Candidate surname | Other names

Centre Number | Candidate Number

Pearson Edexcel International GCSE (9–1)

Friday 24 November 2023

Morning (Time: 1 hour 45 minutes)

Paper reference **4GE1/02**

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*.
- Where asked you must **show all your working out** 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*.
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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** factor that affects the location of primary industry.

(1)

⊠ **A** access to areas with low air pollution

⊠ **B** access to large car parks

⊠ **C** access to sports facilities

⊠ **D** access to road network

(ii) State **one** example of a quaternary sector industry.

(1)

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(b) Identify **one** impact of a shift from a primary industry (agriculture) to secondary industries.

(1)

⊠ **A** ageing rural populations

⊠ **B** ageing urban populations

⊠ **C** growth in rural areas

⊠ **D** growth in rural services

(c) Study Figure 1a in the Resource Booklet which shows information about employment structure for selected countries.

Suggest **one** reason for the difference in employment structure.

(2)

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(d) State what is shown by the Clark Fisher model.

(1)

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(e) For a named megacity, explain **one** advantage and **one** disadvantage of informal employment.

(4)

Named megacity

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Advantage

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Disadvantage

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(f) Study Figure 1b in the Resource Booklet which shows energy consumption in Europe.

Suggest **one** possible reason for the differences in energy consumption.

(3)

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(g) Explain **two** environmental impacts of using non-renewable energy sources.

(4)

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P 7 4 6 4 0 A 0 4 4 8

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

Analyse the ways to make energy use more sustainable.

Refer to the resource in your answer.

(8)

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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 **one** type of farm diversification.

(1)

⊠ **A**   increasing irrigated land

⊠ **B**   increasing land used for flood defences

⊠ **C**   opening a farm shop

⊠ **D**   opening a new barn to store crops

(ii)   State **one** reason for using genetically modified (GM) crops.

(1)

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(b) Identify the best definition of intensive farming.

(1)

⊠ **A**   Farming which uses large amounts of resources and labour.

⊠ **B**   Farming which uses no chemical fertilisers or pesticides.

⊠ **C**   Farming which uses traditional irrigation methods.

⊠ **D**   Farming which grows crops to support the family.

(c) Study Figure 2a in the Resource Booklet which shows the distribution of selected biomes.

Explain **one** reason for the distribution of different biomes.

(2)

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(d) State **one** characteristic of a temperate forest biome.

(1)

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(e) Explain **two** ways natural ecosystems provide services.

(4)

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(f) Study Figure 2b in the Resource Booklet which shows increases in the percentage (%) of cereal yield, and land used for growing cereals, in Asia 1961 to 2020.

Suggest **one** possible reason for the increased yields.

(3)

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P 7 4 6 4 0 A 0 8 4 8

(g) For a named developing or emerging country, explain how **non-governmental organisations (NGOs)** have tried to manage **two** challenges within a rural environment.

(4)

Named developing or emerging country

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

Analyse the factors that may contribute to the negative multiplier effect.

Refer to the resource in your answer.

(8)

P 7 4 6 4 0 A 0 1 0 4 8

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(Total for Question 2 = 25 marks)

P 7 4 6 4 0 A 0 1 1 4 8

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

3   Urban environments

(a) (i)   Identify **one** strategy used to make cities more environmentally sustainable.

(1)

☒   **A**   increased number of car parks

☒   **B**   increased network of cycle lanes

☒   **C**   increased shopping facilities

☒   **D**   increased healthcare services

(ii)   State **one** way politicians can manage challenges in a city.

(1)

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(b) Identify **one** factor that can lead to increased urbanisation.

(1)

☒   **A**   air pollution

☒   **B**   farm diversification

☒   **C**   high urban crime rate

☒   **D**   employment

(c) Study Figure 3a which shows a land use map for an area of Virginia, USA.

Suggest **one** factor that may have affected the land use patterns shown.

(2)

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(d) State where in an urban area you would be most likely to find a science park.

(1)

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P 7 4 6 4 0 A 0 1 2 4 8

(e) Explain **one** advantage and **one** disadvantage of building housing estates on the rural-urban fringe.

(4)

Advantage

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Disadvantage

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(f) Study Figure 3b in the Resource Booklet which shows urban and rural populations in the United States.

Suggest **one** factor that may have caused the trend shown.

(3)

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(g) For a named developing or emerging country, explain **two** challenges caused by rapid urbanisation.

(4)

Named developing or emerging country

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

Analyse the benefits of building on brownfield sites.

Refer to the resource in your answer.

(8)

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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** type of secondary data that could support this enquiry.

(1)

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(ii) Explain **one** advantage of using secondary data.

(2)

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Study Figure 4b in the Resource Booklet. It shows some of the results from the Environmental Quality Survey (EQS).

(b) (i) Plot the data for the EQS (from Figure 4b in the Resource Booklet) to complete the radar graph below (Figure 4c). Some data has been plotted for you as an example.
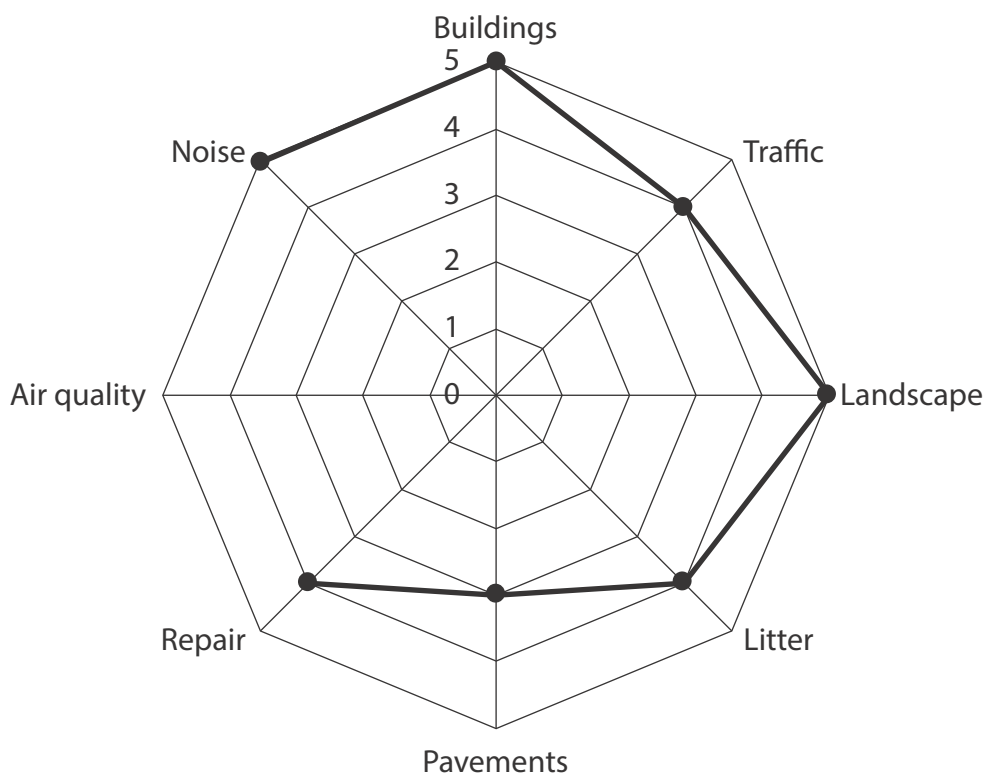
(2)
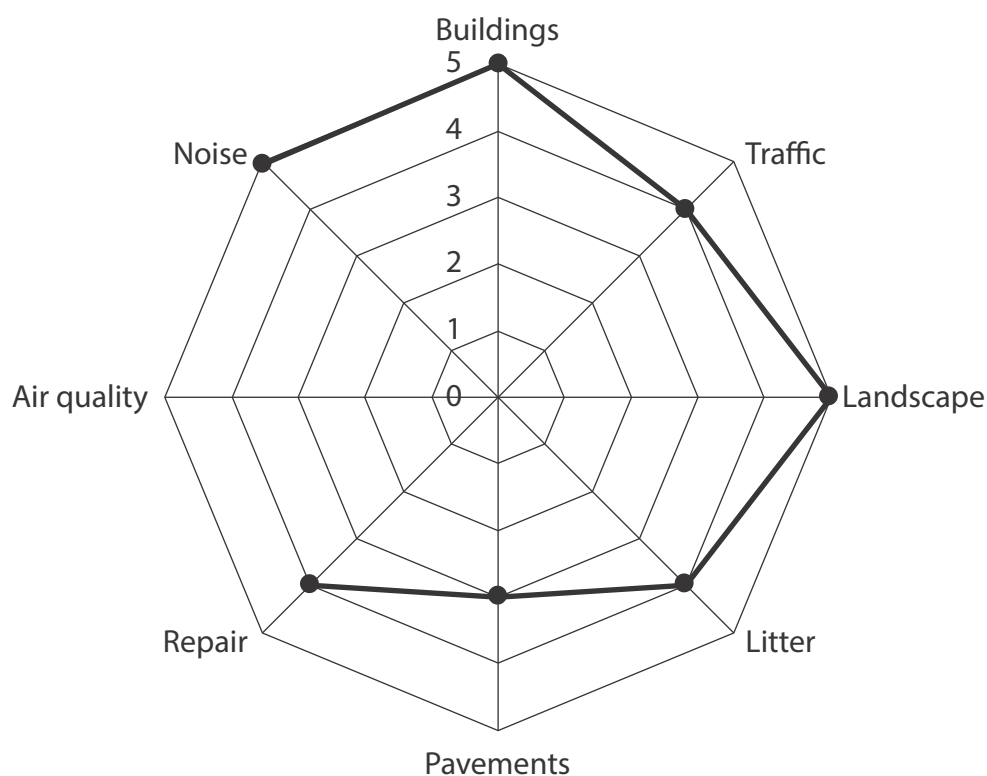
Figure 4c

