Pearson Edexcel International GCSE (9–1)

Friday 9 June 2023

Morning (Time: 1 hour 45 minutes)

Paper reference **4GE1/02R**

Geography
PAPER 2: Human 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.
  In Section C, answer **one** question from Questions 7, 8 **and** 9.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- Calculators may be used.
- Where asked you must **show all your working** with **your answer clearly identified** at the end of **your solution**.

Information

- The total mark for this paper is 105.
- 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.

Turn over ▶

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Pearson

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   Economic activity and energy

(a) (i) Identify **one** type of employment associated with the primary sector.

(1)

☒   **A**   doctor

☒   **B**   computer engineer

☒   **C**   miner

☒   **D**   teacher

(ii) State **one** factor that affects the location of primary sector economic activity.

(1)

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(b) Identify a characteristic of informal employment.

(1)

☒   **A**   reliable income

☒   **B**   consistent income

☒   **C**   lack of access to a retail park

☒   **D**   lack of unemployment benefits

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

Suggest **one** factor that has affected the location of this business park.

(2)

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(d) Define the term **energy gap**.

(1)

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(e) For a named developing or emerging country, explain **two** ways energy can be managed sustainably.

(4)

Named developing or emerging country

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1 ....

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

Suggest **one** possible reason for a change in the energy mix shown.

(3)

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(g) Explain **one** advantage and **one** disadvantage of using renewable energy sources.

(4)

Advantage

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Disadvantage

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(h) Study Figure 1c in the Resource Booklet.

Analyse reasons for changes in the employment sectors shown.

Refer to the resource in your answer.

(8)

P 7 1 1 9 7 R A 0 5 5 2

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(Total for Question 1 = 25 marks)

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

2   Rural environments

(a) (i) Identify a type of goods provided by a tropical forest.

(1)

☒   **A**   recycling of nutrients

☒   **B**   tourism

☒   **C**   timber

☒   **D**   wildlife habitat

(ii) Define the term **subsistence farming**.

(1)

....

....

(b) Identify the characteristic of a tundra ecosystem.

(1)

☒   **A**   temperatures below 0°C most of the year

☒   **B**   no presence of permafrost

☒   **C**   precipitation all year round

☒   **D**   rich in nutrients

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

Suggest **one** reason suburbanisation has lead to changes in this rural area.

(2)

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(d) State **one** way farmers try to increase crop yields.

(1)

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(e) For a named developed country, explain **two** ways farm incomes can be diversified.

(4)

Named developed country

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

Suggest **one** way the patterns shown in Figure 2b might change the characteristics of rural areas.

(3)

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(g) Explain **two** strategies being used to make rural living more sustainable in developing or emerging countries.

(4)

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(h) Study Figure 2c in the Resource Booklet.

Analyse the factors that are leading to changes in rural areas in developing and emerging countries.

Refer to the resource in your answer.

(8)

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(Total for Question 2 = 25 marks)

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

3 Urban environments

(a) (i) Identify the feature you would expect to find in a city centre.

(1)

☒ **A** theme park

☒ **B** houses with large gardens

☒ **C** business park

☒ **D** financial district

(ii) State **one** reason for changing land values in different areas of a city.

(1)

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(b) Identify a factor that can affect land use patterns.

(1)

☒ **A** infrastructure

☒ **B** international agreements

☒ **C** GDP per capita

☒ **D** weather

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

Suggest **one** advantage of building on the greenfield site shown.

(2)

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(d) Define the term **counter-urbanisation**.

(1)

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(e) Explain **two** factors that affect the rate of urbanisation.

(4)

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

Suggest **one** reason for a trend shown.

(3)

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P 7 1 1 9 7 R A 0 1 3 5 2

(g) For a named developing or emerging country, explain how **two** groups of stakeholders are trying to manage environmental urban challenges.

(4)

Named developing or emerging country

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(h) Study Figure 3c in the Resource Booklet.

Analyse the transport problems associated with rapid urbanisation.

Refer to the resource in your answer.

(8)

P 7 1 1 9 7 R A 0 1 5 5 2

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(Total for Question 3 = 25 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Geographical enquiry

Answer ONE question only 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 economic activity and energy

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

(i) Identify **one** of the open questions in the questionnaire.

(1)

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(ii) Explain why closed questions can be useful in a questionnaire.

(2)

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Study Figure 4b in the Resource Booklet. It shows environmental quality scores collected at regular distances from a new power plant.

(b) (i) Plot the Environmental Quality Score for 40m and 60m (Figure 4b in the Resource Booklet) to complete the scatter graph below (Figure 4c). Some data has been plotted for you as an example.

(2)
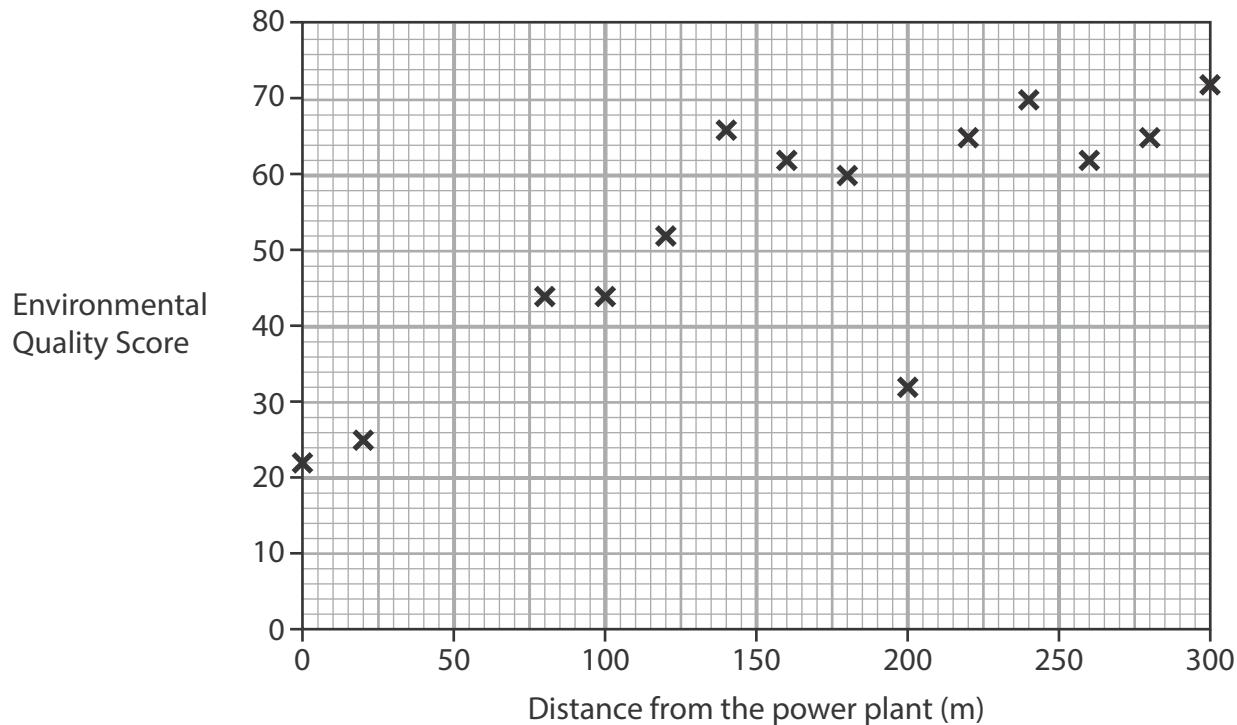
Figure 4c

(ii) Identify at which distance there is an anomaly.

