

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

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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 ►

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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)

(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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(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)

(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)

(d) State **one** characteristic of a temperate forest biome. (1)



(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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(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

1

2



P 7 4 6 4 0 A 0 9 4 8

(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)

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(Total for Question 2 = 25 marks)



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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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(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



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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)

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

(2)



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

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)

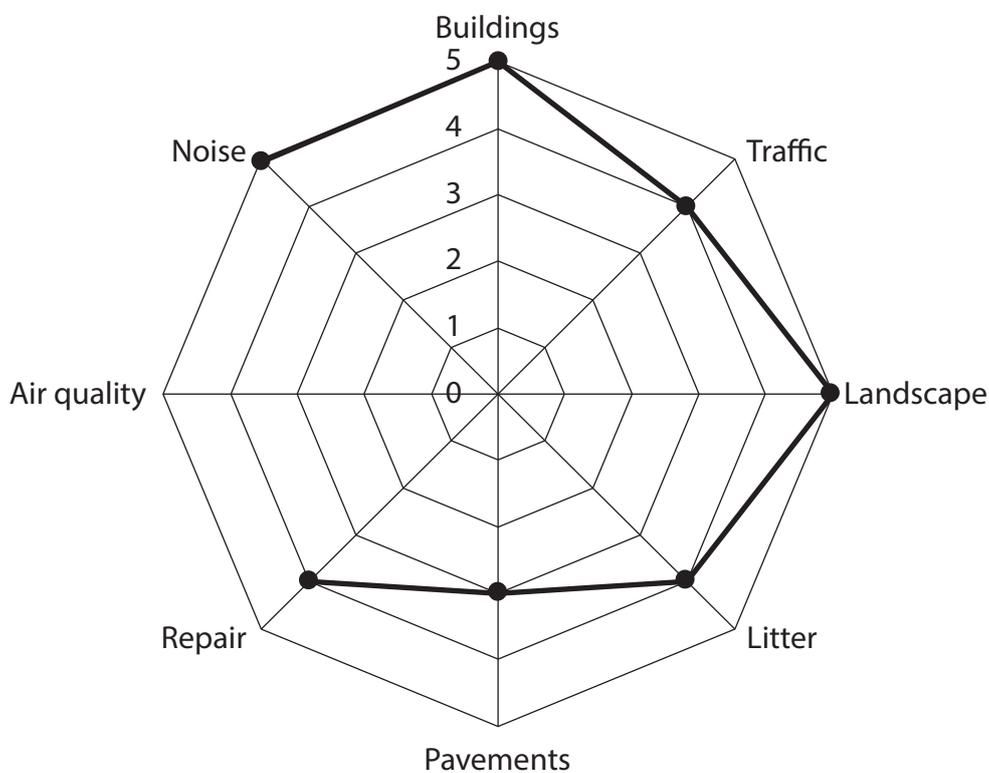


Figure 4c

Radar graph for Environmental Quality Survey

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

(1)

- (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 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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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)

(ii) Explain **one** advantage of using secondary data. (2)

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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)

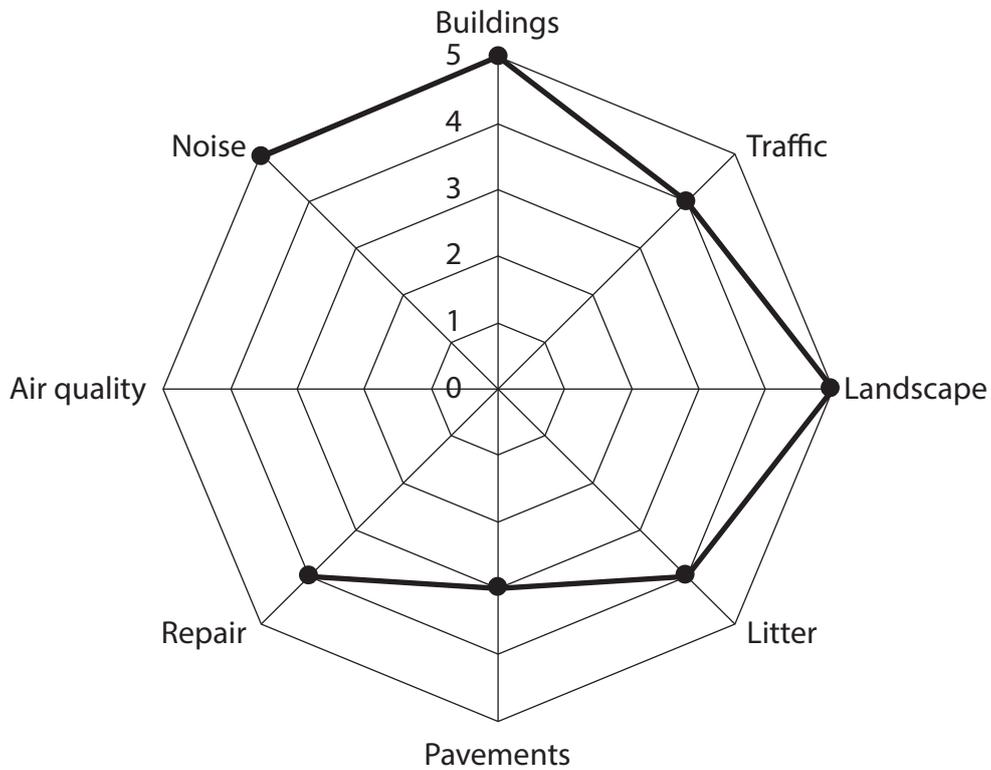


Figure 5c

Radar graph for Environmental Quality Survey

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

(1)

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

(1)



(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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(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** type of secondary data that could support this enquiry. (1)

(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)