Radar graph for Environmental Quality Survey

(ii) State **one** observation you can make from the data presented in Figure 4c.

(1)

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(iii) Identify **one** advantage of using this type of graph to present data.

(1)

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P 7 4 6 4 0 A 0 1 8 4 8

(iv) Calculate the modal Environmental Quality Score for the data shown in Figure 4b.

Show all your workings.

(2)

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(c) Explain how the student's own photographs could be used in this enquiry.

(3)

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

State the title of your geographical enquiry.

Evaluate how the conclusions you made demonstrated that you had answered your enquiry question.

(8)

Geographical Enquiry Title

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(Total for Question 4 = 20 marks)

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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** type of secondary data that could support this enquiry.

(1)

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(ii) Explain **one** advantage of using secondary data.

(2)

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P 7 4 6 4 0 A 0 2 2 4 8

Study Figure 5b in the Resource Booklet. It shows some of the results from the Environmental Quality Survey (EQS).

(b) (i) Plot the data for the EQS (Figure 5b in the Resource Booklet) to complete the radar graph below (Figure 5c). Some data has been plotted for you as an example.

(2)

Figure 5c

Radar graph for Environmental Quality Survey

(ii) State **one** observation you can make from the data presented in Figure 5c.

(1)

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(iii) Identify **one** advantage of using this type of graph to present data.

(1)

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(iv) Calculate the modal Environmental Quality Score for the data shown in Figure 5b.

Show all your workings.

(2)

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(c) Explain how the student's own photographs could be used in 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 the conclusions you made demonstrated you had answered your enquiry question.

(8)

Geographical Enquiry Title

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(Total for Question 5 = 20 marks)

P74640A02648

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** type of secondary data that could support this enquiry.

(1)

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   (ii) Explain **one** advantage of using secondary data.

(2)

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Study Figure 6b in the Resource Booklet. It shows some of the results from the Environmental Quality Survey (EQS).

(b) (i) Plot the data for the Environmental Quality Survey (Figure 6b in the Resource Booklet) to complete the radar graph below (Figure 6c). Some data has been plotted for you as an example.

(2)
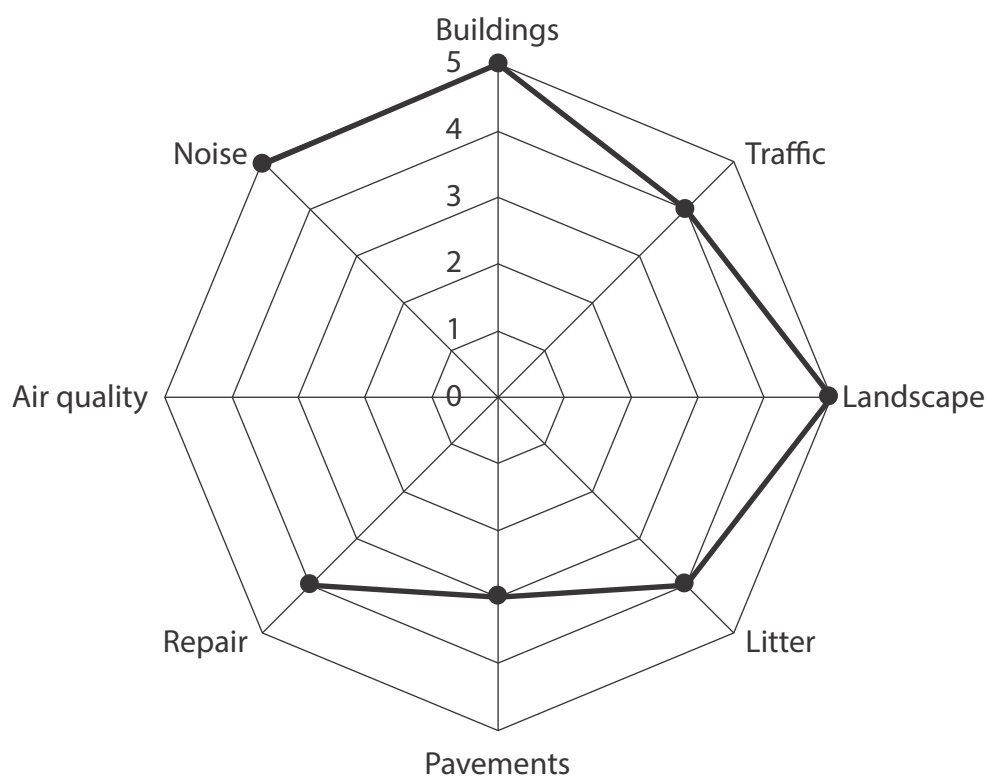
Figure 6c

Radar graph for Environmental Quality Survey

(ii) State **one** observation you can make from the data presented in Figure 6c.

(1)

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(iii) Identify **one** advantage of using this type of graph to present data.

(1)

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(iv) Calculate the modal Environmental Quality Score for the data shown in Figure 6b.

Show all your workings.

(2)

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(c) Explain how the student's own photographs could be used in 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 the conclusions you made demonstrated you had answered your enquiry question.

(8)

Geographical Enquiry Title

P 7 4 6 4 0 A 0 3 0 4 8

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(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS

P74640A03148

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 **one** natural cause of climate change.

(1)

☒ **A**   glacial melt

☒ **B**   air travel

☒ **C**   renewable energy

☒ **D**   solar variations

(b) Identify which statement best explains how volcanoes can affect climate change.

(1)

☒ **A**   eruptions release greenhouses gases

☒ **B**   eruptions release volcanic bombs

☒ **C**   eruptions lead to damaged houses

☒ **D**   eruptions lead to damaged pipes

(c) State **two** human causes of global climate change.

(2)

1 ....

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2 ....

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

Identify the labelled country with the highest reduction in CO_2 emissions per capita.

(1)

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(ii) Compare the pattern shown for Africa and North America.

(2)

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

(2)

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(iv) Suggest **one** other type of data which could be used to understand the causes of climate change.

(2)

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(e) State **two** characteristics of a desert environment.

(2)

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P 7 4 6 4 0 A 0 3 3 4 8

(f) Explain **two** causes of desertification.

(4)

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

Assess strategies that could be used to try and resolve water resource shortages.

(6)

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P 7 4 6 4 0 A 0 3 4 4 8

(h) Discuss the view:

"The most effective way to protect fragile environments is through international agreements."

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)

(Total for Question 7 = 35 marks)

8 **Globalisation and migration**

(a) (i) Identify **one** reason for the growth of mass tourism.

(1)

☒ **A** more carbon emissions

☒ **B** more disposable income

☒ **C** more informal jobs

☒ **D** more renewable energy

(ii) Identify **one** strategy designed to make tourism more sustainable.

(1)

☒ **A** Employing local people at tourist resorts

☒ **B** Importing products for tourists

☒ **C** Removing restrictions on tourist numbers

☒ **D** Building new large hotels for tourists

(b) State **two** factors that can affect geopolitical relationships between countries.