(1)

....

(iii) On Figure 4c, draw a line of best fit.

(1)

P 7 1 1 9 7 R A 0 1 8 5 2

(iv) Calculate the median Environmental Quality Score (EQS).

(2)

Write your answer to one decimal place.

Show all your workings.

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(c) Explain how secondary data could have been used to support this enquiry.

(3)

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P 7 1 1 9 7 R A 0 1 9 5 2

(d) You have studied economic activity and energy as part of your own geographical enquiry.

State the title of your geographical enquiry.

Evaluate how far your data collection methods allowed you to achieve your aim.

(8)

Geographical enquiry title

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(Total for Question 4 = 20 marks)

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

5   Investigating rural environments

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

(i) Identify **one** of the open questions in the questionnaire.

(1)

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(ii) Explain why closed questions can be useful in a questionnaire.

(2)

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Study Figure 5b in the Resource Booklet. It shows environmental quality scores collected at regular distances from the new collection of farm shops.

(b) (i) Plot the Environmental Quality Score for 40m and 60m (Figure 5b in the Resource Booklet) to complete the scatter graph below (Figure 5c). Some data has been plotted for you as an example.

(2)
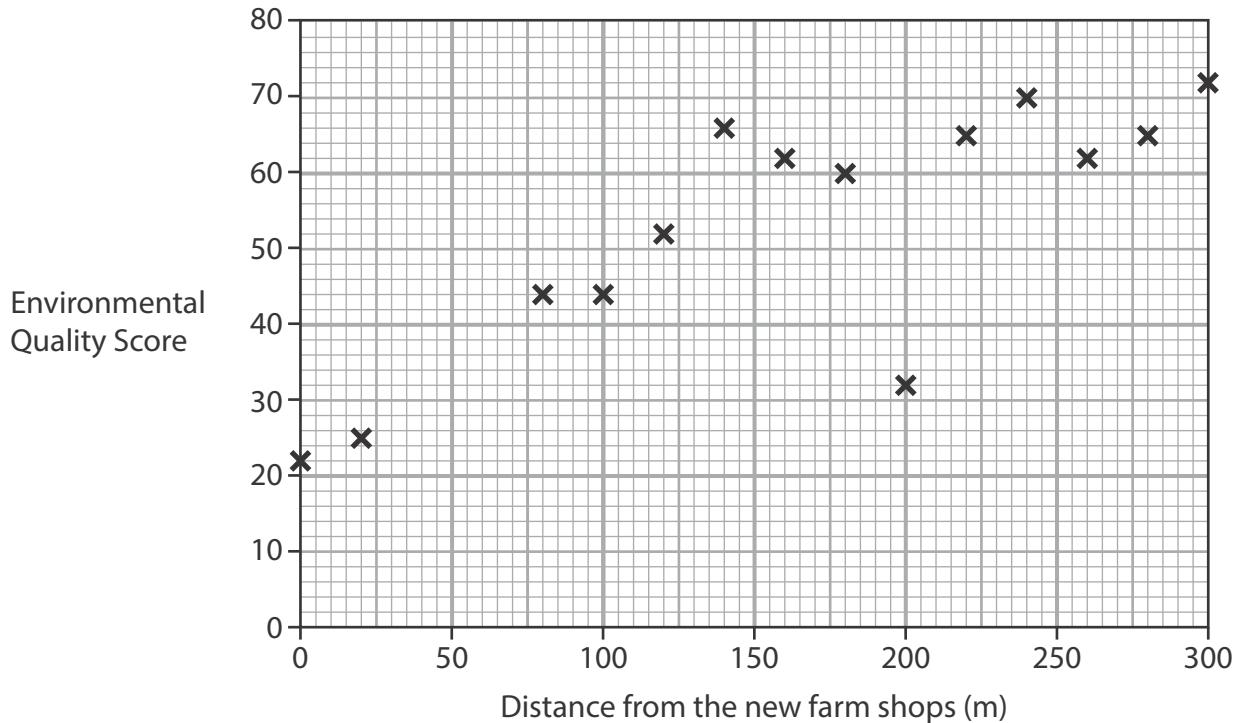
Figure 5c

(ii) Identify at which distance there is an anomaly.

(1)

....

(iii) On Figure 5c, draw a line of best fit.

(1)

(iv) Calculate the median Environmental Quality Score (EQS).

(2)

Write your answer to one decimal place.

Show all your workings.

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(c) Explain how secondary data could have been used to support this enquiry.

(3)

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(d) You have studied rural environments as part of your own geographical enquiry.

State the title of your geographical enquiry

Evaluate how far your data collection methods allowed you to achieve your aim.

(8)

Geographical enquiry title

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(Total for Question 5 = 20 marks)

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

6   Investigating urban environments

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

(i) Identify **one** of the open questions in the questionnaire.

(1)

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(ii) Explain why closed questions can be useful in a questionnaire.

(2)

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(b) Study Figure 6b in the Resource Booklet. It shows environmental quality scores collected at regular distances from the new bus station.

(i) Plot the Environmental Quality Score for 40m and 60m (Figure 6b in the Resource Booklet) to complete the scatter graph below (Figure 6c). Some data has been plotted for you as an example.