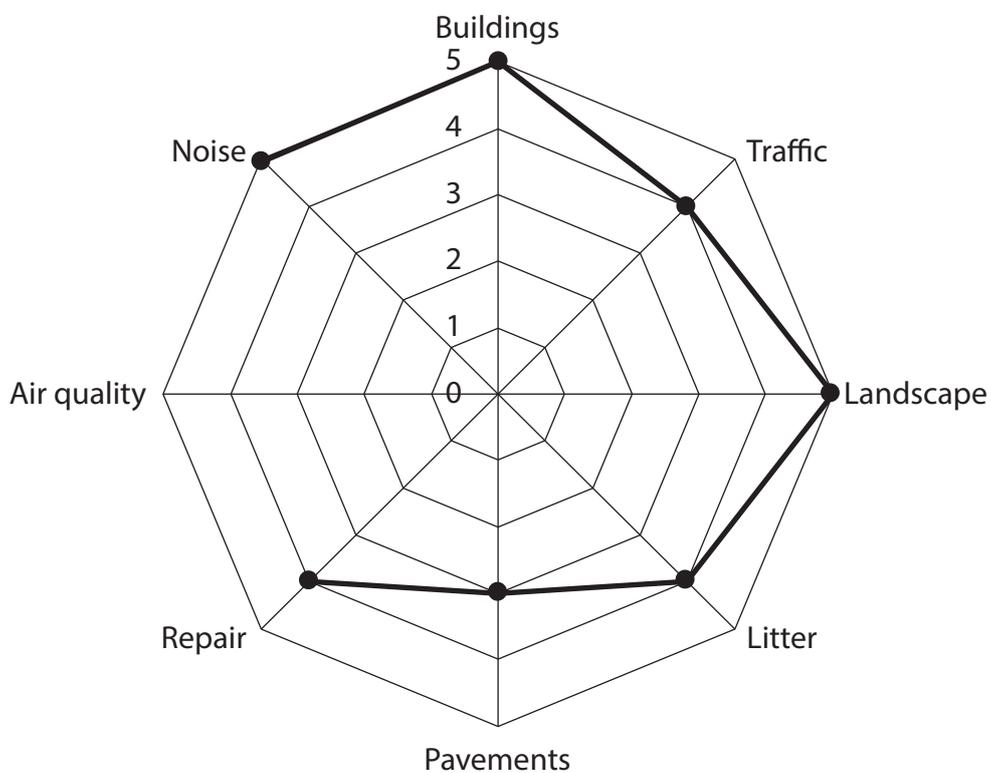


Figure 6c

Radar graph for Environmental Quality Survey

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

(1)

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

(1)



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

Show all your workings.

(2)

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

(3)

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(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS



P 7 4 6 4 0 A 0 3 1 4 8

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 CO₂ emissions per capita.

(1)

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

(2)

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

(2)

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

(2)

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

(2)

1

2



(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)

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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 **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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(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)

Area with horizontal dotted lines for writing the answer.



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Handwriting practice area with 20 horizontal dotted lines.

(Total for Question 8 = 35 marks)

Blank area for writing the answer to Question 8.



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

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

2

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

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

(6)

.....



(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)

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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)

Paper
reference

4GE1/02

Geography

PAPER 2: Human geography

Resource Booklet

Do not return this Booklet with the question paper.

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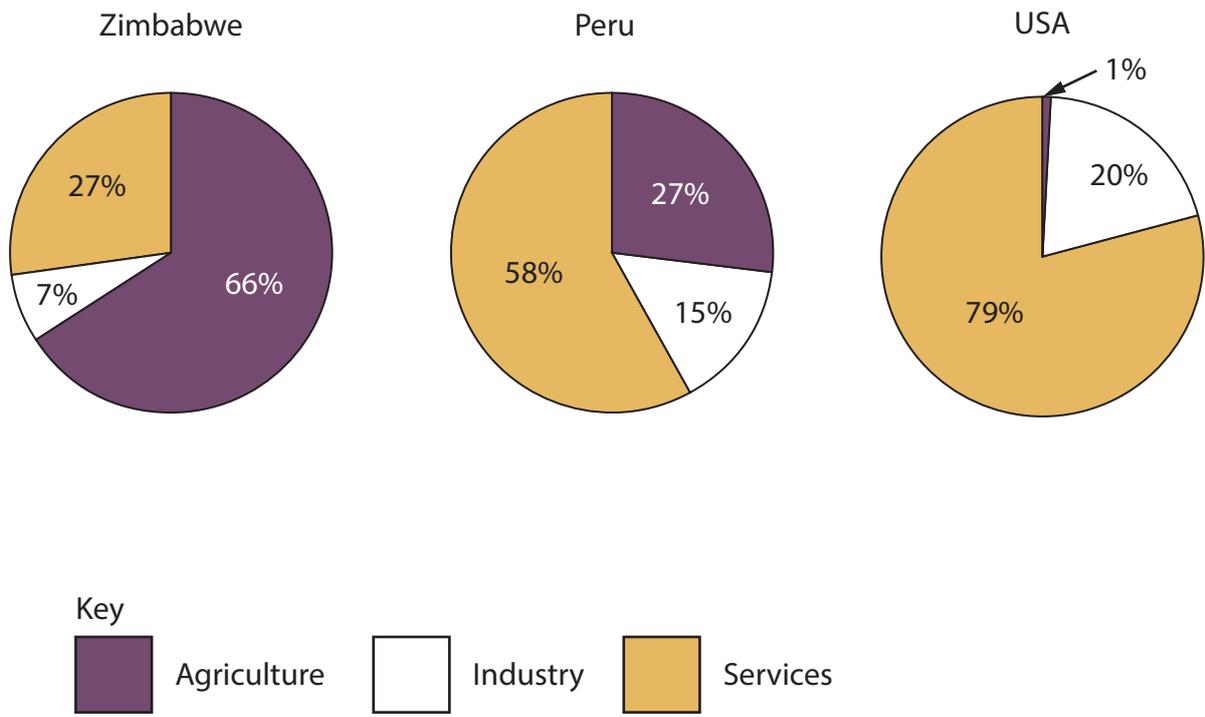
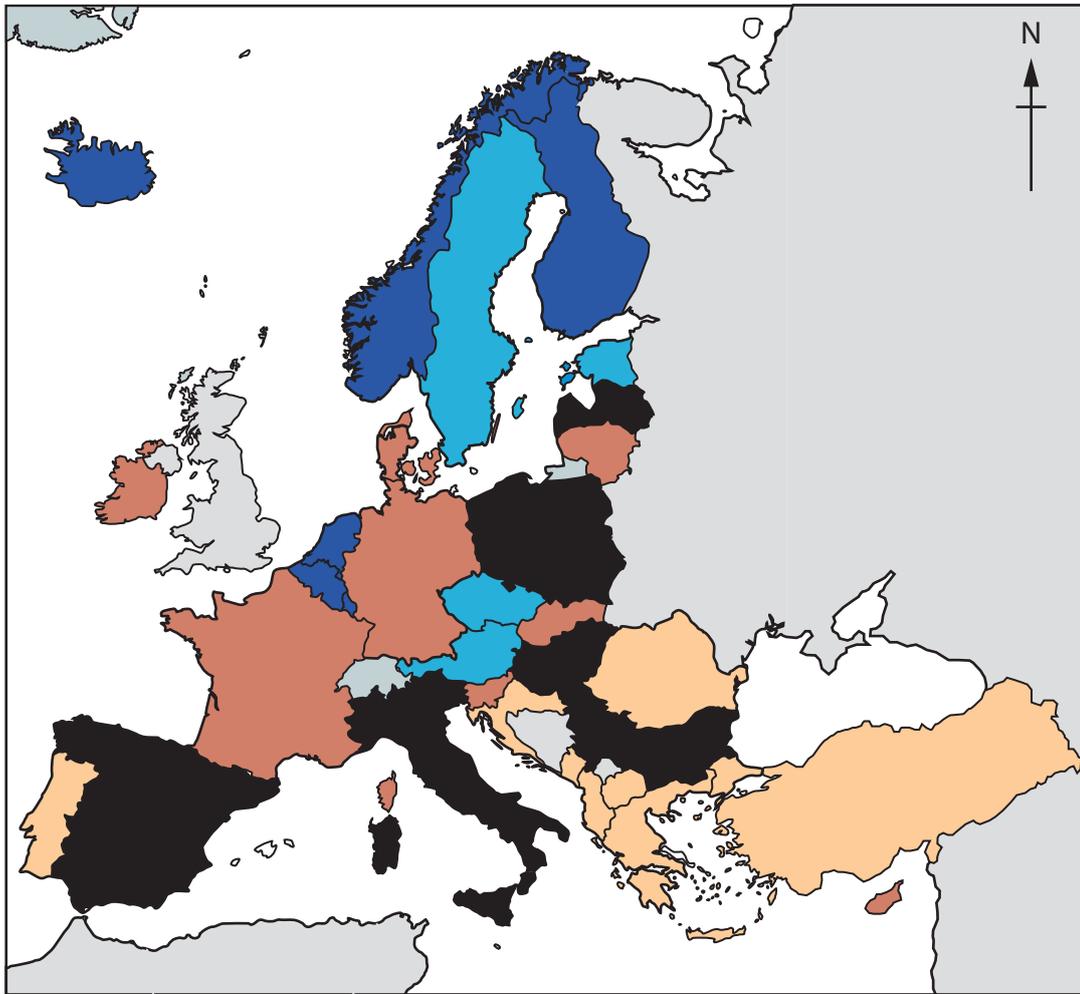
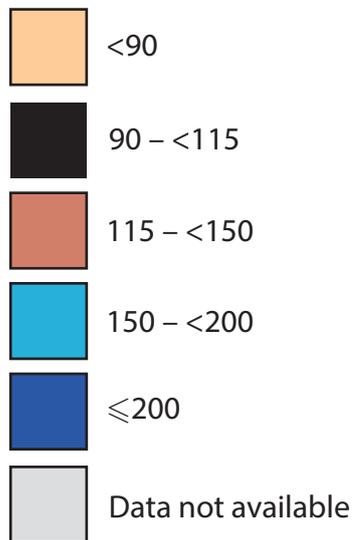


