

Paper Reference 4GE1/02R
Pearson Edexcel
International GCSE (9–1)

Geography

PAPER 2: Human geography

Friday 9 June 2023 – Morning

Time: 1 hour 45 minutes

Resource Booklet

**Do not return this Resource Booklet with
the Question Paper**

V71197RA

Contents

For some Figures there is a modified colour and modified black and white diagram. You may use whichever version is easier for you to view. Some diagrams are only in modified colour but you are then provided with a description of the diagram.

Page

7	Figure 1a
8	Figure 1b
9	Figure 1c
10	Figure 2a
11	Figure 2b
12	Figure 2c – Key

(continued on the next page)

Turn over

Contents continued.

Page

13 Figure 2c – Diagram

14 Figure 3a

15 Figure 3b – Key

16 Figure 3b – Diagram

17–18 Figure 3c

19–21 Figure 4a

22–23 Figure 4b

24–26 Figure 5a

27–28 Figure 5b

29–31 Figure 6a

32–33 Figure 6b

34 Figure 7a – Key (Colour)

**35 Figure 7a – Diagram Part 1
(Colour)**

**36 Figure 7a – Diagram Part 2
(Colour)**

(continued on the next page)

Turn over

Contents continued.

Page

**37 Figure 7a – Diagram Part 3
(Colour)**

**38 Figure 7a – Key (Black and
White)**

**39 Figure 7a – Diagram Part 1
(Black and White)**

**40 Figure 7a – Diagram Part 2
(Black and White)**

**41 Figure 7a – Diagram Part 3
(Black and White)**

42 Figure 7b

43 Figure 8a – Key (Colour)

**44 Figure 8a – Diagram Part 1
(Colour)**

**45 Figure 8a – Diagram Part 2
(Colour)**

(continued on the next page)

Turn over

Contents continued.

Page

**46 Figure 8a – Diagram Part 3
(Colour)**

**47 Figure 8a – Key (Black and
White)**

**48 Figure 8a – Diagram Part 1
(Black and White)**

**49 Figure 8a – Diagram Part 2
(Black and White)**

**50 Figure 8a – Diagram Part 3
(Black and White)**

51–52 Figure 8b

53 Figure 9a – Key (Colour)

**54 Figure 9a – Diagram Part 1
(Colour)**

**55 Figure 9a – Diagram Part 2
(Colour)**

(continued on the next page)

Turn over

Contents continued.

Page

**56 Figure 9a – Diagram Part 3
(Colour)**

**57 Figure 9a – Key (Black and
White)**

**58 Figure 9a – Diagram Part 1
(Black and White)**

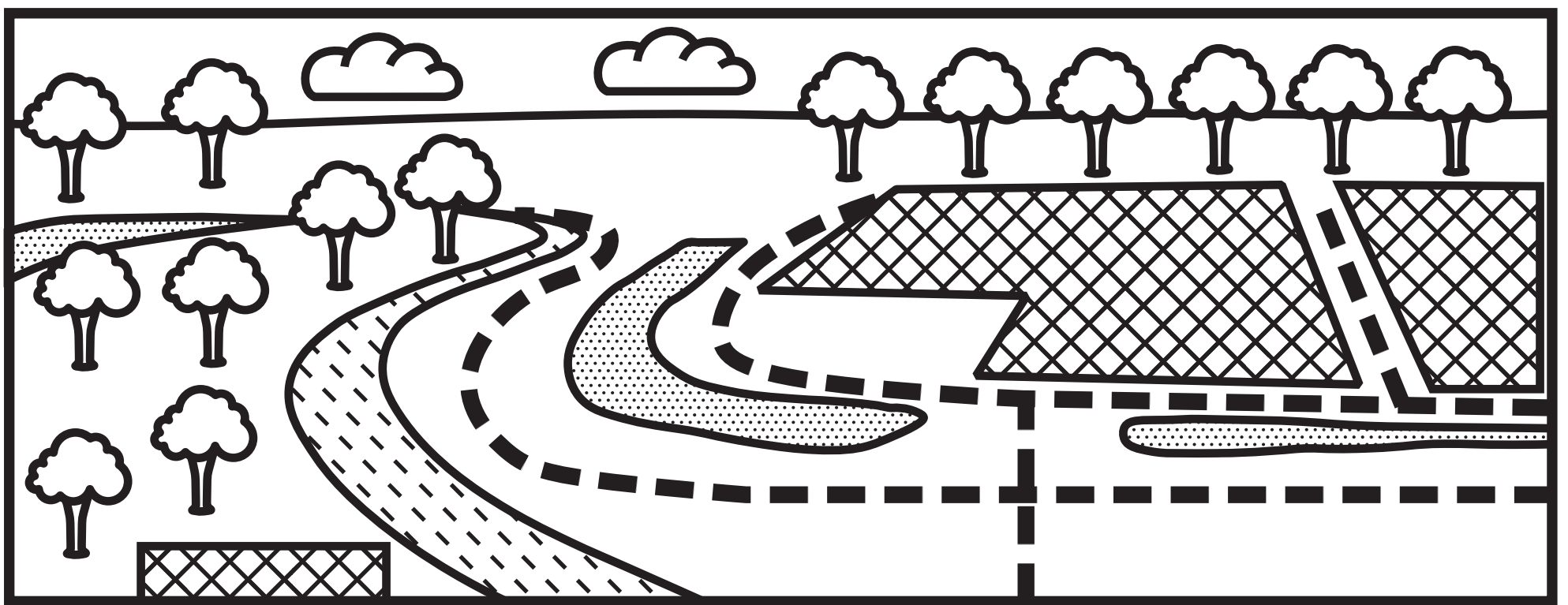
**59 Figure 9a – Diagram Part 2
(Black and White)**

