



GCSE

C111U20-1



FRIDAY, 9 JUNE 2023 – MORNING

GEOGRAPHY A – Component 2
Environmental and Developmental Issues

1 hour 30 minutes plus your additional time allowance

Surname

First name(s)

Centre Number

Candidate Number

0

ADDITIONAL MATERIALS

Resource Folder.

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.

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.

Answer BOTH questions in Section A.

Answer ONE question in Section B.

Write your answers in the spaces provided in this booklet.

(Turn over)

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.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part-question.

Your ability to spell, punctuate and use grammar and specialist terminology accurately will be assessed in your answer to Question 2(d).

(Turn over)

SECTION A: CORE THEMES

Answer ALL questions in this section.

THEME 5: WEATHER, CLIMATE AND ECOSYSTEMS

1 (a) Study GRAPHS 1.1 and 1.2 opposite.

(Turn over)

Read the statements in the box below.

1 (a) (i) Tick (✓) the TWO correct statements. [2 marks]

	TICK (✓)
The lowest percentages of average rainfall were in South East England and East Anglia.	
Scotland West received 70% of average rainfall.	
South East England received 10% of average rainfall.	
Most regions of the UK had average high temperatures of over 20°C.	
Northern Ireland was the coolest region.	

(Turn over)

1 (a) (ii) Suggest an alternative technique to represent the information shown on GRAPHS 1.1 and 1.2.

[1 mark]

(iii) Give TWO impacts of high-pressure hazards on people. [2 marks]

Impact 1: _____

Impact 2: _____

(Turn over)

1 (a) (iv) Give ONE reason why high-pressure hazards have impacts on the environment.

[2 marks]

(Turn over)

1 (a) (v) In the UK, low pressure brings different weather conditions to high pressure. Explain why.

[6 marks]

(Turn over)

Additional space for 1(a)(v) only:

(Turn over)

1 (a) (vi) Give ONE reason why weather conditions vary in different parts of the UK. [2 marks]

(Turn over)

1 (b) (i) Define biodiversity. [1 mark]

(Turn over)

- 1 (b) (ii) Describe TWO ways human activity in ecosystems can have an impact on biodiversity.
[4 marks]

Way 1: _____

Way 2: _____

(Turn over)

1 (b) (iii) Give ONE strategy which can be used to manage biodiversity.

[1 mark]

(Turn over)

1 (c) Study OS MAP 1.3 in the RESOURCE FOLDER.

- (i) Complete the paragraph to describe the location of the wind farm, choosing the correct answers from the box below.**
[3 marks]

The wind farm is found to the

_____ of the A1 road.

Much of the wind farm is located in grid square _____ .

The woodland to the west of Langford is approximately _____ kilometres from the wind farm.

East	West	North	2141	2041	2040	4	2	5
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(Turn over)

1 (c) (ii) Study GRAPH 1.4 opposite.

**Calculate the percentage of energy
generated by wind in the UK in 2020.
Show your working. [2 marks]**

Answer: _____ %

(Turn over)

**1 (c) (iii) Study the information in
RESOURCE BOX 1.5 opposite
and the OS MAP 1.3 in the
RESOURCE FOLDER.**

**To what extent does energy production
have negative impacts on the environment
near Biggleswade?**

**Use evidence from RESOURCE BOX 1.5
and the OS MAP 1.3 [8 marks]**

(Turn over)

(Turn over)

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(Turn over)

(Turn over)

Additional space for question 1(c)(iii) only:

END OF QUESTION 1

(Turn over)

**THEME 6: DEVELOPMENT AND
RESOURCE ISSUES**

**2 (a) (i) Tick (✓) the correct definition of
GNI from the table below.**

[1 mark]

	TICK (✓)
Gross National Inequality	
Great National Income	
Gross National Income	

(Turn over)

Study GRAPH 2.1 opposite.

2 (a) (ii) Describe the similarities and differences in GNI between Brazil and the UK. [3 marks]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

(Turn over)

**2 (a) (iii) Give ONE way in which
GRAPH 2.1 could be improved.
[1 mark]**

(Turn over)

2 (a) (iv) Explain why using economic measures of development has limitations. [4 marks]

(Turn over)

2 (b) (i) Choose the correct definition for each of the following terms.

Write the correct LETTER in the box below.
[4 marks]

Trade	A
Trade Bloc	B
Imports	C
Exports	D

DEFINITION	LETTER
Goods and services which are bought from other countries.	
A group of countries that work together to promote trade.	
Buying and selling of goods and services.	
Goods and services sold to other countries.	

(Turn over)

Study MAP 2.2 opposite.

2 (b) (ii) Give TWO conclusions you can draw about trade in Brazil from MAP 2.2. [2 marks]

Conclusion 1: _____

Conclusion 2: _____

(Turn over)

2 (b) (iii) International trade can have an impact on development in LICs and/or NICs. Explain why.

[4 marks]

(Turn over)

2 (c) Study MAP 2.3 opposite.

(i) Describe the pattern of household income shown on MAP 2.3. [2 marks]

(Turn over)

2 (c) (ii) Give ONE reason why there are inequalities within countries.

[2 marks]

(Turn over)

2 (c) (iii) Give THREE social consequences of inequality. [3 marks]

1 _____

2 _____

(Turn over)

3

(Turn over)

2 (d) Study RESOURCE BOX 2.4 opposite.

The demand for water in Rio de Janeiro can be easily managed. How far do you agree? [8 marks]

Your ability to spell, punctuate and use grammar and specialist terminology accurately will be assessed in your answer to this question. [4 marks]

(Turn over)

(Turn over)

(Turn over)

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(Turn over)

Additional space for 2(d) only:

END OF QUESTION 2

(Turn over)

SECTION B: OPTIONS

Answer ONE question in this section.

Choose EITHER Question 3 (Theme 7) OR Question 4 (Theme 8)

THEME 7: SOCIAL DEVELOPMENT

3 (a) Study GRAPH 3.1 opposite

(i) Complete GRAPH 3.1 using the data in the table below. [2 marks]

YEAR	INFANT MORTALITY RATE PER 1000
2020	50

(Turn over)

3 (a) (ii) Give TWO factors which cause high rates of infant mortality in sub-Saharan Africa. [2 marks]

Factor 1: _____

Factor 2: _____

(Turn over)

3 (a) (iii) Give TWO reasons why levels of social development change over time. [4 marks]

Reason 1: _____

continued on the following page

(Turn over)

Reason 2: _____

(Turn over)

3 (b) Study the information in RESOURCE BOX 3.2 opposite.