Figure 1a
Employment structure in selected countries





Key: Energy consumption per capita, terajoules



0 400 800km

Figure 1b

Energy consumption intensity in the European Union, 2022

What can you do to reduce your carbon footprint?

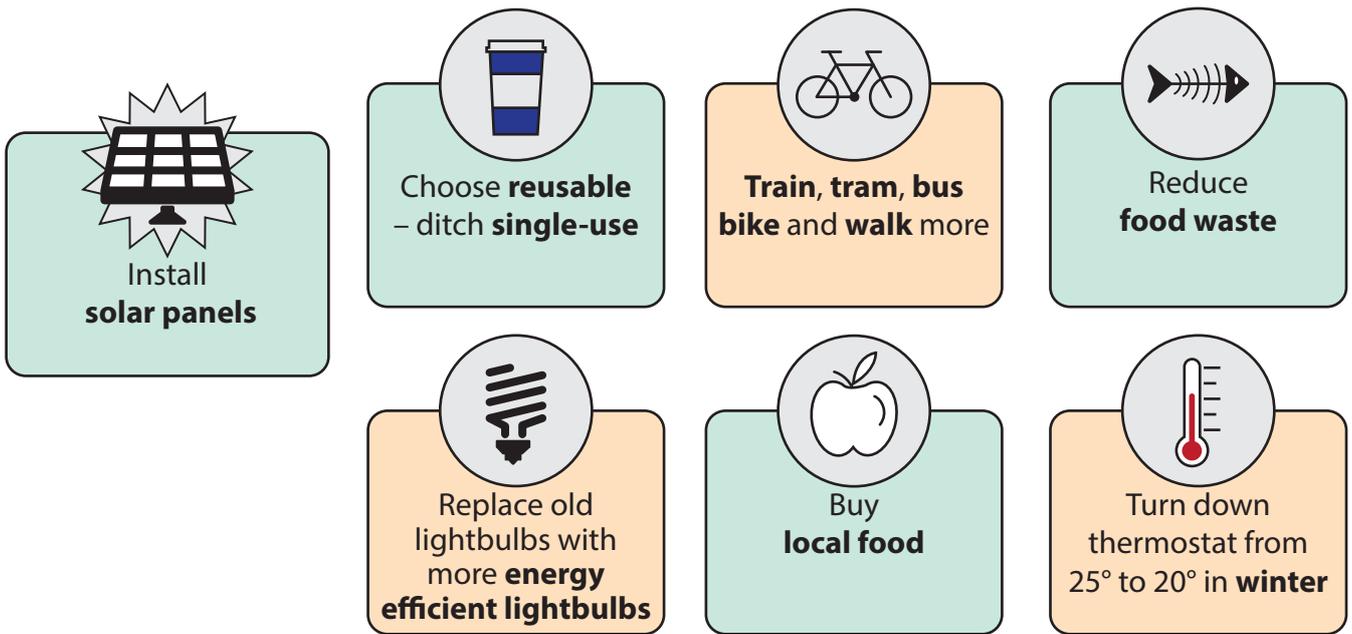
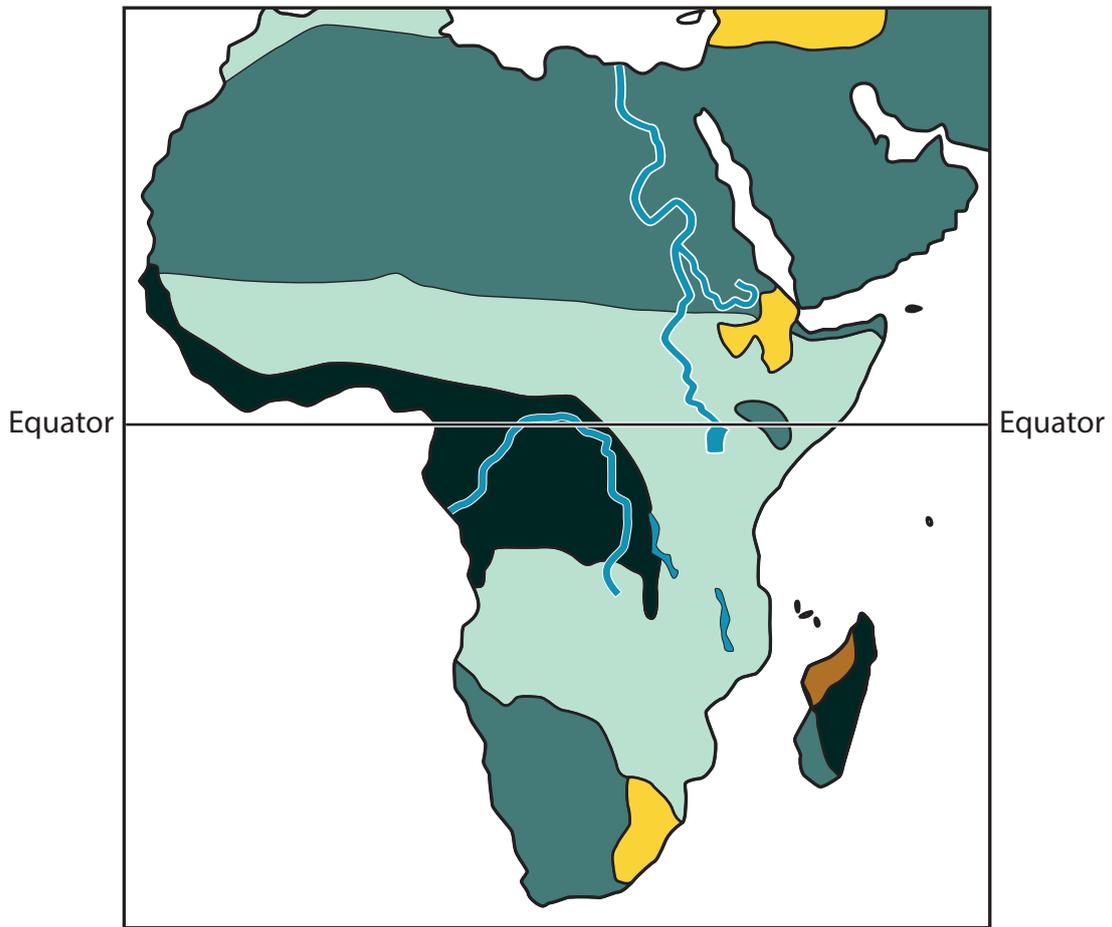


