Please check the examination details bel	ow before ente	ering your candidate information
Candidate surname		Other names
Centre Number Candidate No	umber	
Pearson Edexcel Inter	nation	al GCSE (9-1)
Time 1 hour 45 minutes	Paper reference	4GE1/02
Geography PAPER 2: Human geograph	phy	•
You must have:		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 **one** question 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 out with your answer clearly identified at the end of your solution.

Information

- The total mark for this paper is 72.
- 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 ▶







SECTION A

Answer ONE question from this section.

Some questions must be answered with a cross in a box \boxtimes . If you change your mind about an answer, put a line through the box \boxtimes and then mark your new answer with a cross \boxtimes .

If you answer Question 1 put a cross in the box $\ \square$.

1	Economic ac	tivity and energy	
	(a) (i) Identi	fy one advantage of using geothermal energy as a source of energy.	(1)
			(1)
	\boxtimes	A It uses the power of the sun.	
	\times	B It uses the power of the wind.	
	\boxtimes	C It is a type of non-renewable energy.	
	\boxtimes	D It is a type of renewable energy.	
	(ii) Define	e the term renewable energy .	(4)
			(1)
	(b) Identify o	ne way to make transport more sustainable.	(1)
			(1)
	⊠ A	increasing the use of powerful petrol engines.	
	В	increasing air travel routes.	
	⊠ C	increasing the use of electric battery technology.	
	⊠ D	increasing the size of motorways.	

Suggest one reason why the activity shown might be consider informal employment.	(2)
(ii) State one advantage of informal employment.	(1)
(d) Explain two factors that affect global energy demand.	(4)



	(e) Study Figure 1b in the Resource Booklet.	
	Explain the relationship shown between population growth and food supply.	
		(3)
	(f) Evaluin two factors that affect the location of guaternary sector employment	
	(f) Explain two factors that affect the location of quaternary sector employment.	(4)
		. ,
1		
1		
1		
1		
1		



Analyse the reasons for the changes in the percentag secondary sector.	e of people employed in the
	(8)



	(Total for Question	

If you answer Question 2 put a cross in the box $ lacksquare$	•
2 Rural environments	
(a) (i) Identify one characteristic associated with a tropical forest.	(1)
	(1)
A arid conditions	
■ B low temperature	
C high humidity	
■ D strong winds	
(ii) Define the term biome .	(1)
	(1)
(b) Identify the meaning of the term organic farming .	(1)
A farming that only produces genetically modified crops.	
B farming that uses chemical fertilisers.	
C farming that does not require irrigation.	
D farming that does not use chemical fertilisers.	
(c) Study Figure 2a in the Resource Booklet.	
Suggest how this forest ecosystem might provide goods for people.	(2)



(d) State one advantage of using genetically modified (GM) crops.	(1)
(e) For people living in a developed country, explain two strategies used to mak rural life more sustainable.	(4)
(f) Study Figure 2b in the Resource Booklet.	
Suggest one reason for the trends shown.	(3)

(g)	(g) Explain how governments and NGOs manage challenges in rural environments in developing or emerging countries.				
	Governments				
	NGOs (Non-governmental organisations)				



(h) Study Figure 2c in the Resource Booklet.	
Analyse the factors that can lead to rural changes in development of the countries.	loping or
emerging countries.	(8)



(Total for Question 2 = 25 marks)



				If you answer Question 3 put a cross in the box $\ oxdiv $.	
Ur	ban	env	iro	nments	
(a)	(i)	Idei	ntif	y one advantage of building on a brownfield site.	(1)
		X		A land and buildings need to be cleared first.	
		X		B reduces loss of countryside.	
		X		c may need to remove contaminated material.	
		X		D involves building on the greenbelt.	
	(ii)	Stat	te c	one problem associated with rapid urbanisation.	(1)
(b)) Ide	_	/ or A	ne feature often found in the rural-urban fringe. business park	(1)
		_	В	high street shops	
			C	bus station	
			D	skyscraper buildings	
(c)				re 3a in the Resource Booklet.	
(0)	Su		t o	ne factor that may have affected the decision to locate the factory in	
					(2)

(d) Define the term megacity .	(1)
(e) Explain two factors that have led to suburbanisation.	(4)
(f) Study Figure 3b in the Resource Booklet.	
Suggest one reason for the trends shown.	(3)



(g) Explain two strategies used to manage challenges in squatter settlements.	(4)
1	
2	

Analyse the environmental challenges facing urban areas in developed countries.	
Analyse the environmental challenges facing urban areas in developed countries.	(8)



	(Total for Question 3 = 25 marks)
(

SECTION B

Geographical enquiry

Answer ONE question only from this section.

Some questions must be answered with a cross in a box \boxtimes . If you change your mind about an answer, put a line through the box \boxtimes and then mark your new answer with a cross \boxtimes .

If you answer Question 4 put a cross in the box \square .