**60 Figure 9a – Diagram Part 3
(Black and White)**

61–62 Figure 9b

Figure 1a

A business park in the Netherlands



KEY **---** Roads  Buildings  Trees
  Canals  Water  Clouds

Figure 1b

Energy mix in Denmark, 2000–2020

KEY

Other renewables

Oil

Solar

Gas

Wind

Coal

Hydropower

Percentage (%)
of energy used

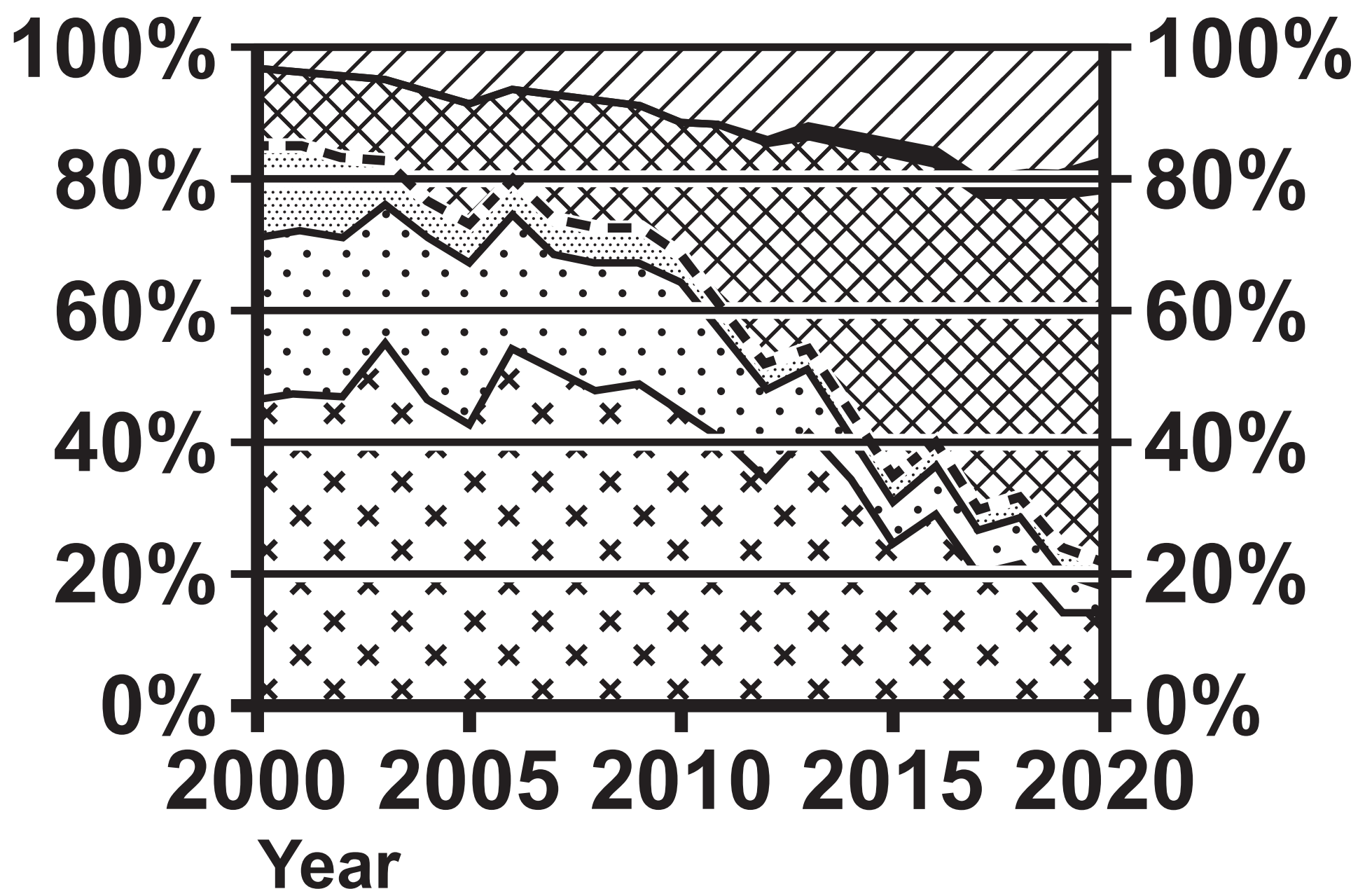


Figure 1c
Clark–Fisher model

KEY: Employment sector

— Primary

- - - Tertiary

••••• Secondary

= = = Quaternary

**Percentage (%)
of employment**

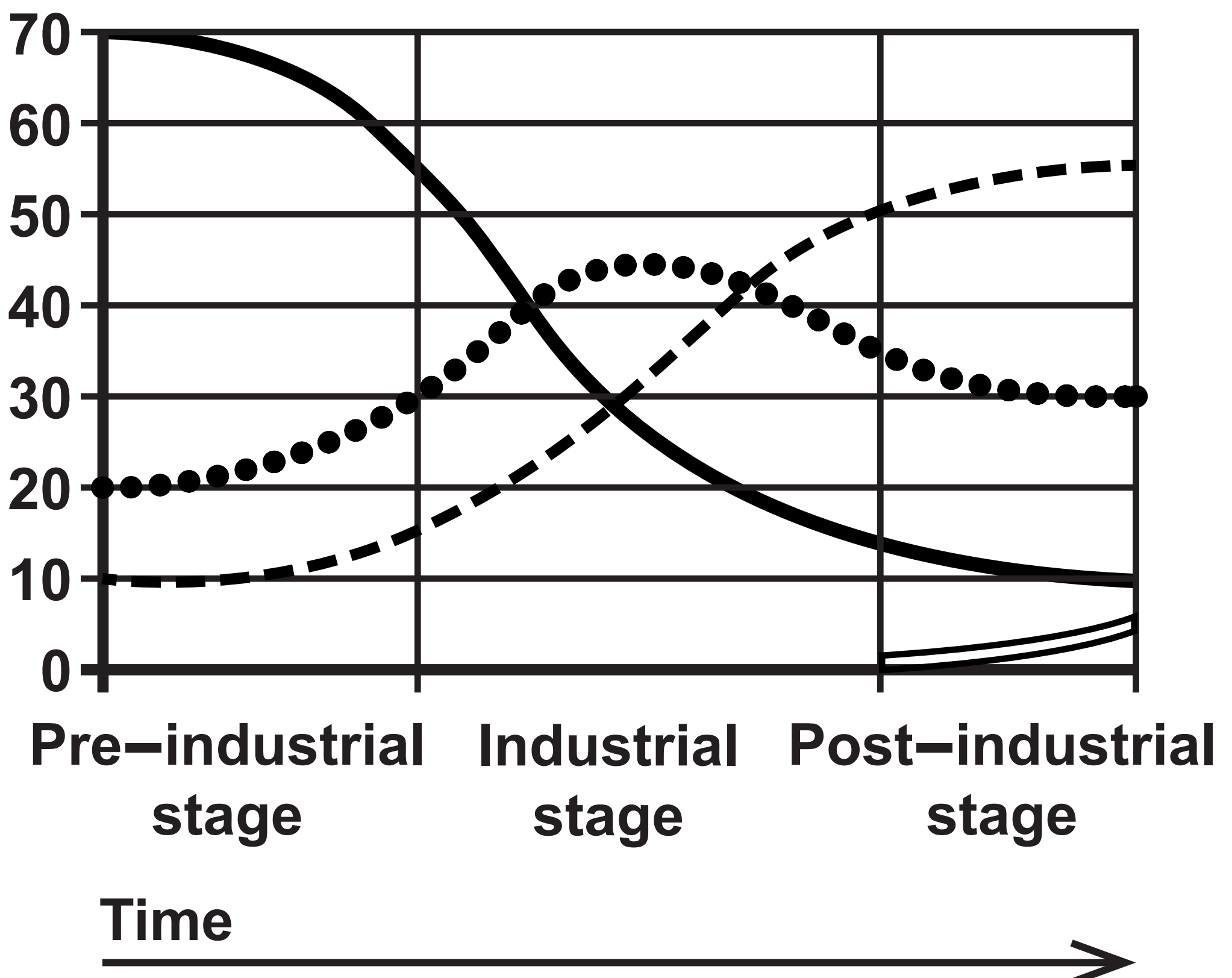
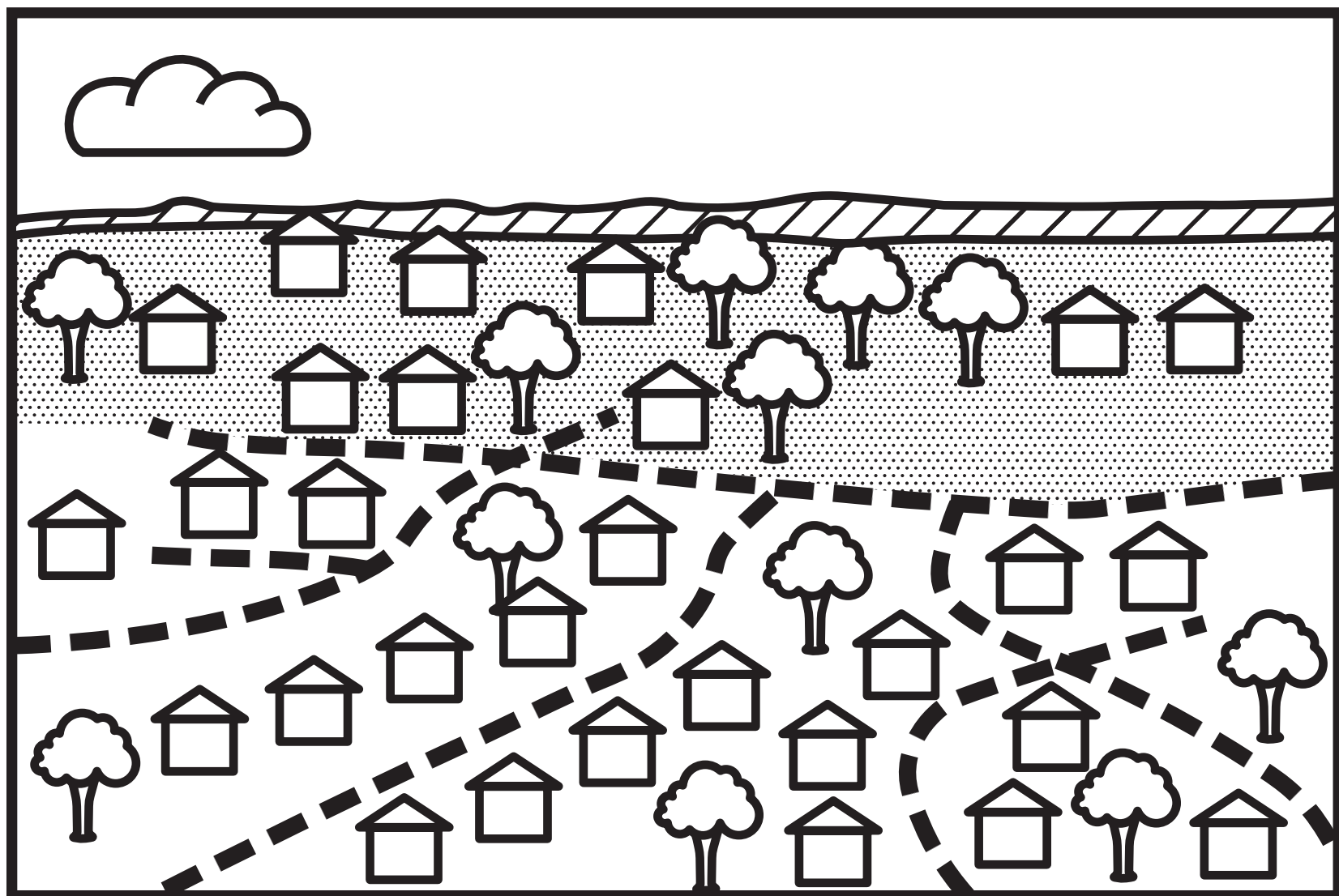


Figure 2a

A photograph of a suburb in Colorado, USA



KEY Roads Houses Trees
 Fields Mountains Clouds

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

KEY: Size of population movement

Inflow to cities (Percentage (%))