Mozambique is making good progress in tackling health care issues. How far do you agree? [8 marks]

(Turn over)

[illegible]

(Turn over)

[illegible]

(Turn over)

(Turn over)

Additional space for question 3(b) only:

END OF QUESTION 3

(Turn over)

**THEME 8 – ENVIRONMENTAL
CHALLENGES**

If you have answered Question 3, DO NOT answer this question.

4 (a) Study GRAPH 4.1 opposite.

(i) Complete GRAPH 4.1 using the data in the table below. [2 marks]

YEAR	INCOME FROM INTERNATIONAL TOURISM (US\$ 1000s)
2019	2100

(Turn over)

4 (a) (ii) Give TWO negative impacts of tourism on the environment.

[2 marks]

Impact 1: _____

Impact 2: _____

(Turn over)

4 (a) (iii) Give TWO reasons why ecotourism is used in some locations. [4 marks]

Reason 1: _____

continued on the following page

(Turn over)

Reason 2: _____

(Turn over)

4 (b) Study the information in RESOURCE BOX 4.2 opposite and on the following page.

Mozambique is making good progress with restoring damaged environments and habitats. How far do you agree?

[8 marks]

(Turn over)

[illegible]

(Turn over)

(Turn over)

Additional space for question 4(b) only:

END OF QUESTION 4

END OF PAPER

(Turn over)

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

(Turn over)

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

(Turn over)

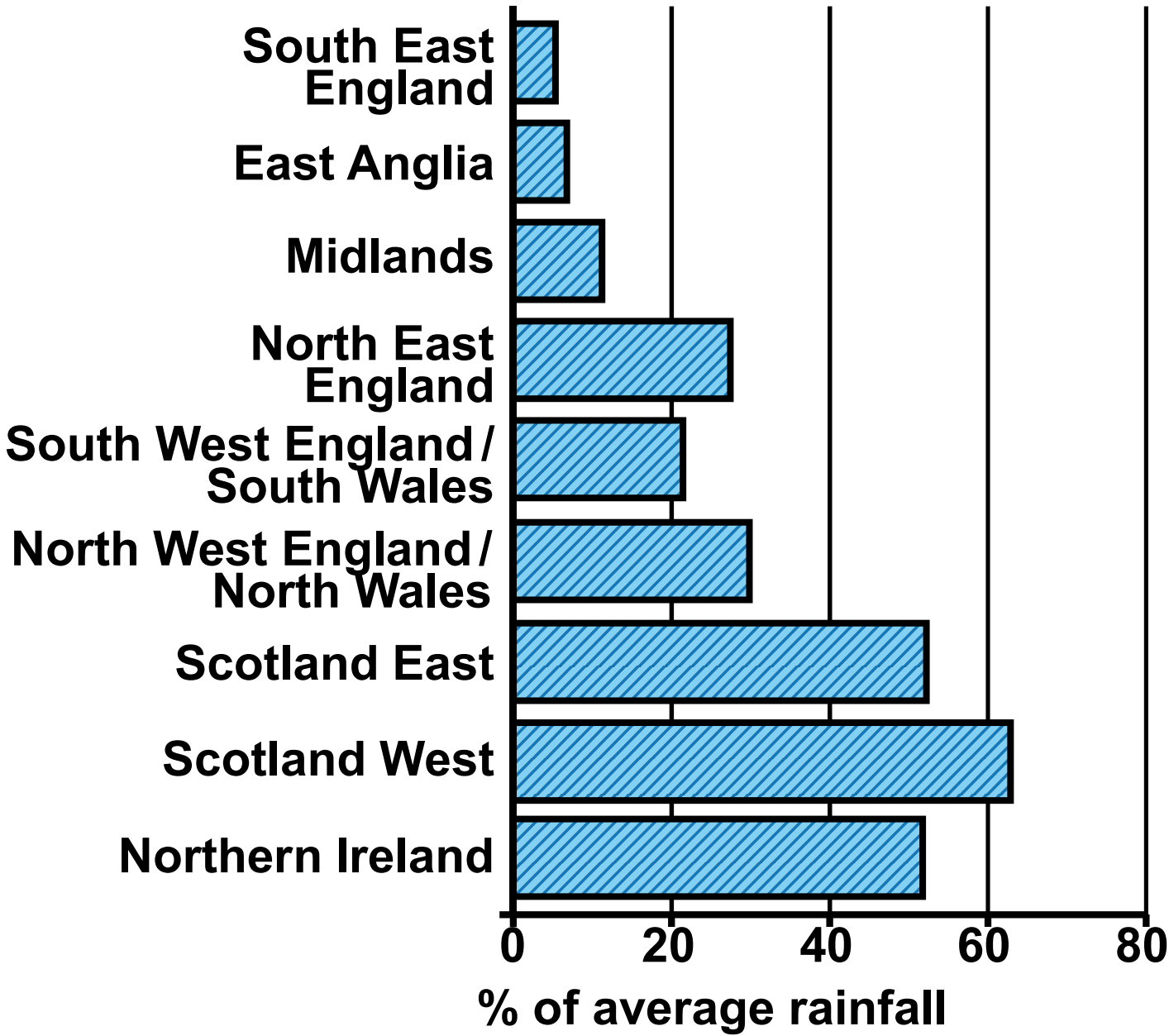
Question Number	Additional page, if required. Write the question number(s) in the left-hand margin.