4	Investigating	economic activity	v and e	nerav
-			,	

Study Figures 4a and 4b in the Resource Booklet. These show extracts from a student's data collection and presentation methods.

The aim of the student's investigation was to understand people's attitudes to making their homes more energy efficient in Vancouver, Canada.

The student carried out a questionnaire, took photographs of energy efficiency measures, and used secondary data about energy consumption in homes in Canada.

((a) Identify one question in Figure 4a that would produce qualitative data.	(1)
((b) Identify one advantage of the presentation type shown in Figure 4b.	(1)
((c) Explain one type of sampling that could have been used in this investigation.	(2)



(d) Study Figures 4a and 4b in the Resource Booklet.						
Evaluate the student's data collection and presentation methods.	(8)					



(Tota	al for Question 4 = 12 marks)

If you answer Question 5 put a cross in the box \square .

Investigating rural environments

Study Figures 5a and 5b in the Resource Booklet. These show extracts from a student's data collection and presentation methods.

The aim of the student's investigation was to understand how local people felt about the impact of tourists in the Lake District National Park.

The student carried out a questionnaire, took photographs of tourist services, and used secondary data about visitor numbers to the national park.

(a)	Identify one	e question in	Figure 5a	that would	produce of	qualitative data.

(1)

(b) Identify **one** advantage of the presentation type shown in Figure 5b.

(1)

(c) Explain **one** type of sampling that could have been used in this investigation.

(2)

Eval at a tla -	ctudont/o data	collection or	- d procests	المصمد مما	l _e	
Evaluate the	student's data	collection ar	nd presenta	tion method	IS.	(8)



(Total for Question 5 – 12 marks)

If you answer Question 6 put a cross in the box \square .

6 Investigating urban environments

Study Figures 6a and 6b in the Resource Booklet. These show extracts from a student's data collection and presentation methods.

The aim of the student's investigation was to investigate attitudes to an old factory being redeveloped in Manchester, United Kingdom.

The student carried out a questionnaire, took photographs of the factory being redeveloped, and used secondary data about property prices in the area.

		_							_	_	
1.	٠,	Idontify		augetion	in	Ciaura 6	a +ha+	اماييميير	produce a	qualitative (d - + -
10	11	iaenuiv	/ one	auesuon	1111	ridure o	a mai	would	produce (jualitative (uata.

(1)

(b) Identify one advantage of the presentation type shown in Figure 6b.	
--	--

(1)

(C)	Explain one	type of sa	ampling tha	t could hav	e been use	ed in this inve	estigation.	

(2)



(d) Study Figures 6a and 6b in the Resource Booklet. It shows an extract from a student's data collection and presentation methods.	
	Evaluate the student's data collection and presentation methods.	(8)
•••••		



(T : 16 0 : 6 10 1)
(Total for Question 6 = 12 marks)
,
$T \cap T \wedge I = \bigcap C \cap C$



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 \boxtimes and then mark your new answer with a cross \boxtimes .

			If you answer Question 7 put a cross in the box $\ oxdot$.	
7	Fragile env	iron	ments and climate change	
	(a) (i) Iden	tify t	he correct word to complete the sentence below.	
			use gases allow radiation through the atmosphere to warm the urface.	
				(1)
	\times	A	nuclear	
	\times	В	light	
	\boxtimes	C	temperature	
	\times	D	solar	
	(ii) Iden	tify t	he meaning of the term Milankovitch cycle .	(1)
				(1)
	\bowtie	A	changes in the shape of the Earth's orbit	
	\bowtie	В	changes to rainfall patterns	
	\boxtimes	C	changes to the carbon cycle	
	X	D	changes in the composition of the atmosphere	
	(b) State on	e hu	ıman cause of climate change.	(1)
				(1)



(i)	Name two countries labelled in Figure 7a at 'Very High' risk of desertification.	(2)
	Suggest two possible reasons for the distribution of countries at risk	
	of desertification.	(4)
(d) E	xplain two strategies for sustainable rainforest management.	(4)
		(-)



(e) S	Study	Figure	7b	in	the	Resource	Booklet.
-------	-------	--------	----	----	-----	----------	----------

(i) Calculate the range in the number of tropical storms for 2019.

You must show all your workings in the space below.

Give your answer to one decimal place.

(2)

(ii) Describe **one** difference in the number of tropical storms between 2010 and 2019.

(2)

(f) Study Figure 7c in the Resource Booklet.	
Assess the potential impacts of deforestation.	(6)
	(6)



(g) Discuss tl	he view
----------------	---------

'The most significant impact of climate change will be the increased frequency of extreme weather events.'