(2)

1 ....

2 ....

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

Identify the country with the highest value of trade as a percentage of GDP.

(1)

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(ii) Compare the pattern shown for South America and Africa.

(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 would be useful for understanding globalisation.

(2)

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(d) State **two** push factors for migration.

(2)

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(e) Explain **two** approaches to managing migration.

(4)

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

Assess the role of international institutions in creating a more globalised economy.

(6)

P 7 4 6 4 0 A 0 3 9 4 8

(g) Discuss the view:

"One of the greatest benefits of globalisation is economic growth".

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)

P 7 4 6 4 0 A 0 4 0 4 8

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(Total for Question 8 = 35 marks)

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9 Development and human welfare

(a) (i) Identify **one** social indicator of development.

(1)

☒ **A** adult literacy rate

☒ **B** GDP per capita

☒ **C** value of cars manufactured

☒ **D** percentage of foreign direct investment (FDI)

(ii) Identify **one** reason for a fall in death rates.

(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 **two** indicators used to create the Human Development Index (HDI).

(2)

1 ....

2 ....

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

Identify the country labelled in Figure 9a with the highest levels of inequality.

(1)

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(ii) Compare the pattern shown for Africa and Asia.

(2)

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

(2)

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(iv) Explain why the data shown on Figure 9a is useful for understanding global development.

(2)

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(d) State **one** advantage and **one** disadvantage of top-down development projects.

(2)

Advantage

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Disadvantage

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(e) Explain **two** factors that can lead to uneven development **within** a country.

(4)

1 ....

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

Assess the role of international aid in reducing the development gap.

(6)

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(g) Discuss the view:

"Continuing uneven global development is caused by economic factors".

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)

P 7 4 6 4 0 A 0 4 5 4 8

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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 24 November 2023

Morning (Time: 1 hour 45 minutes)

Geography
PAPER 2: Human geography

Resource Booklet

Do not return this Booklet with the question paper.

P74640A

Pearson
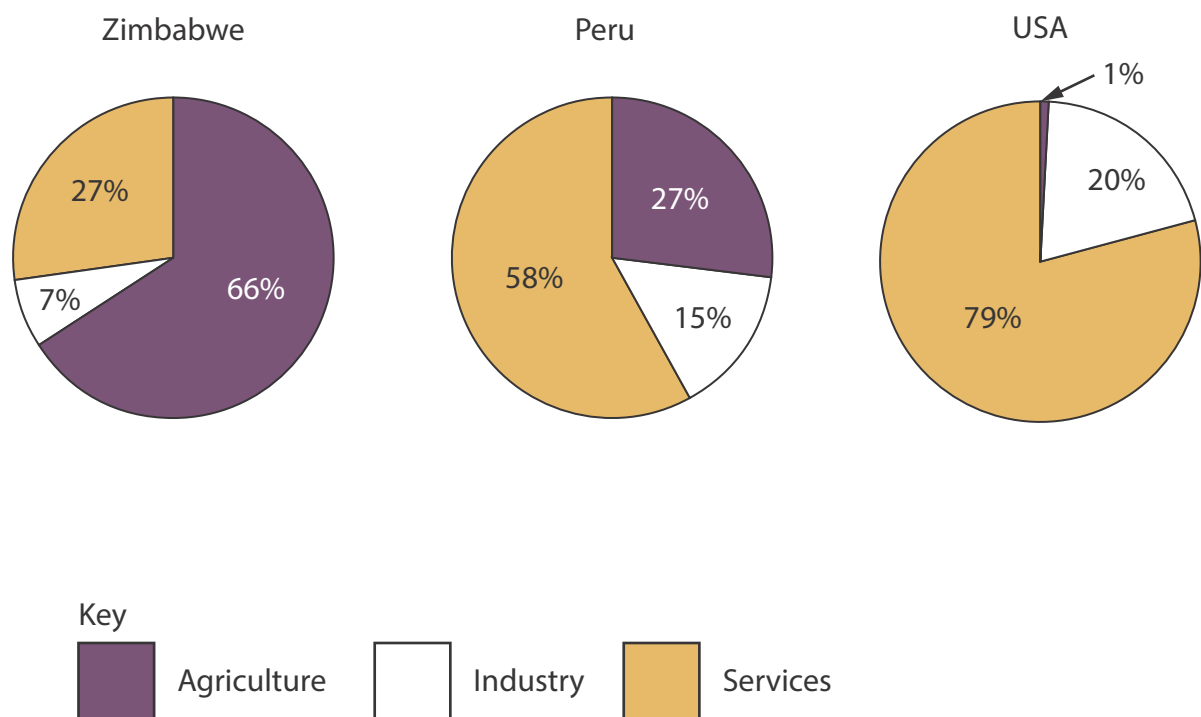
Figure 1a

Employment structure in selected countries
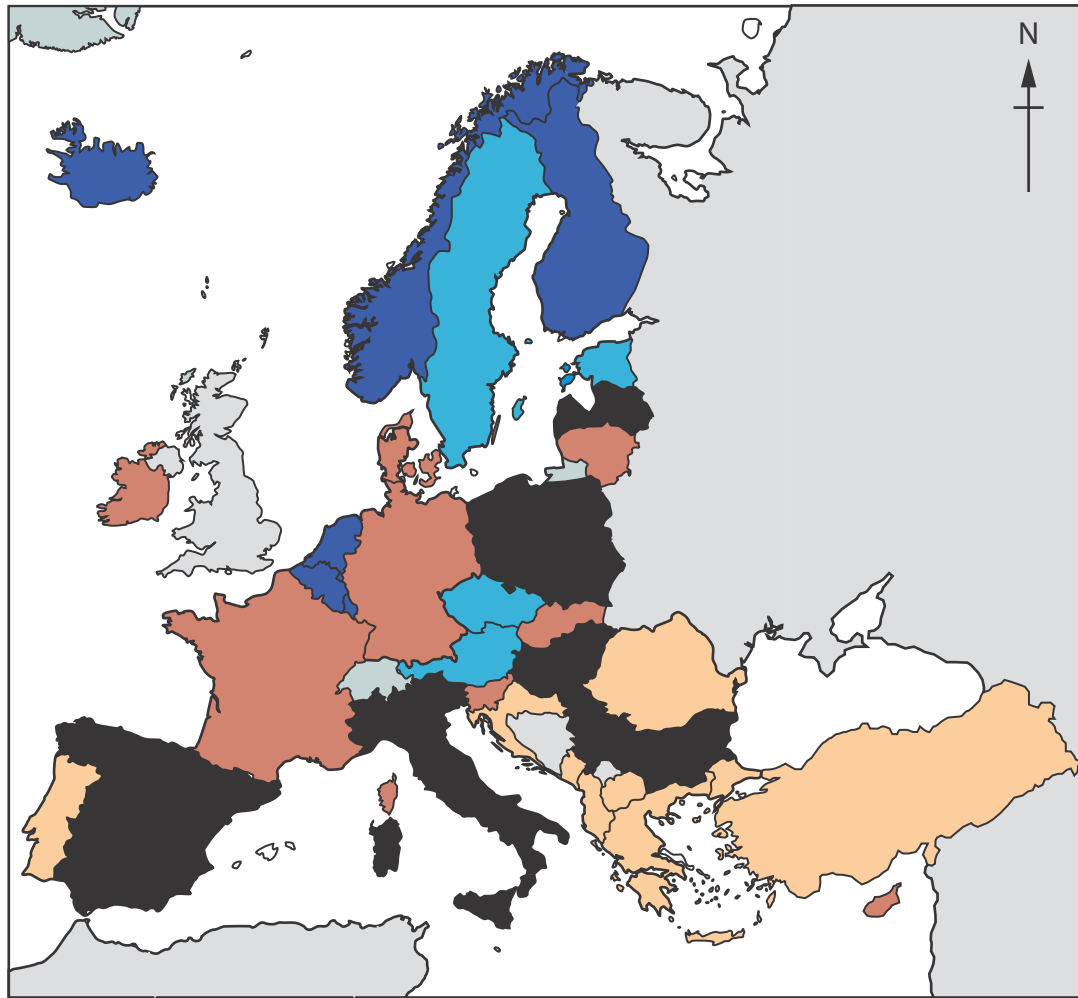
Key: Energy consumption per capita, terajoules

	<90
	90 – <115
	115 – <150
	150 – <200
	⩽200
	Data not available
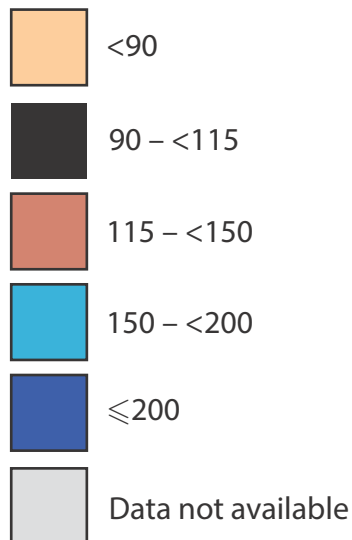
Figure 1b

Energy consumption intensity in the European Union, 2022

What can you do to reduce your carbon footprint?