(Turn over)

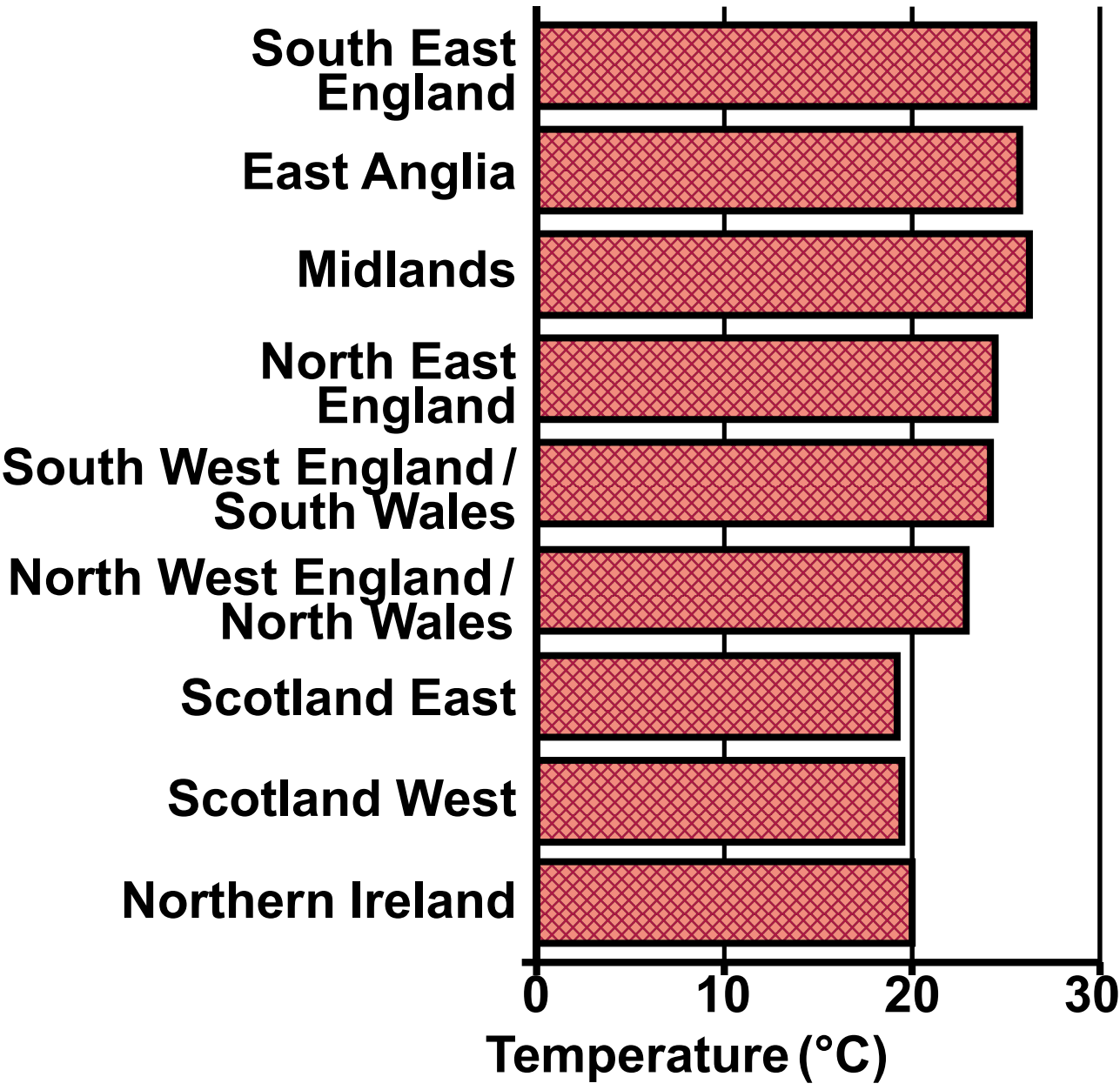
Question Number	Additional page, if required. Write the question number(s) in the left-hand margin.

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1	34	
2	34	
SPaG	4	
either 3	16	
or 4	16	
Total	88	

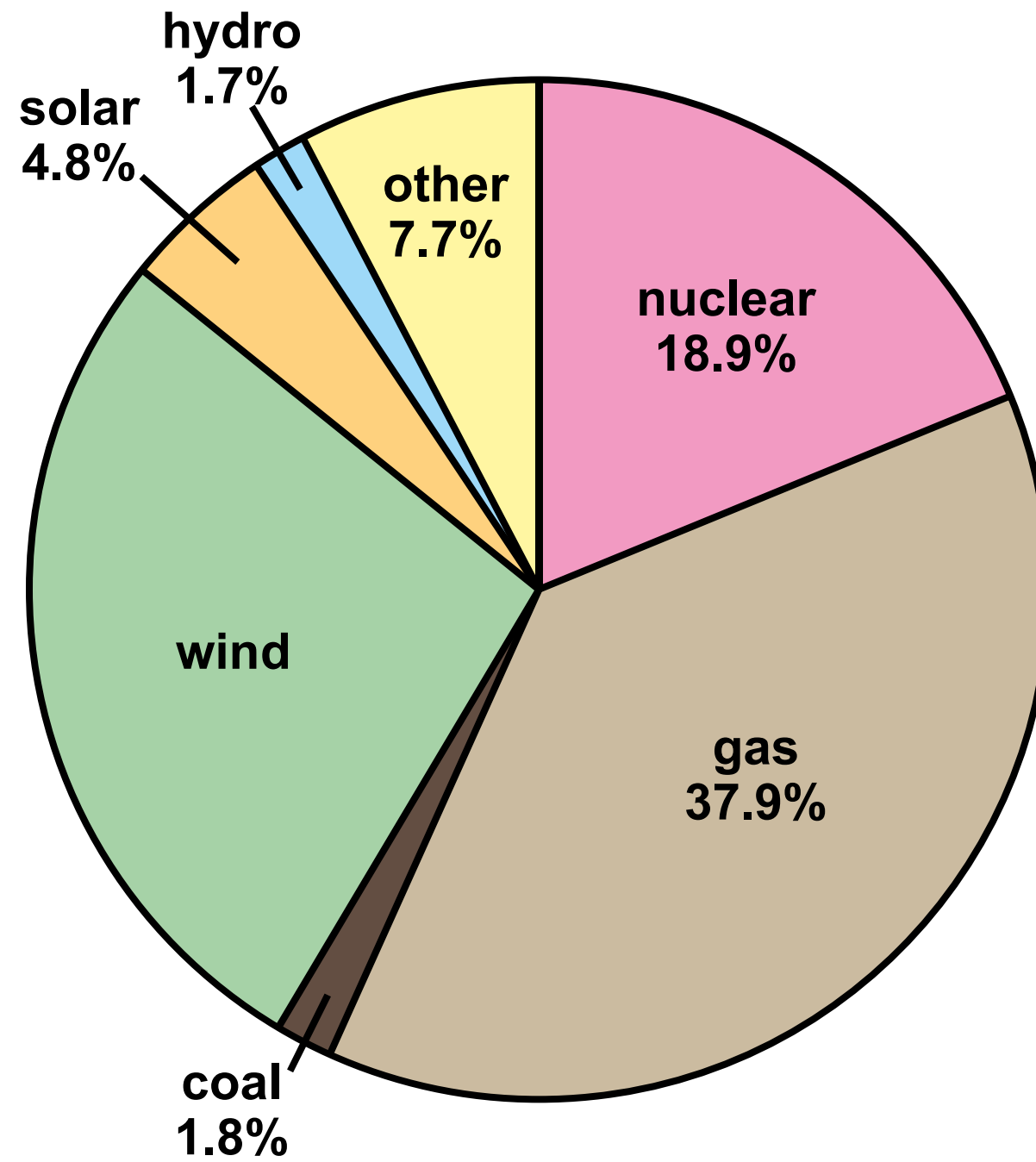
**GRAPH 1.1 - PERCENTAGE OF AVERAGE RAINFALL
IN JUNE AND JULY FOR UK REGIONS IN 2018**