● >2.90 ● $1.46 - 2.90$ ● $0.29 - 1.45$

Outflow to suburban areas (Percentage (%))

● >2.90 ● $1.46 - 2.90$ ● $0.29 - 1.45$

□ Outside coverage

N 0 250 500 km

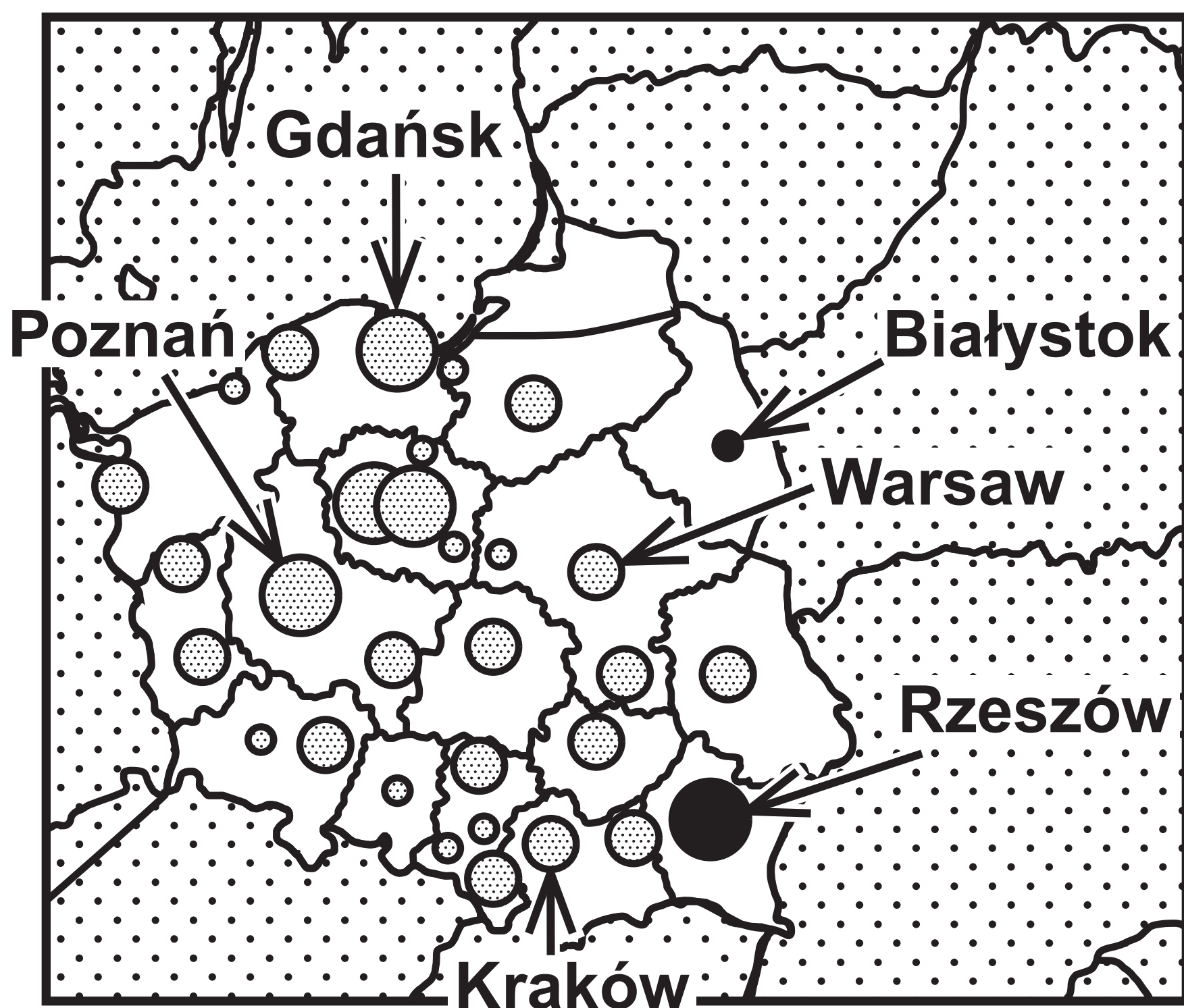


Figure 2c – Key

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

Population in Brazil

 **Urban**

 **Rural**

A predicted population

B 1950

C 1960

D 1970

E 1980

F 1990

G 2000

H 2010

I 2020

J 2030

K 2040

L 2050

Turn over

Figure 2c – Diagram
Urban and rural population change and predicted
change in Brazil, 1950–2050

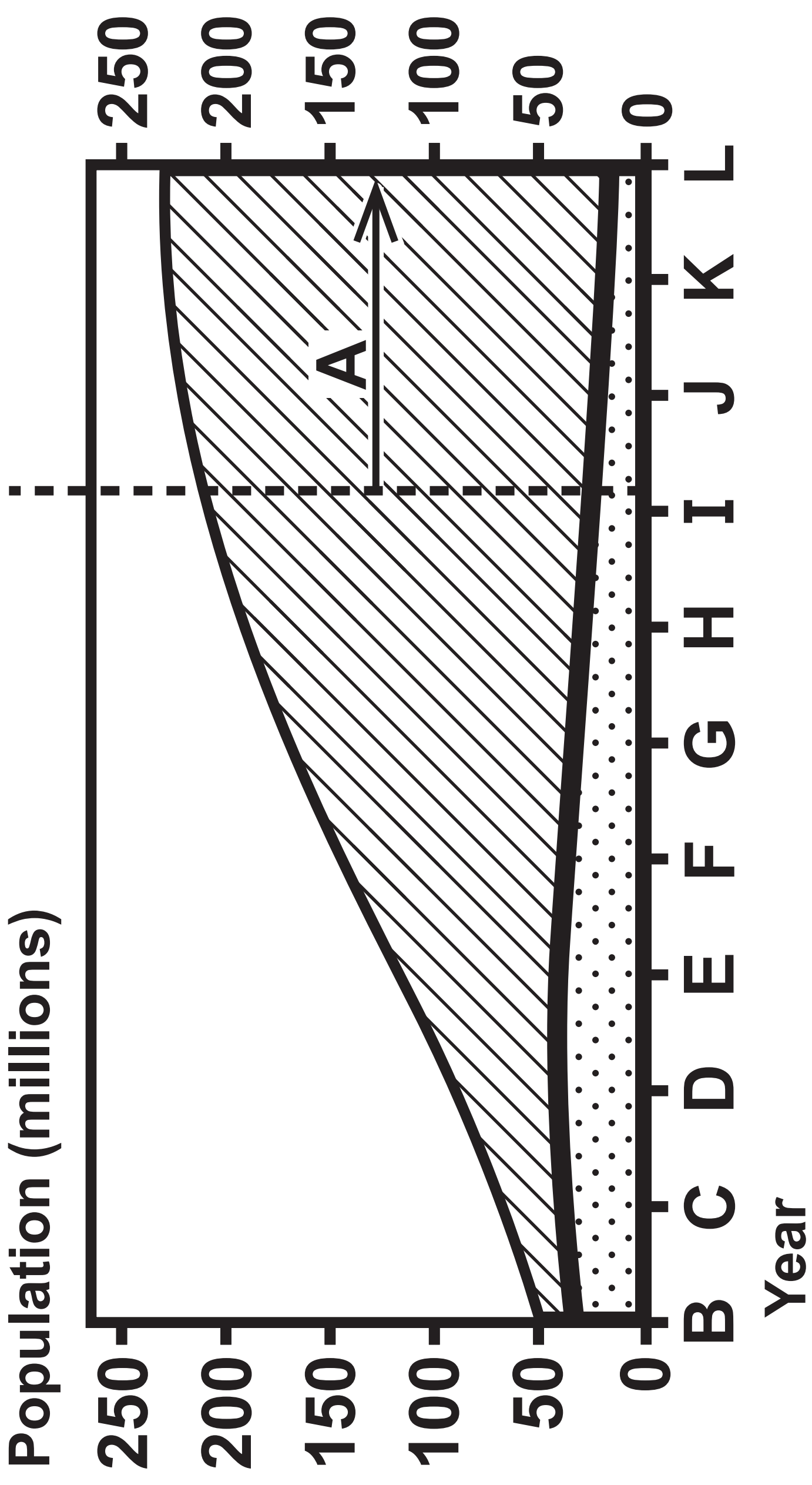
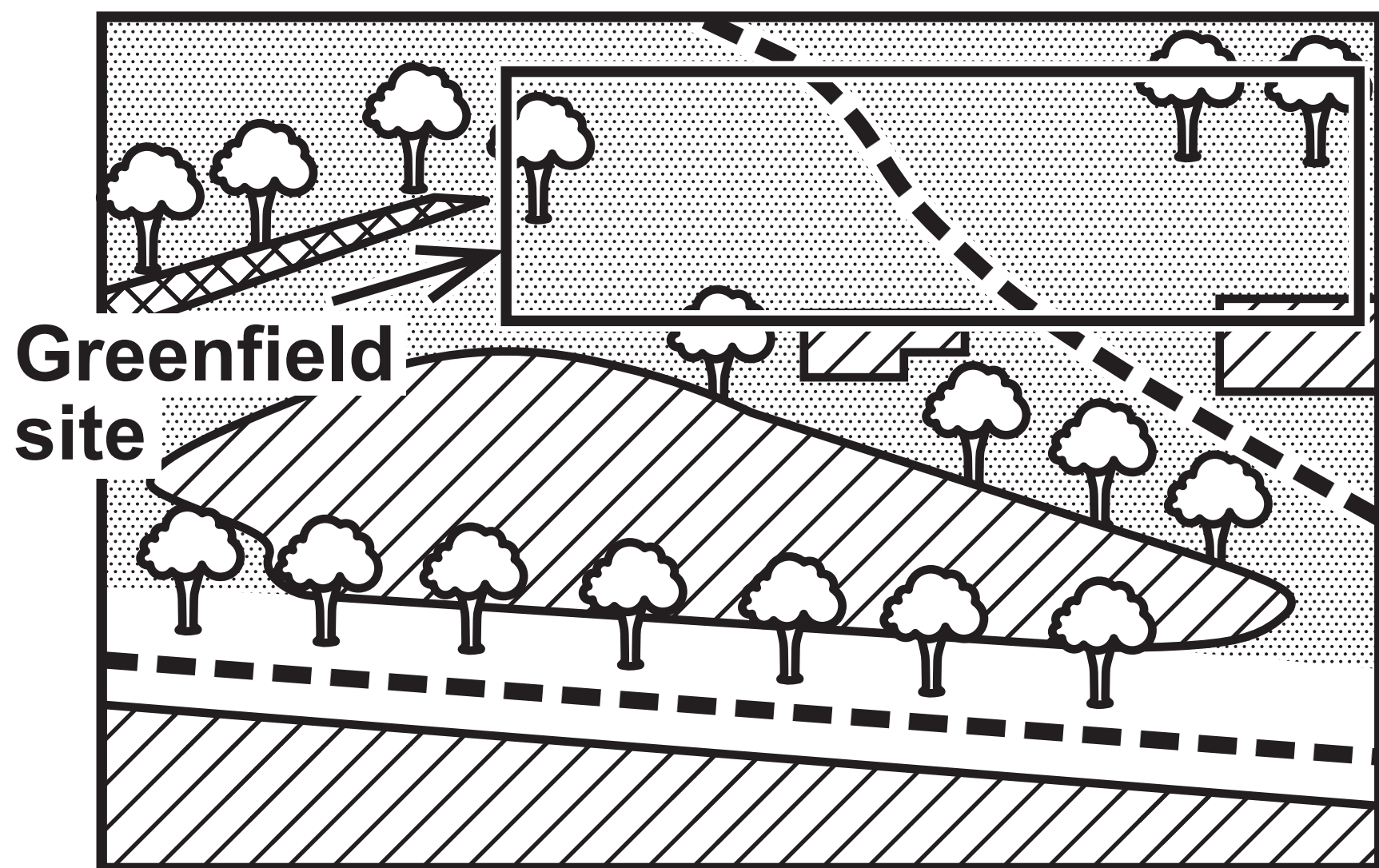