Install **solar panels**

Choose **reusable** – ditch **single-use**

Train, **tram**, **bus bike** and **walk** more

Reduce **food waste**

Replace old lightbulbs with more **energy efficient lightbulbs**

Buy **local food**

Turn down thermostat from 25° to 20° in **winter**

Figure 1c

Efforts to make energy use more sustainable

Equator   Equator
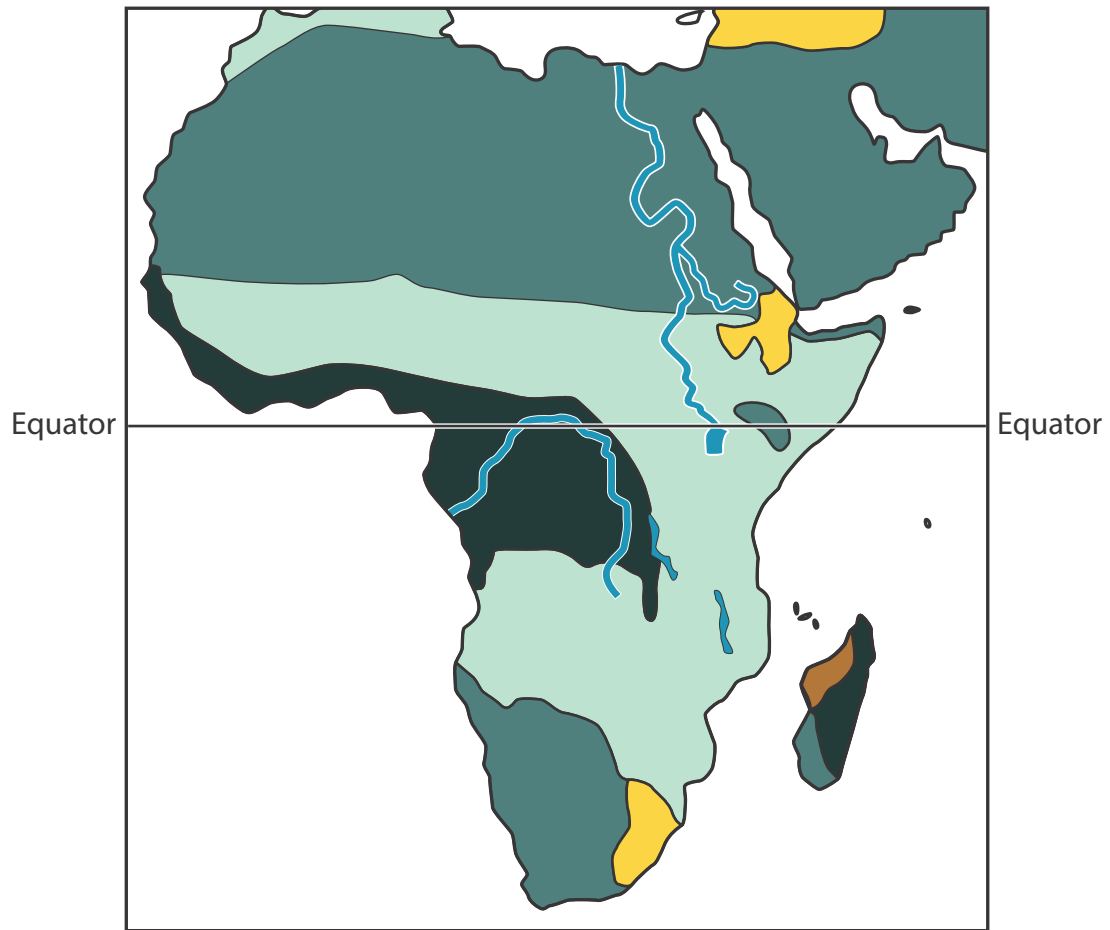
Key

◼ Tropical Rainforest   ◻ Savanna/Tropical Grassland

◼ Temperate Forest   ◼ Freshwater

◼ Desert   ◻ Marine

◼ Grassland

Figure 2a

Map of selected biomes
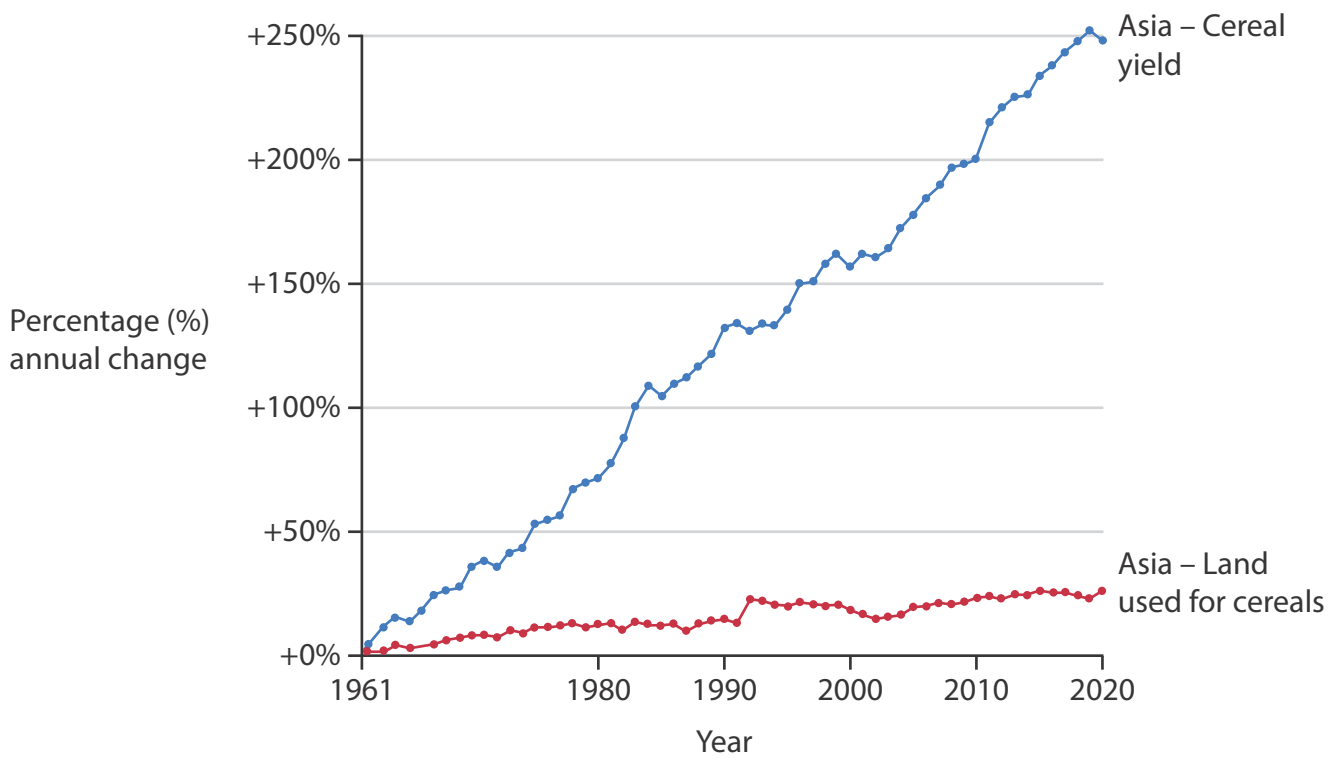
Figure 2b

Increase in percentage (%) of cereal yield and land used for growing cereals in Asia, 1961 to 2020