Figure 1c

Efforts to make energy use more sustainable



Key



Tropical Rainforest



Temperate Forest



Desert



Grassland



Savanna/Tropical Grassland



Freshwater



Marine

Figure 2a

Map of selected biomes

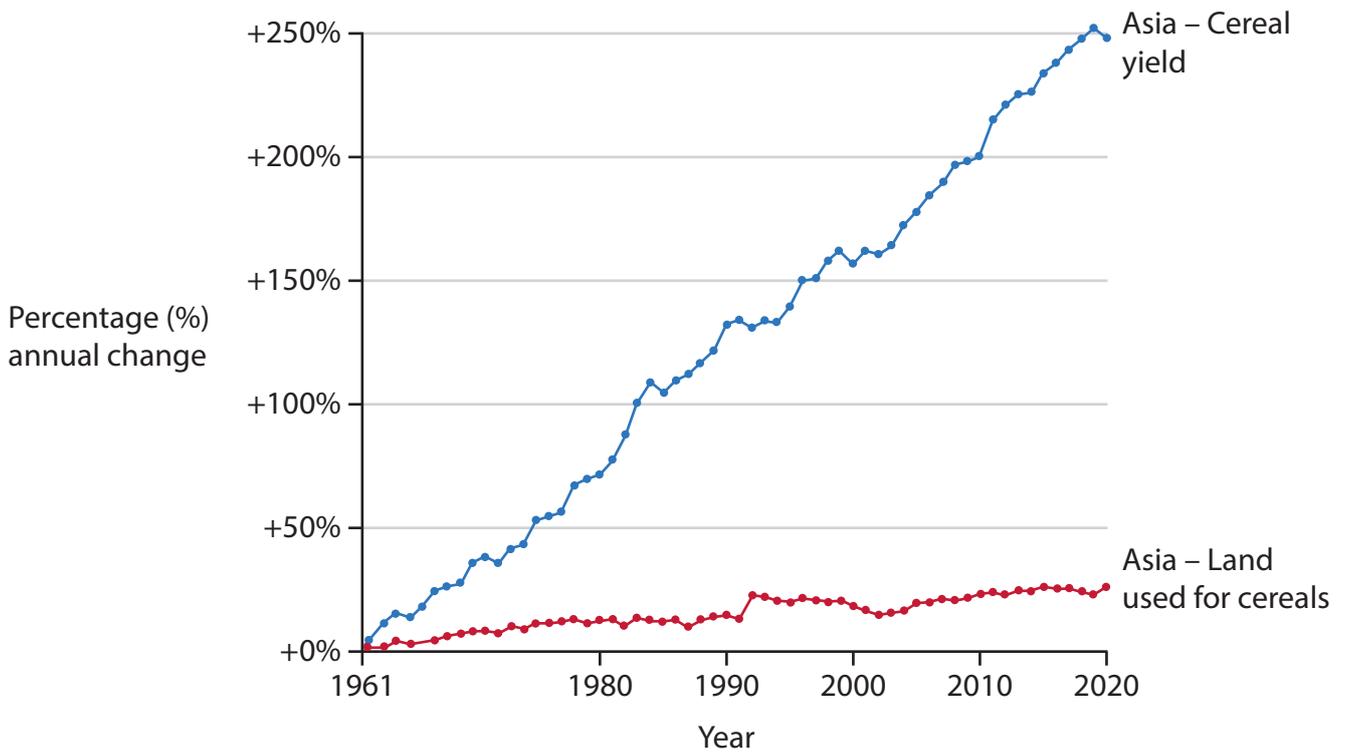


Figure 2b
Increase in percentage (%) of cereal yield and land used for growing cereals in Asia, 1961 to 2020