Figure 3a






Photograph of a greenfield site in North Rhine–Westphalia, Germany



KEY **---** Roads  Buildings  Trees
  Fields  Water

Figure 3b – Key

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

-  **North America**
-  **Latin America and Caribbean**
-  **Europe**
-  **Asia**
-  **Africa**

A 1950

B 1970

C 1990

D 2010

E 2030

F 2050

Turn over

Figure 3b – Diagram

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

Percentage (%) share of people living in urban areas by region

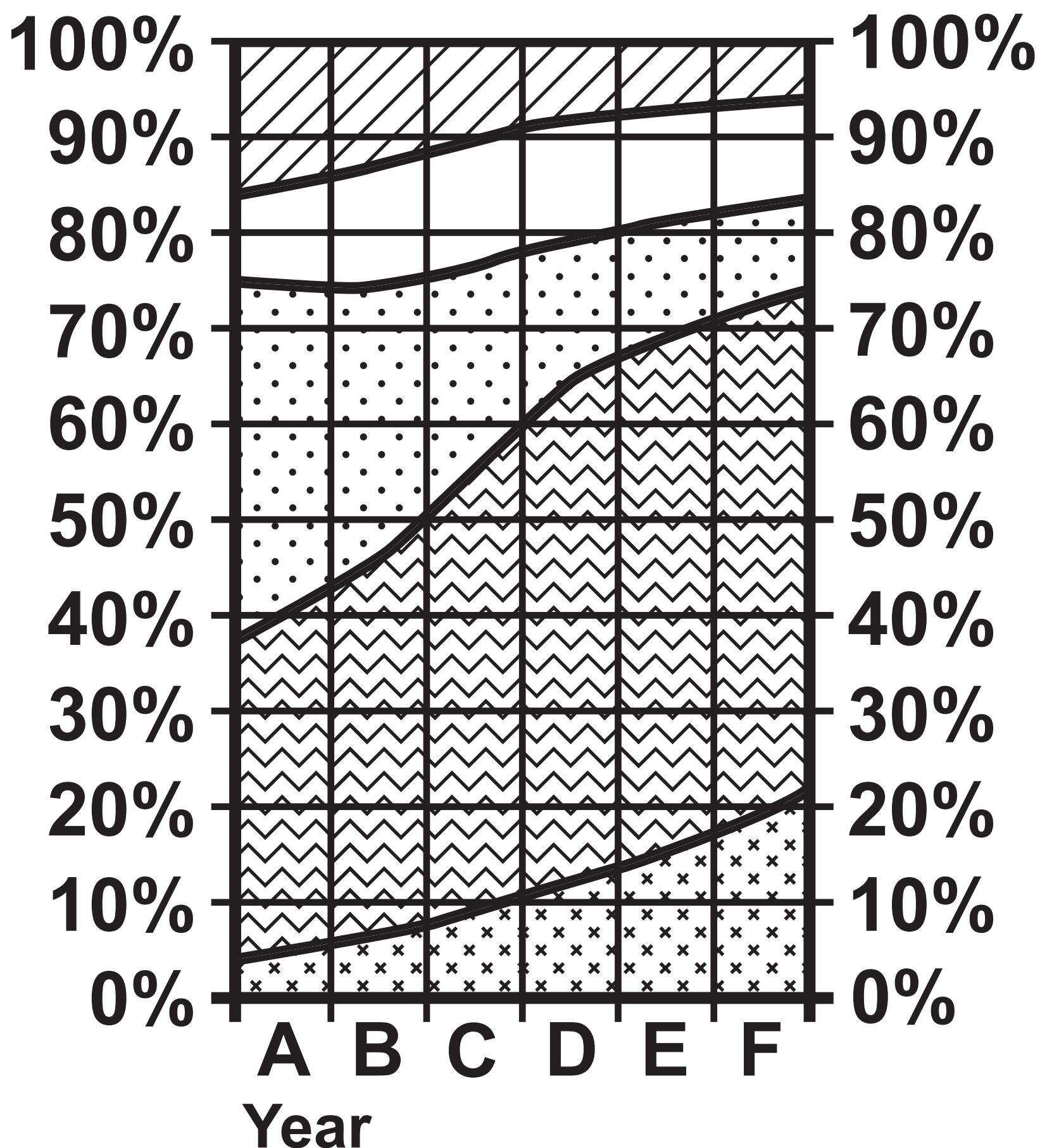


Figure 3c

Information on traffic congestion in selected cities

The cities with the worst traffic congestion

Cities with the highest average traffic congestion levels in 2020*

*0% = uncongested free flow of traffic –

e.g. 35% congestion means the extra travel time is 35% more than the average trip in uncongested conditions.

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Turn over

Figure 3c continued.

City	Country	Percent of average traffic congestion levels in 2020
Moscow	Russia	54%
Mumbai	India	53%
Bogota	Columbia	53%
Manila	Philippines	53%
Istanbul	Turkey	51%
Bengaluru	India	51%
Kyiv	Ukraine	51%
New Delhi	India	47%
Novosibirsk	Russia	45%
Bangkok	Thailand	44%

Figure 4a

Extract from the student’s questionnaire

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

Q1. Do you think the new power plant is good for the area?	Yes <div></div>	No <div></div>
Q2. What benefits does it bring?	<div></div> <div></div> <div></div>	

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Turn over

Figure 4a continued.

<p>Q3. Do you think the new power plant will improve the local economy?</p>	<p>Yes</p> <div></div>	<p>No</p> <div></div>
<p>Q4. Do you think the new power plant will damage the environment?</p>	<p>Yes</p> <div></div>	<p>No</p> <div></div>

(continued on the next page)

Figure 4a continued.

