Candidate surname | Other names

Pearson Edexcel International GCSE (9–1)

Centre Number | Candidate Number

Wednesday 3 June 2020

Afternoon (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 **black** 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 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*.

Advice

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

Turn over ▶

P 6 2 6 3 4 A 0 1 4 4

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) Identify the meaning of **shale gas**.

(1)

☒	**A**	a gas that comes from underground coal mines
☒	**B**	a gas that is emitted from the sun
☒	**C**	natural gas that is trapped within shale formations
☒	**D**	natural gas released from burning renewable energy resources

(b) Define the term **energy efficiency**.

(1)

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(c) Identify **one** source of renewable energy.

(1)

☒	**A**	hydroelectric power
☒	**B**	coal
☒	**C**	oil
☒	**D**	natural gas

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

Suggest **one** reason for the change in population shown in Figure 1a.

(2)

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(e) State **one** example of secondary employment.

(1)

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(f) For a named megacity, explain **two** characteristics of informal employment.

(4)

Named megacity ....

1 ....

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

Suggest **one** advantage of the power source shown in Figure 1b.

(3)

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(h) Explain **two** reasons why energy demand varies between countries.

(4)

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

Analyse the possible reasons for the changes in manufacturing employment.

(8)

(Total for Question 1 = 25 marks)

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

2 Rural environments

(a) Identify the meaning of the term **rural–urban migration**.

(1)

☒	**A**	the growth of urban areas
☒	**B**	population movement from rural to urban areas
☒	**C**	increasing movement of people from urban to rural areas
☒	**D**	population movement from the suburbs to the countryside

(b) Define the term **biome**.

(1)

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(c) Identify the meaning of the term **NGO**.

(1)

☒	**A**	intergovernmental organisation
☒	**B**	national government organisation
☒	**C**	not-guaranteed operation
☒	**D**	non-governmental organisation

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

Suggest **one** physical factor that could have influenced the land use shown in Figure 2a.

(2)

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(e) State **one** way that farmers can diversify to provide new income streams.

(1)

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(f) Explain **one** type of goods and **one** service provided by natural ecosystems.

(4)

Goods..

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Service...

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

Suggest **one** reason for the distribution of tundra.

(3)

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(h) For a named **developing or emerging** country, explain how **two** factors have caused rural change.

(4)

Named developing or emerging country ....

1 ....

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

Analyse the possible reasons for the change in the number of farms and crops and cattle production.

(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) Identify the meaning of the term **megacity**.

(1)

☒	**A**	a city with a population of more than 2 million
☒	**B**	a city with a population of more than 5 million
☒	**C**	a city with a population of more than 10 million
☒	**D**	a city with a population of more than 20 million

(b) Define the term **urbanisation**.

(1)

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(c) Identify **one** characteristic of a **greenfield site**.

(1)

☒	**A**	a location that has never been built on
☒	**B**	a location that has high-rise development
☒	**C**	a location that has illegally-built housing
☒	**D**	a location that has previously been built on

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

Suggest **one** piece of evidence that shows this urban area experiences transport problems.

(2)

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(e) State **one** land use associated with development of the rural–urban fringe.

(1)

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(f) Explain **two** reasons why urban land use patterns vary.

(4)

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

Suggest **one** reason for the differences in pollution levels between Dubai and Delhi.

(3)

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(h) Explain how waste disposal and housing have been improved in an urban environment for a named **developing or emerging country**.

(4)

Named developing or emerging country ....

Waste disposal

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Housing

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

Analyse the possible factors leading to the population changes.

(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**

You have studied economic activity and energy as part of your geographical enquiry.

State the title of your geographical enquiry.

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(a) Explain how you managed **one** risk associated with your geographical enquiry.

(2)

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(b) (i)   Explain **one** limitation of a method that you used to collect **qualitative** data.

(2)

Qualitative method ....

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(ii) Explain **one** way you could have improved the collection of your qualitative data.

(2)

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(c) Explain **one** way secondary data was used to support your geographical enquiry.

(2)

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(d) Explain **two** methods you used to present some of your fieldwork data.

(4)

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P 6 2 6 3 4 A 0 1 5 4 4

(e) Study Figures 4a and 4b in the Resource Booklet. These show extracts from a student's methods and techniques used to investigate the changing use of energy.

> The aim of the student's enquiry was to investigate the attitudes and perceptions about changing energy use.
>
> The student designed a method and carried out a questionnaire.

Evaluate the student's data collection methods.

(8)

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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

You have studied rural environments as part of your geographical enquiry.

State the title of your geographical enquiry.

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(a) Explain how you managed **one** risk associated with your geographical enquiry.

(2)

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(b) (i) Explain **one** limitation of a method that you used to collect **qualitative** data.

(2)

Qualitative method ....

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(ii) Explain **one** way you could have improved the collection of your qualitative data.

(2)

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(c) Explain **one** way secondary data was used to support your geographical enquiry.

(2)

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(d) Explain **two** methods you used to present some of your fieldwork data.

(4)

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P 6 2 6 3 4 A 0 1 9 4 4

(e) Study Figures 5a and 5b in the Resource Booklet. These show extracts from a student's methods and techniques used to investigate the changing use of rural environments.

> The aim of the student's enquiry was to investigate the attitudes and perceptions about the changing use of rural environments.
>
> The student designed a method and carried out a questionnaire.

Evaluate the student's data collection methods.

(8)

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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

You have studied the use of central/inner urban environments as part of your geographical enquiry.

State the title of your geographical enquiry.

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(a) Explain how you managed **one** risk associated with your geographical enquiry.

(2)

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(b) (i) Explain **one** limitation of a method that you used to collect **qualitative** data.

(2)

Qualitative method ....

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(ii) Explain **one** way you could have improved the collection of your qualitative data.

(2)

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(c) Explain **one** way secondary data was used to support your geographical enquiry.

(2)

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(d) Explain **two** methods you used to present some of your fieldwork data.

(4)

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(e) Study Figures 6a and 6b in the Resource Booklet. These show extracts from a student's methods and techniques used to investigate the changing use of central/inner urban environments.

> The aim of the student's enquiry was to investigate the attitudes and perceptions about the changing use of urban environments.
>
> The student designed a method and carried out a questionnaire.

Evaluate the student's data collection methods.

(8)

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(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS

P 6 2 6 3 4 A 0 2 5 4 4

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) (i) Identify the meaning of the term **malnutrition**.

(1)

☒	**A**	a diet that is high in sugar
☒	**B**	a diet with too many nutrients
☒	**C**	a diet with too few nutrients
☒	**D**	a diet associated with scarcity of food

(ii) Identify **one** characteristic of a fragile environment.

(1)

☒	**A**	a place that is suffering deforestation
☒	**B**	a place that has a high biodiversity
☒	**C**	a place that is being managed sustainably
☒	**D**	a place threatened by human and physical factors

(b) (i) State **one** economic cause of deforestation.

(1)

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(ii) Study Figure 7a in the Resource Booklet.

Identify **two** areas labelled A–F in Figure 7a with a predicted −15% to −50% loss in agricultural productivity.

(2)

1 ....

2 ....

(iii) Suggest **two** possible reasons for the pattern shown in Figure 7a.

(4)

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(c) Explain **two** economic impacts climate change is having on people.

(4)

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

   (i) Calculate the range in loss between the countries shown.

   You must show all your workings in the space below.

   (2)

   .... millions of hectares

   (ii) Describe the amount of tree cover loss shown in Figure 7b.

   (2)

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(e) Study Figure 7c in the Resource Booklet.

Assess the fragile environments at risk from increasing temperatures.

(6)

P 6 2 6 3 4 A 0 2 9 4 4

(f) Discuss the view:

> 'Climate change will have a bigger impact on agricultural food productivity than on fragile environments.'

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

(12)

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(Total for Question 7 = 35 marks)

Turn over

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

8   Globalisation and migration

(a) (i)   Identify **one** role of the WTO (World Trade Organization).