The downward spiral

Little money to improve area

Deprived area

Few jobs and unemployment

Those able to move, move out

People have little money to spend

Services decline

More people leave

Further decline
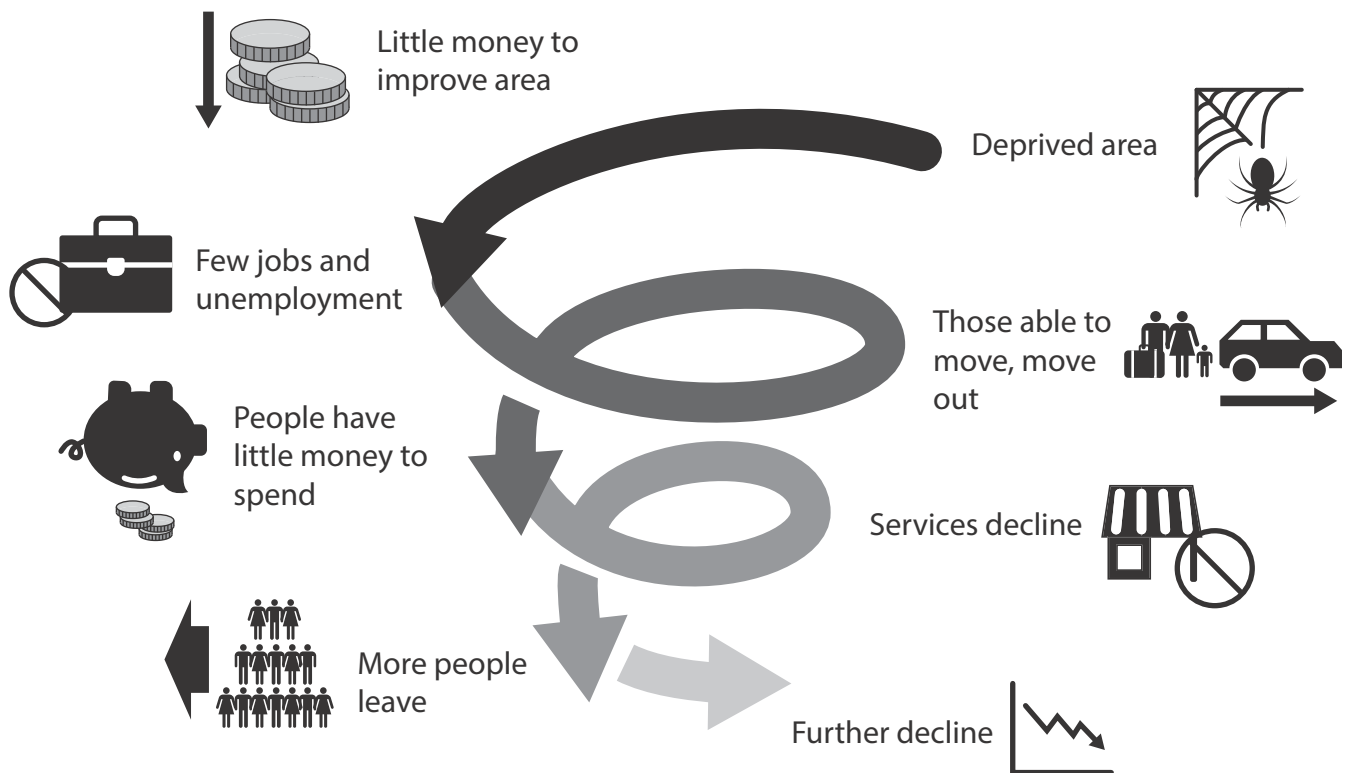
Figure 2c

The negative multiplier effect

Key: Land Use Category

▦M▦ Railway

━━━ Road

■ Bus/Metro Station Mixed Use

□ Retail Mixed Use

□ Offices

■ Residential/Retail

■ Park/Open Space
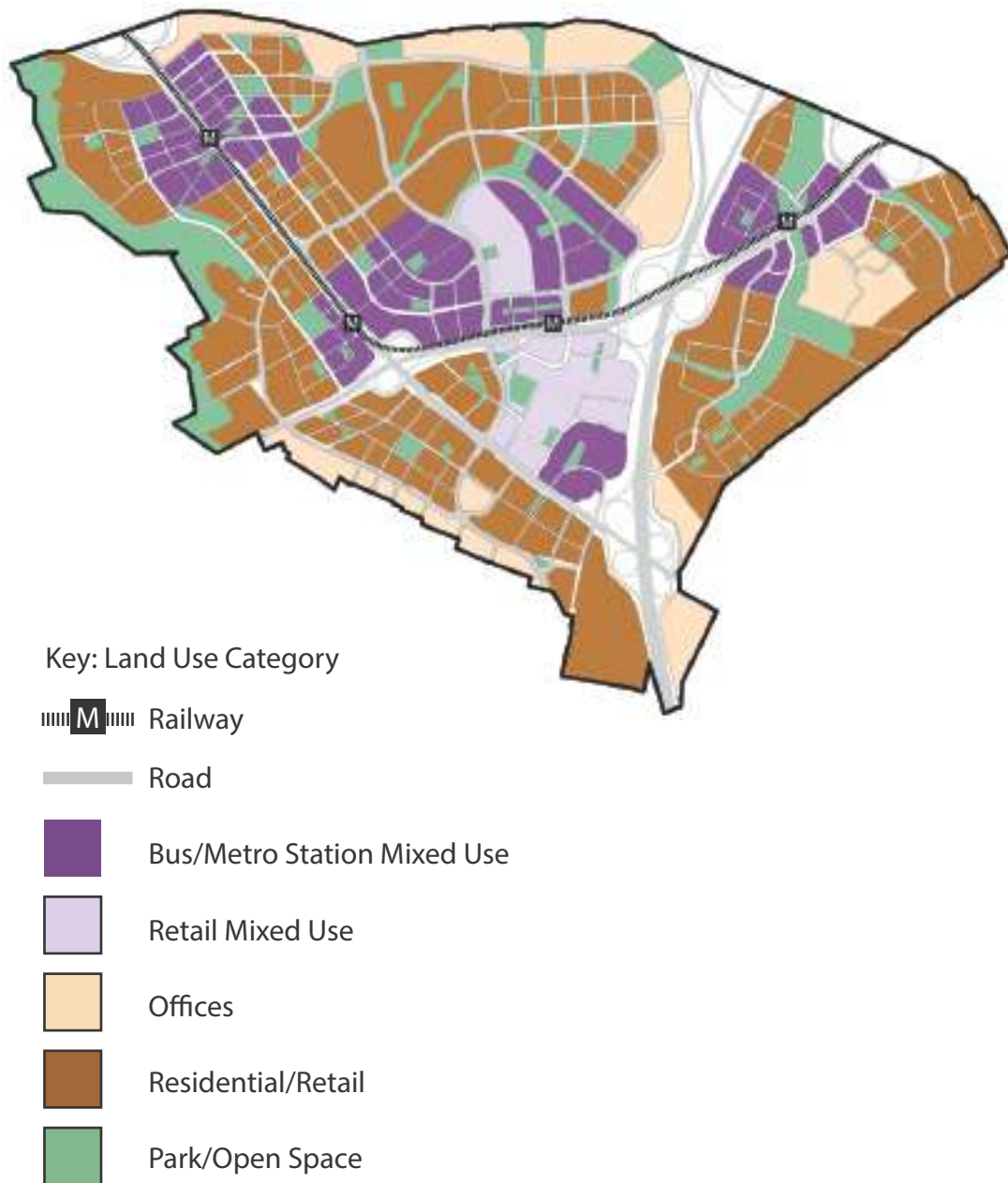
Figure 3a

Land use map of an urban area in Virginia, United States
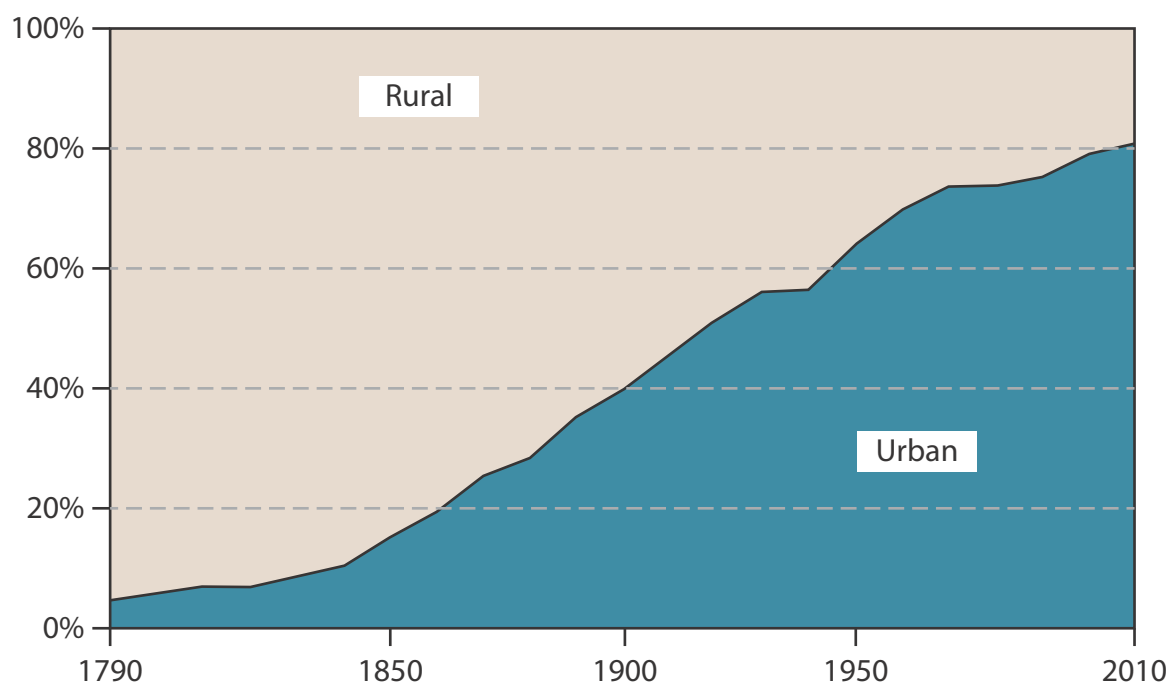
Figure 3b

Urban and rural populations in the United States, 1790–2010

Buildings and houses, empty and in poor condition

Old fuel stations

Abandoned factories

Polluted waterfronts

New buildings
Creating healthy and safe community spaces

Community gardens
Making it easier to get healthy foods

Parks and trails for walking and biking
Increasing physical activity and safety
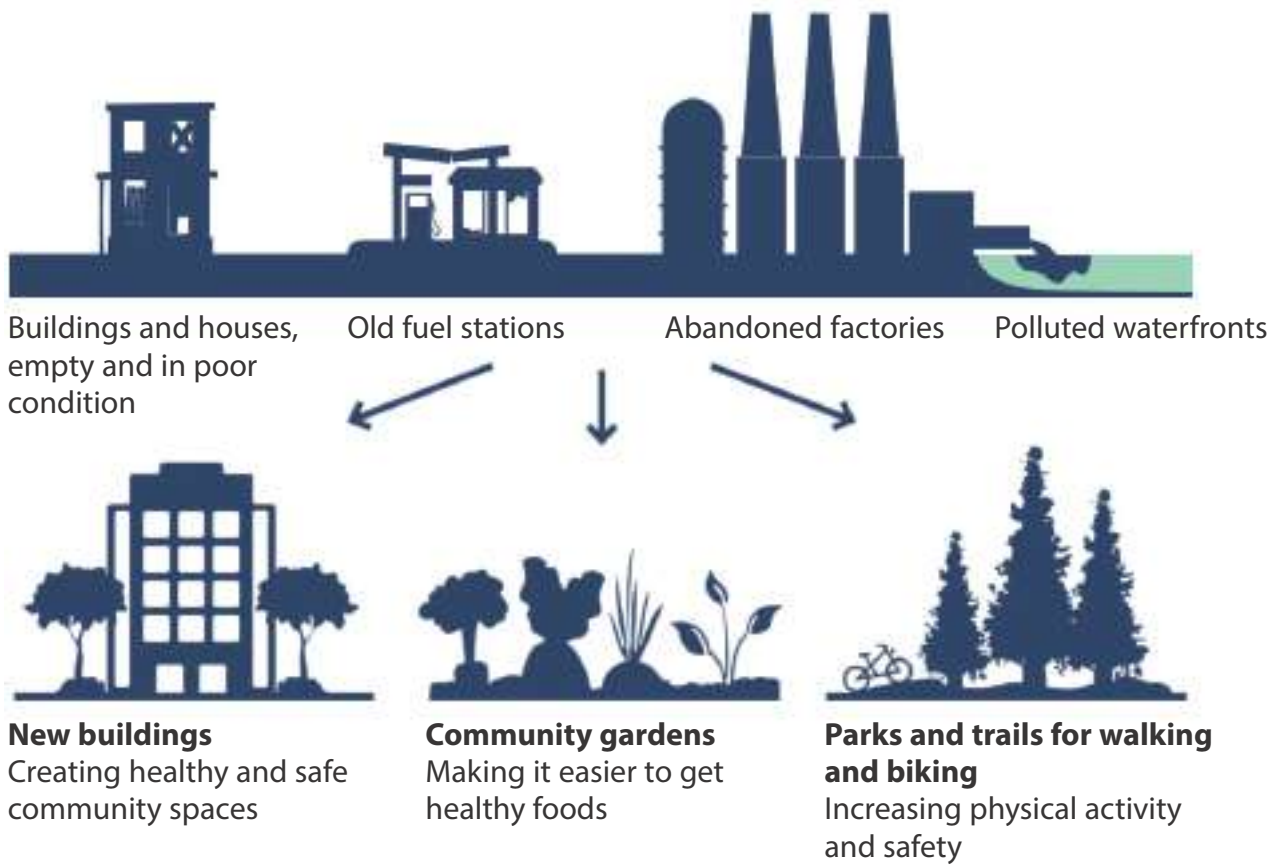
Figure 3c

Information about brownfield site developments in the United States

Enquiry question: What are the impacts of a new solar farm on a local community?

Primary data collected:

| Observations of the solar farm and its surroundings | Interviews with local residents | Environment Quality Survey near the solar farm and in the local village | Field sketches of the solar farm |

Figure 4a

Information about the students' enquiry and primary data collection

Indicator	Negative	1	2	3	4	5	Positive
Buildings	Buildings are in poor condition					X	Buildings are in good condition