Page 21

Q5. Do you think the new power plant will affect house prices in the area?	<div>Yes</div> <div><div></div></div> <div>No</div> <div><div></div></div>
Q6. What impact do you think the new power plant has had on the area?	<div></div> <div></div> <div></div>

Figure 4b
Extract from the student's data collection

Distance from the new power plant (metres)	Total Environmental Quality Score (Max 80)
0	22
20	25
40	30
60	40
80	44
100	44
120	52
140	66

(continued on the next page)

Turn over

Figure 4b continued.

Distance from the new power plant (metres)	Total Environmental Quality Score (Max 80)
160	62
180	60
200	32
220	65
240	70
260	62
280	65
300	72

Figure 5a

Extract from the student’s questionnaire

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

Q1. Do you think the new farm shops are good for the area?	Yes <div></div>	No <div></div>
Q2. What benefits do they bring?	<div></div> <div></div> <div></div>	

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Turn over

Figure 5a continued.

<p>Q3. Do you think the new farm shops will improve the local economy?</p>	<p>Yes</p> <div></div>	<p>No</p> <div></div>
<p>Q4. Do you think the new farm shops will damage the environment?</p>	<p>Yes</p> <div></div>	<p>No</p> <div></div>

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Figure 5a continued.

<p>Q5. Do you think the new farm shops will affect house prices in the area?</p>	<p>Yes</p> <div></div> <p>No</p> <div></div>
<p>Q6. What impact do you think the new farm shops have had on the area?</p>	<div></div> <div></div> <div></div>

Figure 5b
Extract from the student's data collection

Distance from the new farm shops (metres)	Total Environmental Quality Score (Max 80)
0	22
20	25
40	30
60	40
80	44
100	44
120	52
140	66

(continued on the next page)

Turn over

Figure 5b continued.

Distance from the new farm shops (metres)	Total Environmental Quality Score (Max 80)
160	62
180	60
200	32
220	65
240	70
260	62
280	65
300	72

Figure 6a

Extract from the student’s questionnaire

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

Q1. Do you think the new bus station is good for the area?	<div>Yes</div> <div></div> <div>No</div> <div></div>
Q2. What benefits does it bring?	<div></div> <div></div> <div></div>

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Turn over

Figure 6a continued.

<p>Q3. Do you think the new bus station will improve the local economy?</p>	<p>Yes</p> <div></div>	<p>No</p> <div></div>
<p>Q4. Do you think the new bus station will damage the environment?</p>	<p>Yes</p> <div></div>	<p>No</p> <div></div>

(continued on the next page)

<p>Q5. Do you think the new bus station will affect house prices in the area?</p>	<div><div>Yes</div><div>No</div></div>
<p>Q6. What impact do you think the new bus station has had on the area?</p>	<div><div></div><div></div><div></div></div>

Figure 6b
Extract from the student's data collection

Distance from the new bus station (metres)	Total Environmental Quality Score (Max 80)
0	22
20	25
40	30
60	40
80	44
100	44
120	52
140	66

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Turn over

Figure 6b continued.

Distance from the new farm shops (metres)	Total Environmental Quality Score (Max 80)
160	62
180	60
200	32
220	65
240	70
260	62
280	65
300	72

Figure 7a – Key (Colour)

Predicted percentage change in crop yields by 2050

Yield change in percentage (%)

 $+1.1$ to $+5.0$

 -3 to $+1.0$

 -10.0 to -3.1

 -30.0 to -10.1

 No data

Turn over

Predicted percentage change in crop yields by 2050

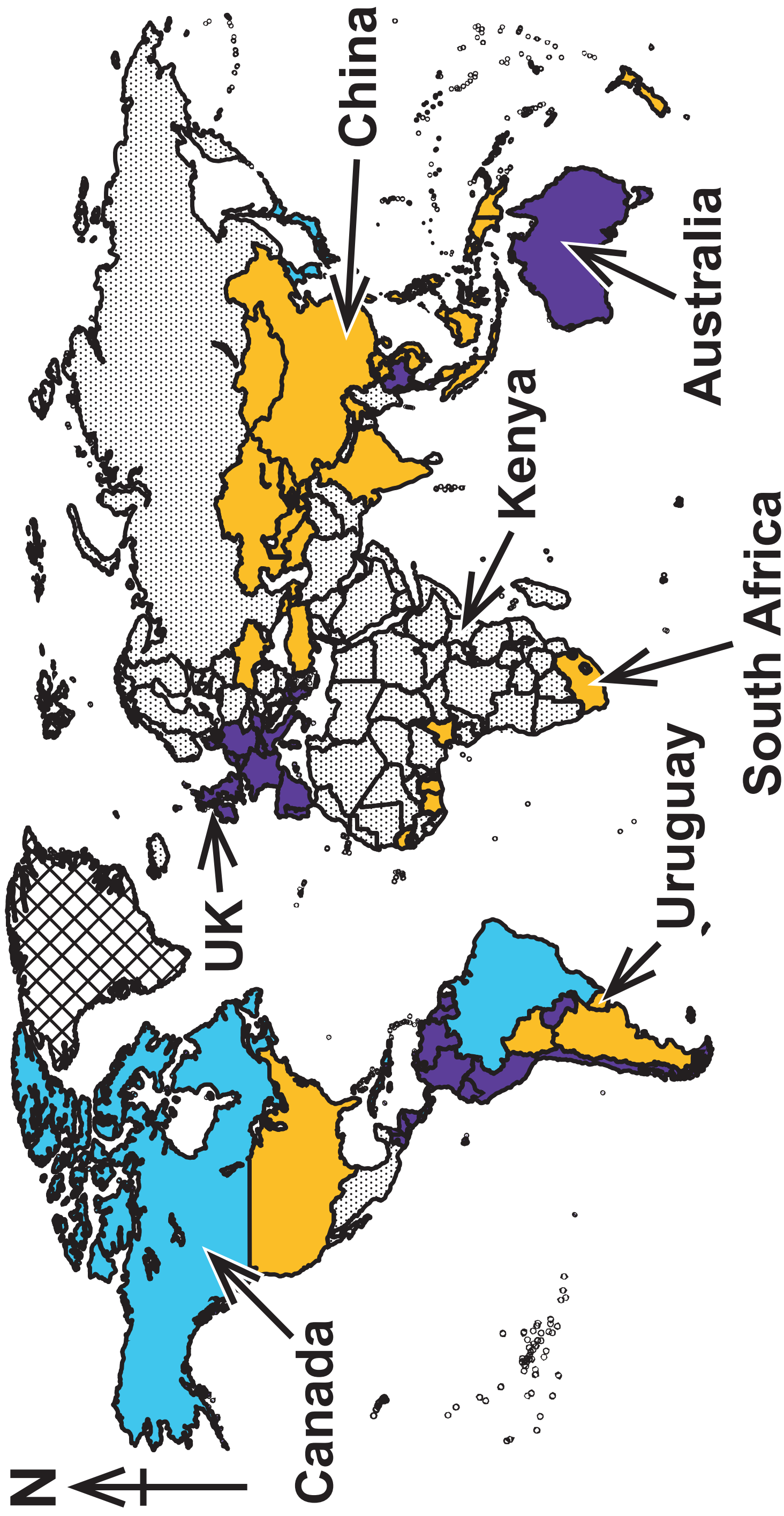


Figure 7a – Diagram Part 2 (Colour)

Predicted percentage change in crop yields by 2050



Turn over

Figure 7a – Diagram Part 3 (Colour)