The downward spiral

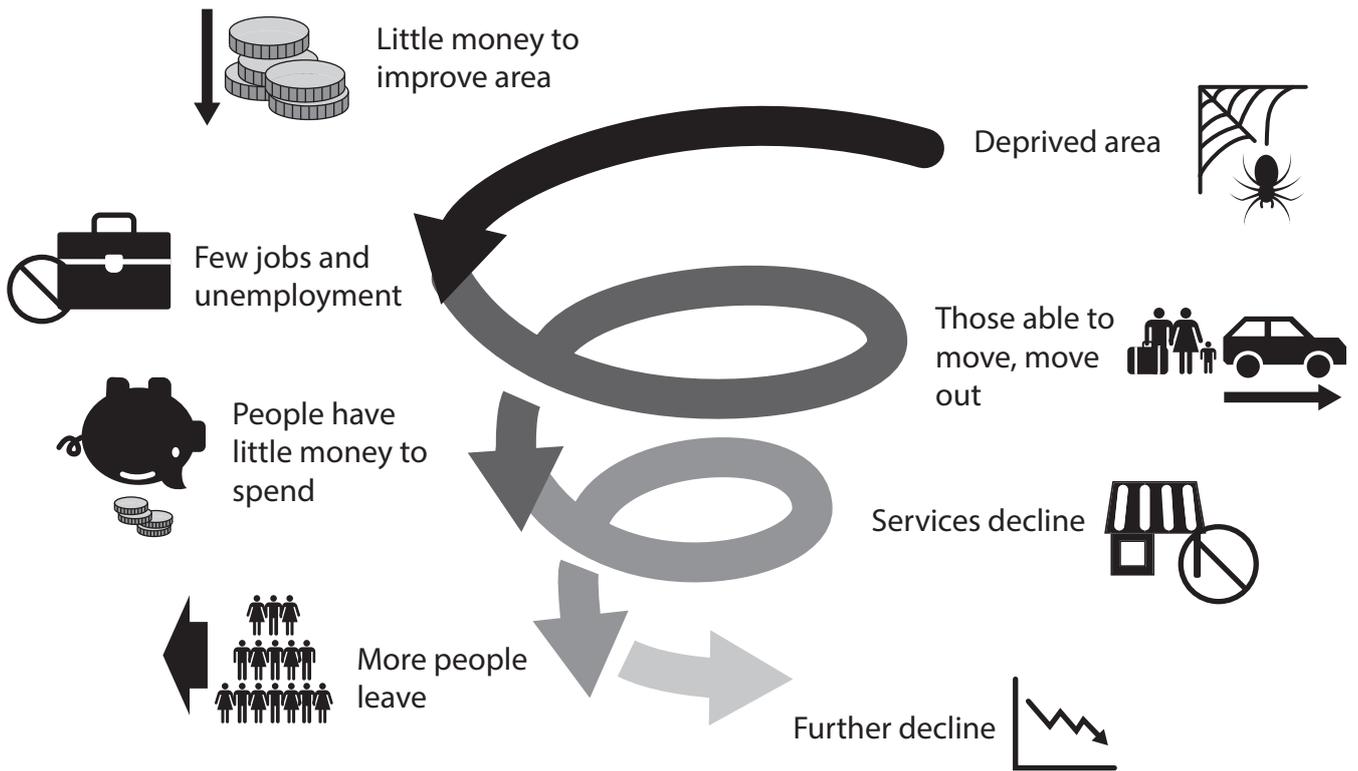


Figure 2c

The negative multiplier effect

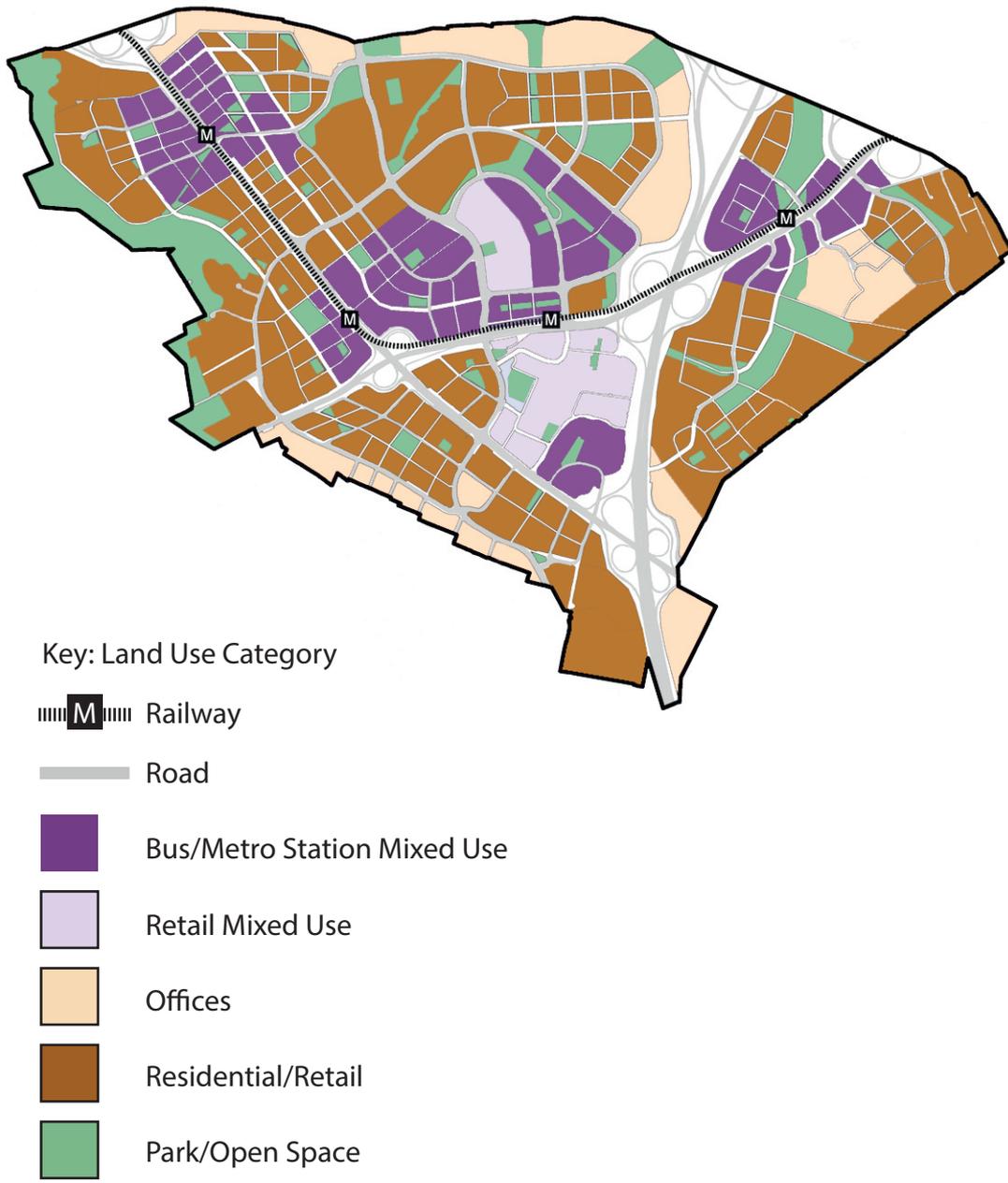


Figure 3a

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



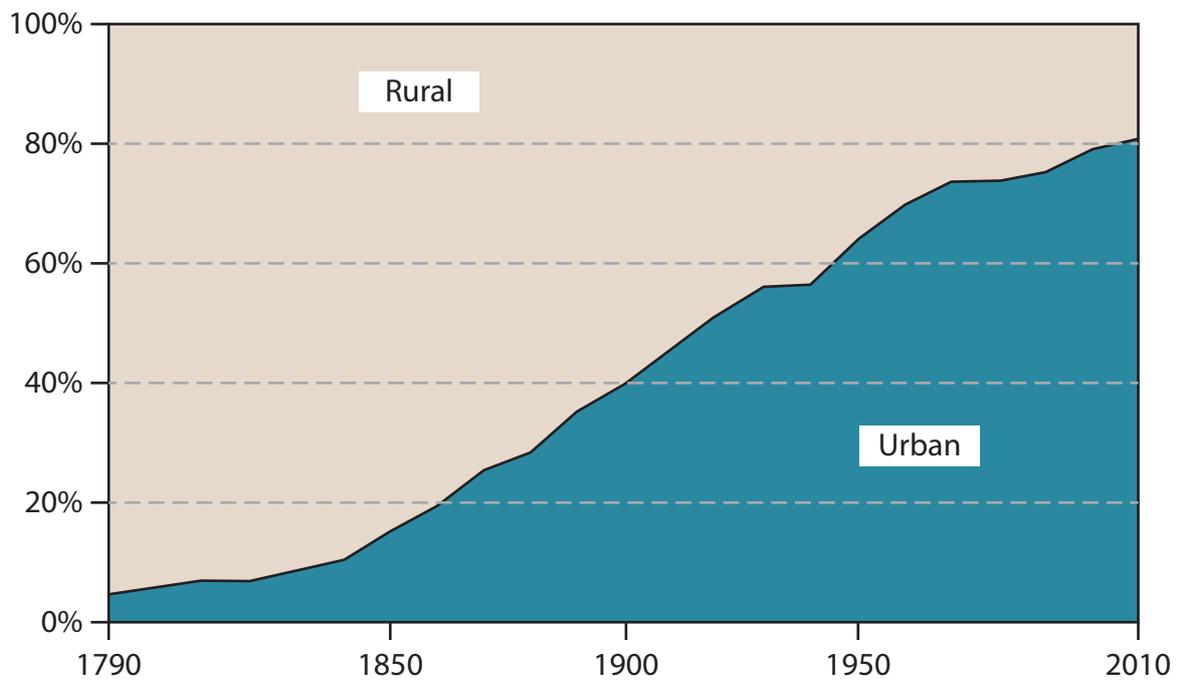


Figure 3b
Urban and rural populations in the United States, 1790–2010