**GRAPH 1.2 - AVERAGE HIGH TEMPERATURE
IN JULY FOR UK REGIONS IN 2018**



GRAPH 1.4 - ENERGY PRODUCTION IN THE UK IN 2020



RESOURCE BOX 1.5

THE WIND FARM NEAR BIGGLESWADE



- There are 10 wind turbines at Biggleswade wind farm.
- They provide electricity for approximately 11 000 homes.
- This project will reduce the amount of CO₂ produced by an estimated 30 000 tonnes.
- Wind power is one of the cheapest renewable energy sources.

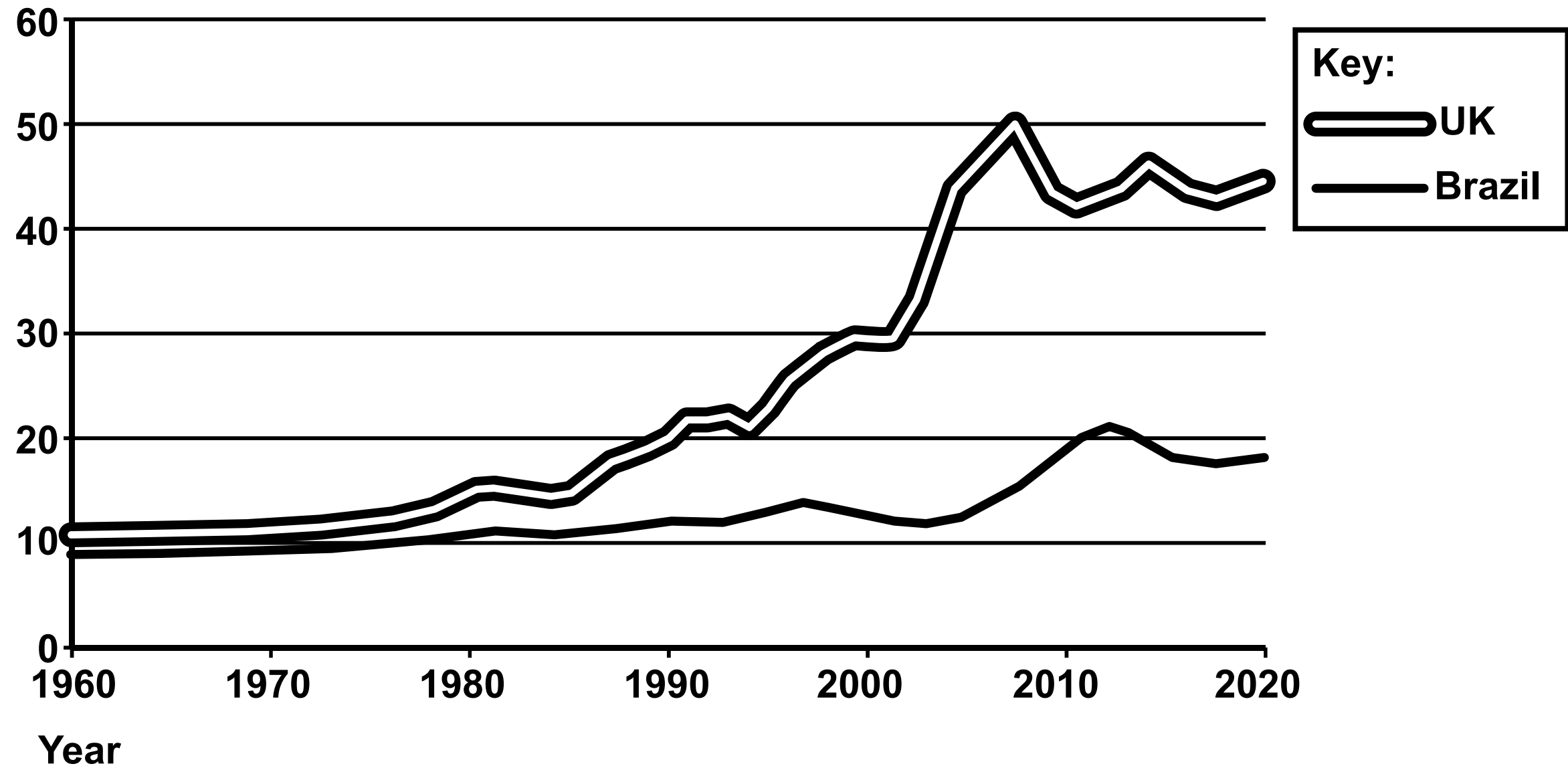
NATURE RESERVE NEAR BIGGLESWADE IN GRID SQUARE 1840



- The nature reserve near Biggleswade is an important habitat for many rare birds and other wildlife.