(2)
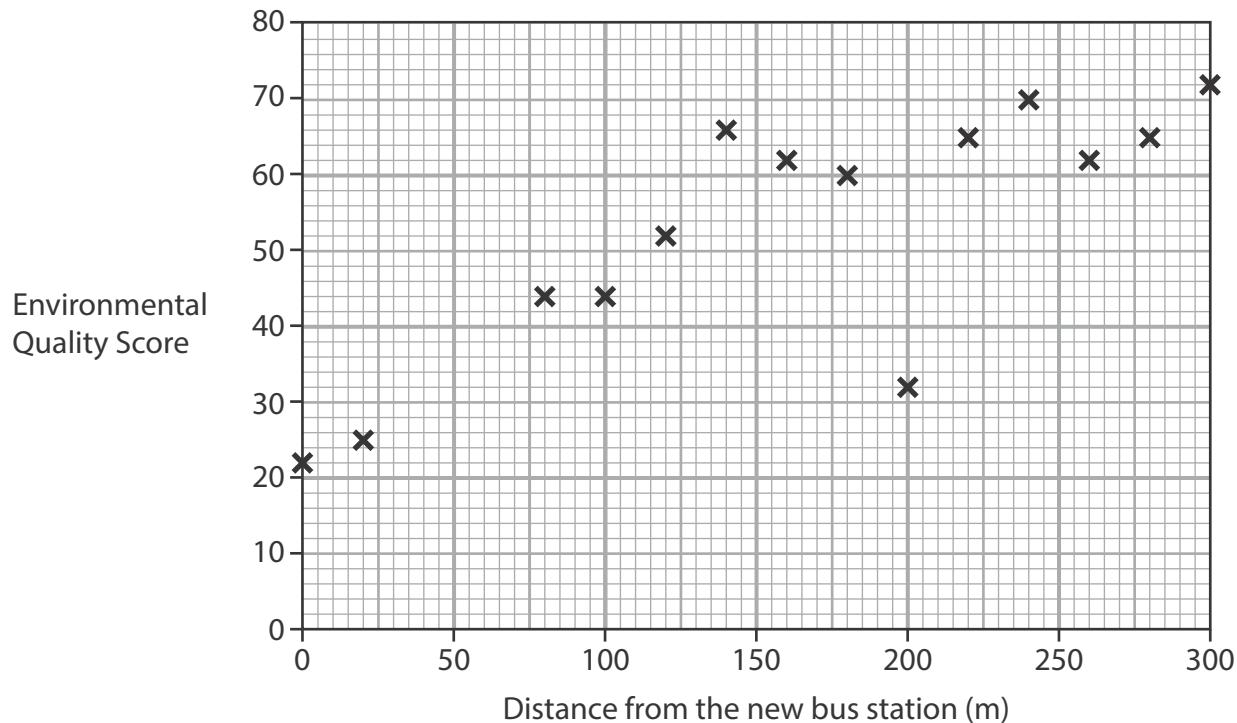
Figure 6c

(ii) Identify at which distance there is an anomaly.

(1)

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(iii) On Figure 6c, draw a line of best fit.

(1)

(iv) Calculate the median Environmental Quality Score (EQS).

(2)

Write your answer to one decimal place.

Show all your workings.

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(c) Explain how secondary data could have been used to support this enquiry.

(3)

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(d) You have studied urban environments as part of your own geographical enquiry.

State the title of your geographical enquiry.

Evaluate how far your data collection methods allowed you to achieve your aim.

(8)

Geographical enquiry title

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(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS

SECTION C

Global issues

Answer ONE question only 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 7, put a cross in the box ☐ .

7 Fragile environments and climate change

(a) Identify a cause of deforestation.

(1)

- ☒ **A** increased humidity
- ☒ **B** increased rainfall
- ☒ **C** tourism industry
- ☒ **D** logging industry

(b) Identify an impact of deforestation.

(1)

- ☒ **A** increased biodiversity
- ☒ **B** increased habitat for wildlife
- ☒ **C** increased soil erosion
- ☒ **D** reduced energy production

(c) State **two** causes of desertification.

(2)

1 ....

2 ....

(d) (i) Study Figure 7a in the Resource Booklet.

Identify the labelled country with the predicted highest decline in crop yields.

(1)

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(ii) Compare the predicted changes for South America and Europe.

(2)

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(iii) Suggest **one** reason for the predicted changes shown in Figure 7a.

(2)

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(iv) Suggest **one** reason why the data shown in Figure 7a might **not** be useful when considering the impact of climate change.

(2)

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(e) State **two** physical factors that affect the distribution of a named fragile environment.

(2)

Named fragile environment

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1 ....

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P 7 1 1 9 7 R A 0 3 3 5 2

(f) Explain **two** ways to reduce water-resource shortages.

(4)

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(g) Study Figure 7b in the Resource Booklet.

Assess strategies used for sustainable tropical rainforest management.

Refer to the resource in your answer.

(6)

(h) Discuss the view:

> "Responses to climate change may be more effective if led by international organisations."

Use Figures 7a and 7b from the Resource Booklet, and your own knowledge and understanding to support your answer.

Refer to the resources in your answer.

(12)

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(Total for Question 7 = 35 marks)

If you answer Question 8, put a cross in the box ☒ .

8 Globalisation and migration

(a) (i) Identify an example of forced migration.

(1)

☒ **A** moving to another country for work

☒ **B** moving to another country to study

☒ **C** moving to another country due to war

☒ **D** moving to another country to be with family

(ii) Identify a pull factor for migration.

(1)

☒ **A** more job opportunities

☒ **B** more unemployment

☒ **C** lack of services

☒ **D** lack of housing

(b) State **one** reason why a government might want to encourage sustainable tourism.

(2)

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(c) (i) Study Figure 8a in the Resource Booklet.

Identify the labelled country with the highest level of foreign direct investment.

(1)

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P 7 1 1 9 7 R A 0 3 8 5 2

(ii) Compare the pattern for North America and Africa shown in Figure 8a.

(2)

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(iii) Suggest **one** reason for the pattern shown in Figure 8a.

(2)

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(iv) Explain why the data shown in Figure 8a might **not** be a good indicator of the global economy.

(2)

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(d) State **two** ways countries manage migration.

(2)

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(e) Explain **two** impacts of international migration on the countries migrants have left (donor countries).

(4)

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P7 1 1 9 7 R A 0 4 0 5 2

(f) Study Figure 8b in the Resource Booklet.

Assess the impacts of TNCs.

Refer to the resource in your answer.

(6)

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(g) Discuss the view:

"Advances in technology have been the most important factor driving the global economy."

Use Figures 8a and 8b from the Resource Booklet, and your own knowledge and understanding to support your answer.

Refer to the resources in your answer.

(12)

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(Total for Question 8 = 35 marks)

If you answer Question 9, put a cross in the box ☒ .

9 Development and human welfare

(a) (i) Identify which of the following would be best to measure a country's development.

(1)

☒ **A** Climate Change Performance Index

☒ **B** Environmental Quality Index

☒ **C** Flood Risk Index

☒ **D** Human Development Index

(ii) Identify a reason for lower mortality rates in developed countries.

(1)

☒ **A** improved access to retail services

☒ **B** improved access to healthcare services

☒ **C** improved access to airports

☒ **D** improved access to legal services

(b) State **one** reason why there are different measures of development.

(2)

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(c) (i) Study Figure 9a in the Resource Booklet

Identify the country labelled in Figure 9a with the lowest level of GDP per capita.

(1)

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(ii) Compare the pattern for Europe and South America shown in Figure 9a.

(2)

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(iii) Suggest **one** possible reason for the pattern shown in Figure 9a.

(2)

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(iv) Explain why the data shown in Figure 9a may **not** show an accurate picture of global development.

(2)

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(d) State **two** quality of life indicators other than GDP per capita.

(2)

1 ....

2 ....

(e) Explain **two** impacts of uneven development within a country.

(4)

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(f) Study Figure 9b in the Resource Booklet.

Assess the different views on how to tackle the development gap.

Refer to the resource in your answer.

(6)

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P 7 1 1 9 7 R A 0 4 7 5 2

(g) Discuss the view:

"Uneven global development can be reduced most effectively through international aid."

Use Figures 9a and 9b from the Resource Booklet, and your own knowledge and understanding to support your answer.

Refer to the resources in your answer.

(12)

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(Total for Question 9 = 35 marks)

TOTAL FOR SECTION C = 35 MARKS
TOTAL FOR PAPER = 105 MARKS

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Pearson Edexcel International GCSE (9–1)

Friday 9 June 2023

Morning (Time: 1 hour 45 minutes)

Geography
PAPER 2: Human geography

Resource Booklet

Do not return this Booklet with the question paper.