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



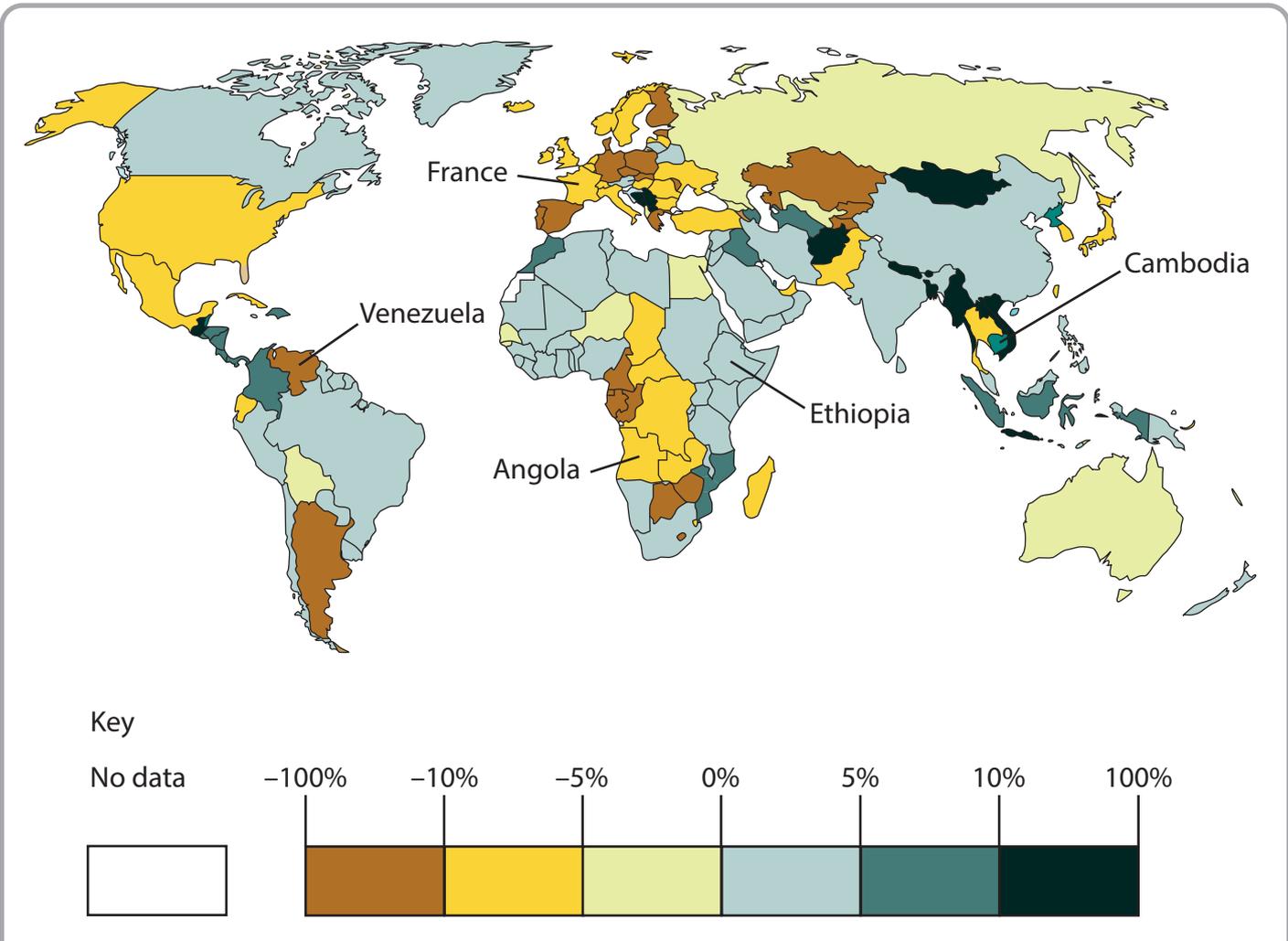


Figure 7a

Percentage (%) positive and negative change in CO₂ 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



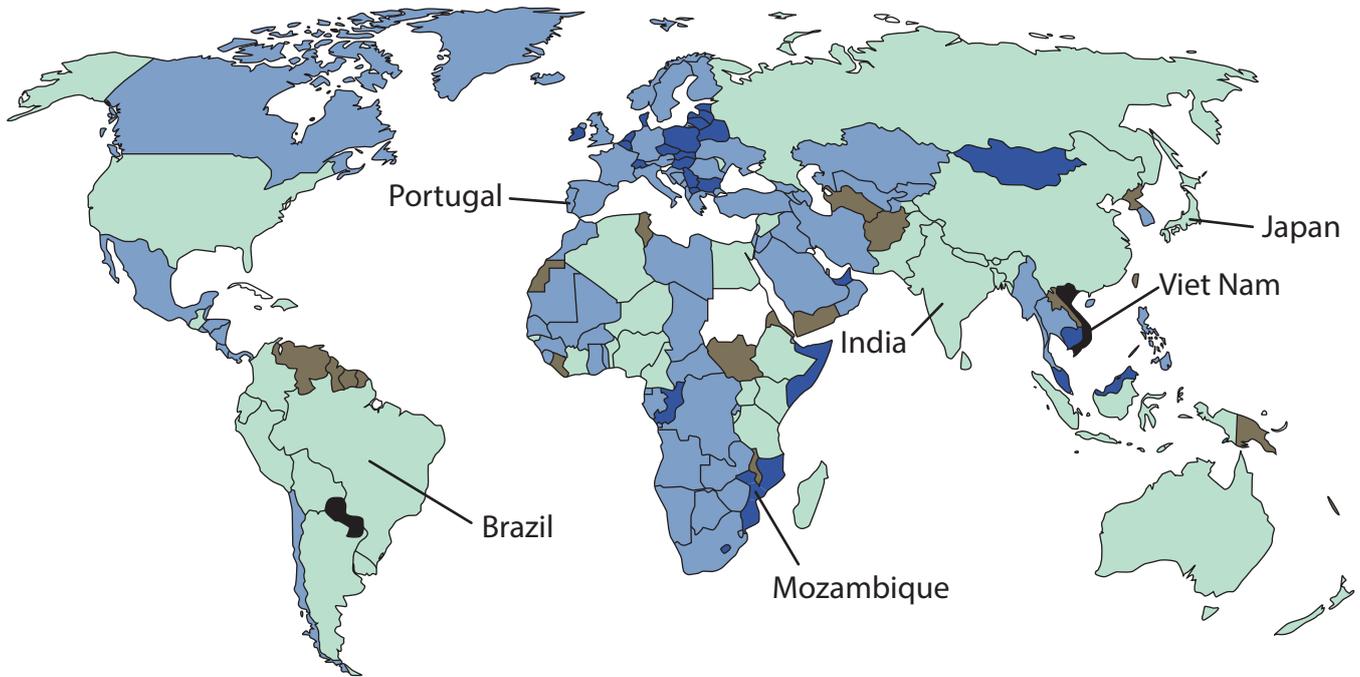
Investing in sustainable energy and water reduction initiatives