Traffic	Large amount of traffic				X		Low amount of traffic
Landscape	Landscape is unattractive					X	Landscape is attractive
Litter	Large amount of litter				X		Small amount of litter
Pavements	Pavements are in poor condition			X			Pavements are in good condition
Repair	Many features in need of maintenance				X		Few features in need of maintenance
Air quality	Poor air quality				X		Good air quality
Noise	High noise levels					X	Low noise levels

Figure 4b

Environmental Quality Survey data from site near the solar farm

Enquiry question: What are the impacts of a new small business park on the edge of a rural village?

Primary data collected:

| Observations of the business park and its surroundings | Interviews with local residents | Environment Quality Survey near the business park and in the local village | Field sketches of the business park |

Figure 5a

Information about the students' enquiry and primary data collection

Indicator	Negative	1	2	3	4	5	Positive
Buildings	Buildings are in poor condition					X	Buildings are in good condition
Traffic	Large amount of traffic				X		Low amount of traffic
Landscape	Landscape is unattractive					X	Landscape is attractive
Litter	Large amount of litter				X		Small amount of litter
Pavements	Pavements are in poor condition			X			Pavements are in good condition
Repair	Many features in need of repair				X		Few features in need of maintenance
Air quality	Poor air quality				X		Good air quality
Noise	High noise levels					X	Low noise levels

Figure 5b

Environmental Quality Survey data from site near the business park

Enquiry question: What are the impacts of new community garden in a city?