(1)

☒	**A**	managing rates of international migration
☒	**B**	increasing global security between countries
☒	**C**	dealing with the rules of trade between nations
☒	**D**	promoting global tourism

(ii) Identify the meaning of the term IMF.

(1)

☒	**A**	International Monetary Fund
☒	**B**	Intergovernmental Monetary Fund
☒	**C**	International Monetary Force
☒	**D**	International Money Formation

(b) (i)   Define the term **forced migration**.

(1)

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P 6 2 6 3 4 A 0 3 2 4 4

(ii) Study Figure 8a in the Resource Booklet

Identify **two** areas labelled A–F in Figure 8a with a net loss in migration.

(2)

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(iii) Suggest **two** possible reasons for the pattern shown in Figure 8a.

(4)

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(c) Explain **two** positive impacts of the growth of global tourism.

(4)

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

(i) Calculate the range in the tourism revenue, 2000–2017.

You must show all your workings in the space below.

(2)

.... billion US$

(ii) Describe how tourism revenue changes in Figure 8b.

(2)

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(e) Study Figure 8c in the Resource Booklet.

Assess the different costs resulting from globalisation.

(6)

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P 6 2 6 3 4 A 0 3 5 4 4

(f) Discuss the view:

> 'Greater international migration is more of a cost of globalisation than a benefit.'

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

(12)

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(Total for Question 8 = 35 marks)

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

9   Development and human welfare

(a) (i)   The Gini coefficient is an index used in understanding development.
Identify what it measures.

(1)

☒	**A**	equality of women
☒	**B**	inequality
☒	**C**	water availability
☒	**D**	food availability

(ii) Identify the meaning of the term **demographic data**.

(1)

☒	**A**	information about population and people
☒	**B**	information about political corruption
☒	**C**	information on the level of development in a country
☒	**D**	information about political stability

(b) (i)   Define the term **development gap**.

(1)

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(ii) Study Figure 9a in the Resource Booklet.

Identify **two** areas labelled A–F in Figure 9a with a GDP above $14,600

(2)

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(iii) Suggest **two** possible reasons for the pattern shown in Figure 9a.

(4)

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(c) Explain **two** advantages of top-down development.

(4)

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

(i) Calculate the range in mean per capita income between urban and rural populations in 2012.

You must show all your workings in the space below.

(2)

.... yuan

(ii) Describe how mean per capita income in urban areas had changed between 2001 and 2014.

(2)

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(e) Study Figure 9c in the Resource Booklet.

Assess the different factors and indicators of the Human Development Index (HDI).

(6)

P 6 2 6 3 4 A 0 4 1 4 4

(f) Discuss the view:

'GDP per capita is the best indicator to measure development.'

Use Figures 9a and 9c from the Resource Booklet and your own knowledge and understanding to support 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)

Wednesday 3 June 2020

Afternoon (Time: 1 hour 45 minutes) | Paper Reference **4GE1/02R**

Geography

Paper 2: Human Geography

Resource Booklet
Do not return the Resource Booklet with the question paper

P62634A

Pearson
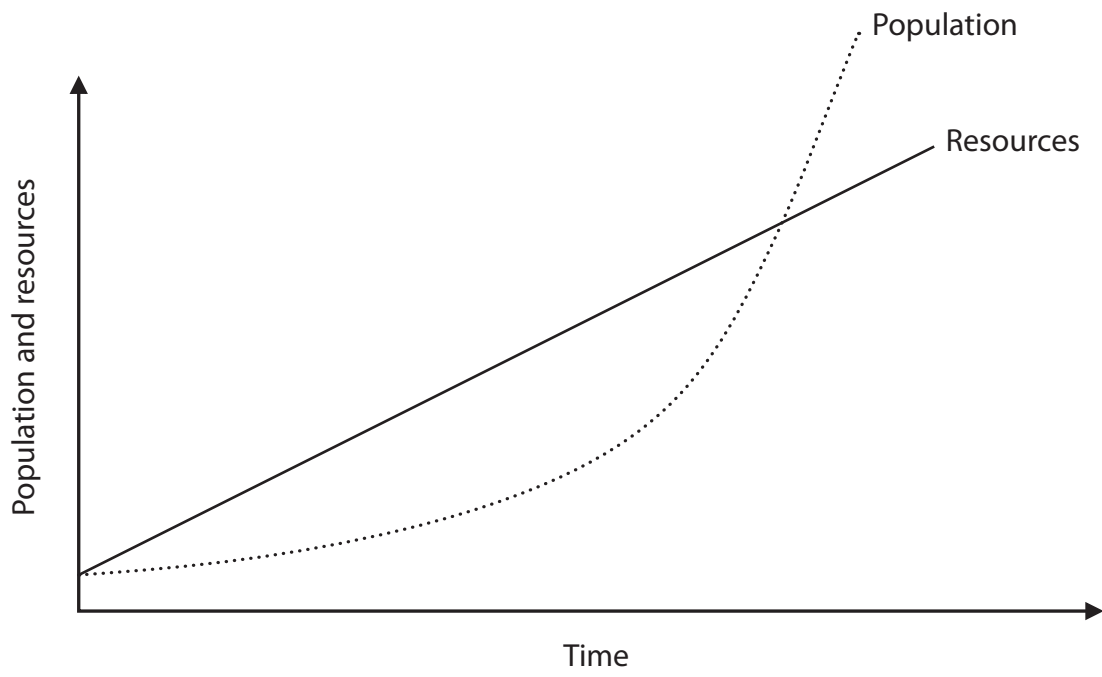
Figure 1a

A population–resource relationship model

(Source: © David Holmes Geography)

Figure 1b

An example of an electricity power source

(Source: https://fas.org/sgp/crs/misc/R42135.pdf)
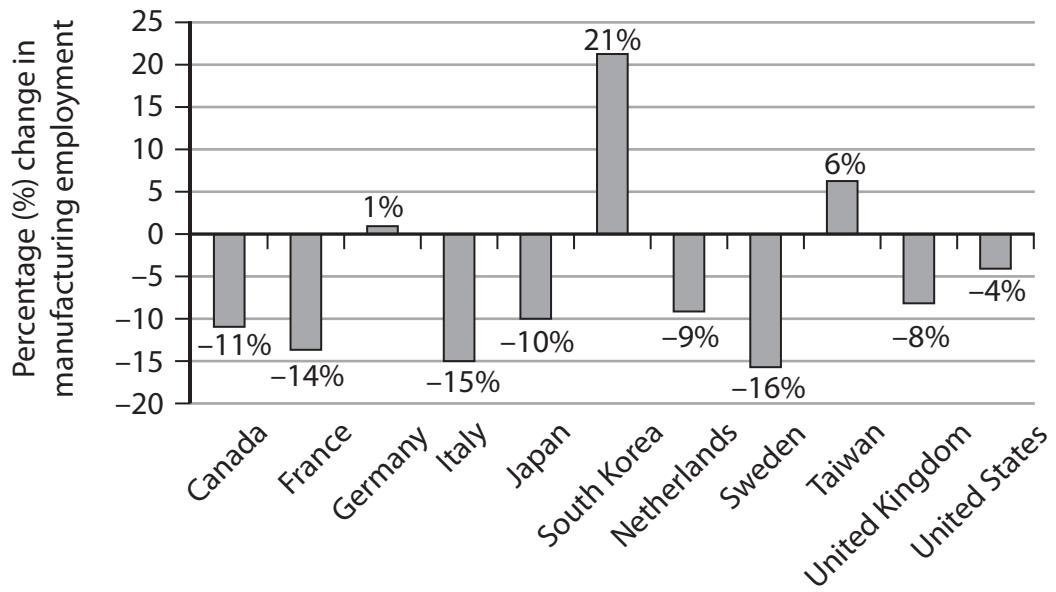
Figure 1c