Figure 7b

Strategies for reducing water shortage





Key

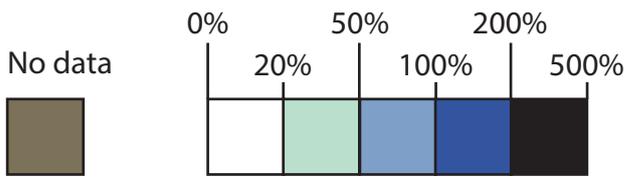


Figure 8a

Trade as a share of GDP, 2020

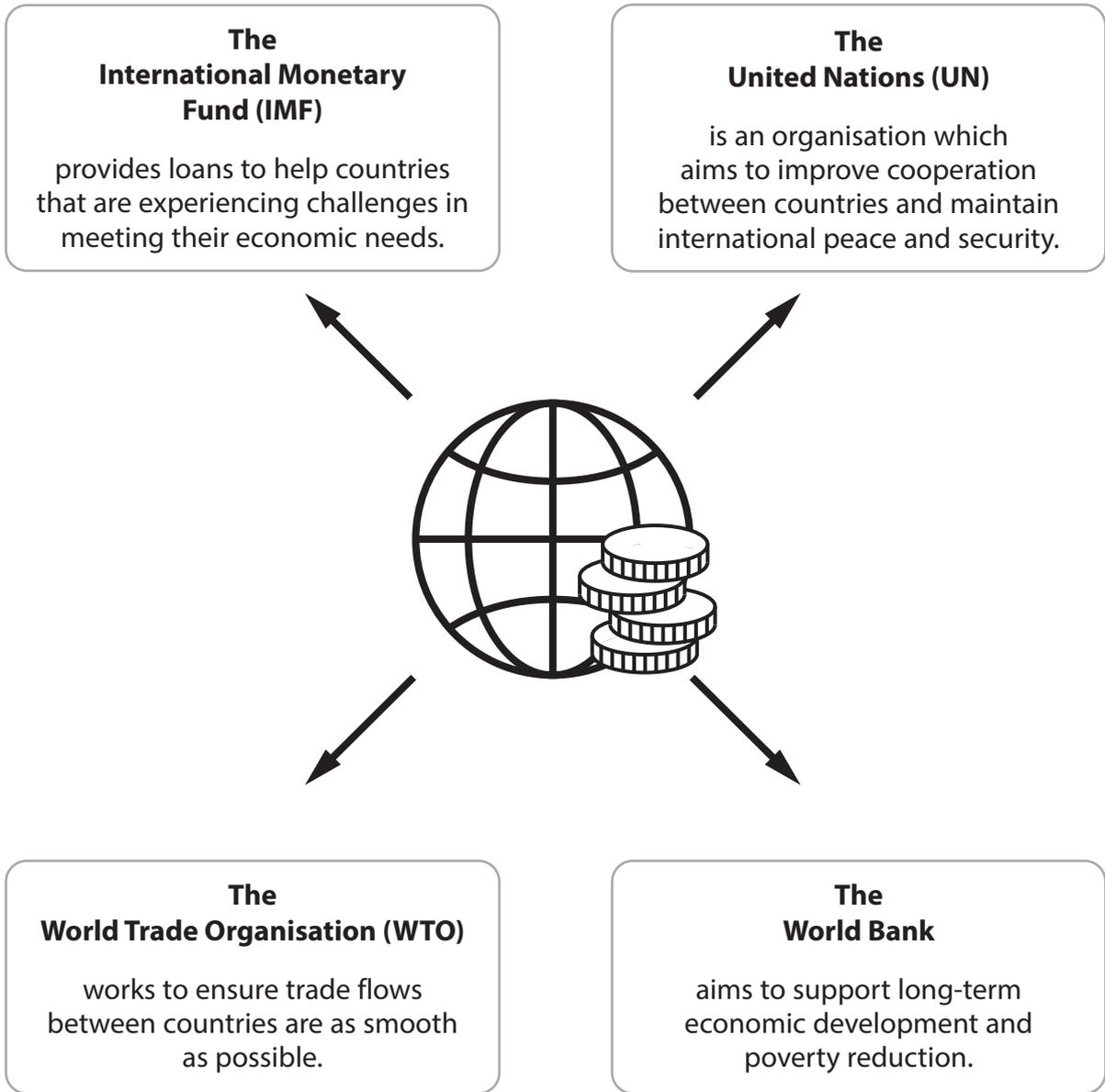
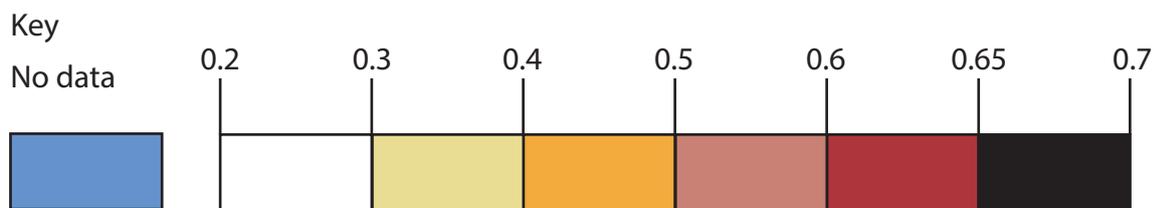
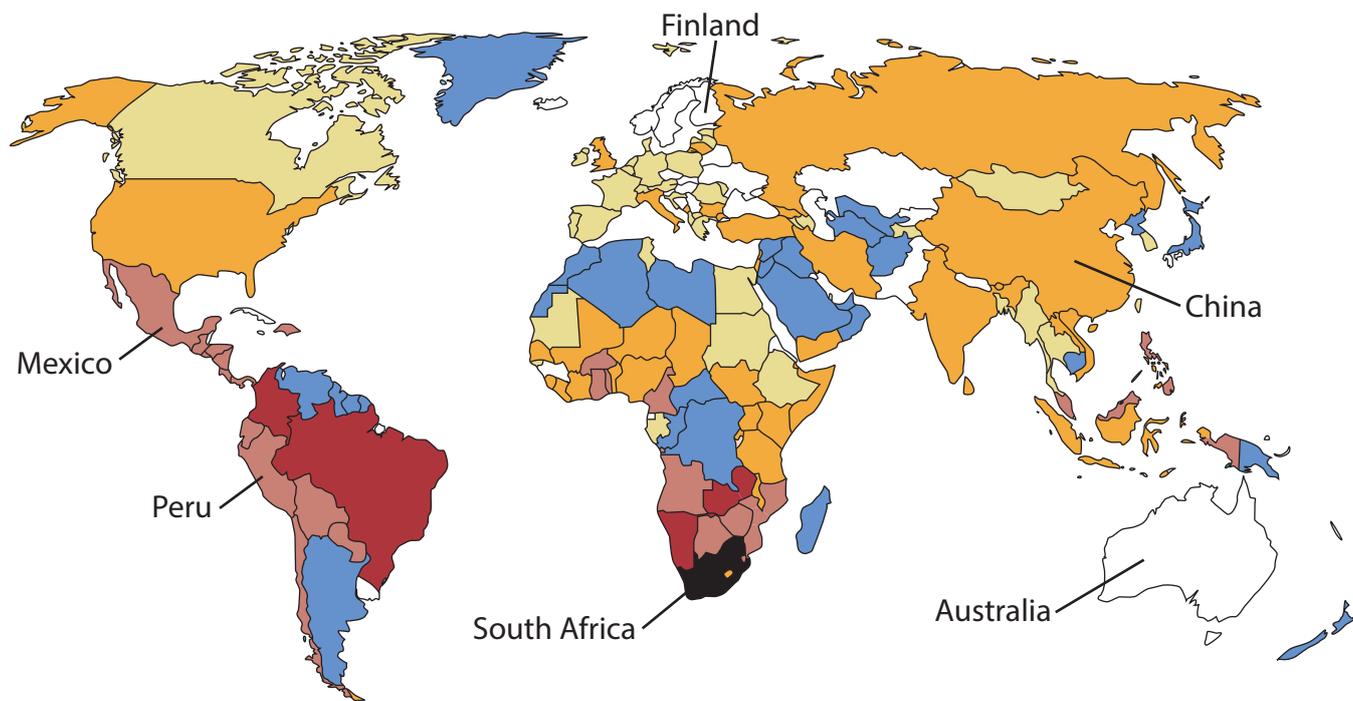