Use Figures 7a and 7b from the Resource Booklet, and your own knowled understanding to support your answer.	edge and
	(12)



7 . 16 . 0
(Total for Question 7 = 35 marks)



Glob	oa	lisatio	on a	nd migration	
(a) (i)	Iden	tify 1	the correct word to complete the sentence below:	
		The cour		vas established to promote free trade and fair trade between s.	(1)
		\times	A	International Monetary Fund	
		×	В	Oxfam	
		×	C	World Bank	
		×	D	World Trade Organisation	
((ii)	Iden	tify (one advantage of transnational corporations (TNCs) for host countries.	(1)
		X	Α	exploitation of workers	
		X	В	infrastructure development	
		X	C	profits leak out of the country	
		X	D	environmental damage	
(b) ((i)	Defir	ne th	ne term commodity chain .	(1)





(ii) Study Figure 8a in the Resource Booklet.	
Identify the country with the highest and lowest percentage of the population who do not use the internet.	(2)
Highest	
Lowest	
(iii) Suggest two possible reasons for the pattern shown in Figure 8a.	(4)
2	
(c) Explain two reasons why trade is important for the global economy.	(4)
2	



(d)	Stud	ly Figure	8b iı	า the	Resource	Book	klet
-----	------	-----------	-------	-------	----------	------	------

(i) Calculate the range in the number of refugees.

You must show all your workings in the space below.

Give your answer to one decimal place.

(2)

(ii) Compare the trends for refugees and internally displaced persons between 2015–2019.

(2)

Assess strategies for making tourism more sustainable.					
			(6)		



'The benefits of o	globalisation outwei	igh the drawbacks.'		
Use Figures 8a and 8c from the Resource Booklet, and your own knowledge and understanding to support your answer. (12)				



(Intal for ()) lestion $X = 35$ marks)
(Total for Question 8 = 35 marks)



Dev	vel	opme	ent a	nd human welfare	
(a)	(i)	lden	tify t	the indicator used to calculate the Human Development Index (HDI).	(1)
		×	A	infant mortality rate	
		×	В	access to water	
		X	C	life expectancy	
		×	D	houses with electricity	
	(ii)	Iden	tify t	the correct word to complete the sentence below:	
		The	C	an be used to measure inequality.	(1)
		×	A	adult literacy rate	
		X	В	Gini-coefficient	
		\times	C	rate of natural increase	
		X	D	dependency ratio	
(b)	(i)	Defi	ne th	ne term development gap .	(1)

	(ii) Study Figure 9a in t	the Resource Booklet		
	Identify two count Index score betwee	ries labelled in Figure 9 en 80–100.	9a with a Corruption P	(2)
1				
2				
	(iii) Suggest two possil	ole reasons for the pat	tern shown in Figure 9	(4)
1				
2				



(c) Explain how fertility rates and population structures change as a country becomes more developed.			
Fertility rates	(4)		
Population structure			
d) Study Figure 9b in the Resource Booklet.			
(i) Calculate the range in the mortality rates for India between 1990–2018	3.		
You must show all your workings in the space below.			
Give your answer to one decimal place.	(2)		
(ii) Suggest how this trand might compare to a developed country such a			
(ii) Suggest how this trend might compare to a developed country such as Canada.	(2)		
	(4)		



Assess the different views on the use of bottom-up projects to improve quality			
of life.			(6)
			(-)



'Top-down proje between countr	ects are the most effecties.'	tive for tackling the c	levelopment gap	
Use Figures 9a and 9c from the Resource Booklet, and your own knowledge and understanding to support your answer.			(12)	



(Total for Question 9 = 35 marks)
TOTAL FOR SECTION C = 25 MARKS

TOTAL FOR SECTION C = 35 MARKS TOTAL FOR PAPER = 72 MARKS



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Pearson Edexcel International GCSE (9-1)

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.

