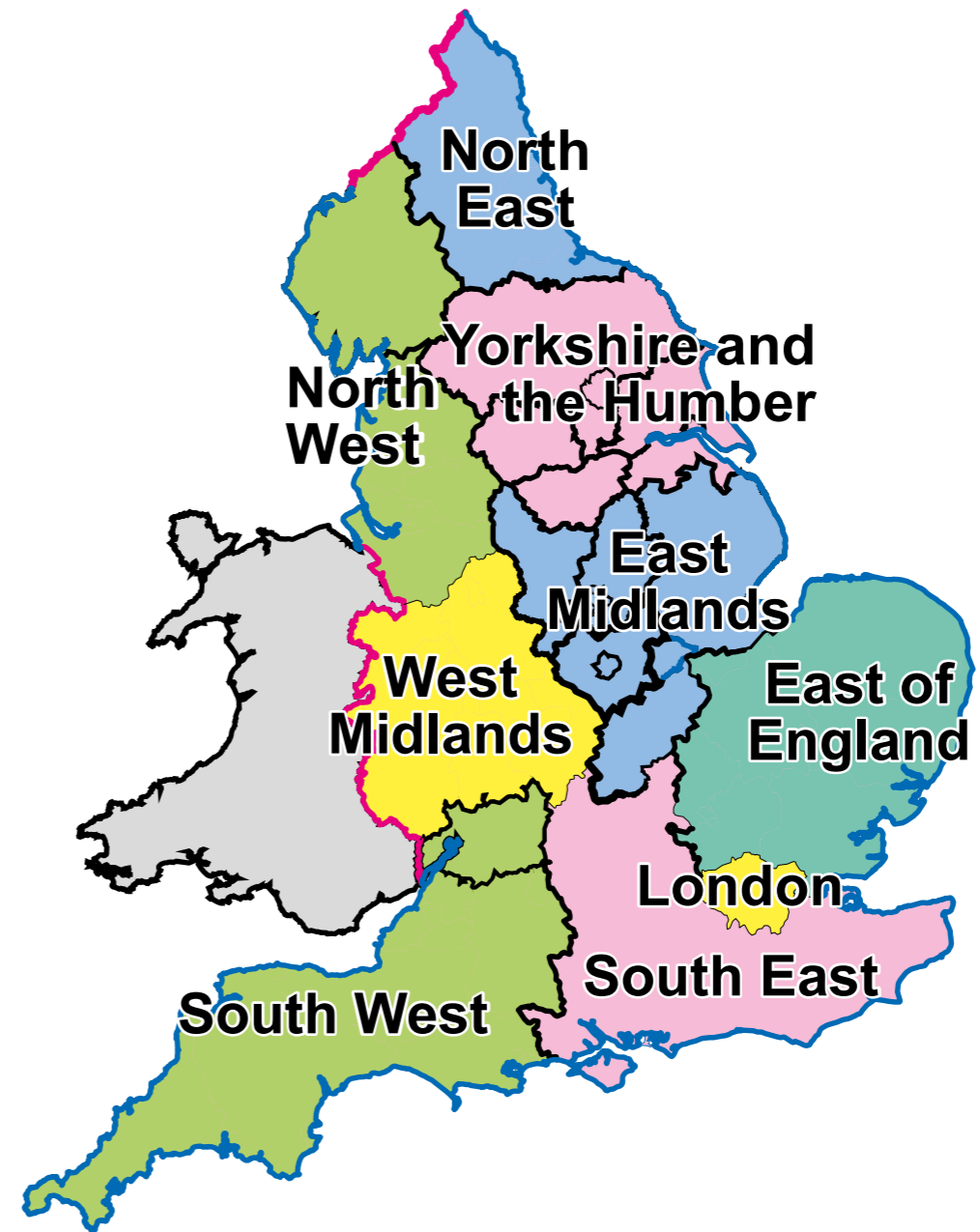




## PLANNED SPENDING ON FLOOD DEFENCES IN ENGLAND UP TO 2026



## REGIONS OF ENGLAND

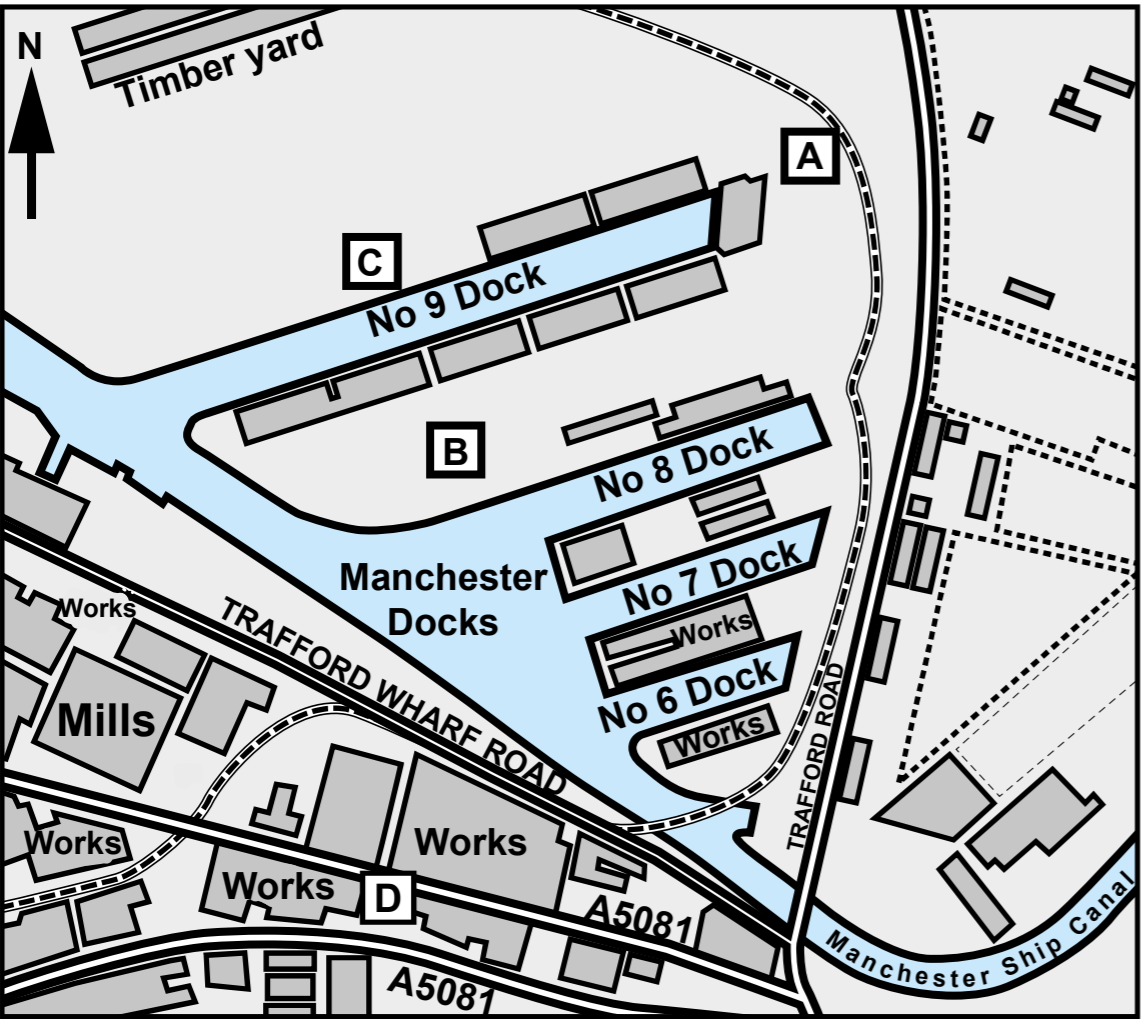


## **MORPETH FLOOD PROTECTION SCHEME, NORTH-EAST ENGLAND, AN EXAMPLE OF HARD ENGINEERING**



**The scheme opened in August 2015, at a cost of £26m. It includes one of the largest flood storage reservoirs the Environment Agency has ever built and reduces the risk of flooding to 1000 homes and businesses in the area. The upstream dam and storage area work by storing up to 1.4 million cubic metres of water when river levels are high. There is now a 0.7% chance of river flooding in Morpeth each year. The scheme created 17 hectares of new habitat for local wildlife.**