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(Source: © KiwiK/Shutterstock)

Figure 1a

A business park in the Netherlands
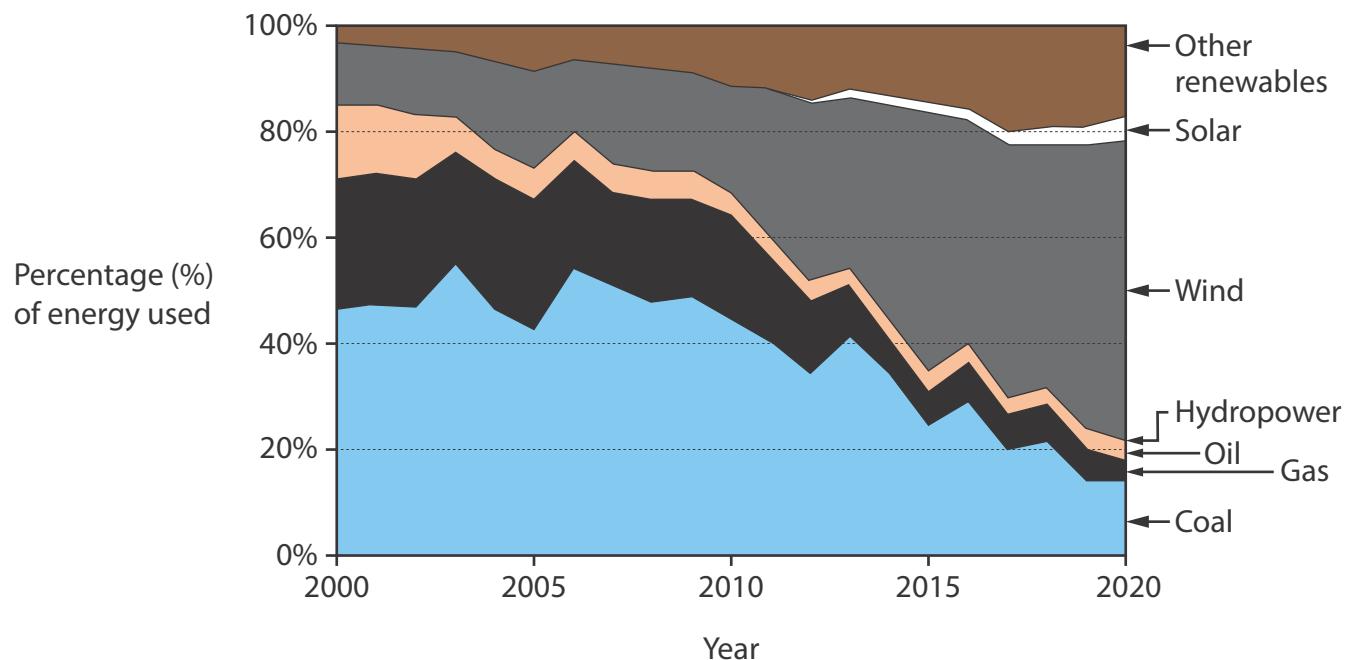
Figure 1b

Energy mix in Denmark, 2000–2020

Key: Employment sector
- Primary
- Secondary
- Tertiary
- Quaternary
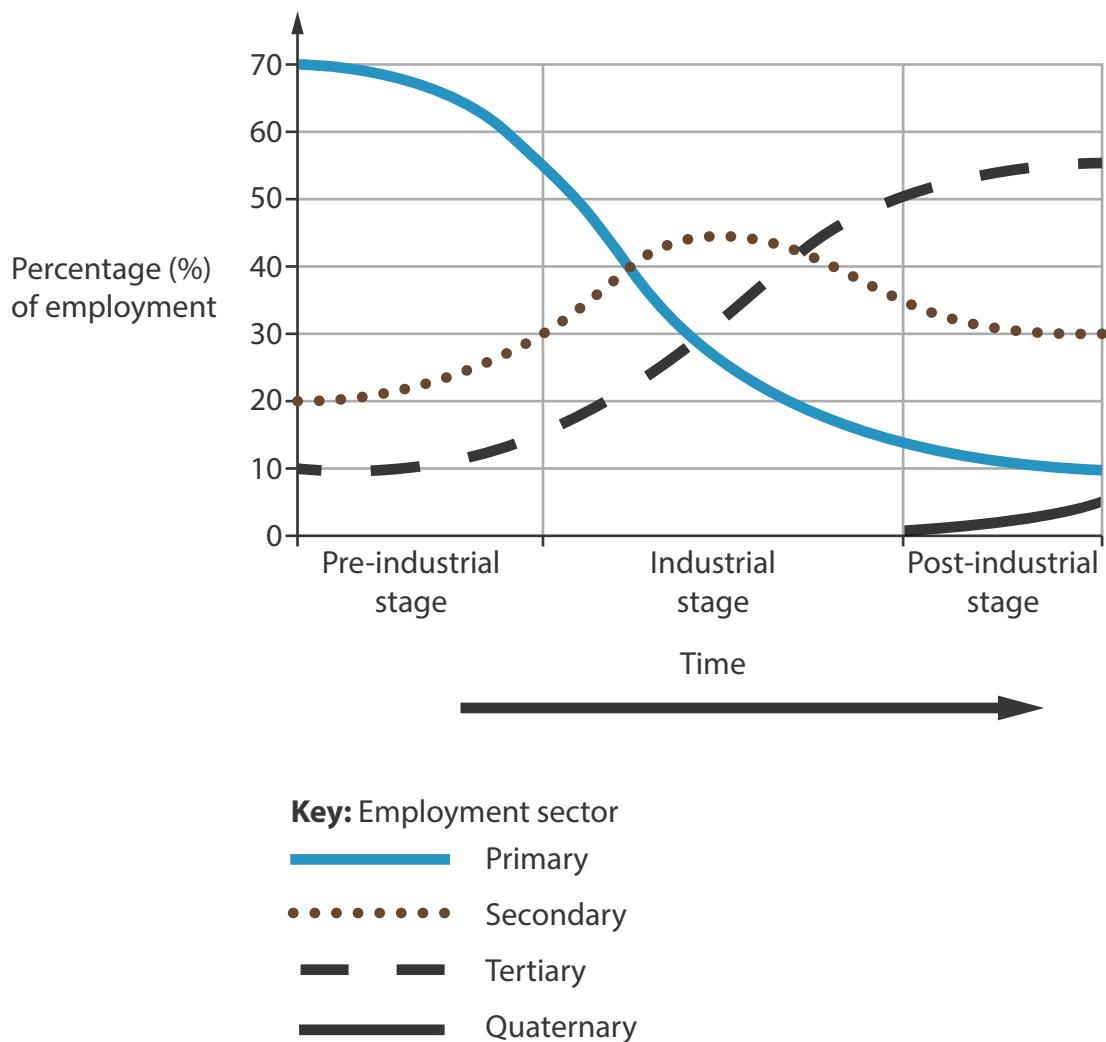
Figure 1c

Clark-Fisher model

(Source: © Robert Arthur Designs/Shutterstock)