Predicted percentage change in crop yields by 2050

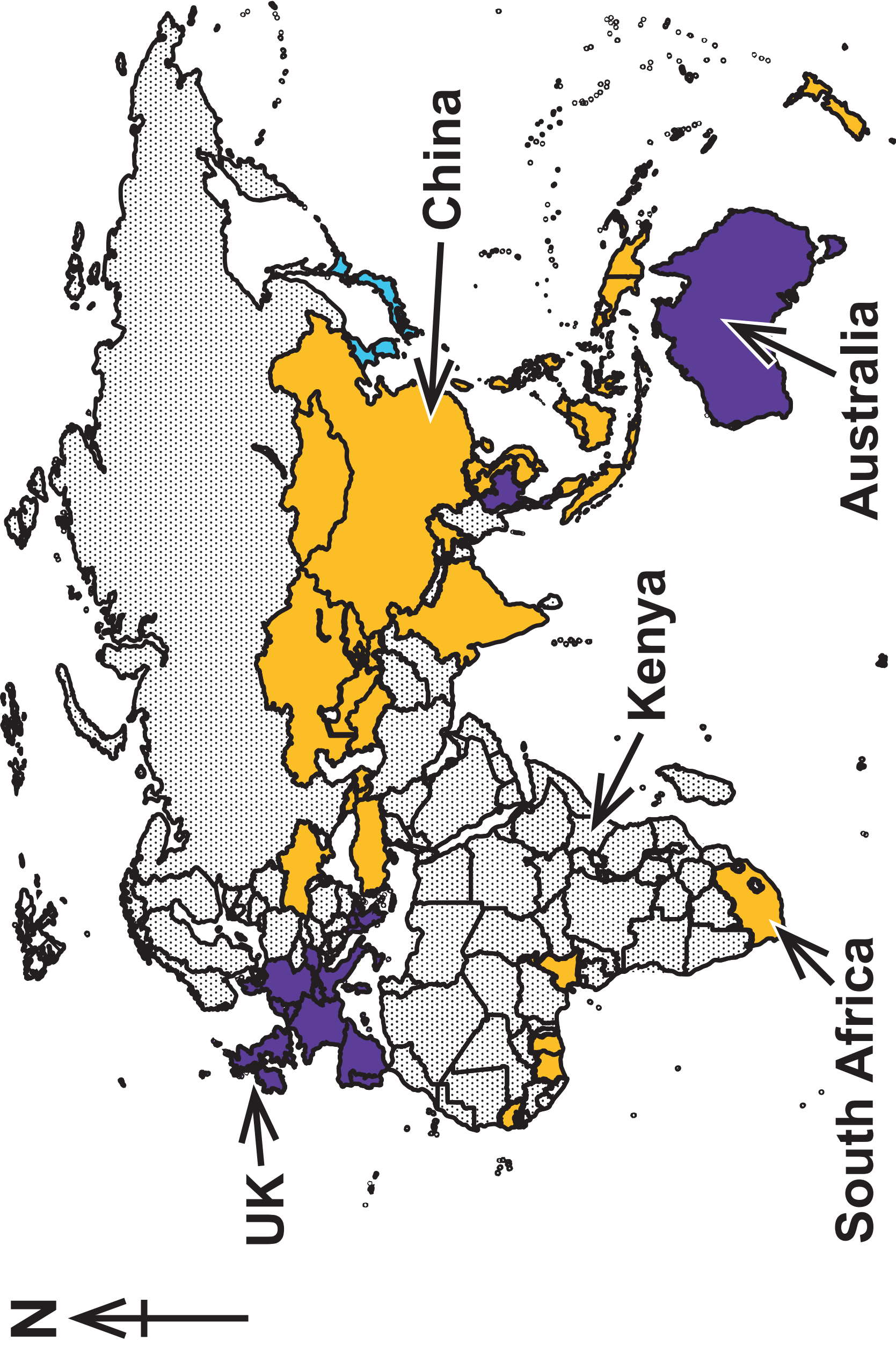


Figure 7a – Key (Black and White)

Predicted percentage change in crop yields by 2050

Yield change in percentage (%)

 **+1·1 to +5·0**

 **–3 to +1·0**

 **–10·0 to –3·1**

 **–30·0 to –10·1**

 **No data**

Turn over

Figure 7a – Diagram Part 1 (Black and White)

Predicted percentage change in crop yields by 2050

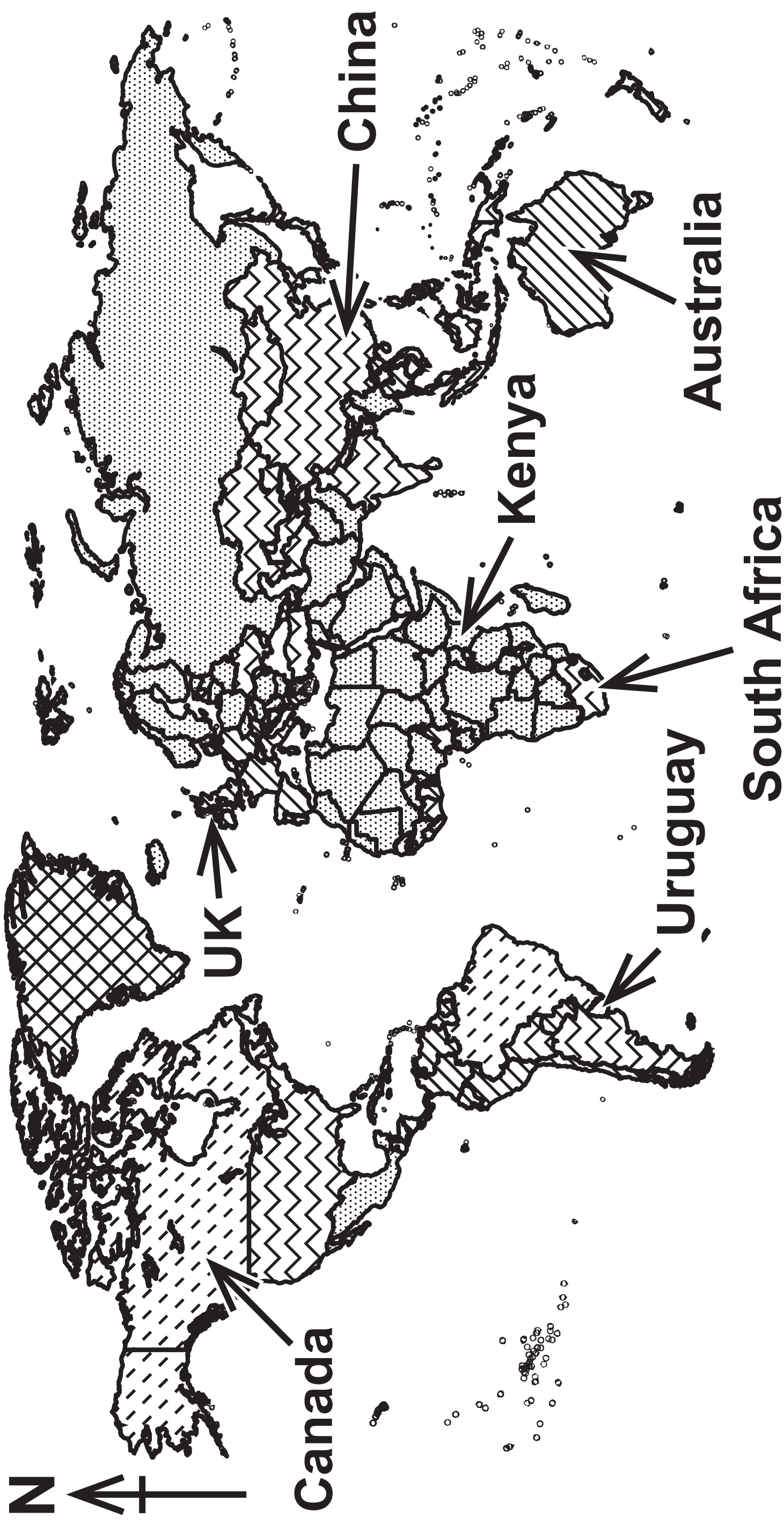
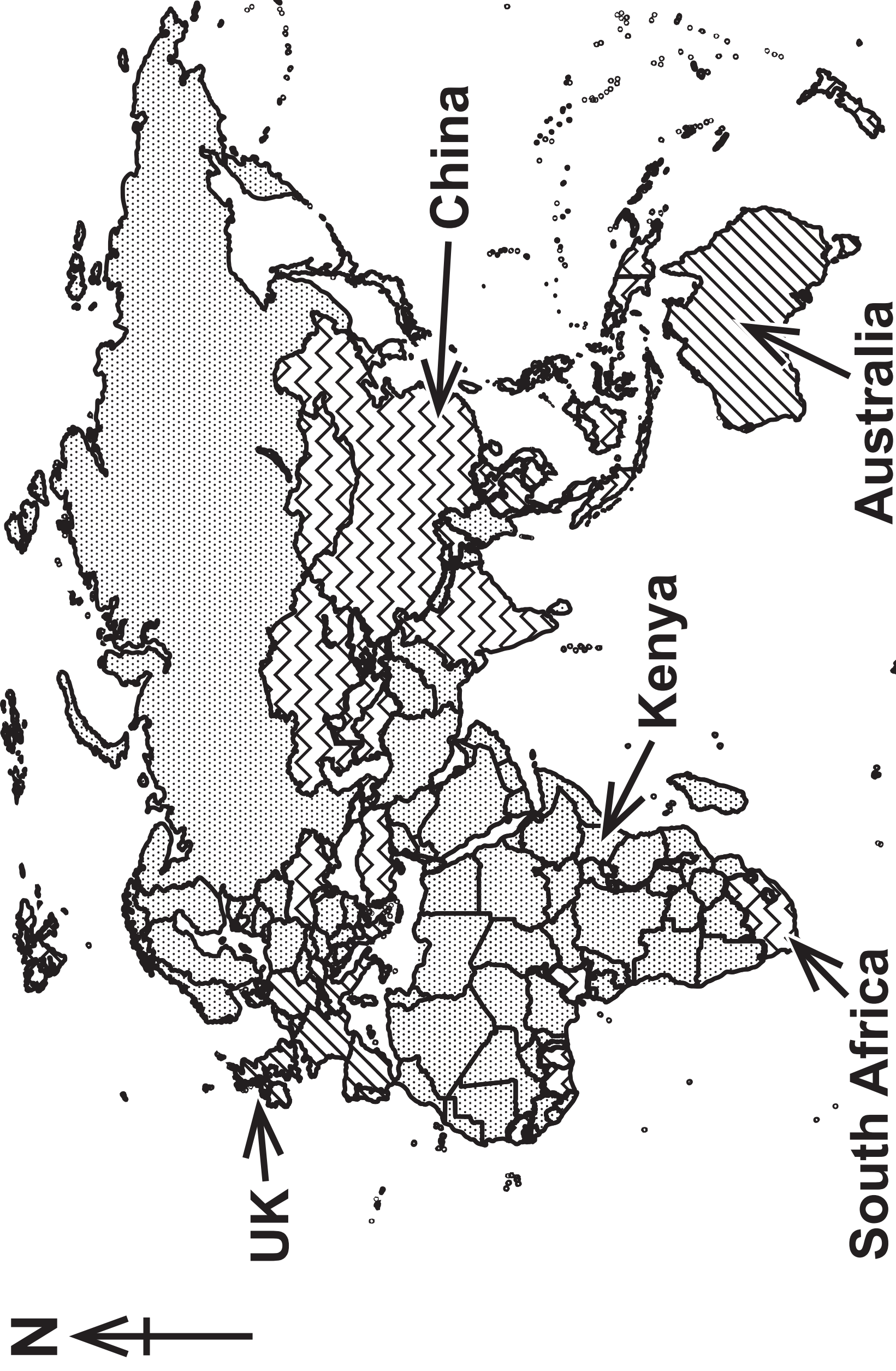