**OS MAP OF MANCHESTER DOCKS IN 1980  
(SCALE 1:10 000)**



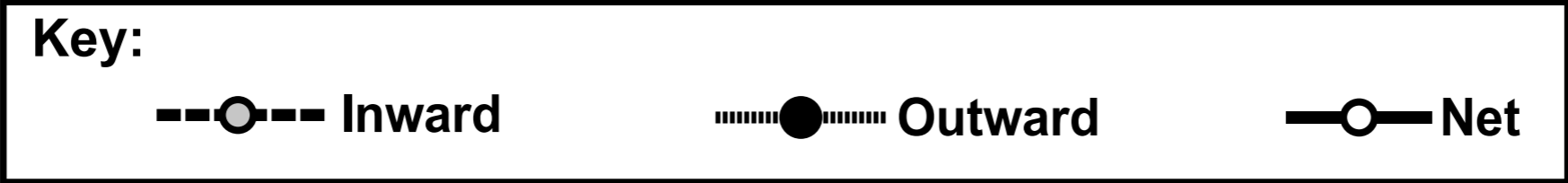
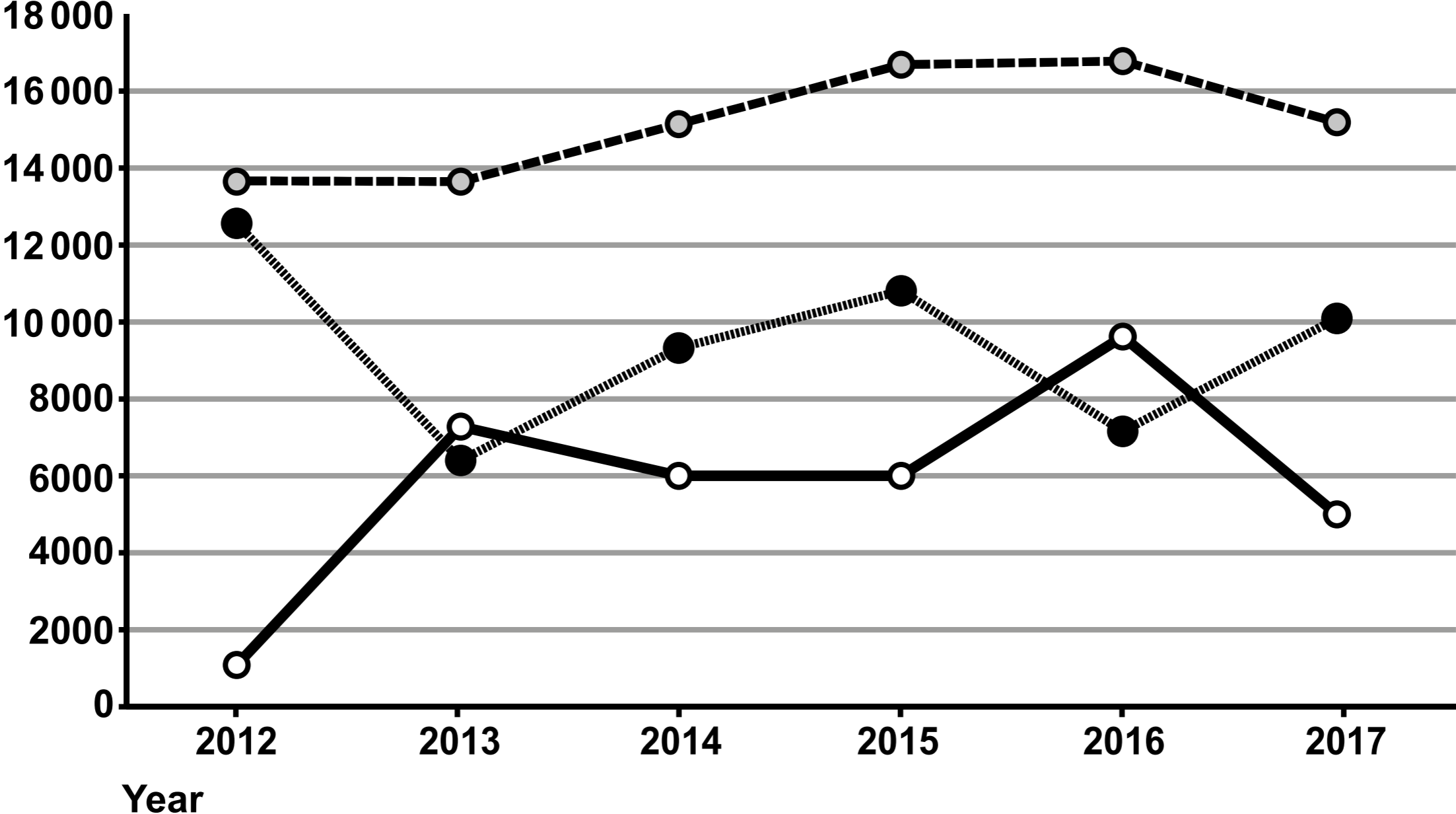
**RECENT PHOTO OF MANCHESTER DOCKS**