Figure 2a

A photograph of a suburb in Colorado, USA
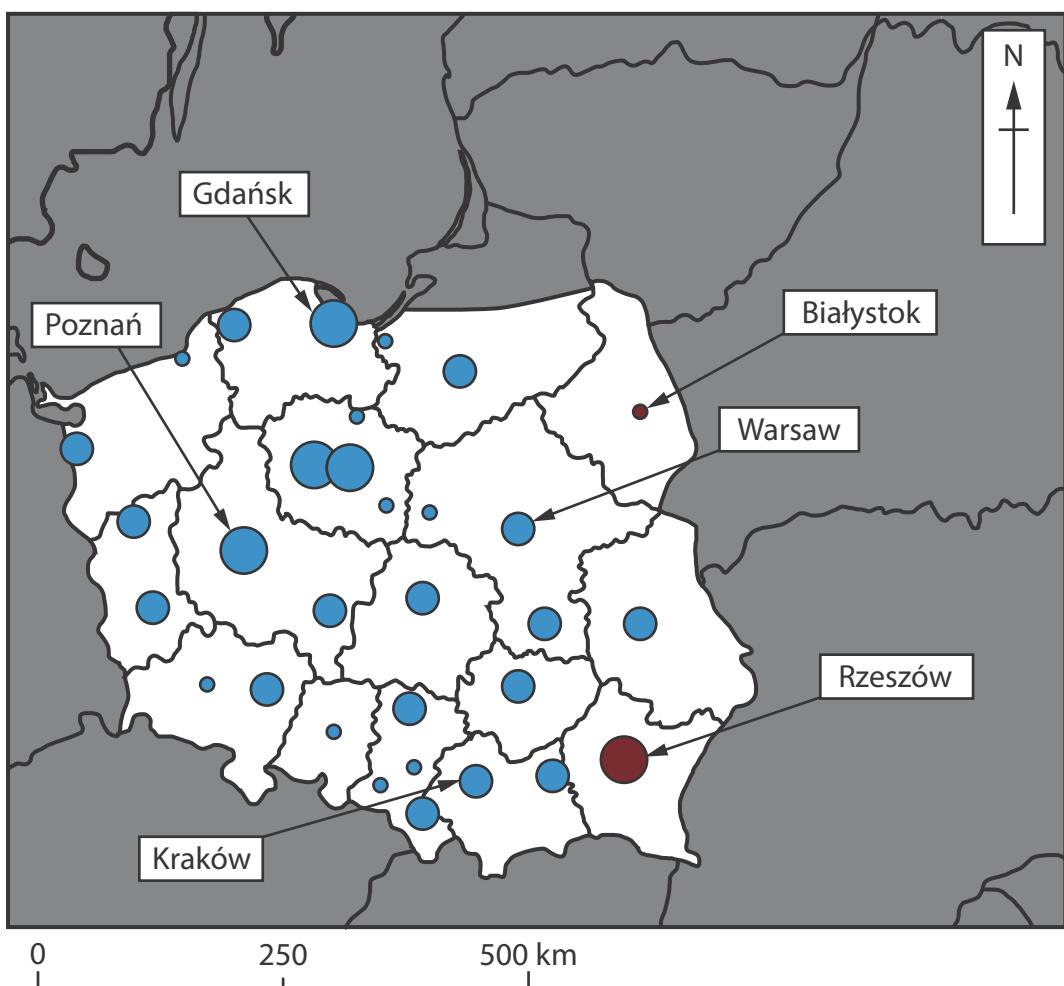
Key: Size of population movement

Inflow to cities (Percentage (%))

- >2.90
- 1.46−2.90
- 0.29−1.45

Outflow to suburban areas (Percentage (%))

- >2.90
- 1.46−2.90
- 0.29−1.45
- Outside coverage

Figure 2b

Movement of people into and out of Polish cities, 2004–2018
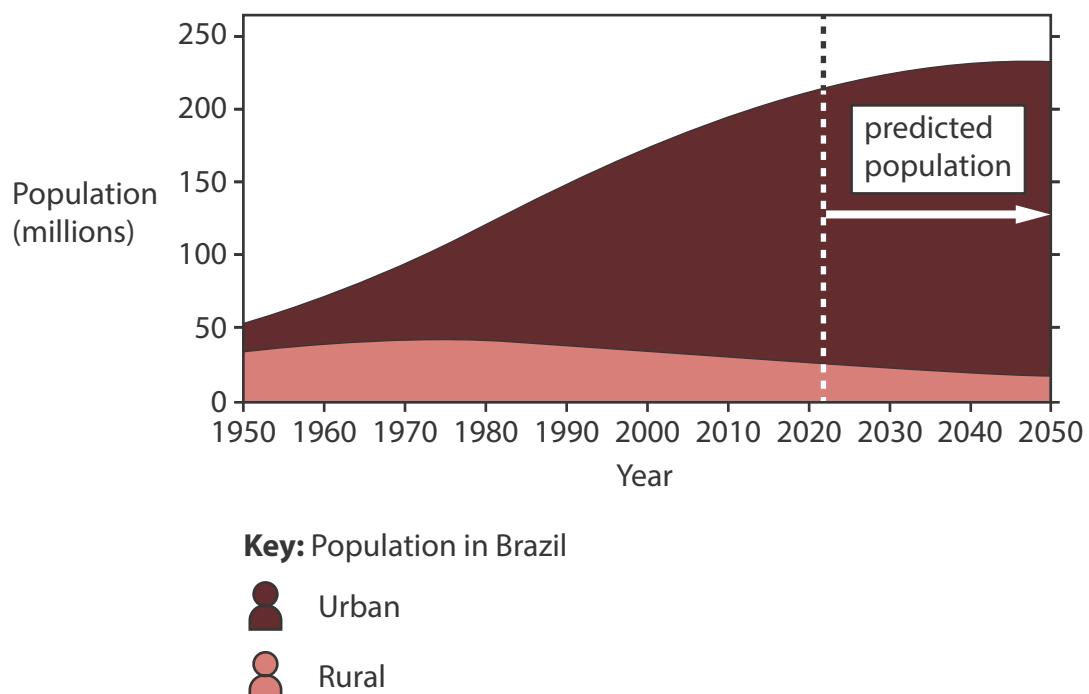
Figure 2c

Urban and rural population change and predicted change in Brazil, 1950–2050

Greenfield site

(Source: © mauritius images GmbH/Alamy Stock Photo)