Turn over ▶









Figure 1a
Informal employment in Kolkata, India



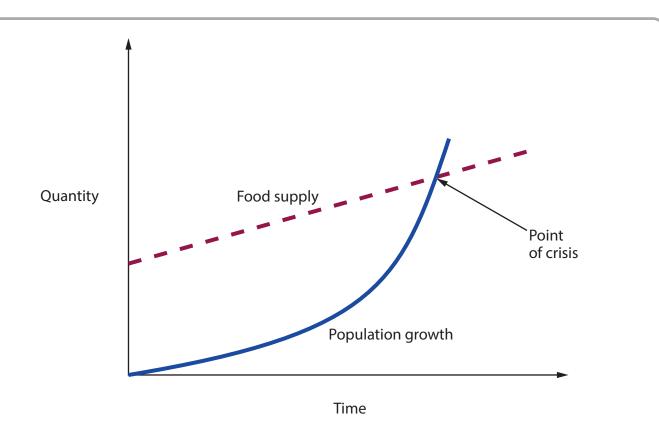
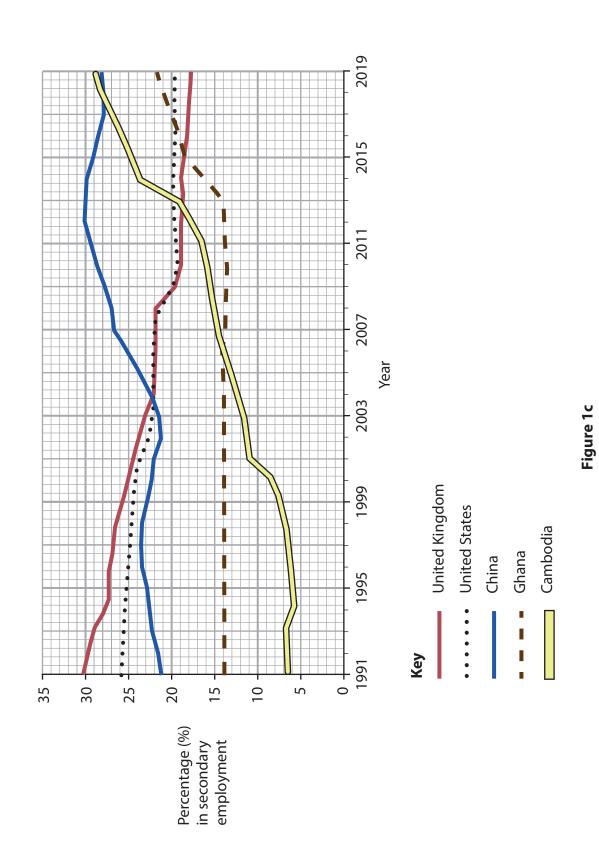


Figure 1b

Malthus' theory of population growth and food supply over time



Percentage (%) of people employed in the secondary sector in selected countries, 1991–2019