Percentage (%) change in manufacturing employment in selected countries, 2008–2016

(Source: © David Holmes Geography)

Figure 2a

A remote area of north west Scotland
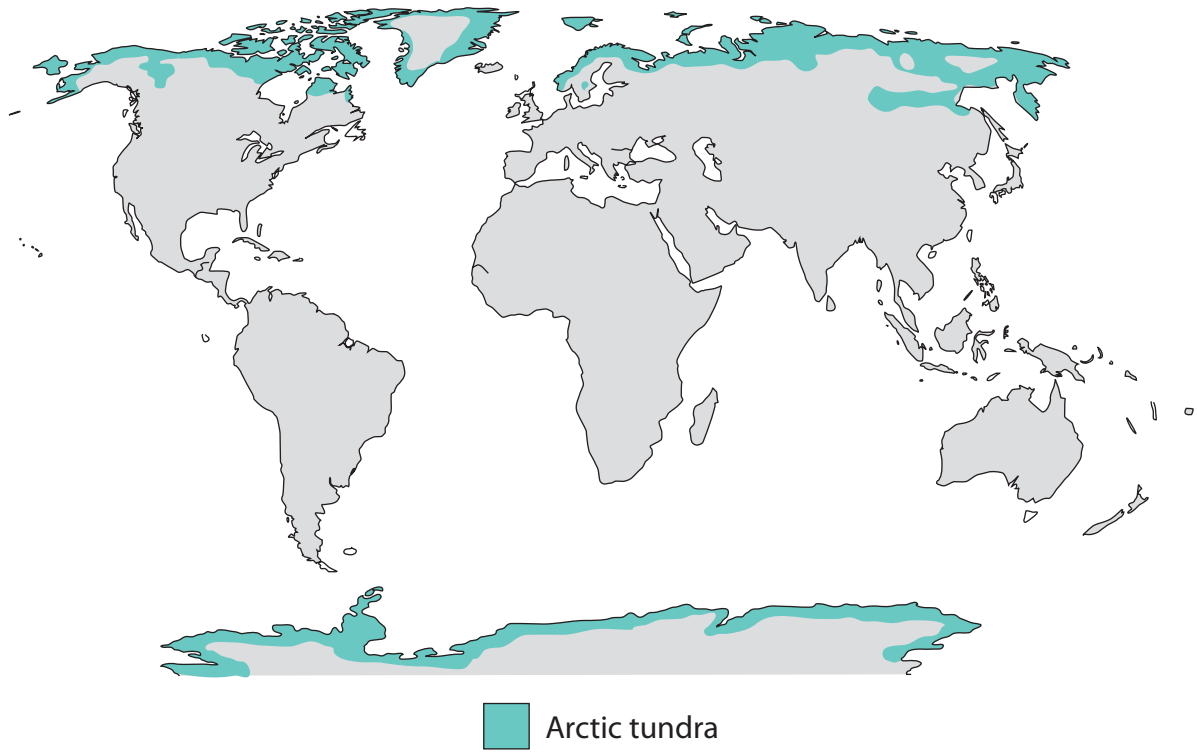
Figure 2b

The distribution of arctic tundra

(Source: http://www.globalharvestinitiative.org/gap-report-gap-index/2015-gap-report/gap-report-2015-infographics/)
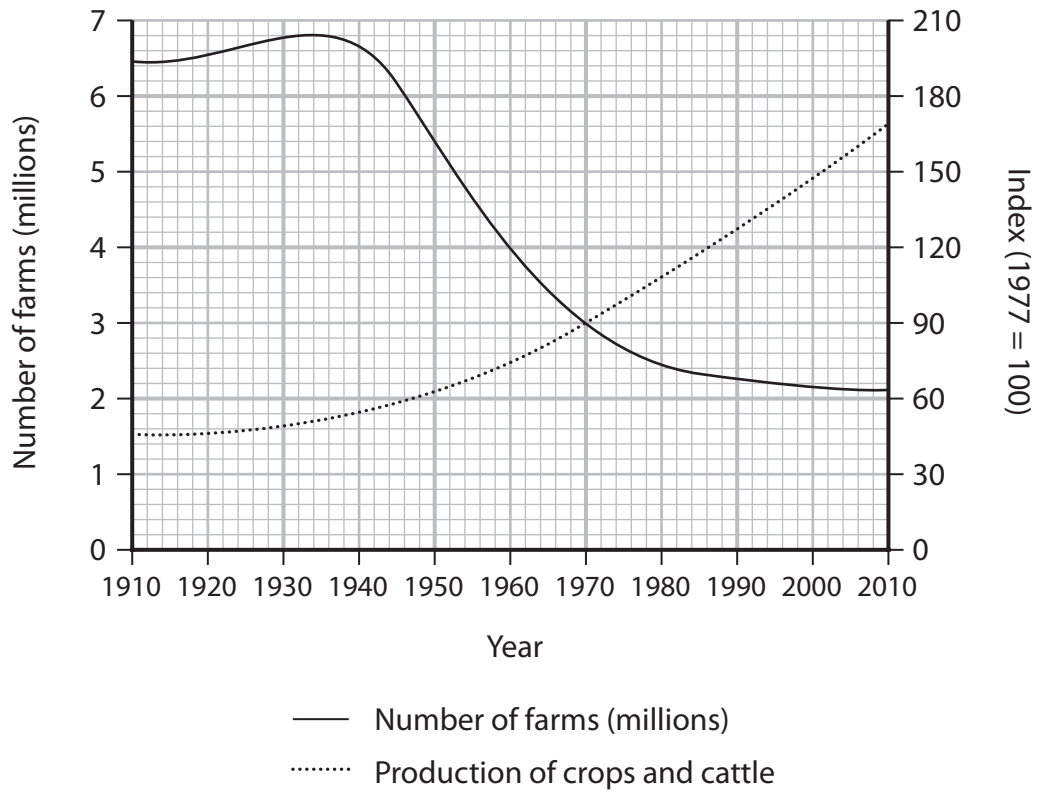
Figure 2c

USA: number of farms and an index of crops and cattle production, 1910–2010
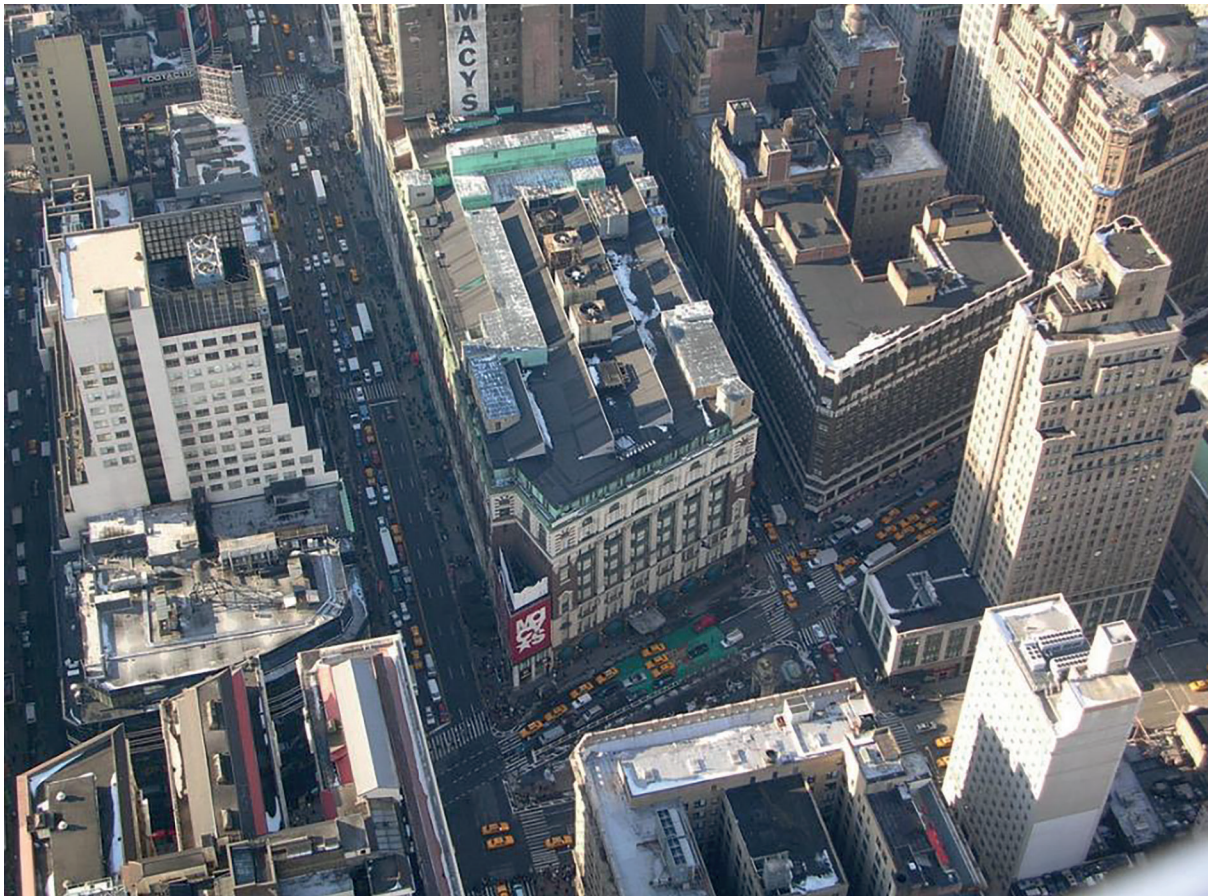
(Source: © David Holmes Geography)