GRAPH 2.1 - GNI IN BRAZIL AND THE UK BETWEEN 1960 AND 2020

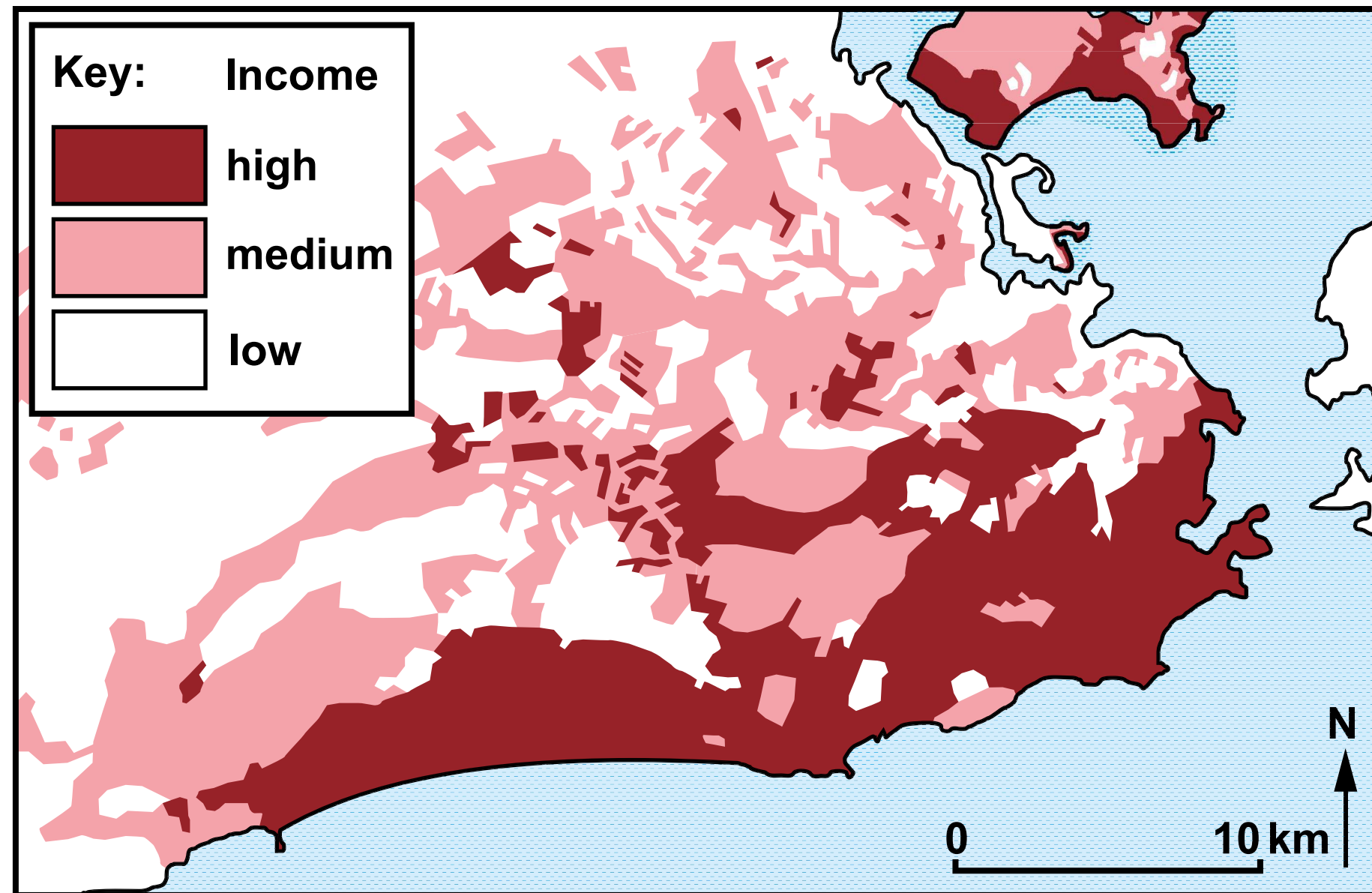
GNI per capita/US\$ (1000s)



MAP 2.2 - MAIN TRADING PARTNERS FOR EACH REGION IN BRAZIL, 2017



MAP 2.3 - INCOME PER HOUSEHOLD IN RIO DE JANEIRO, A LARGE CITY IN BRAZIL



RESOURCE BOX 2.4 - INFORMATION ABOUT WATER RESOURCES IN BRAZIL

THE GUANDU WATER TREATMENT PLANT NEAR RIO DE JANEIRO



- The Guandu Water Treatment Plant is the largest in the world.
- It provides 92% of drinking water for Rio de Janeiro.
- The cost of water treatment is US\$ 40 million per year.
- The treatment plant is struggling to cope with increasing water quality problems.