Figure 3a

Photograph of a greenfield site in North Rhine-Westphalia, Germany
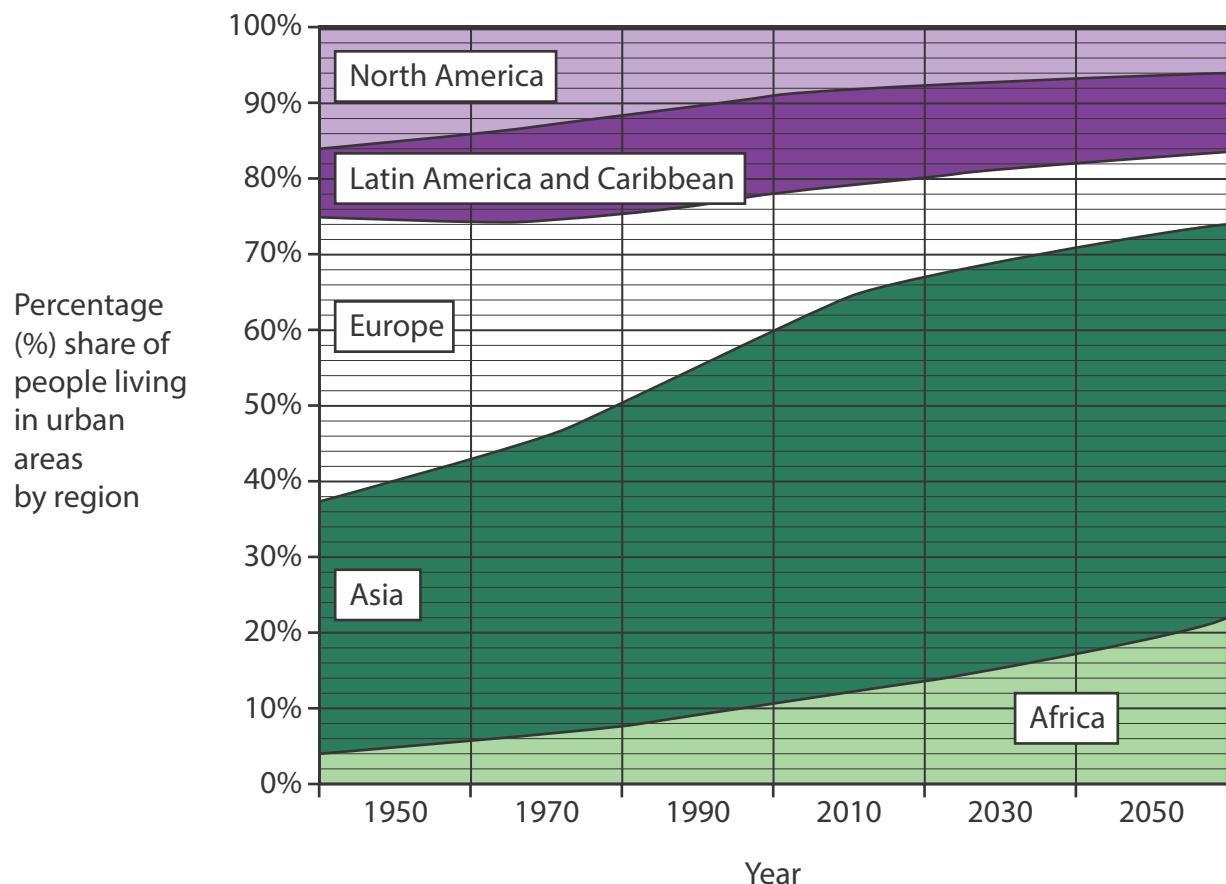
Figure 3b

**Percentage (%) of population living in urban areas by region,
1950–2020 and projection to 2050**

The cities with the worst traffic congestion

Cities with the highest average traffic congestion levels in 2020*

City	Congestion
Moscow	54%
Mumbai	53%
Bogota	53%
Manila	53%
Istanbul	51%
Bengaluru	51%
Kyiv	51%
New Delhi	47%
Novosibirsk	45%
Bangkok	44%
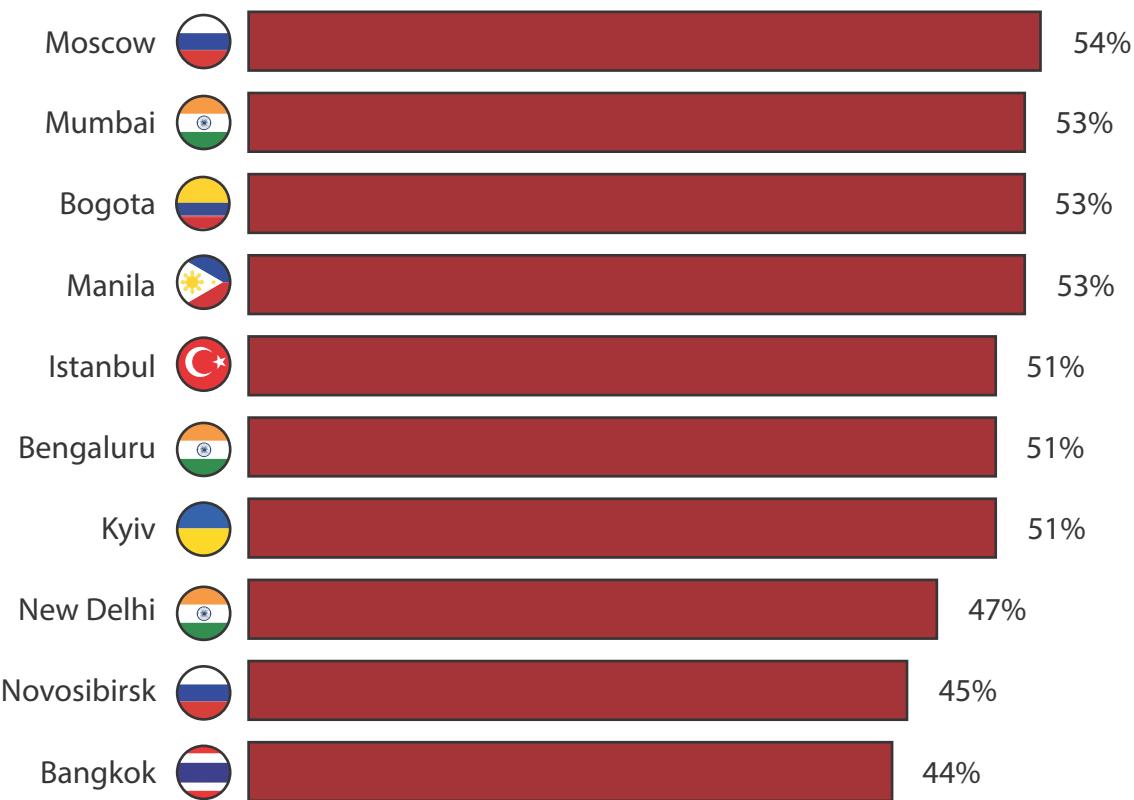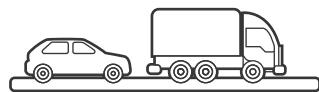
*0% = uncongested free flow of traffic –
e.g. 35% congestion means the extra travel time is 35% more than the average trip in uncongested conditions.

Figure 3c

Information on traffic congestion in selected cities

Enquiry question: How has the new power plant impacted the local area?

Q1. Do you think the new power plant is good for the area?	Yes ☐ No ☐
Q2. What benefits does it bring?	....
Q3. Do you think the new power plant will improve the local economy?	Yes ☐ No ☐
Q4. Do you think the new power plant will damage the environment?	Yes ☐ No ☐
Q5. Do you think the new power plant will affect house prices in the area?	Yes ☐ No ☐
Q6. What impact do you think the new power plant has had on the area?	....

Figure 4a

Extract from the student's questionnaire

Distance from the new power plant (m)	Total Environmental Quality Score (Max 80)
0	22
20	25
40	38
60	40
80	44
100	44
120	52
140	66
160	62
180	60
200	32
220	65
240	70
260	62
280	65
300	72

Figure 4b

Extract from the student's data collection

Enquiry question: How has the new collection of farm shops impacted the local area?

Q1. Do you think the new farm shops are good for the area?	Yes ☐ No ☐
Q2. What benefits do they bring?	....
Q3. Do you think the new farm shops will improve the local economy?	Yes ☐ No ☐
Q4. Do you think the new farm shops will damage the environment?	Yes ☐ No ☐
Q5. Do you think the new farm shops will affect house prices in the area?	Yes ☐ No ☐
Q6. What impact do you think the new farm shops have had on the area?	....