Figure 2a
A temperate forest in the United States of America

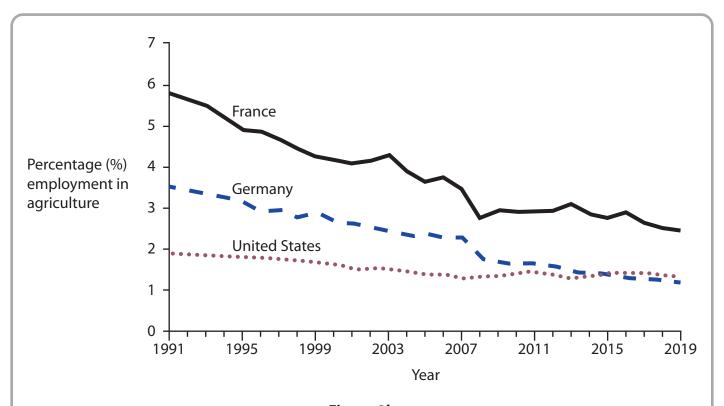


Figure 2b

Percentage (%) of employment in agriculture for selected countries, 1991–2019

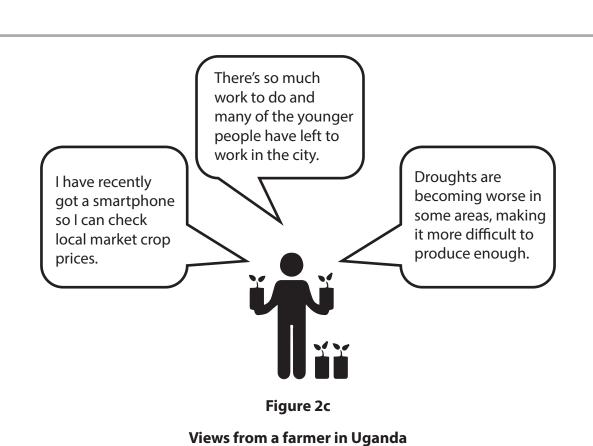




Figure 3a

Aerial photo of a factory in New Orleans, United States of America



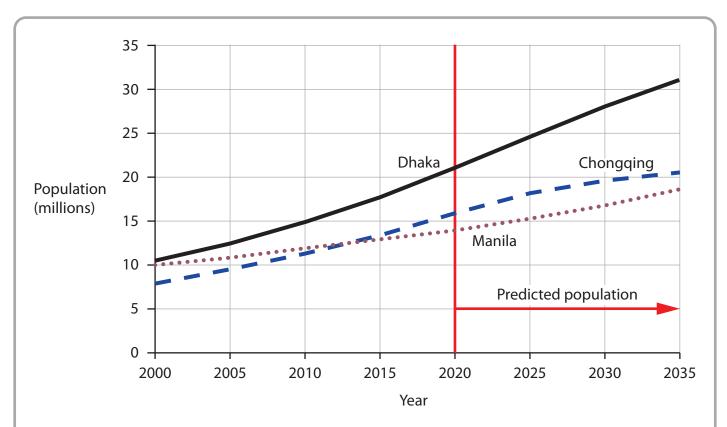


Figure 3b

Population and predicted population of selected megacities, 2000–2035

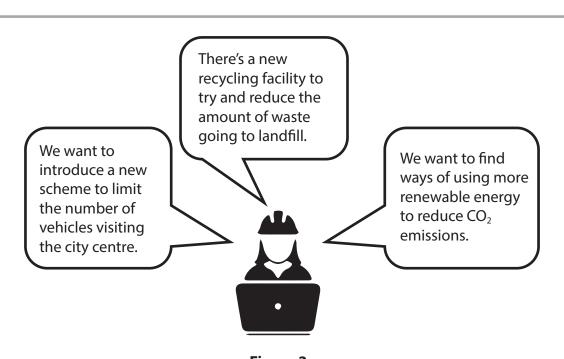


Figure 3c

Comments from a planner in London, United Kingdom

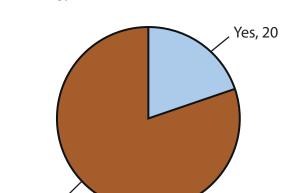


	Questionnaire: Investigating energy efficiency in the home						
1.	Do you think your home is energy effi	cient?					
2.	. Do you want to make your home more energy efficient? Yes No						
3.	Why?						
4.	How do you think you could make yo	ur hom	e more	energy	efficier	nt?	
5.	On a scale of 1–5 how likely are you to your home:	o make					
	Solar panels New windows (with double glazing) Roof insulation Underfloor heating			3	4	5	

Figure 4a

An extract from a student's questionnaire

Question 1. Do you think your home is energy efficient?



No, 80

Question 2. Do you want to make your home more energy efficient?

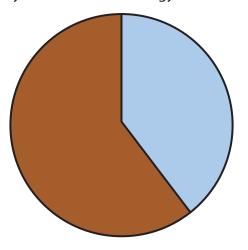


Figure 4b

An extract from a student's data presentation

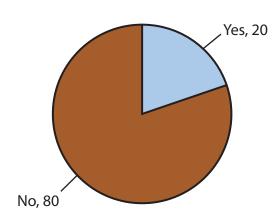
	Questionnaire: Investigating Lake District	g the impact of tourists in the National Park
1.	Do you think tourists have a negative Yes No	impact on the national park?
2.	Do you think there should be limits o	n the number of tourists?
3.	Why?	
4.	How do you think tourists could redu	ce their impact on the national park?
5.	On a scale of 1–5 how much do touris	sts affect these features of the
	Traffic Property prices Scenic beauty Pollution	1 2 3 4 5

Figure 5a

An extract from a student's questionnaire

Question 1. Do you think tourists have a negative impact on the national park?

Question 2. Do you think there should be limits to the number of tourists?



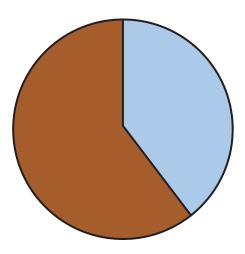


Figure 5b

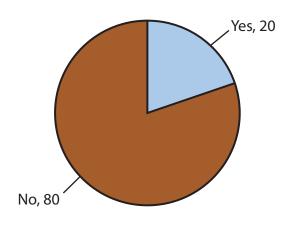
An extract from a student's data presentation

	Questionnaire: Investigating factory redevelopment							
1.	Do you think the factory needs to be Yes No	redevel	oped?					
	Does this area need more space for businesses and a hotel? Yes No							
	Why?							
4.	How do you think the factory could be local area?	e redev	reloped	to be u	iseful to	the		
5.	On a scale of 1–5 how likely are you t this factory:					lanned for		
	Office space	1	2	3	4	5		
	Gym							
	Coffee shop							
	Hotel							

Figure 6a
An extract from a student's questionnaire

Question 1. Do you think the factory needs to be redeveloped?

Question 2. Do you think this area needs more space for business and a hotel?