Primary data collected:

| Observations of the community garden and its surroundings | Interviews with local residents | Environment Quality Survey near the community garden and nearby | Field sketches of the community garden |

Figure 6a

Information about the students' enquiry and primary data collection

Indicator	Negative	1	2	3	4	5	Positive
Buildings	Buildings are in poor condition					X	Buildings are in good condition
Traffic	Large amount of traffic				X		Low amount of traffic
Landscape	Landscape is unattractive					X	Landscape is attractive
Litter	Large amount of litter				X		Small amount of litter
Pavements	Pavements are in poor condition			X			Pavements are in good condition
Repair	Many features in need of maintenance				X		Few features in need of maintenance
Air quality	Poor air quality				X		Good air quality
Noise	High noise levels					X	Low noise levels

Figure 6b

Environmental Quality Survey data from site near the community garden
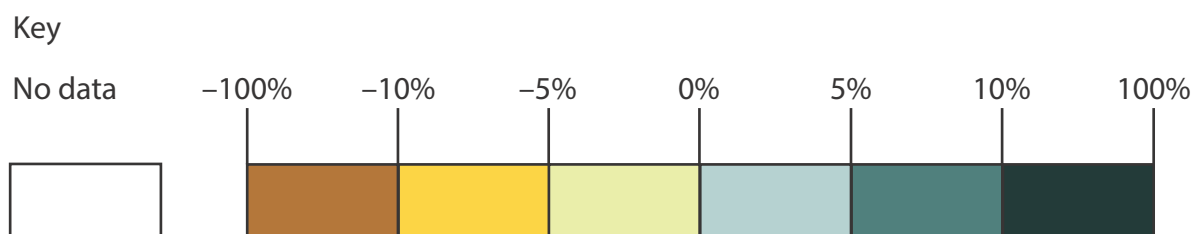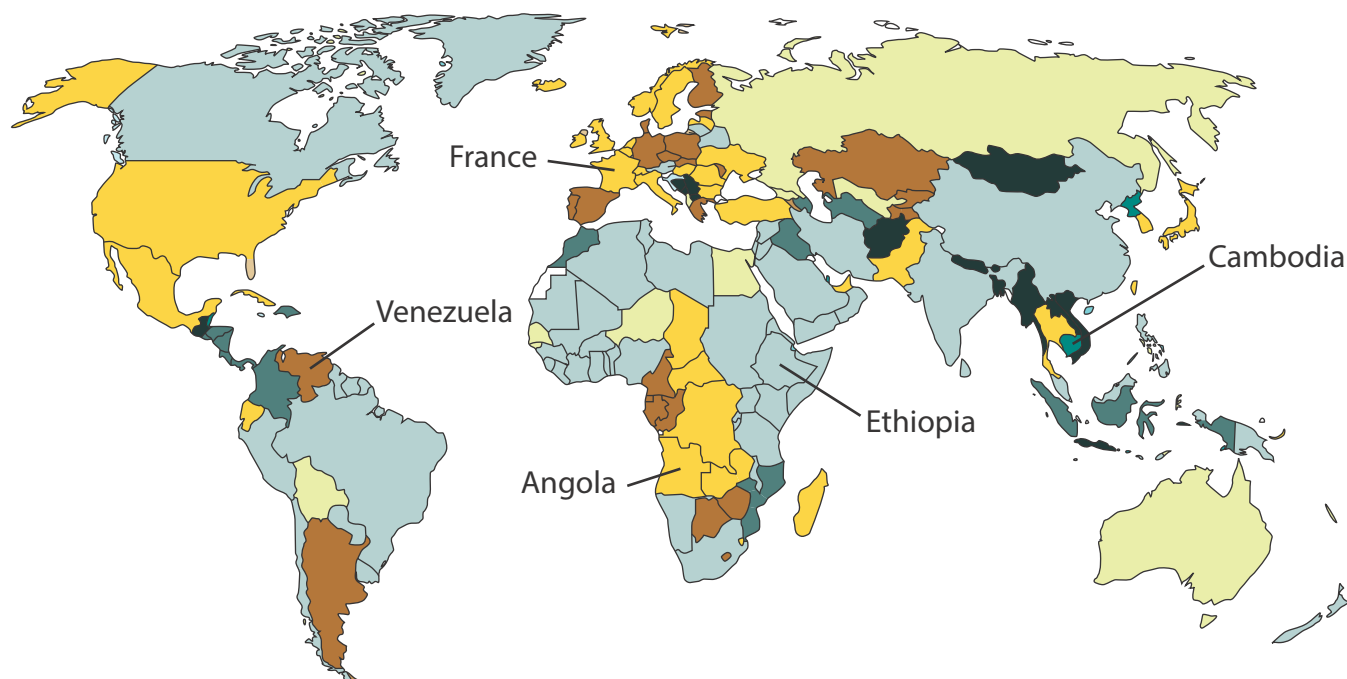
Figure 7a

Percentage (%) positive and negative change in CO$_2$ emissions, 2019

Promoting sustainable water use

⬧ People are setting water-saving examples at
home, school, and work, including:

Taking shorter
showers
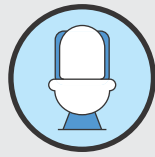
Installing low-flow
toilets

Collecting
rainwater

Reusing greywater
(waste water)
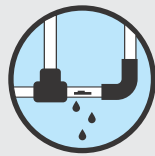
Fixing leaks
quickly

Investing in sustainable
energy and water
reduction initiatives

Figure 7b

Strategies for reducing water shortage
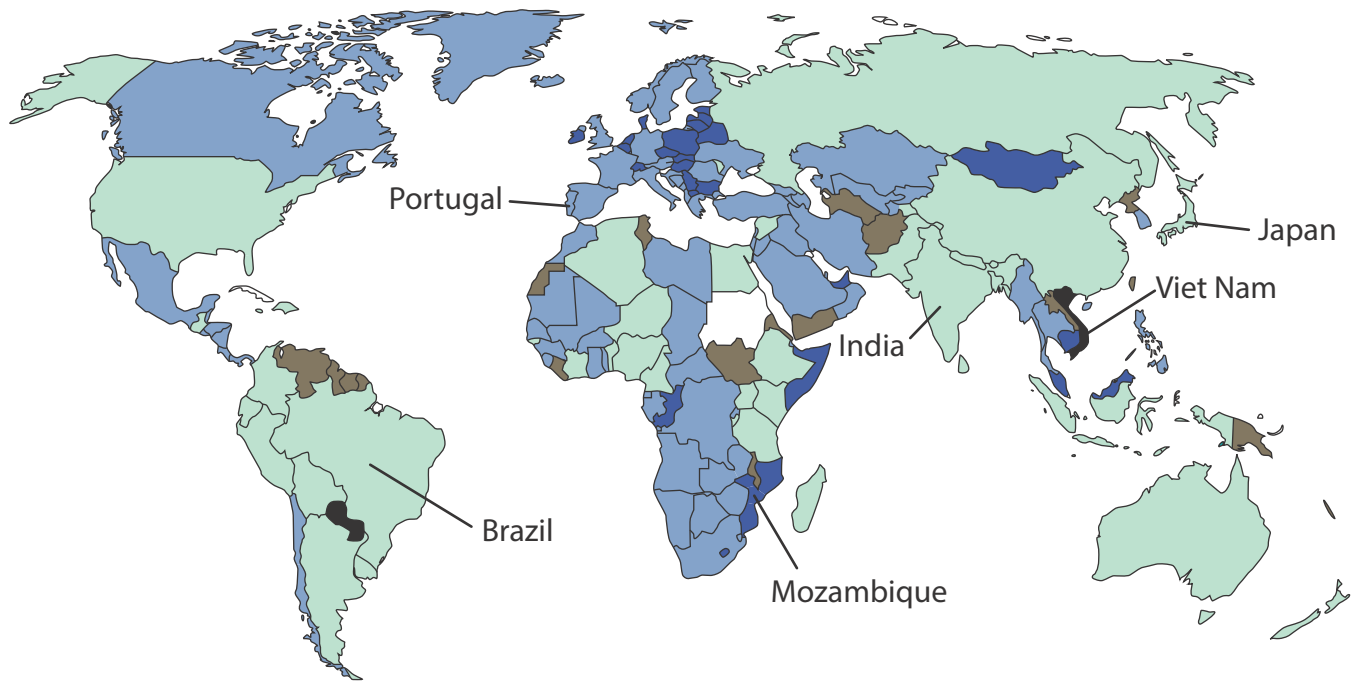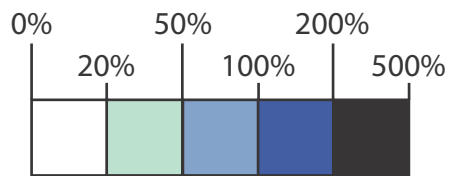
Figure 8a

Trade as a share of GDP, 2020

The International Monetary Fund (IMF)

provides loans to help countries that are experiencing challenges in meeting their economic needs.

The United Nations (UN)

is an organisation which aims to improve cooperation between countries and maintain international peace and security.

The World Trade Organisation (WTO)

works to ensure trade flows between countries are as smooth as possible.