Figure 7a – Diagram Part 2 (Black and White)

Predicted percentage change in crop yields by 2050



Figure 7a – Diagram Part 3 (Black and White)
Predicted percentage change in crop yields by 2050



Information on sustainable rainforest management projects

Sustainable rainforest management

Reforest'Action (non-governmental organisation) in Brazil

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

Brazil (government)

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

International Tropical Timber Agreement, 2006

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


Figure 8a – Key (Colour)

Global foreign direct investment (FDI), 2019

Foreign direct investment
(millions of US\$) received

 1,000,001 – 4,000,000

 100,001 – 1,000,000

 10,001 – 100,000

 1,000 – 10,000

 N/A

Turn over

Global foreign direct investment (FDI), 2019

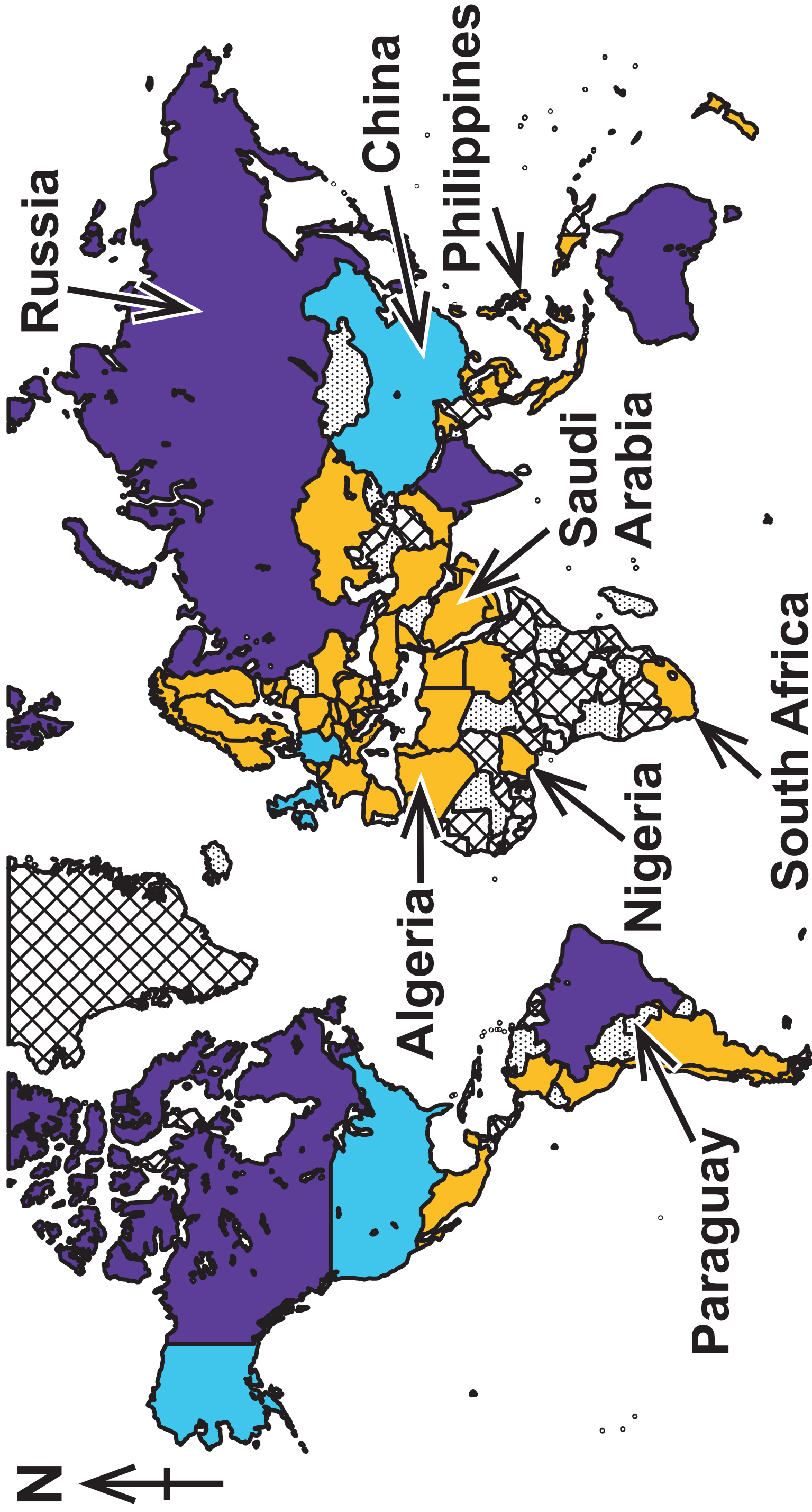
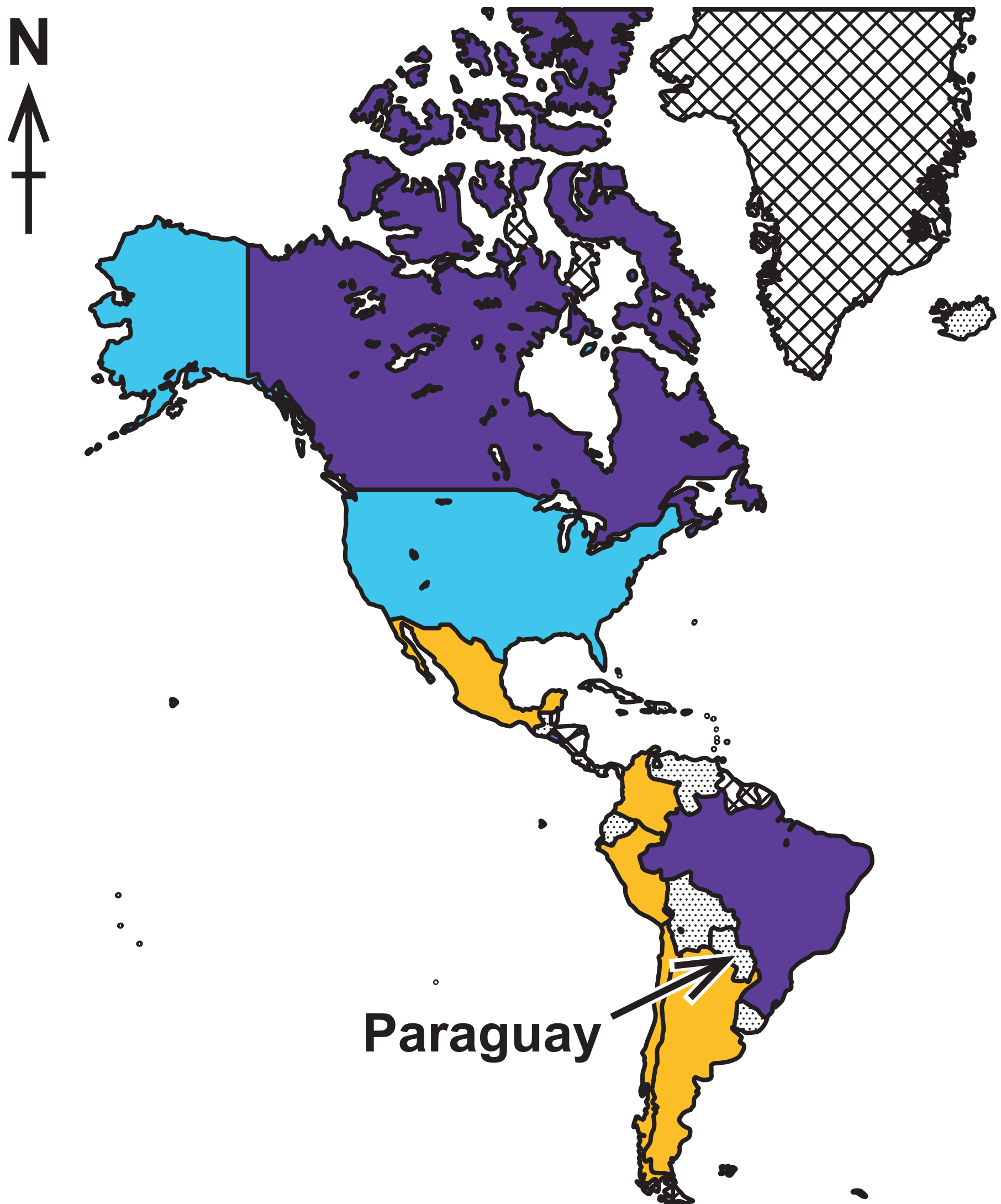