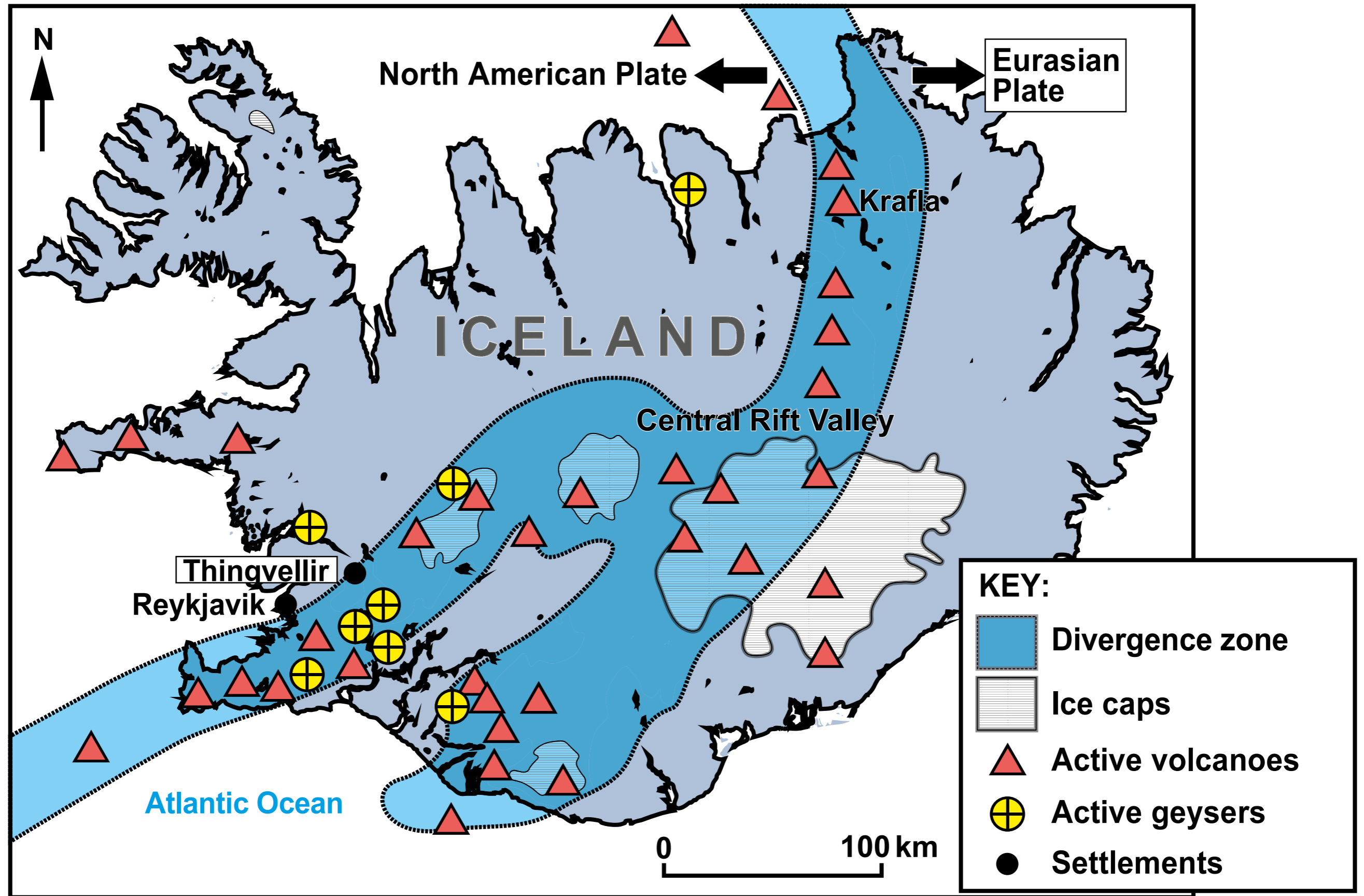
**Salford Quays**

# INTERNATIONAL MIGRATION, 2012-2017, WALES

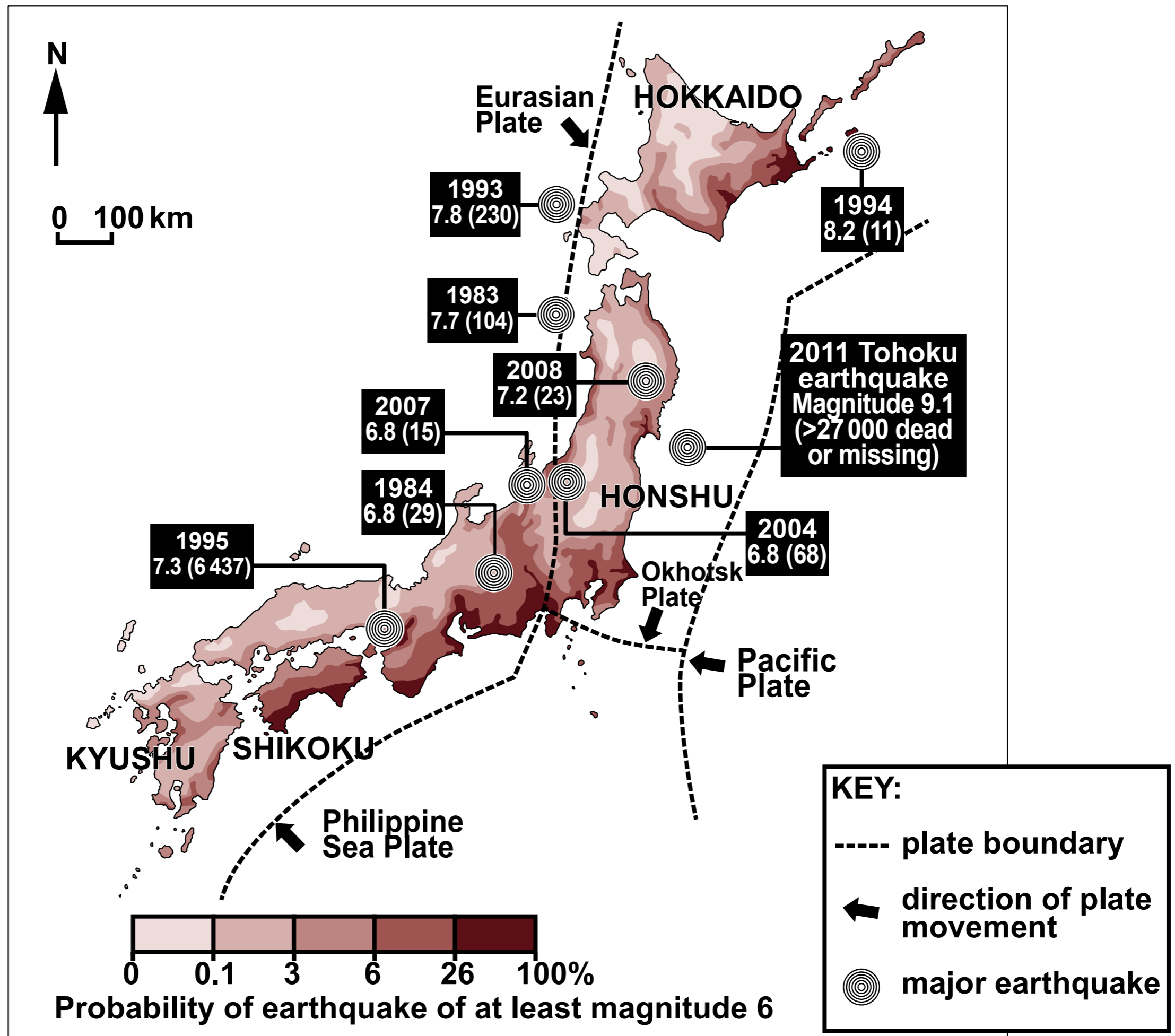
Number of people



# MAP OF TECTONIC LANDSCAPE FEATURES OF ICELAND

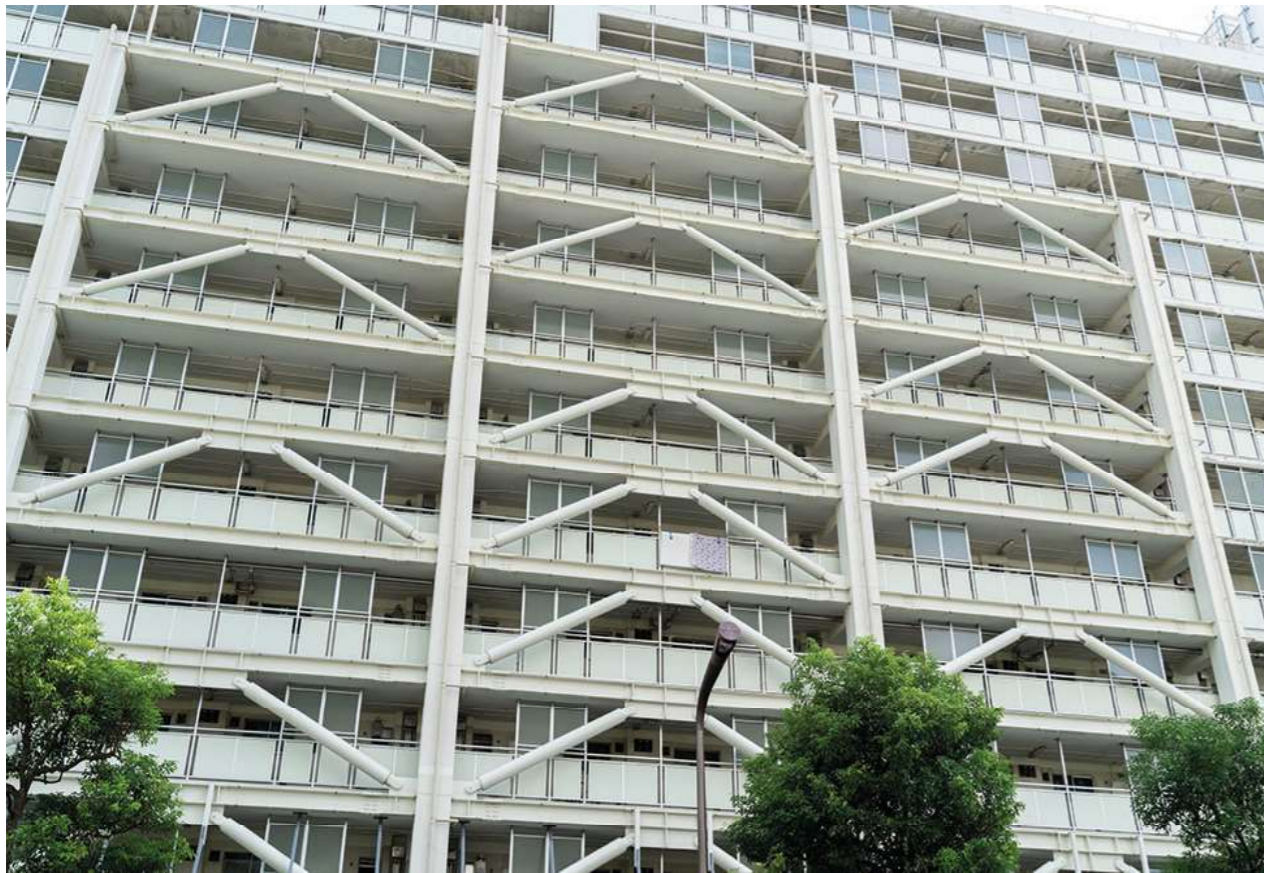


# EARTHQUAKE HAZARD RISK MAP, JAPAN



## INFORMATION ON JAPAN

### EARTHQUAKE-RESISTANT BUILDING TECHNOLOGY



### EARTHQUAKE