Figure 5a

Extract from the student's questionnaire

Distance from the new farm shops (m)	Total Environmental Quality Score (Max 80)
0	22
20	25
40	38
60	40
80	44
100	44
120	52
140	66
160	62
180	60
200	32
220	65
240	70
260	62
280	65
300	72

Figure 5b

Extract from the student's data collection

Enquiry question: How has the new bus station impacted the local area?

Q1. Do you think the new bus station is good for the area?	Yes ☐ No ☐
Q2. What benefits does it bring?	....
Q3. Do you think the new bus station will improve the local economy?	Yes ☐ No ☐
Q4. Do you think the new bus station will damage the environment?	Yes ☐ No ☐
Q5. Do you think the new bus station will affect house prices in the area?	Yes ☐ No ☐
Q6. What impact do you think the new bus station has had on the area?	....

Figure 6a

Extract from the student's questionnaire

Distance from the new bus station (m)	Total Environmental Quality Score (Max 80)
0	22
20	25
40	38
60	40
80	44
100	44
120	52
140	66
160	62
180	60
200	32
220	65
240	70
260	62
280	65
300	72

Figure 6b

Extract from the student's data collection
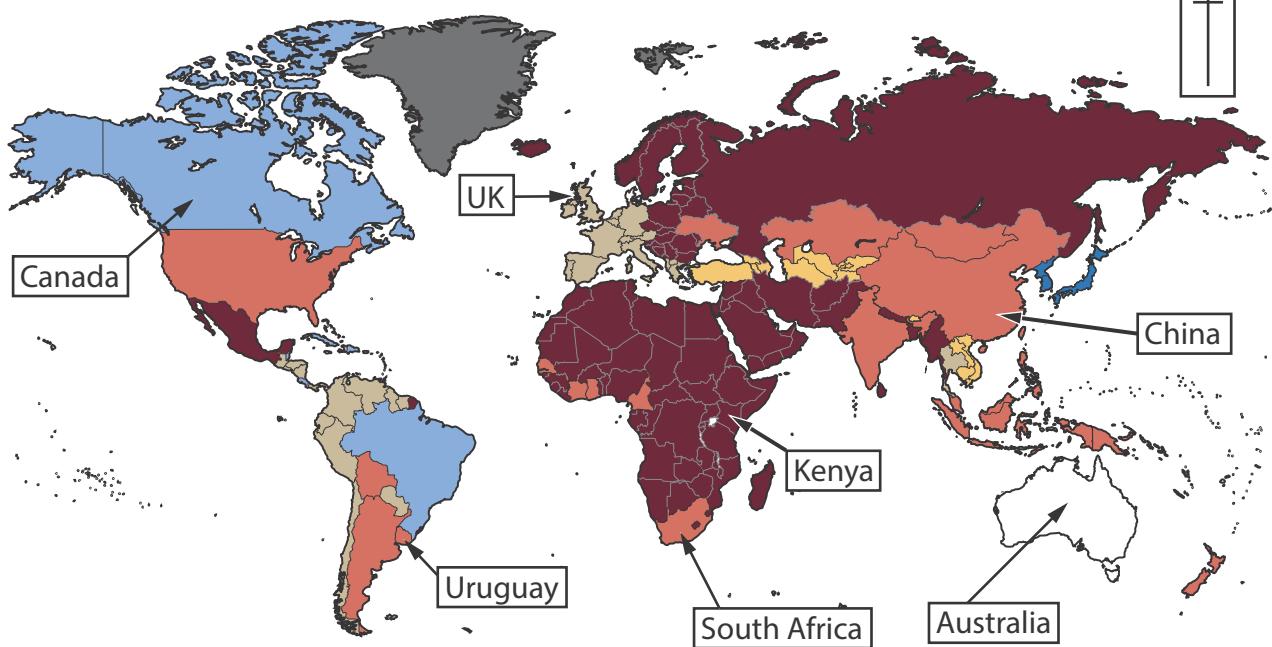
Figure 7a

Predicted percentage change in crop yields by 2050

Sustainable rainforest management

Reforest'Action (non-governmental organisation) in Brazil

- Implement afforestation programmes.
- Provide education about sustainable agroforestry.

Brazil (government)

- Creation of the rainforest code limiting amount of forest that can be cleared.
- Creation of parks and reserves through Amazon Region Protected Areas scheme.

International Tropical Timber Agreement, 2006

- Agreement to expand and diversify trade of sustainably managed forests and legally harvested wood.
- Promotes sustainable management of timber forests.

Figure 7b

Information on sustainable rainforest management projects
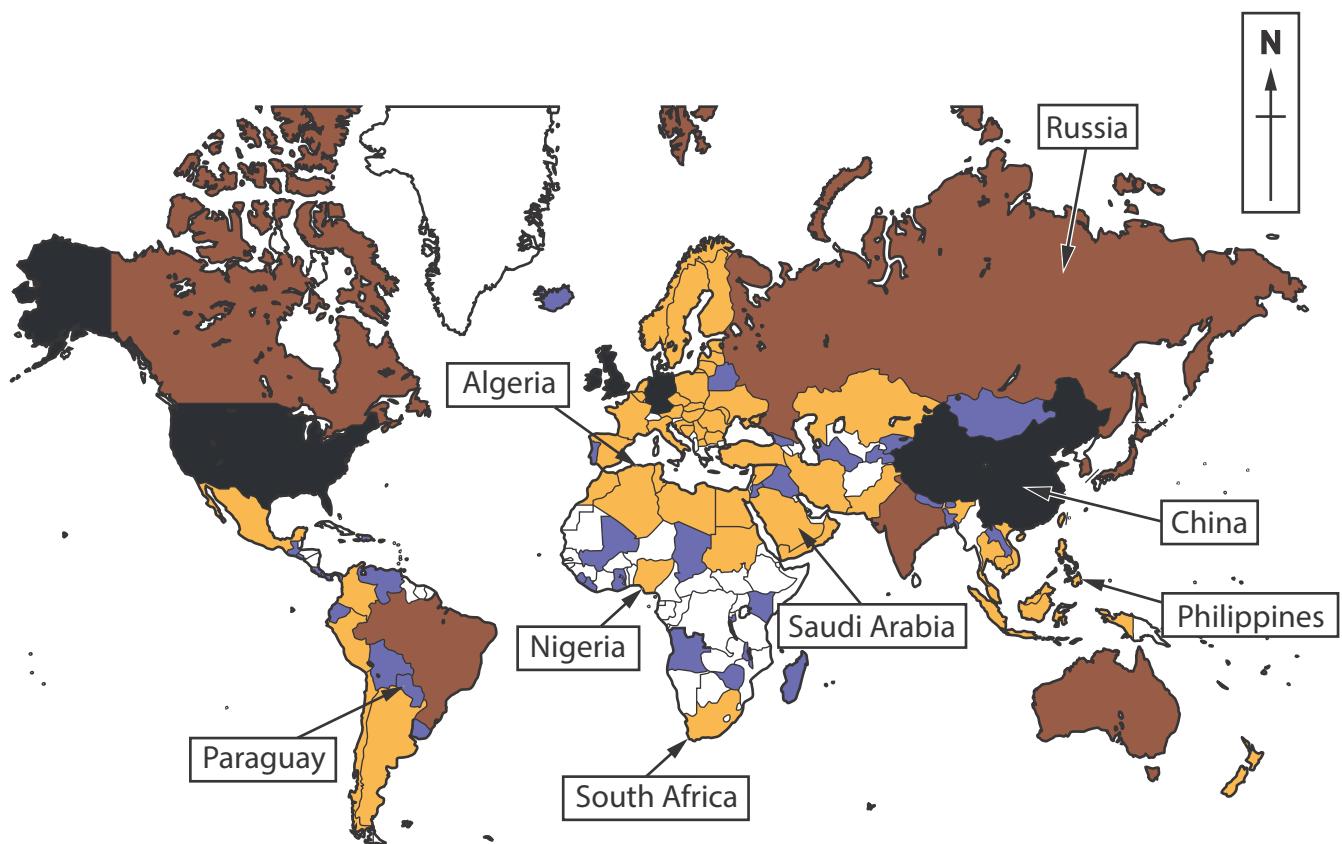
Key: Foreign direct investment (millions of US$) received