Figure 3a

An urban area in the USA

	Dubai		Delhi	
Air pollution		**Moderate** 55.00		**Very High** 88.23
Drinking water pollution		**Low** 37.56		**High** 64.39
Problems with rubbish disposal		**Low** 30.99		**High** 75.90
Dirty and untidy		**Low** 25.38		**High** 73.22
Noise and light pollution		**Moderate** 54.72		**High** 65.40
Water pollution		**Moderate** 42.80		**High** 77.68
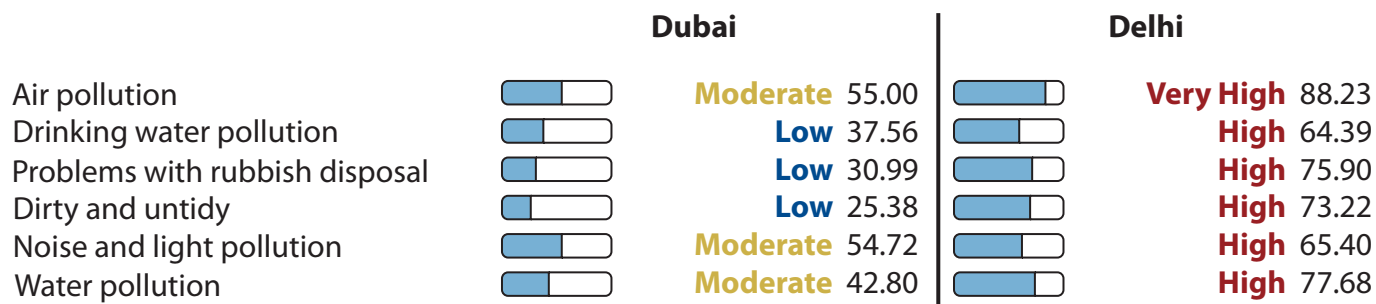
(Source: https://www.numbeo.com/pollution/compare_cities.jsp?country1=United+Arab+Emirates&country2=India&city1=Dubai&city2=Delhi)

Figure 3b

Pollution indicators for Dubai and Delhi (index out of 100)
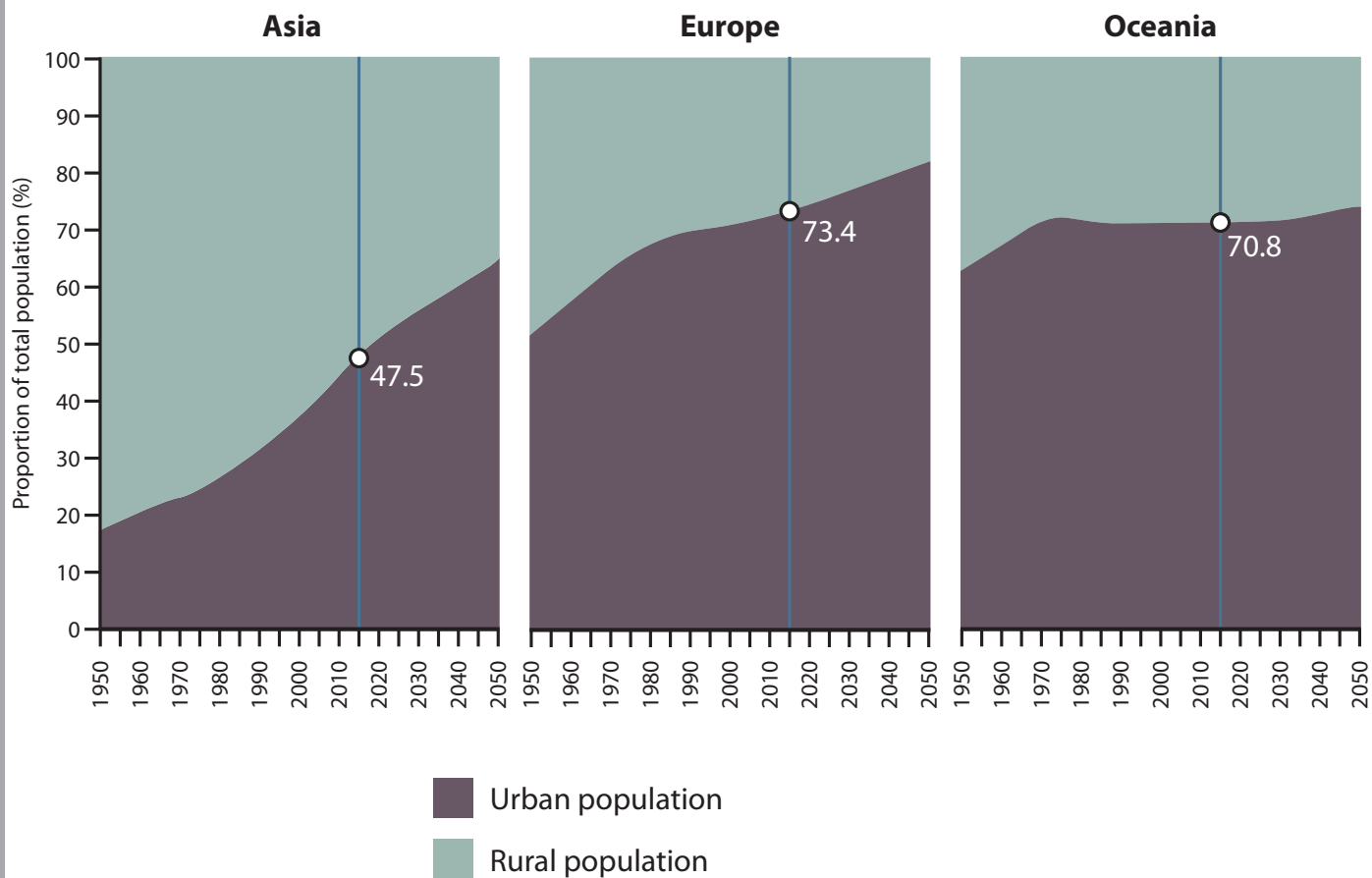
Figure 3c

Urban and rural population changes 1950–2050 (projected) for global regions

- Sample size will be 5–10 questionnaires to local people and visitors.
- Questionnaires undertaken at lunchtime.
- I will ask every 8th person that I see in the street.