EMERGENCY DRILL IN JAPAN



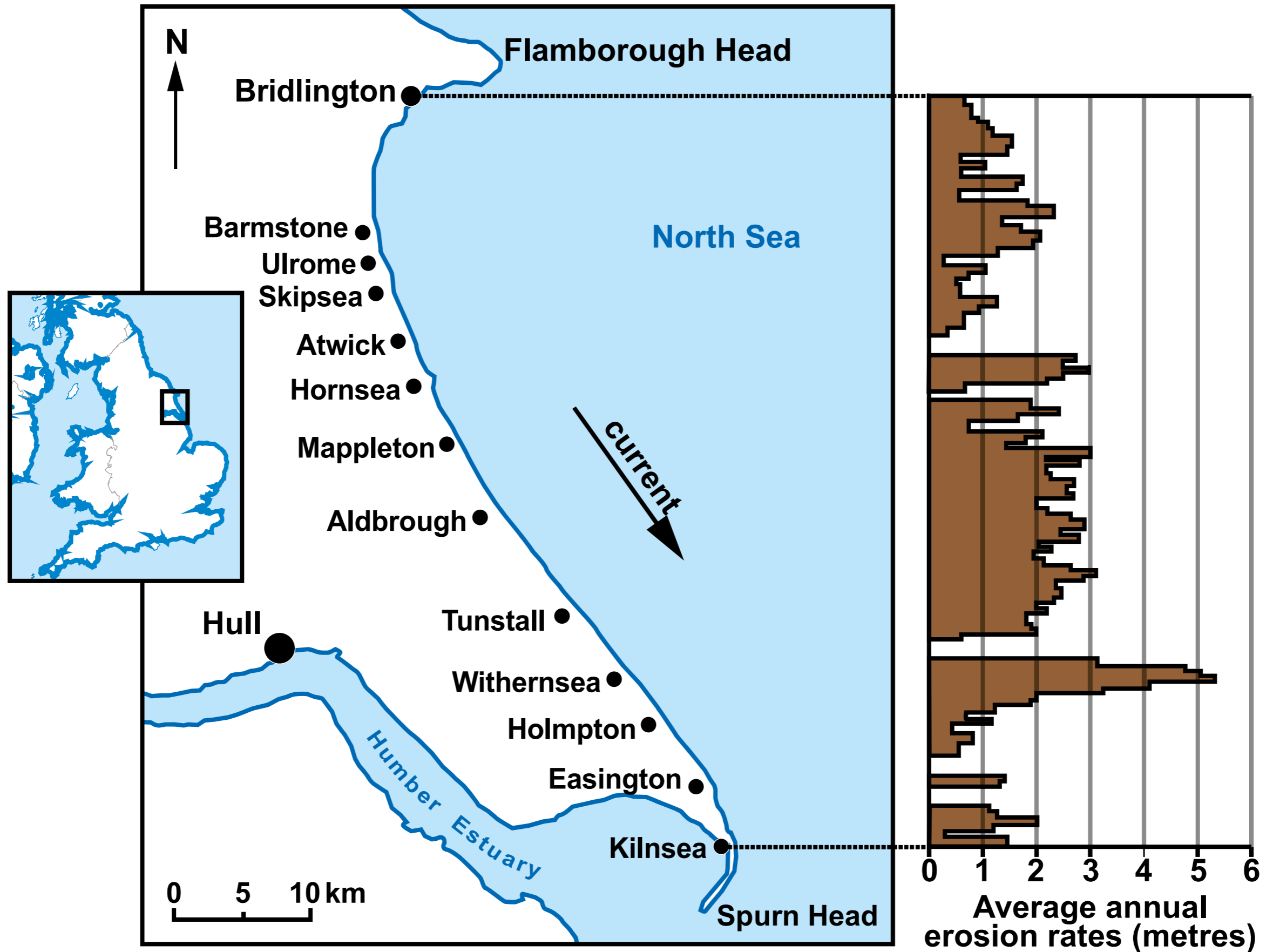
### PART OF TOKYO'S BUILT-UP AREA



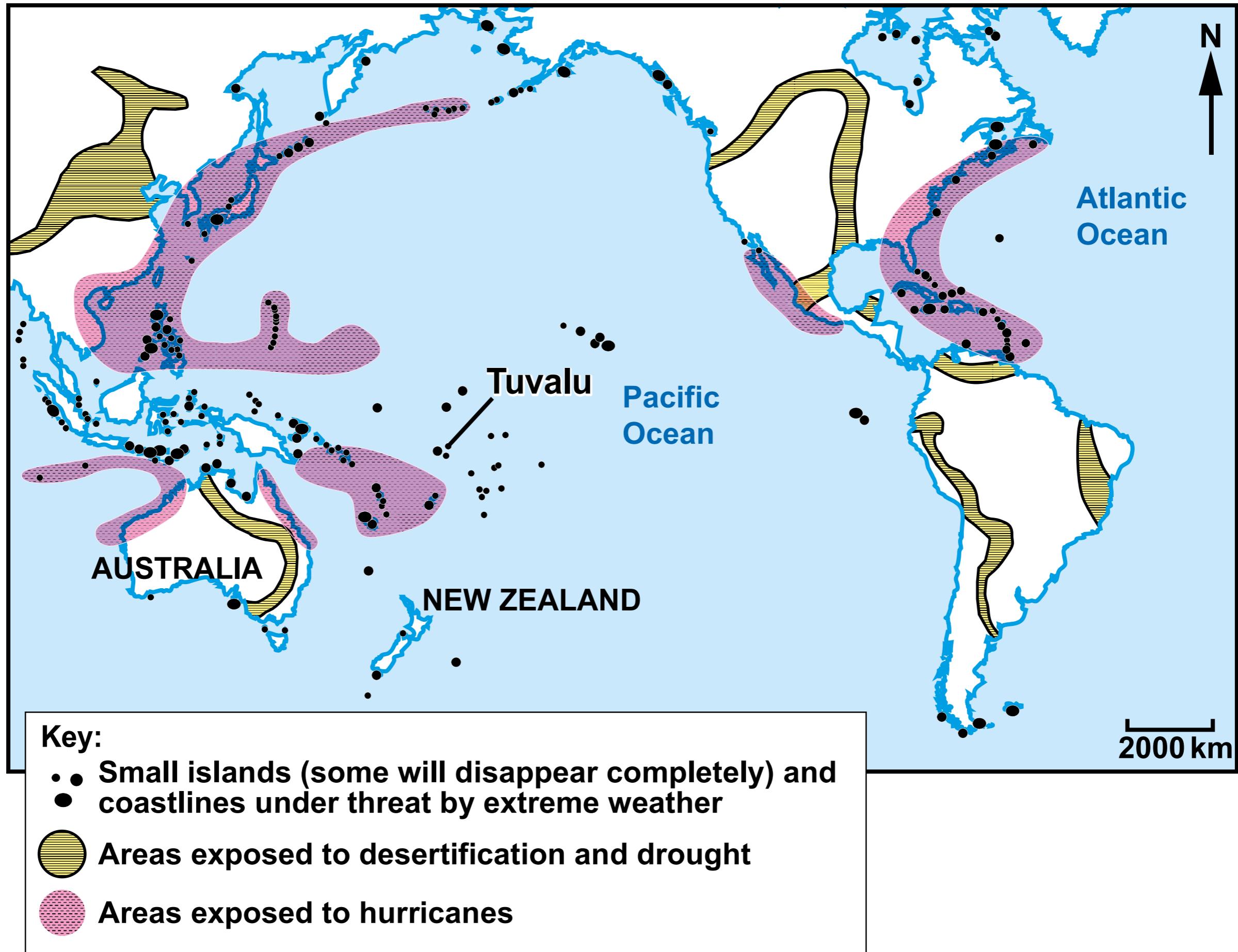
#### FACT FILE

- Japan is one of the wealthiest countries in the world with GDP per capita \$40 000.
- The Japanese government has spent \$1 billion to build its seismic alert system that can detect the peak of an earthquake 80 seconds before it arrives.
- In Japan the most seismically active areas are also the most densely populated areas.
- It is estimated that earthquake damage costs the Japanese economy an average \$20 billion per year.

# AVERAGE ANNUAL EROSION RATES 2003-2017 ALONG THE HOLDERNESS COAST, NORTHERN ENGLAND



# AREA AT RISK OF CREATING ENVIRONMENTAL REFUGEES



## INFORMATION ABOUT TUVALU



### FACT FILE

- Tuvalu is a Small Island Developing State (SIDS). It comprises 9 small, sparsely populated islands with palm-fringed beaches.
- The islands are the lowest lying of all SIDS. The highest point above sea level is 4.6 m.
- Its population of 11 500 mostly live by farming and fishing.
- GDP per capita is \$4 059 (UK \$43 500).
- Climate change is causing sea levels to rise, threatening the islanders' way of life.
- Salt water is flooding the shores and killing coconut palms. Many large parcels of land used for palm plantations are no longer of any value, greatly affecting the local economy.
- In the past floods occurred twice a year. Now it is every month. One of the smallest islands disappeared in 1997.

### AERIAL PHOTOGRAPH OF PART OF TUVALU