■ (black)	1,000,001 – 4,000,000
■ (brown)	100,001 – 1,000,000
■ (orange)	10,001 – 100,000
■ (purple)	1,000 – 10,000
□ (white)	N/A

Figure 8a

Global foreign direct investment (FDI), 2019

Shoe manufacturer TNC

- Present in 39 countries.
- 486 factories.
- 1.09 million workers.

- Headquarters: Oregon, USA.

- Accused of poor working conditions in some factories.

Research and pharmaceutical TNC

- 99,000 employees worldwide.
- Present in over 39 countries.
- Revenue of over US$40 billion.

- Headquarters: London, UK.

- Mainly targets more developed countries, but the company has several programmes that help less developed countries.

Soft drinks manufacturer, TNC

- Drinks are sold in more than 200 countries.
- Opened a new US$90 million research and development centre in India.

- Headquarters: Atlanta, USA.

- Accused of depletion of groundwater in India.

Figure 8b

Information about three transnational corporations (TNCs)
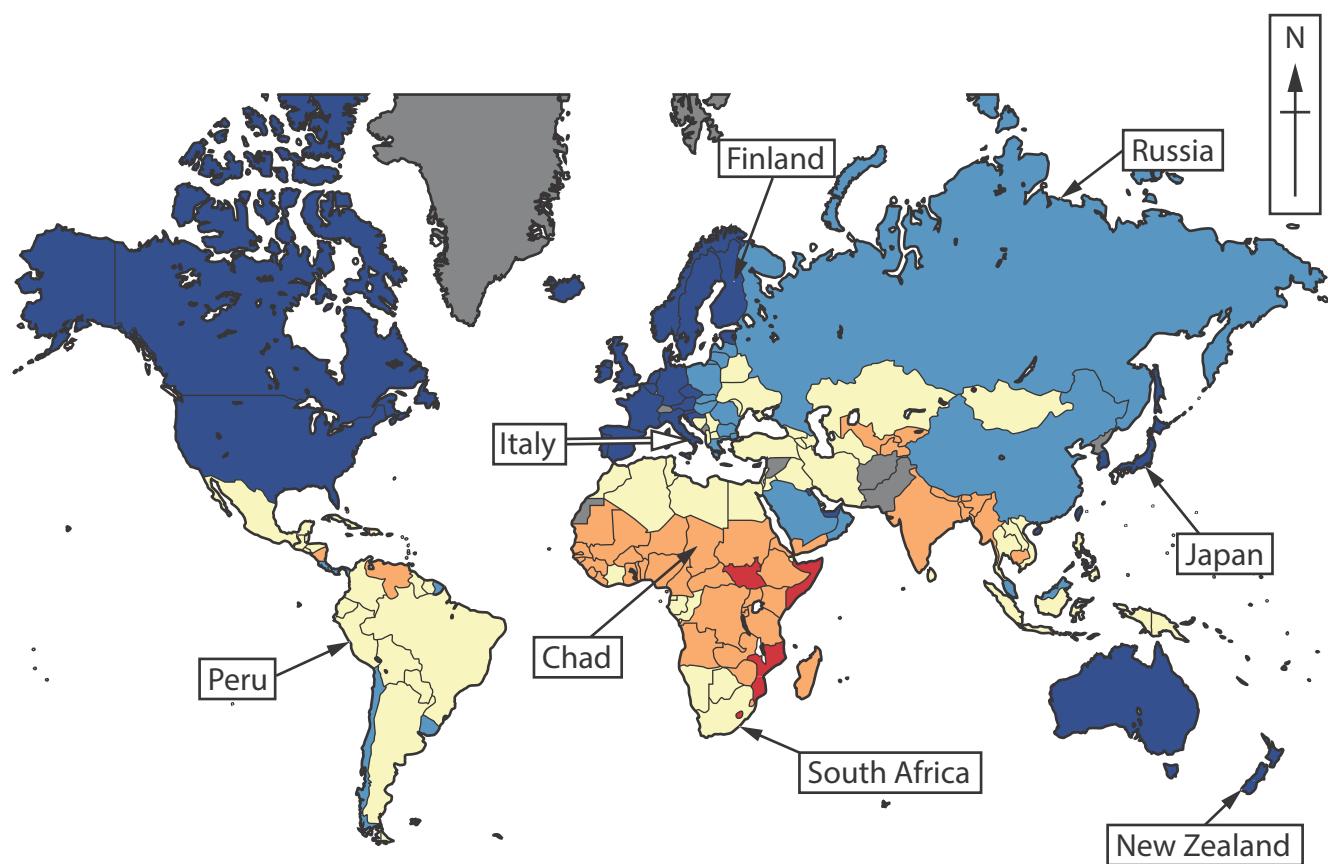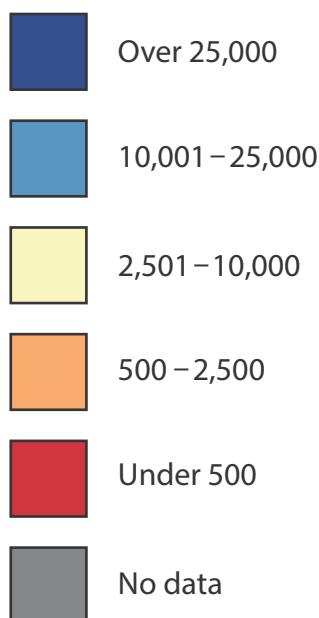
Figure 9a

Global Gross Domestic Product (GDP) per capita, 2021

Intergovernmental agencies e.g. World Bank or World Trade Organisation

- A combination of financial support including loans and debt relief can support economies to develop.

Solar Aid, NGO

- An international charity established to combat poverty and climate change.
- Through its social enterprise "SunnyMoney" it sells lights in remote rural communities in Malawi and Zambia to try and increase access to affordable renewable energy.

Government

- Investment in large-scale infrastructure projects can fuel economic growth encouraging investment and providing employment.

Figure 9b

Information about strategies for reducing the development gap

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