Figure 4a

The student's proposed design methodology

Hello, I'm a student on a GCSE Geography field trip. I would like to ask you a few questions. It won't take long.

1. **What do you think of the new biomass plant being built here? Do you like the idea?**
   Mark only one oval.

	1	2	3	4	5	
Yes, I'm really happy	◯	◯	◯	◯	◯	No, I really don't want it

2. **Lots of people are worried about climate change. How do you think it will affect this area?**
   Mark only one oval.
   - ◯ More cyclones
   - ◯ More flooding
   - ◯ More tornadoes
   - ◯ More earthquakes
   - ◯ Not sure

3. **How old are you?**
   Check all that apply.
   - ☐ 0-10
   - ☐ 10-20
   - ☐ 20-30
   - ☐ 30+

4. **Do you think 'green energy' is better than a gas-fired power station?**
   Check all that apply.
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

Figure 4b

An extract from a student's questionnaire

- Sample size will be 5–10 questionnaires to local people and visitors.
- Questionnaires undertaken at lunchtime.
- I will ask every 8th person that I see in the street.

Figure 5a

The student's proposed design methodology

Hello, I'm a student on a GCSE Geography field trip. I would like to ask you a few questions. It won't take long.

1. **What do you think of the new quarry being opened here? Do you like the idea?**
   Mark only one oval.

	1	2	3	4	5	
Yes, I'm really happy	◯	◯	◯	◯	◯	No, I really don't want it

2. **Lots of people are worried about noise pollution. How do you think it will affect this area?**
   Mark only one oval.
   - ◯ More traffic
   - ◯ More flooding
   - ◯ More light pollution
   - ◯ More earthquakes
   - ◯ Not sure

3. **How old are you?**
   Check all that apply.
   - ☐ 0-10
   - ☐ 10-20
   - ☐ 20-30
   - ☐ 30+

4. **Do you think it's a good idea to plant more trees in this area?**
   Check all that apply.
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

Figure 5b

An extract from a student's questionnaire

- Sample size will be 5–10 questionnaires to local people and visitors.
- Questionnaires undertaken at lunchtime.
- I will ask every 8th person that I see in the street.

Figure 6a

The student's proposed design methodology

Hello, I'm a student on a GCSE Geography field trip. I would like to ask you a few questions. It won't take long.

1. **What do you think of the new high-rise flats being built here? Do you like the idea?**
   Mark only one oval.

	1	2	3	4	5	
Yes, I'm really happy	◯	◯	◯	◯	◯	No, I really don't want it

2. **Lots of people are worried about air pollution. How do you think it will affect this area?**
   Mark only one oval.
   - ◯ More noise
   - ◯ More flooding
   - ◯ More breathing problems
   - ◯ More earthquakes
   - ◯ Not sure

3. **How old are you?**
   Check all that apply.
   - ☐ 0-10
   - ☐ 10-20
   - ☐ 20-30
   - ☐ 30+

4. **Do you think it's a good idea to build more schools in this area?**
   Check all that apply.
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

Figure 6b

An extract from a student's questionnaire
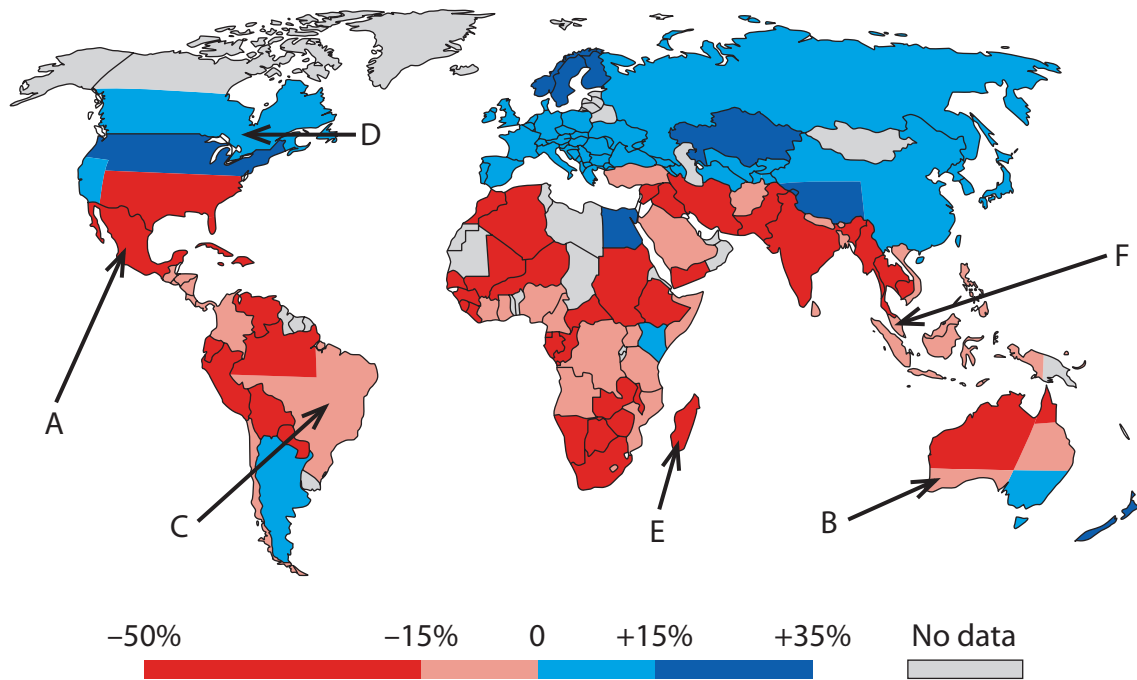
Figure 7a

Predicted changes in agricultural productivity in 2080, as a result of climate change

Brazil 4.52 ha
Democratic Republic of the Congo 1.47 ha
Indonesia 1.30 ha
Madagascar 0.51 ha
Malaysia 0.48 ha
Bolivia 0.46 ha
Colombia 0.42 ha
Paraguay 0.36 ha
Mozambique 0.36 ha
Ivory Coast 0.36 ha

(Source: https://www.wri.org/blog/2018/06/2017-was-second-worst-year-record-tropical-tree-cover-loss)
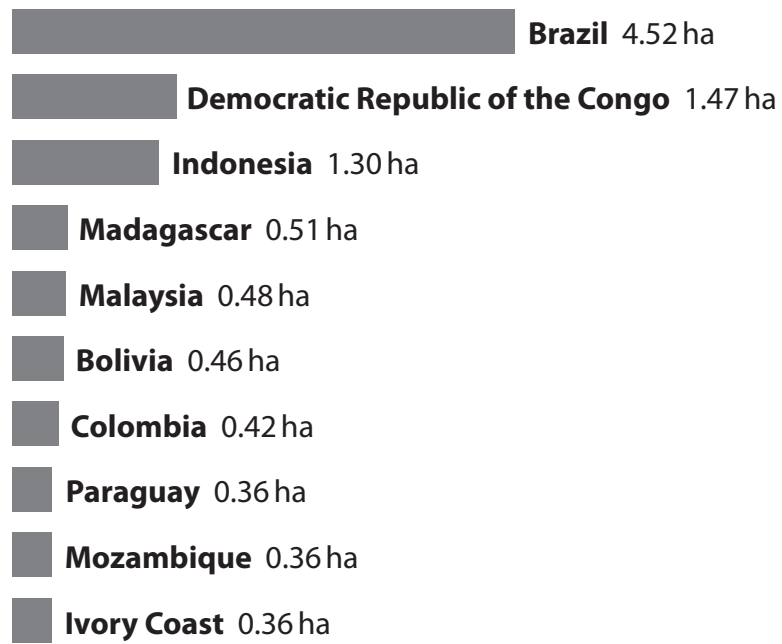
Figure 7b