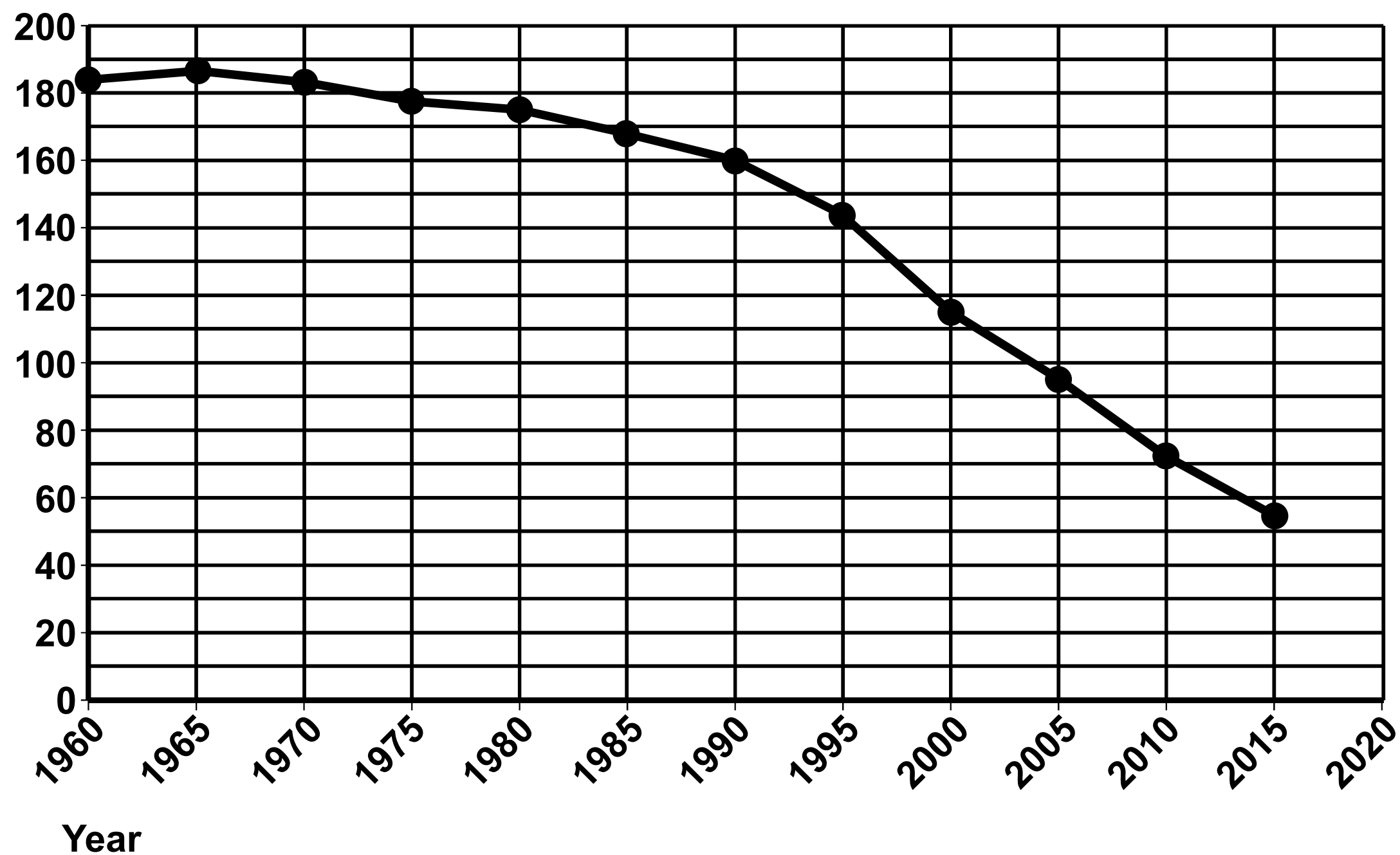


WASTE WATER IN A RESIDENTIAL AREA OF RIO DE JANEIRO

- Due to increased demand Rio's water supply will have to increase by 50% by 2030.
- Brazil is the world's largest source of water. It has 13% of all fresh water and 20% of all the groundwater.
- Deforestation in Brazil is causing soil erosion which is filling reservoirs with sediment instead of water.
- Replanting the forest could save US\$79 million in water treatment costs.

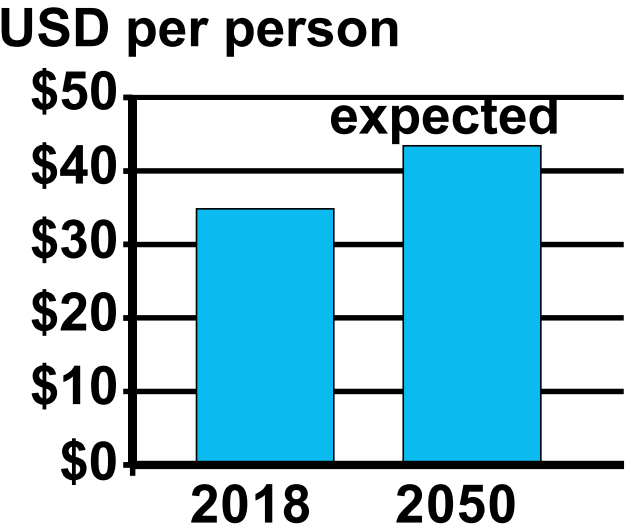
GRAPH 3.1 - INFANT MORTALITY RATE IN MOZAMBIQUE, AFRICA

Infant mortality rate (per 1000)

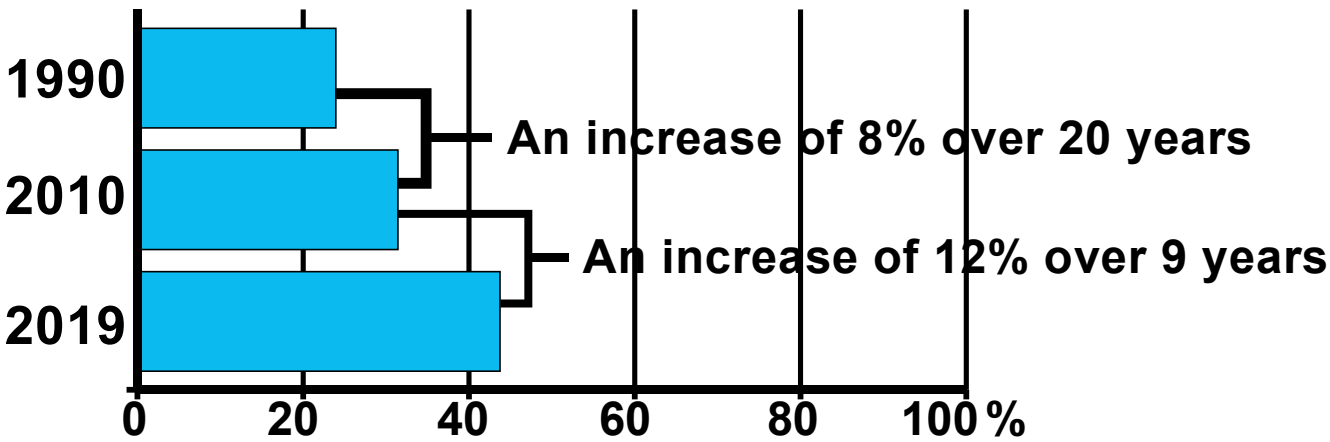


RESOURCE BOX 3.2 - INFORMATION ABOUT HEALTH IN MOZAMBIQUE

HEALTH SPENDING IN MOZAMBIQUE (2020)