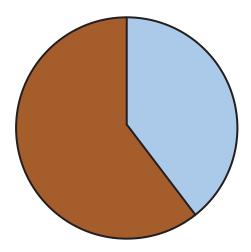


Figure 6b

An extract from a student's data presentation



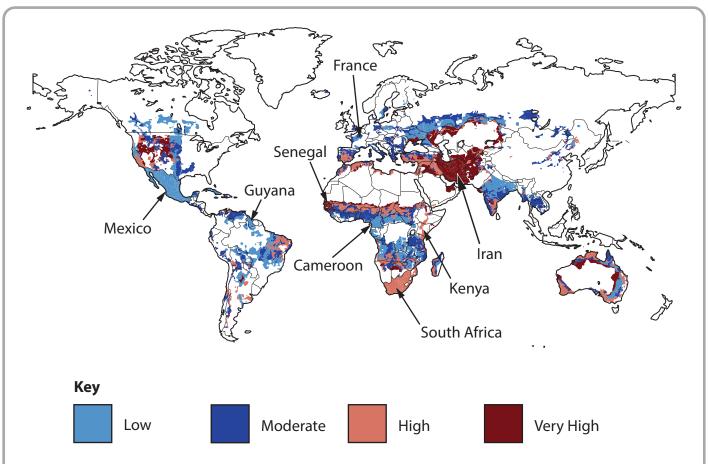
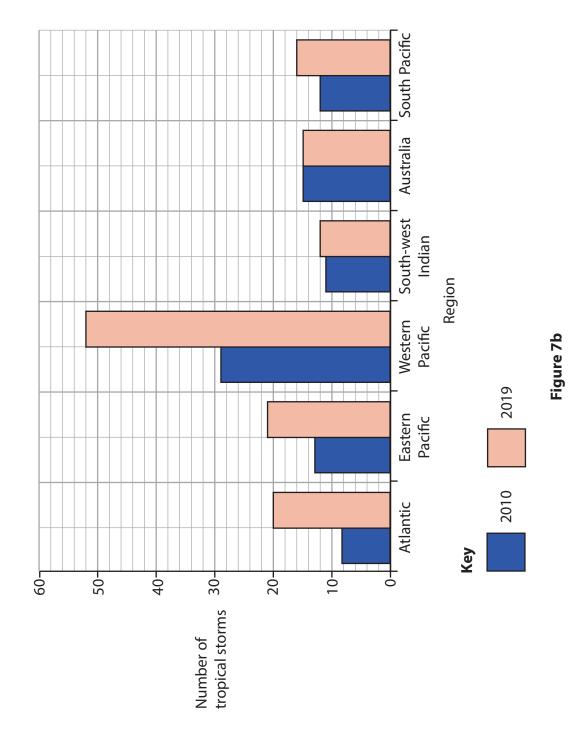


Figure 7a

Levels of global desertification risk



Number of tropical storms affecting selected regions, 2010–2019

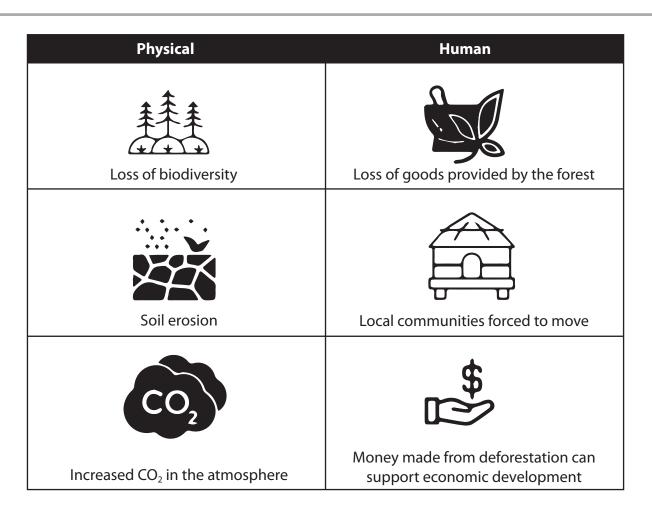
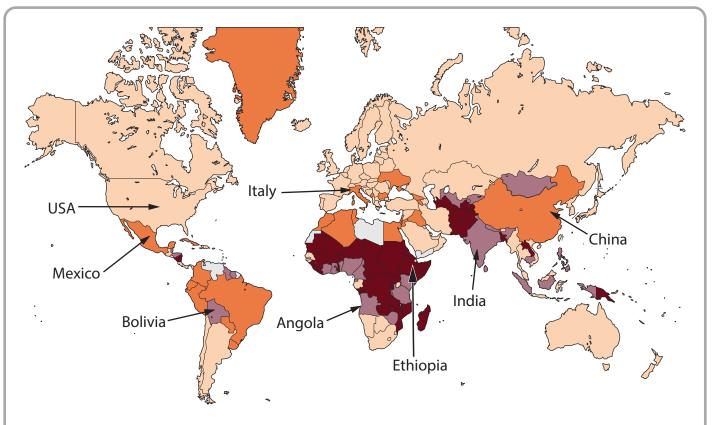


Figure 7c
Selected impacts of deforestation



Key: Percentage (%) of population not using the internet

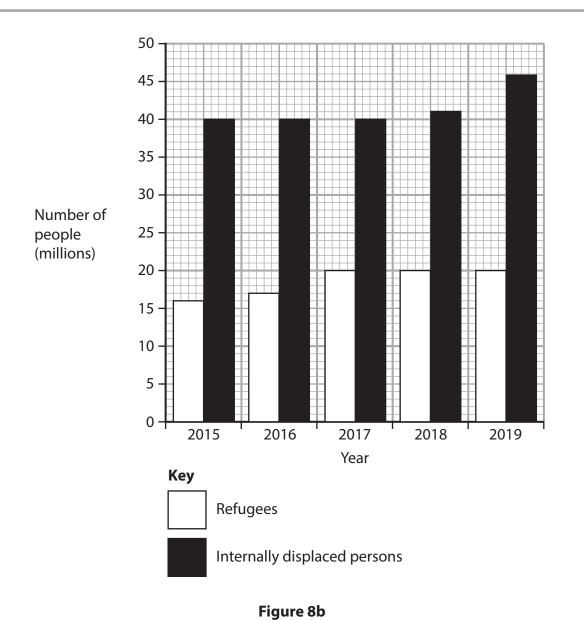
0-25 26-50 51-75

76–100

Data not available

Figure 8a

Percentage of the population not using the internet (2019)