Top ten countries for tree cover loss in 2017 (millions of hectares)
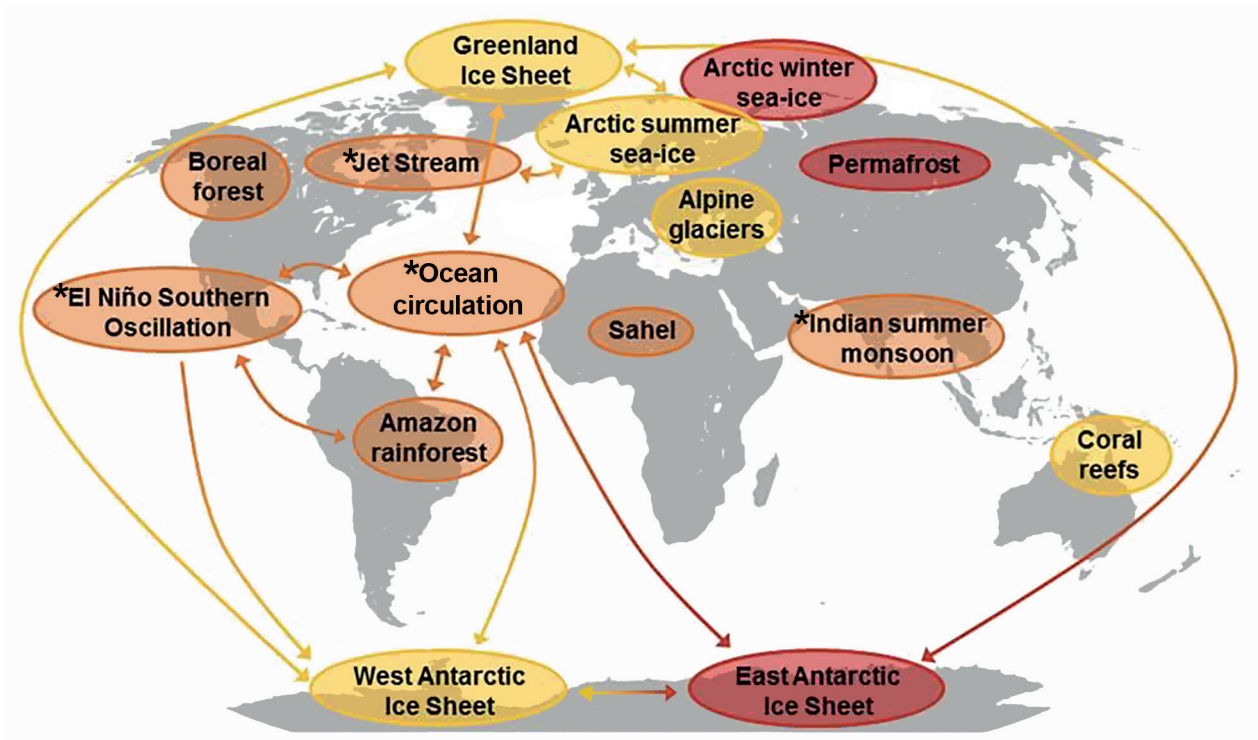
KEY:

* Earth's natural systems at risk

Temperature tipping points which will put fragile environments and natural systems at risk
- 1 ℃ – 3 ℃
- 3.1 ℃ – 5 ℃
- >5 ℃

(Source: http://www.stockholmresilience.org/research/research-news/2018-08-06-planet-at-risk-of-heading-towards-hothouse-earth-state.html)

Figure 7c

Fragile environments and natural systems at risk from increasing temperatures
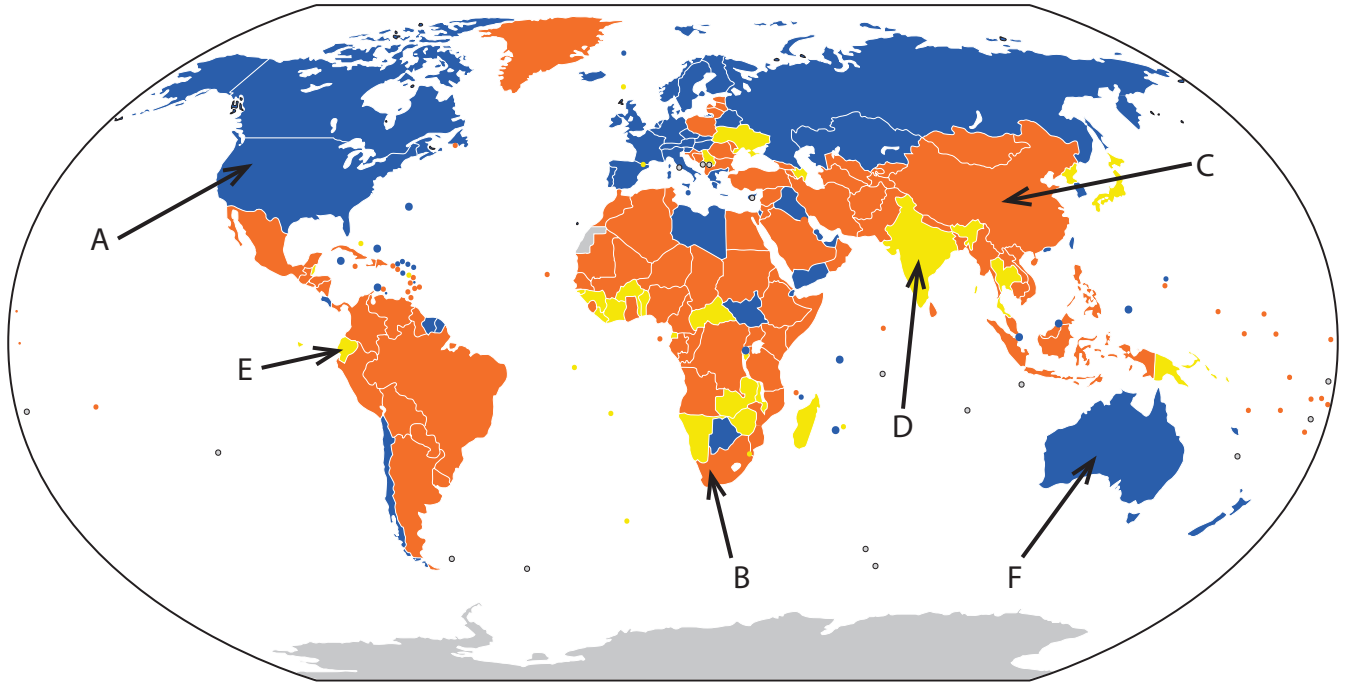
KEY:

A – USA
B – South Africa
C – China
D – India
E – Ecuador
F – Australia

● Net gain
● Neutral
● Net loss
○ No data

(Source: The World Factbook 2016-17. Washington, DC: Central Intelligence Agency, 2016.)