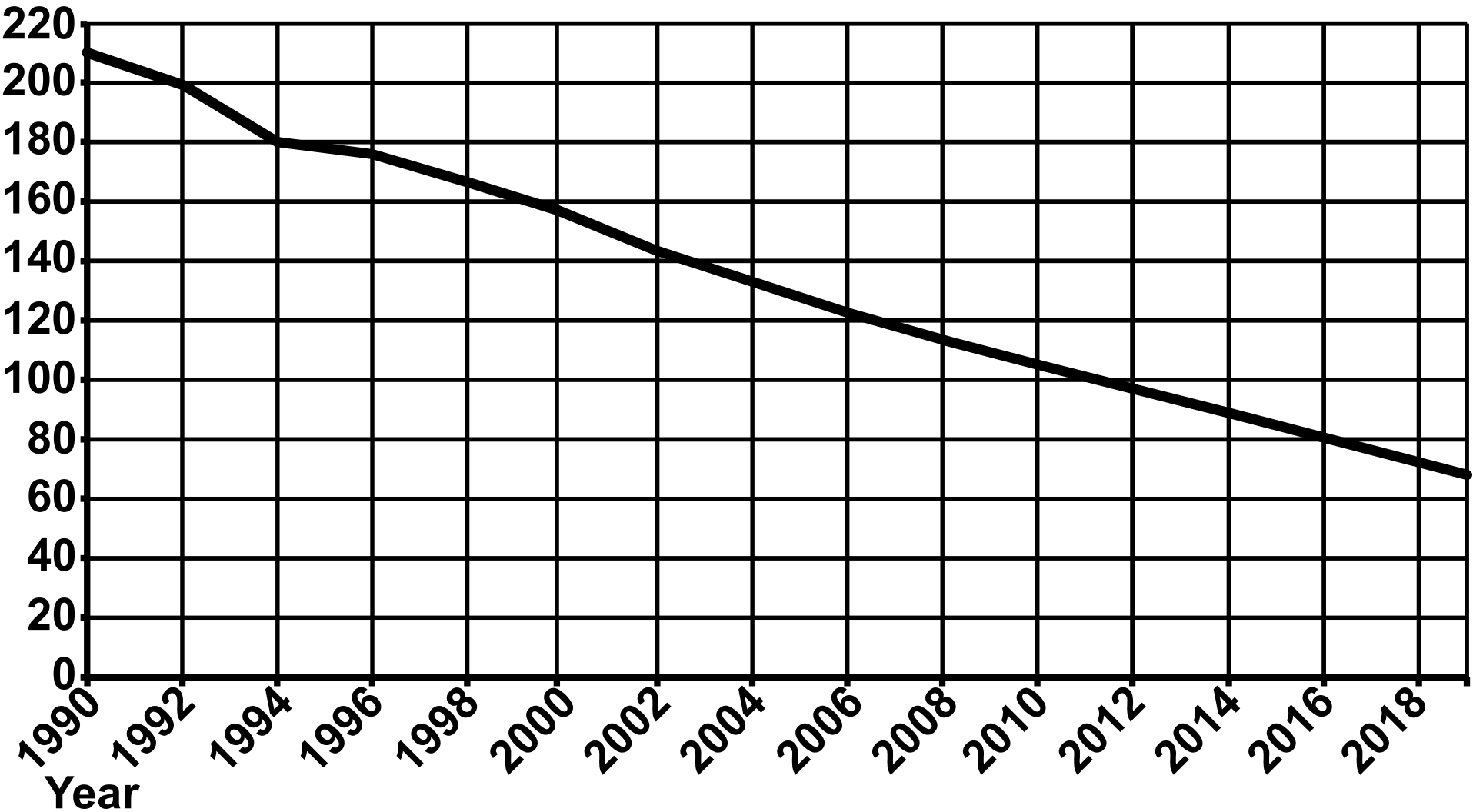
PERCENTAGE OF POPULATION WITH ACCESS TO HEALTH SERVICES



CHILD MORTALITY PER 1000

Child mortality is the number of deaths per 1000 of the population before the age of 5