The World Bank

aims to support long-term economic development and poverty reduction.

Figure 8b

Infographic about international institutions
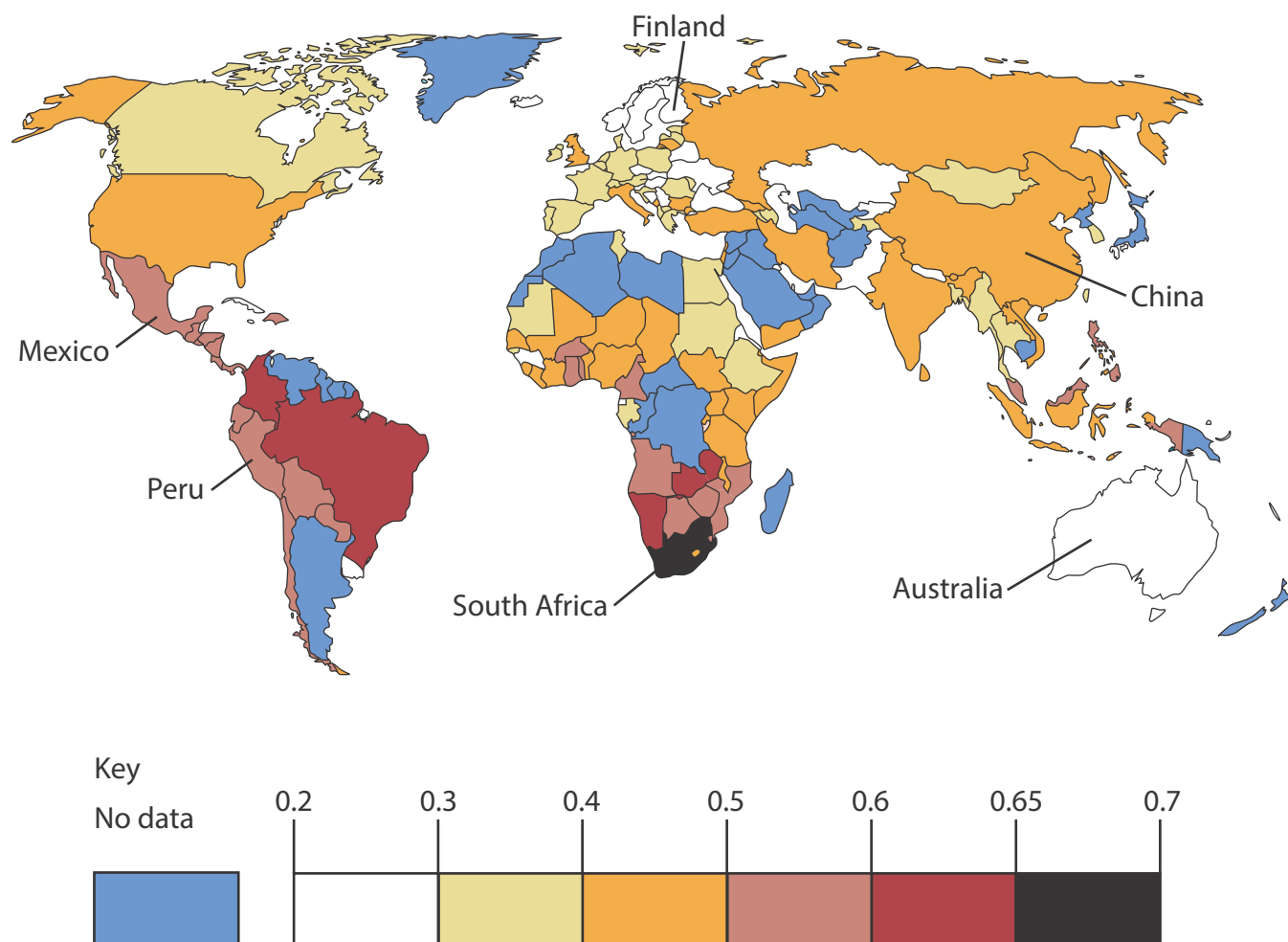
Note: the Gini Equality Index is a measure of inequality.

Figure 9a

The Gini Equality Index, 2019
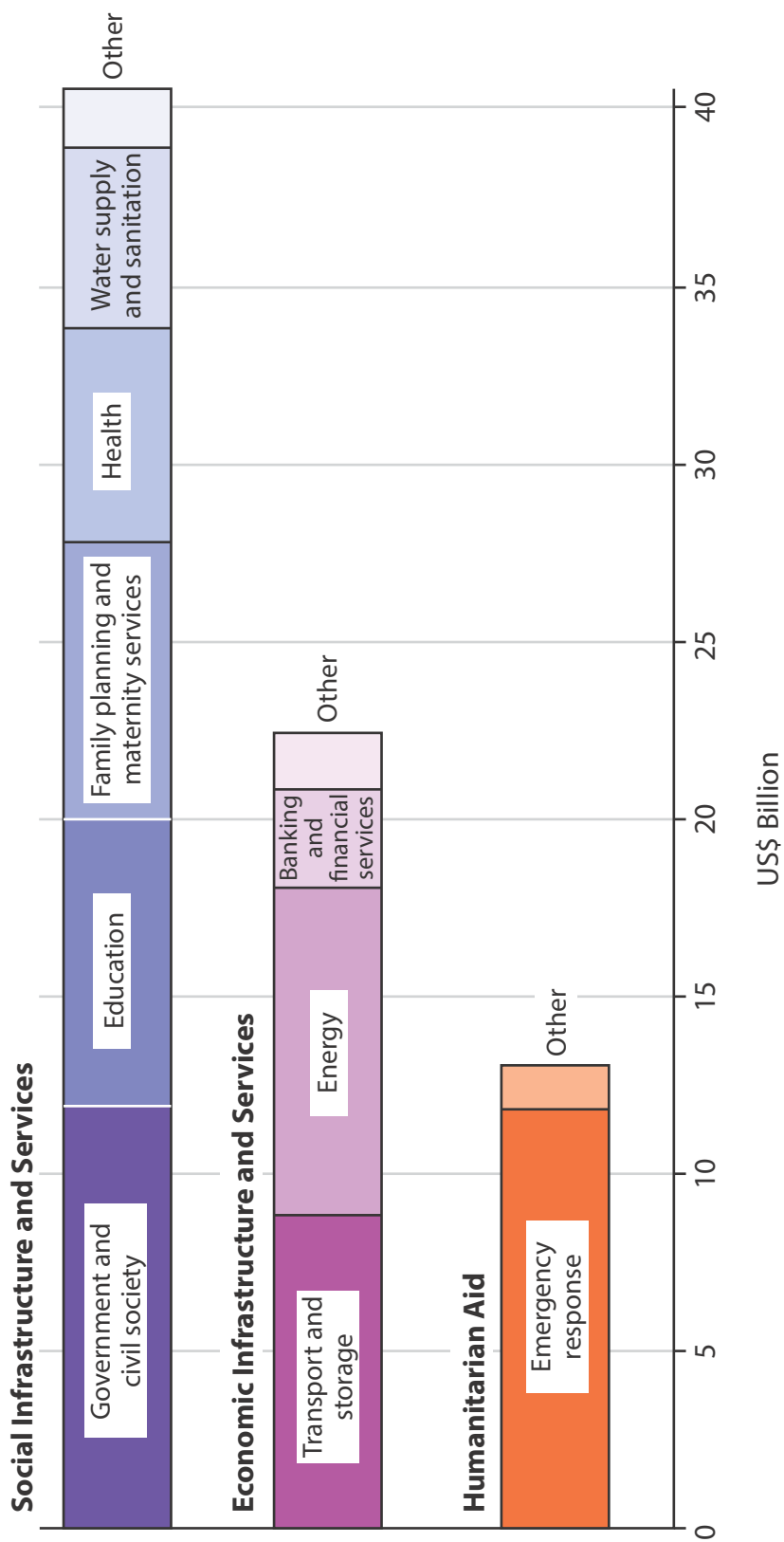
Figure 9b

Distribution of international aid by and within sectors, 2022

US$ Billion

Social Infrastructure and Services

Other
Water supply and sanitation
Health
Family planning and maternity services
Education
Government and civil society

Economic Infrastructure and Services

Other
Banking and financial services
Energy
Transport and storage

Humanitarian Aid

Other
Emergency response

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