Figure 8b

Infographic about international institutions



Note: the Gini Equality Index is a measure of inequality.

Figure 9a
The Gini Equality Index, 2019

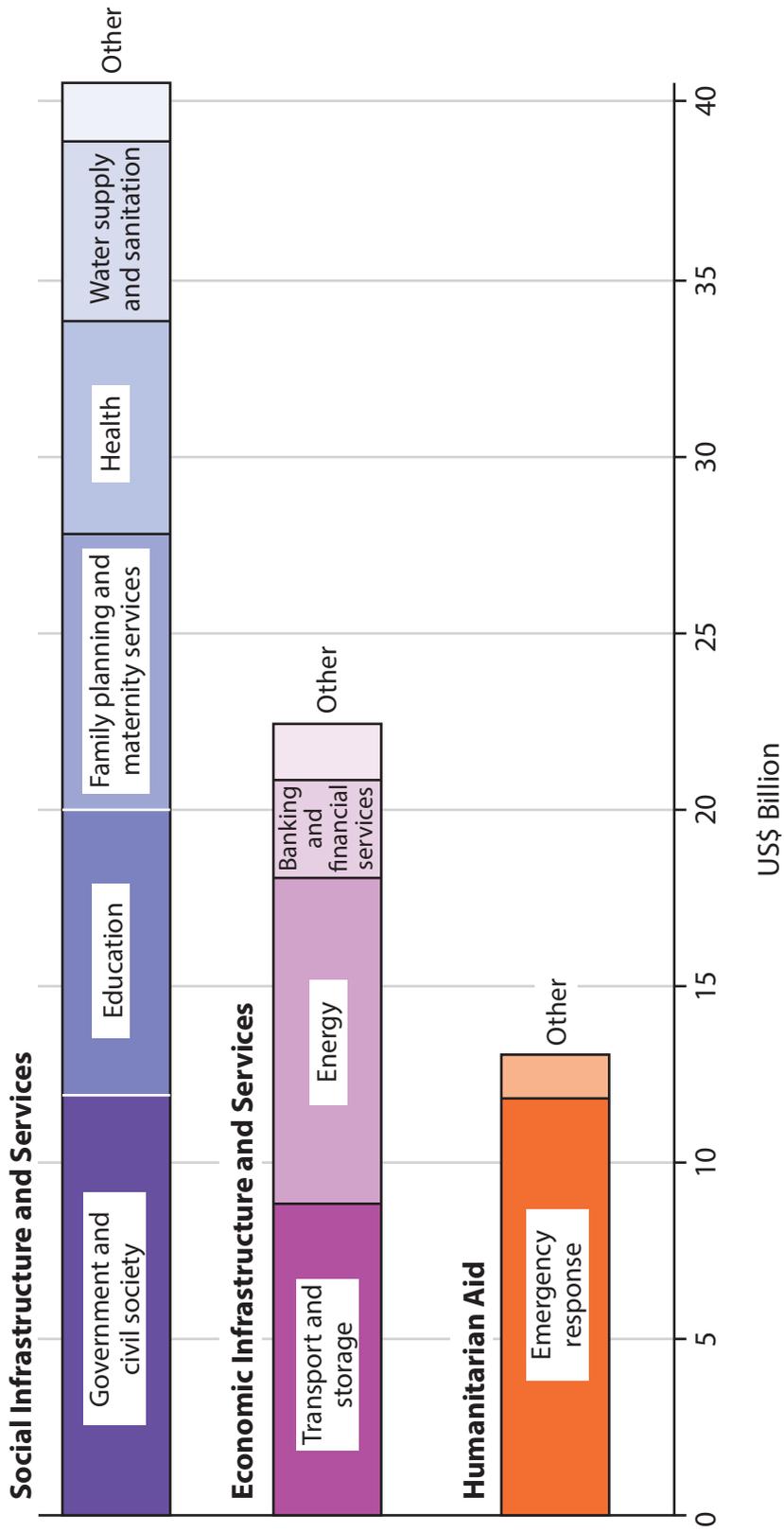


Figure 9b
Distribution of international aid by and within sectors, 2022



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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all the following sources used in the preparation of this paper:

Figure 1b: adapted from <https://ec.europa.eu/eurostat/>

Figure 1c: adapted from <https://www.gleneira.vic.gov.au/services/sustainable-living/what-can-i-do-to-reduce-my-carbon-footprint>

Figure 2a: Reproduced under Creative Commons Attribution-ShareAlike 3.0 license

Figure 2b: Food and Agriculture Organization of the United Nations [OurWorldInData.org/crop-yields](https://www.ourworldindata.org/crop-yields)

Figure 2c: adapted from <https://geogramblings.com/>

Figure 3a: adapted from <https://toolkit.climate.gov/image/1991>

Figure 3b: adapted from <https://ourworldindata.org/grapher/urban-and-rural-populations-in-the-united-states>

Figure 3c: adapted from https://www.cdc.gov/nceh/multimedia/infographics/redeveloping_brownfield.html

Figure 7a: adapted from <https://ourworldindata.org/co2-emissions>

Figure 8a: adapted from <https://ourworldindata.org/grapher/trade-as-share-of-gdp>

Figure 9a: adapted from <https://ourworldindata.org/grapher/economic-inequality-gini-index>

Figure 9b: adapted from <https://story.aidhedge.org/foreign-aid-infographics-851c8971ed7a>