Deaths per 1000 live births

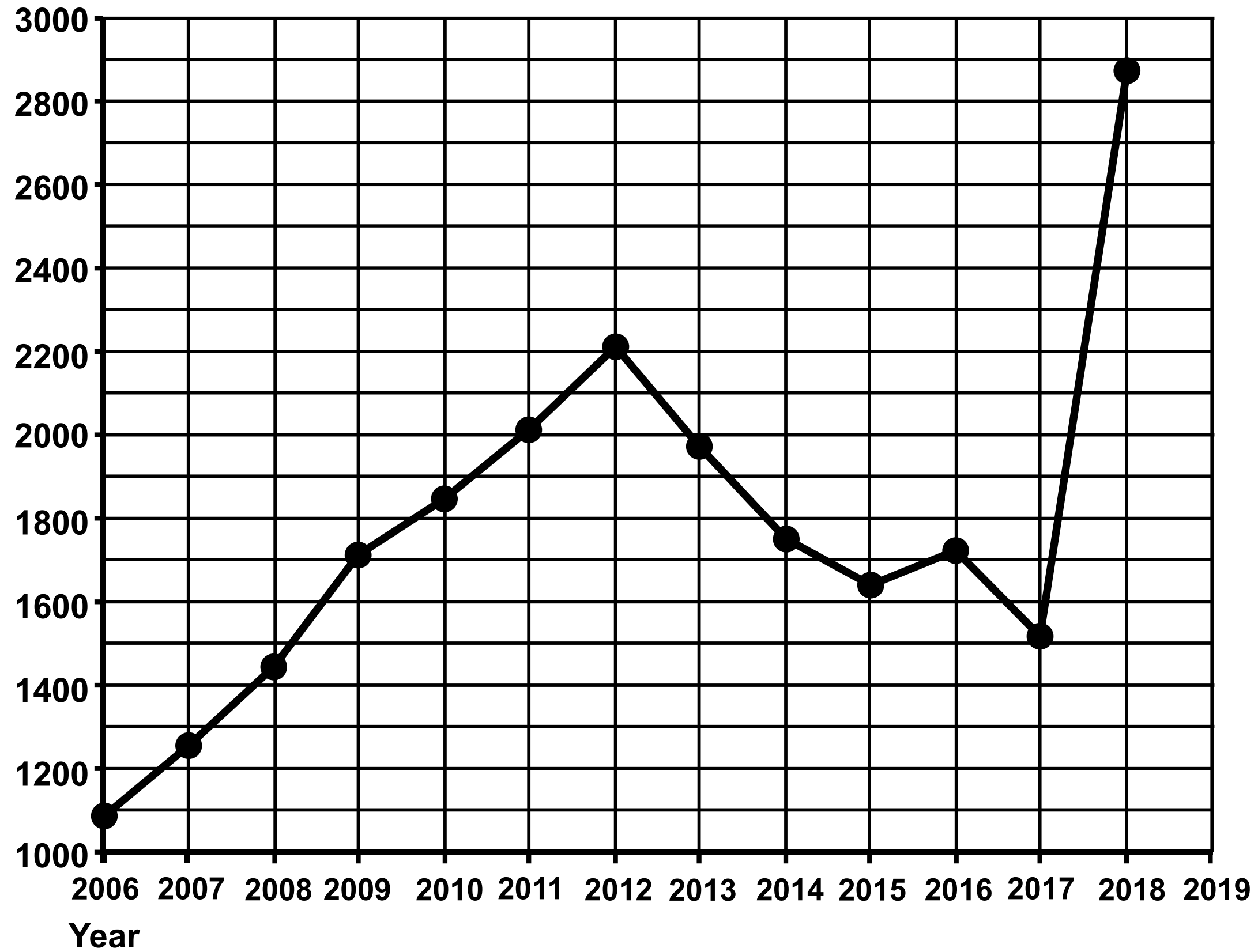


RESOURCE BOX 3.2 - INFORMATION ABOUT HEALTH IN MOZAMBIQUE CONTINUED

- **Mozambique is a low-income country (LIC). In 2020 it was ranked 188 out of 190 by GNI.**
- **Mozambique has one of the highest incidences of HIV and malaria in sub-Saharan Africa.**
- **1.5 million people have HIV and 40 000 people dies from HIV each year.**
- **Low levels of education and poor availability of medication contribute to high rates of HIV.**
- **Malaria is one of the main public health issues with an estimated 8.9 million cases; this is approximately 30% of the population.**
- **Mozambique also has high rates of other diseases such as typhoid, cholera and yellow fever. The climate contributes to the spread of these diseases.**

GRAPH 4.1 - INCOME FROM INTERNATIONAL TOURISTS IN MOZAMBIQUE

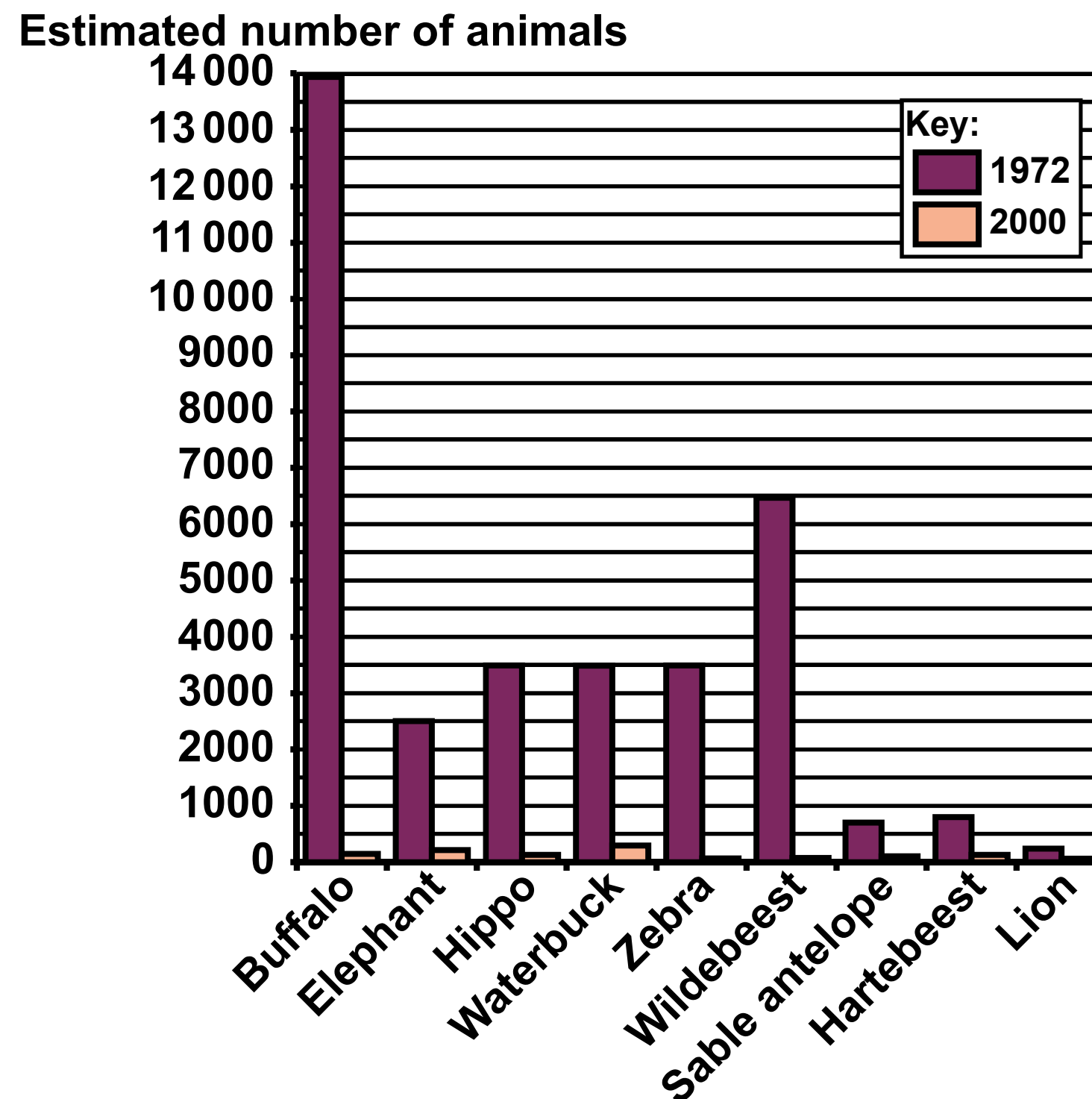
Income US\$ (1000s)



RESOURCE BOX 4.2 - INFORMATION ABOUT GORONGOSA NATIONAL PARK IN MOZAMBIQUE

- Mozambique is a low-income country (LIC). In 2020 it was ranked 188 out of 190 by GNI.
- A National Park is an area of land protected for enjoyment by people and preservation of wildlife. Gorongosa was made a National Park in 1960. At the time Gorongosa had the greatest density of wildlife in Africa.
- A war in Mozambique between 1977 and 1992 destroyed habitats in Gorongosa. 90% of wildlife was killed.

ESTIMATED WILDLIFE NUMBERS IN GORONGOSA NATIONAL PARK IN 1972 AND 2000



THE DERELICT TOURIST CAMP IN GORONGOSA IN 1995



BUFFALO BEING RELEASED BACK INTO THE WILD IN 2006



- Since 1994 millions of trees have been planted, many animals have been moved there and a team of rangers work to try to prevent poaching.
- In 2018, more than 100 000 large animals were counted in Gorongosa.
- Recent conflicts and COVID-19 have reduced income from tourism in Mozambique.
- Droughts have had a negative impact on habitat restoration and wildlife populations.