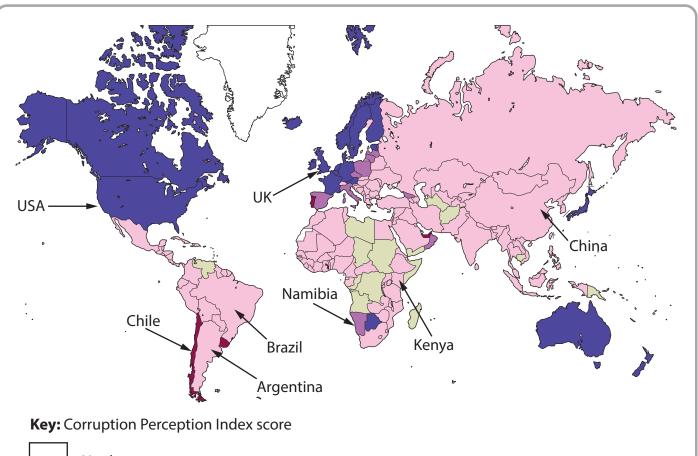


Number of refugees and internally displaced persons, 2015–2019



Figure 8c
Selected strategies to support sustainable tourism





No data

0–19 Most corrupt

20–39

40–59

60–79

80–100 Least corrupt

Figure 9a

Corruption Perception Index, 2018

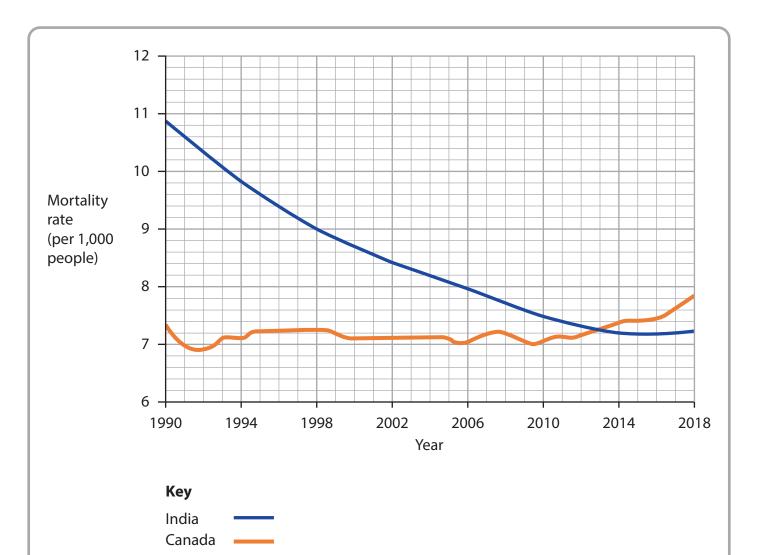


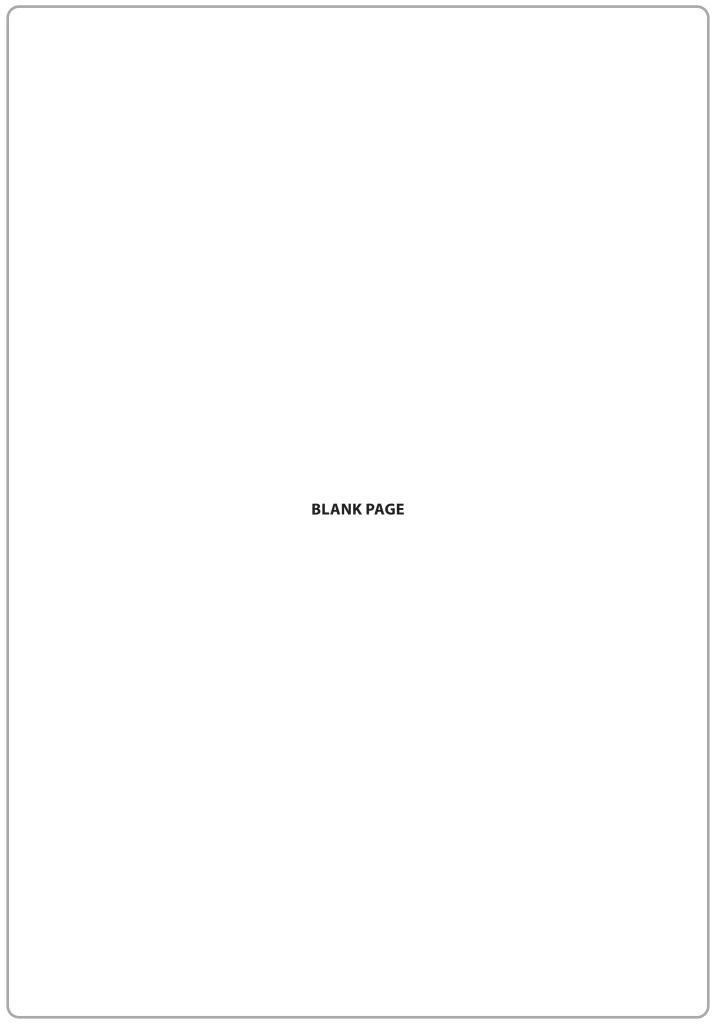
Figure 9b

Mortality rates for India and Canada,1990–2018

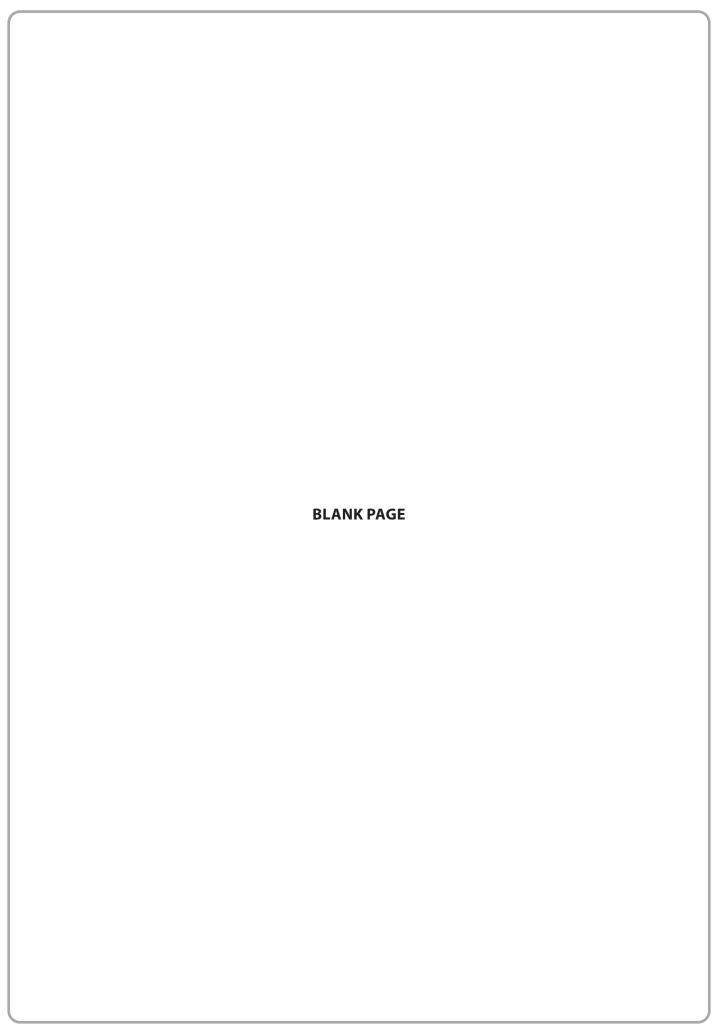


Government	Organisations	Individuals
Inefficient compared to large-scale investments.	Low-cost loans could help develop small businesses.	Focused on local communities.
Difficult to have an impact at the national level.	Can improve basic facilities, such as quality of water supply.	Provides opportunities for empowerment.
	(3)	i ††† i

Figure 9c
Views on bottom-up projects







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Acknowledgements

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

Figure 1a: Source from © JeremyRichards/Shutterstock