Figure 8a

Net global migration in 2016: gains, losses and neutral

(Source: https://www.statista.com/statistics/273123/total-international-tourism-receipts/)
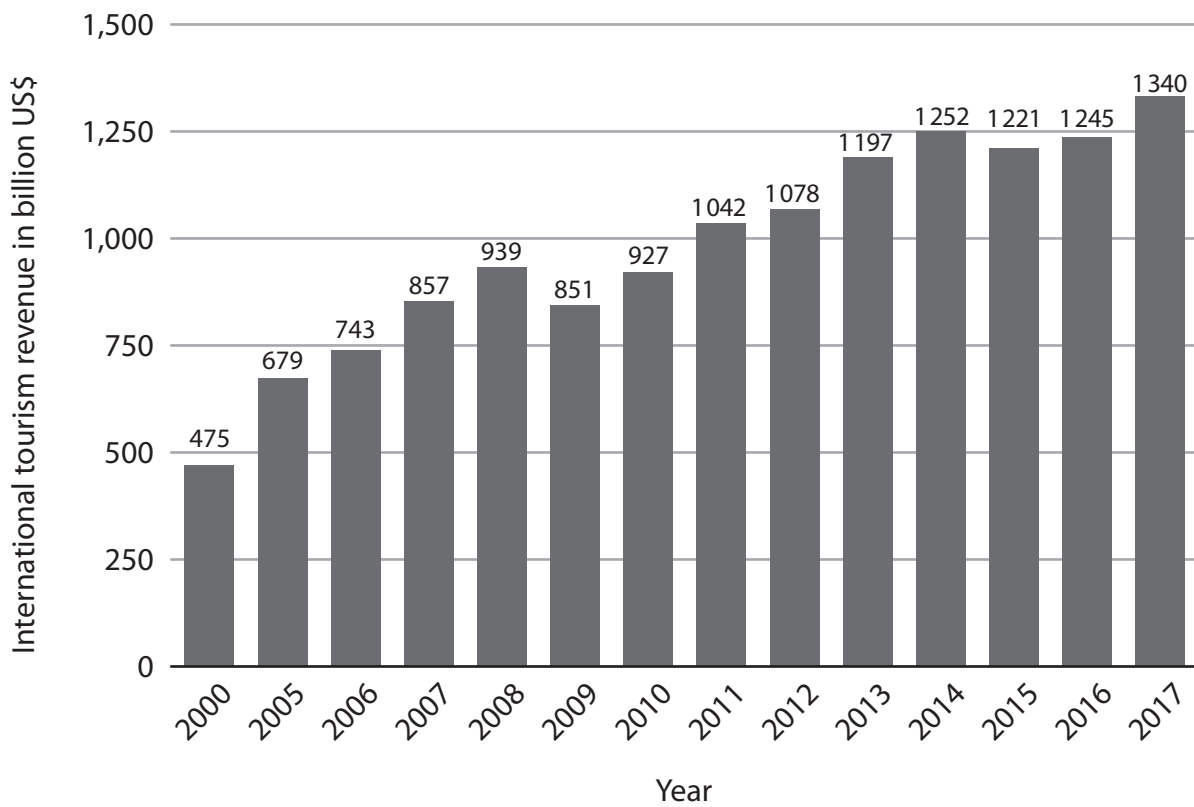
Figure 8b

Global total international tourism revenue (billion US$) 2000–2017
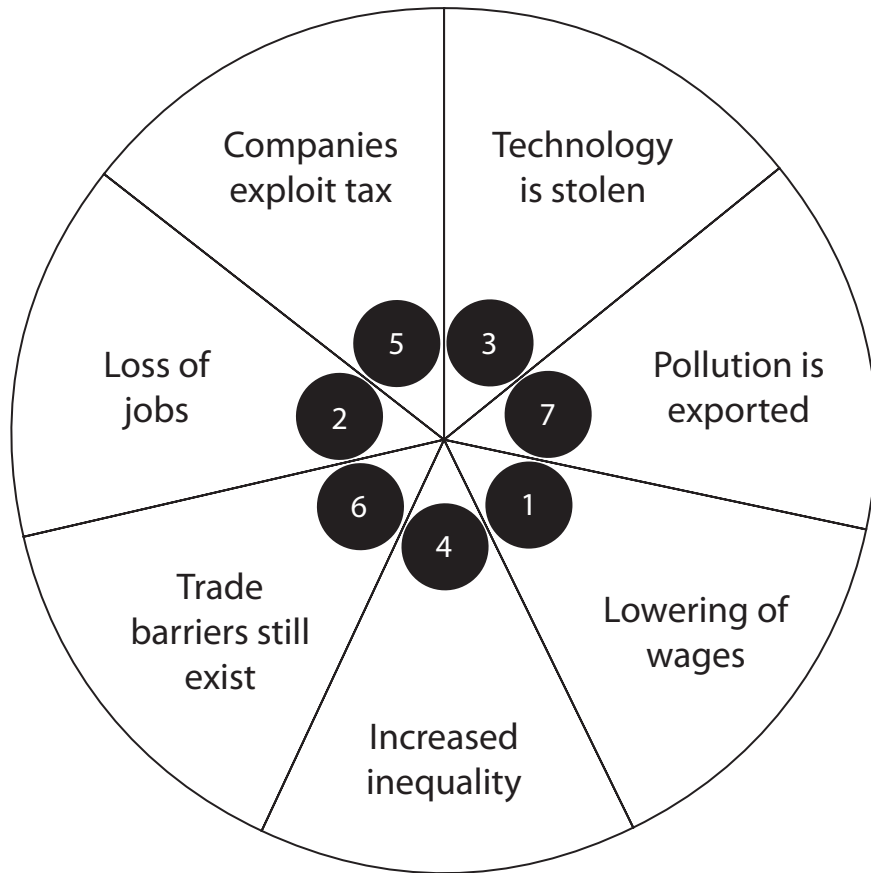
Figure 8c

Selected costs of globalisation, ranked from 1 (highest) to 7 (lowest)

Gross domestic product per capita (US$)
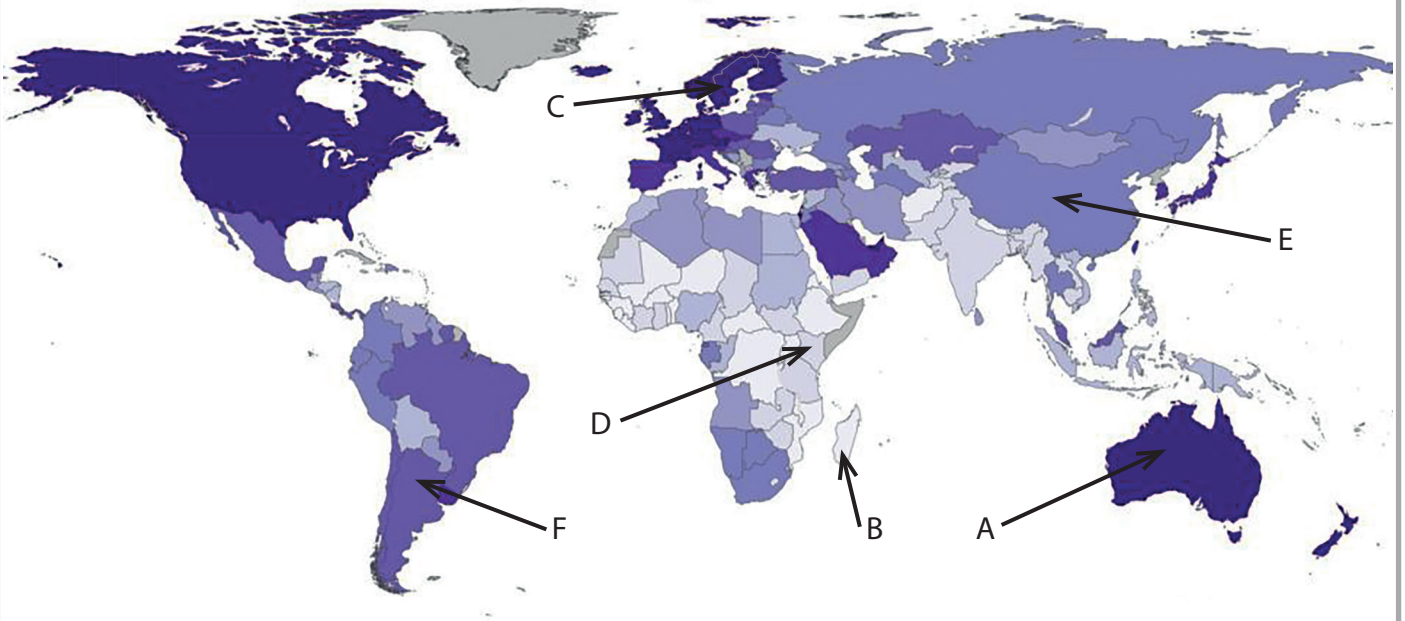
KEY:

A – Australia
B – Madagascar
C – Sweden
D – Kenya
E – China
F – Argentina

	<1,800
	1,800–3,500
	3,501–5,000
	5,001–8,800
	8,801–14,600
	14,601–35,400
	>35,400

(Source: © actualitix.com)

Figure 9a

GDP per capita (US$), 2016
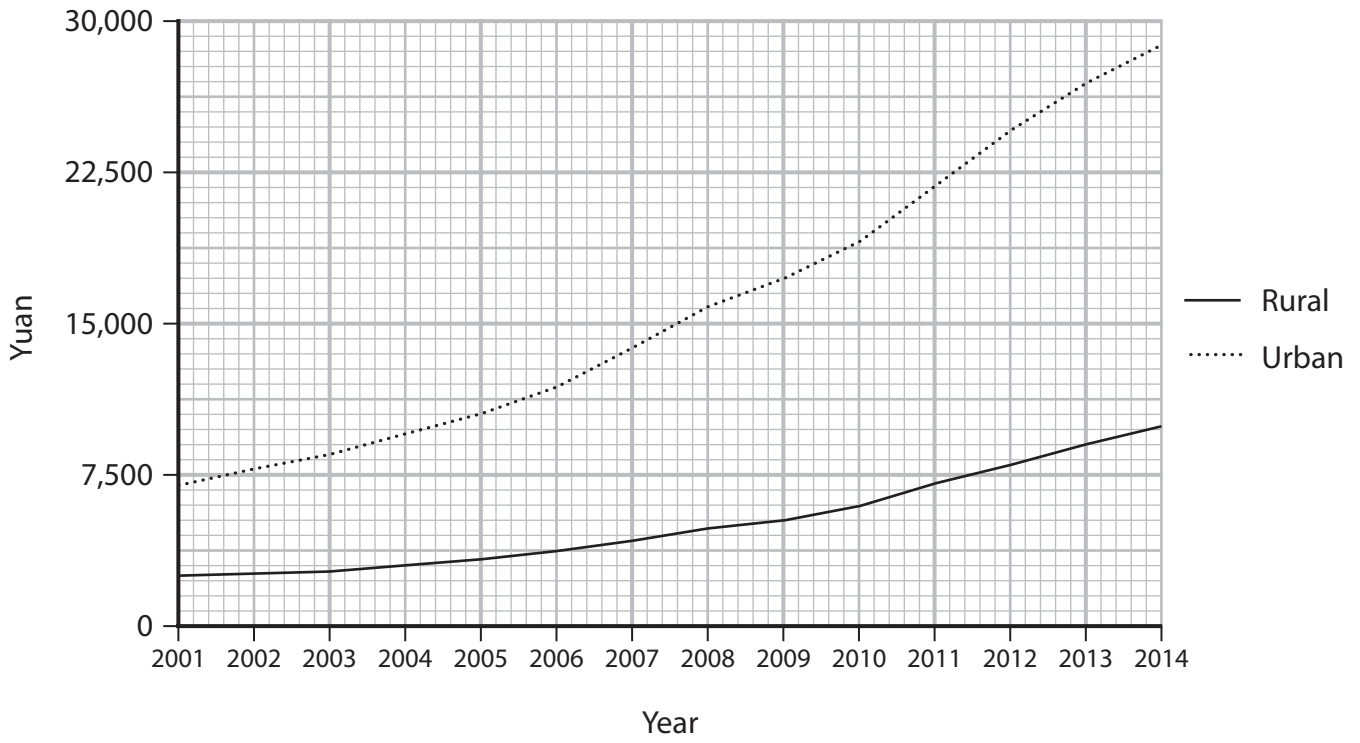
(Source: https://www.theatlas.com/charts/H1BZr8Bde)

Figure 9b

Mean per capita income in China, 2001–2014
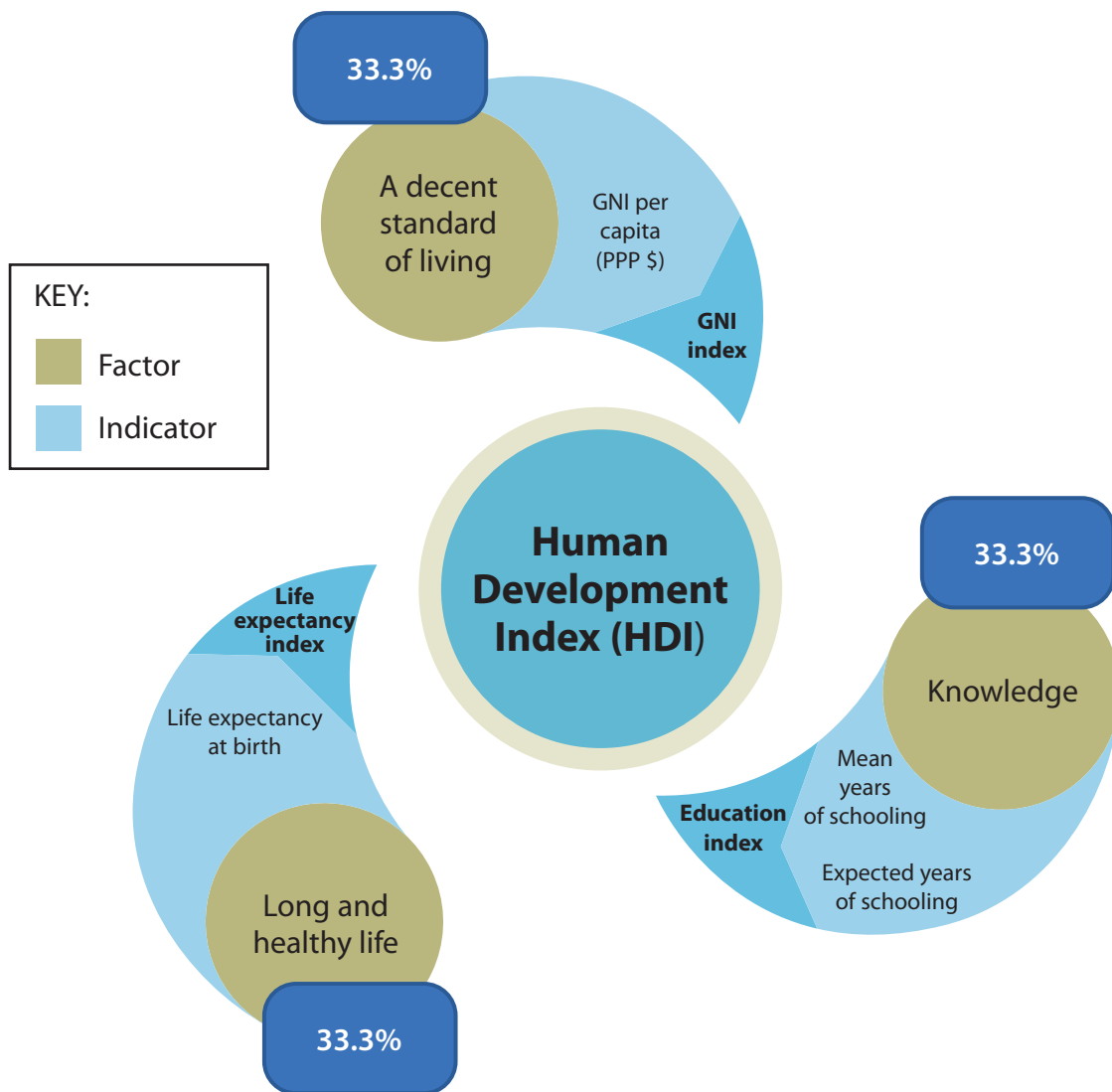
(Source: United Nations Development Programme, Human Development Reports Office, 2018.)

Figure 9c

Factors contributing to the Human Development Index, with weightings as a percentage (%)

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