Figure 1c: Source data adapted from https://data.worldbank.org/indicator/SL.IND.EMPL.

ZS?end=2019&locations=US-JP-GH-KH&start=1991&view=chart

Figure 2a: Source from © Kletr/Shutterstock

Figure 2b: Source data adapted from https://data.worldbank.org/indicator/SL.AGR.EMPL.

ZS?end=2019&locations=US-JP-GH-KH&start=1991&view=chart

Figure 3a: Source from © SF photo/Shutterstock

Figure 3b: Source data adapted from http://data.un.org/Data.aspx?d=POP&f=tableCode%3a240#POP

Figure 7a: Source adapted from http://ossfoundation.us/projects/environment/global-warming/myths/

 $images/changes-future/desertification_map_1920w.jpg/image_view_fullscreen$

Figure 8a: Source adapted from https://itu.foleon.com/itu/measuring-digital-development/offline-population/

Figure 8b: Source data adapted from: https://www.unhcr.org/refugee-statistics/download/?url=R1xq

Figure 9a: Source adapted from: https://ourworldindata.org/grapher/ti-corruption-perception-index

Figure 9b: Source adapted from: https://data.worldbank.org/indicator/SP.DYN.CDRT.IN?locations=IN&start=

1990IN?locations=IN&start=1990