Figure 8a – Diagram Part 2 (Colour)

Global foreign direct investment (FDI), 2019



Paraguay

Turn over

Figure 8a – Diagram Part 3 (Colour)

Global foreign direct investment (FDI), 2019

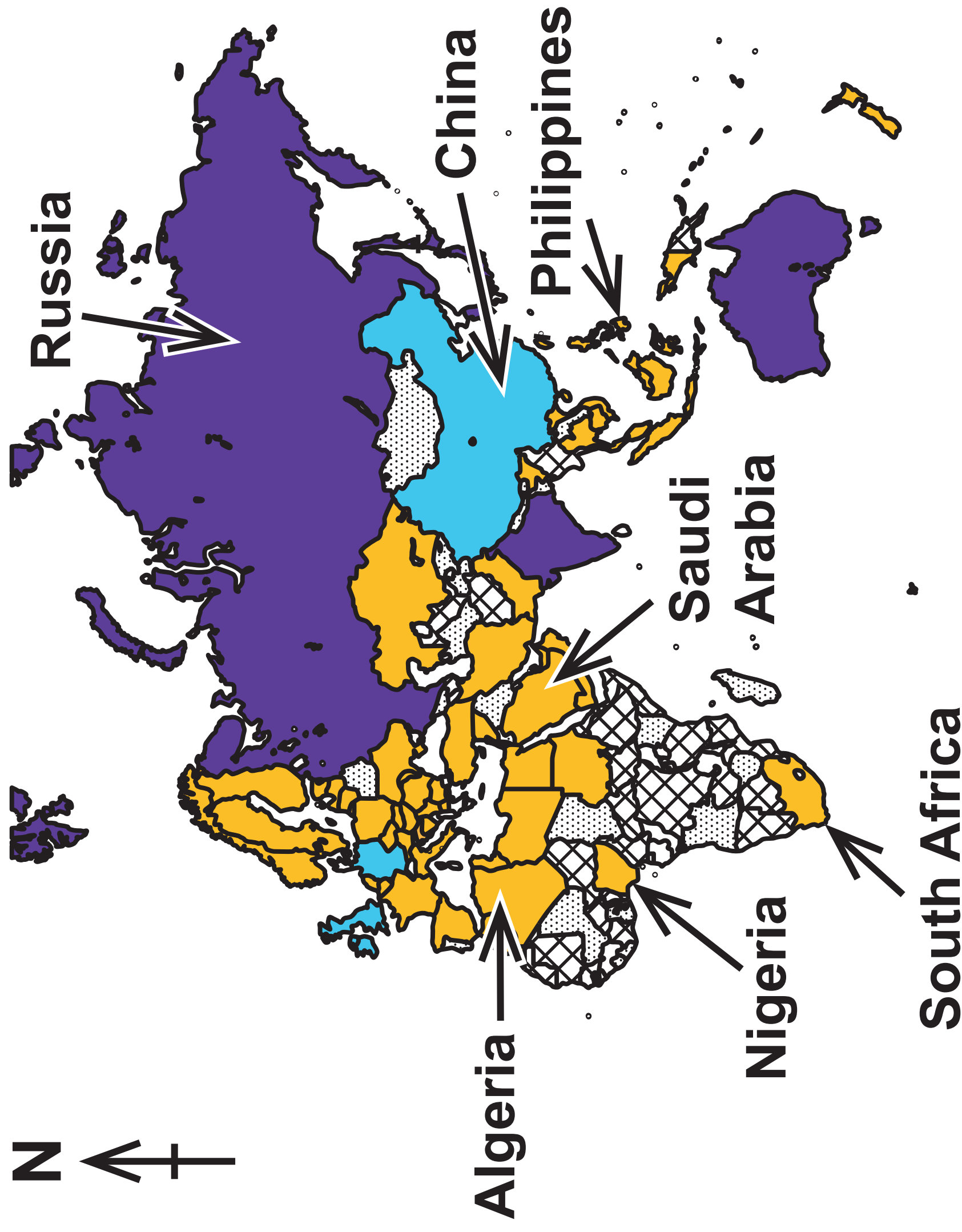



Figure 8a – Key (Black and White)

Global foreign direct investment (FDI), 2019

**Foreign direct investment
(millions of US\$) received**

 **1,000,001 – 4,000,000**

 **100,001 – 1,000,000**

 **10,001 – 100,000**

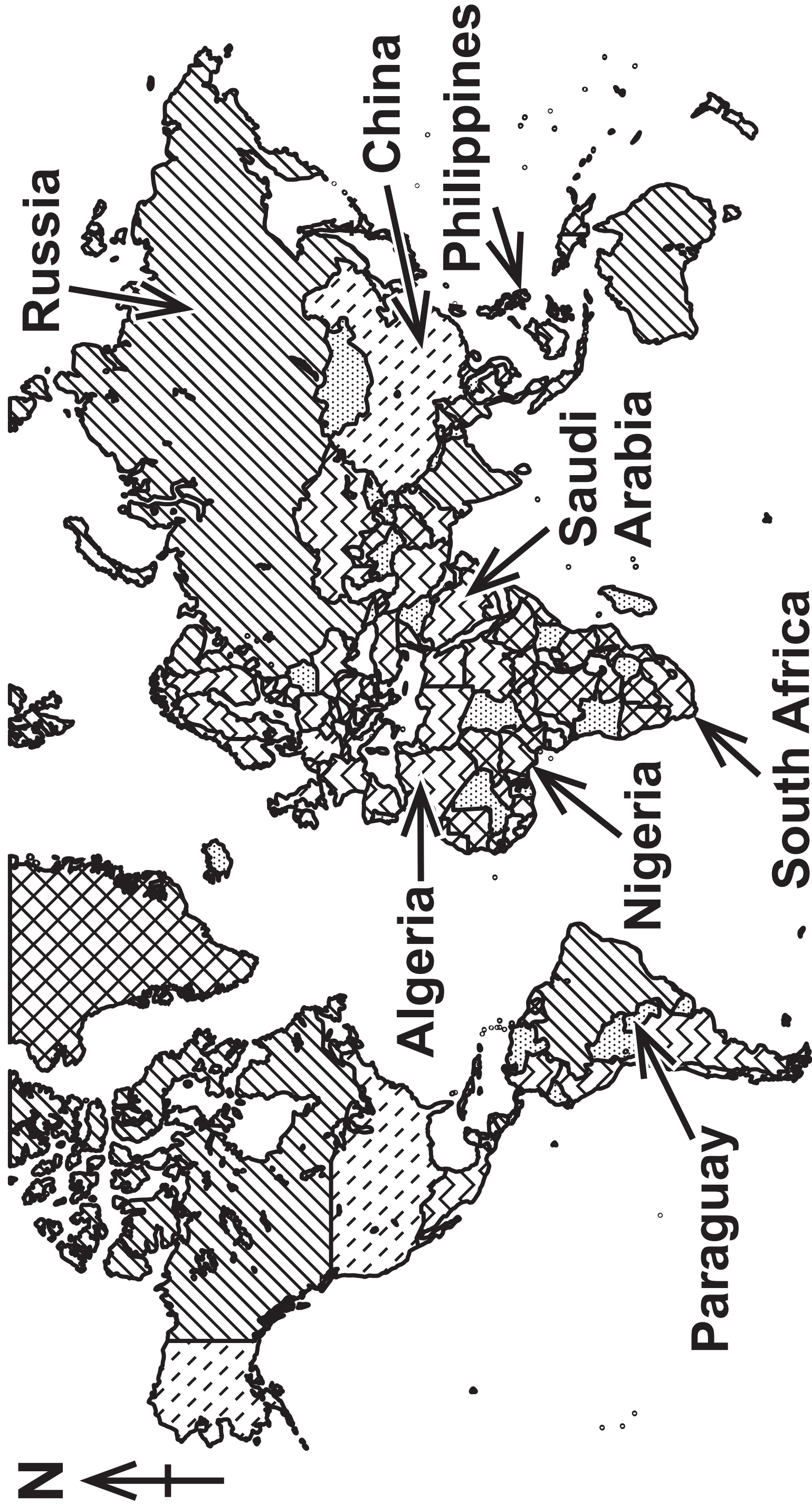
 **1,000 – 10,000**

 **N/A**

Turn over

Figure 8a – Diagram Part 1 (Black and White)

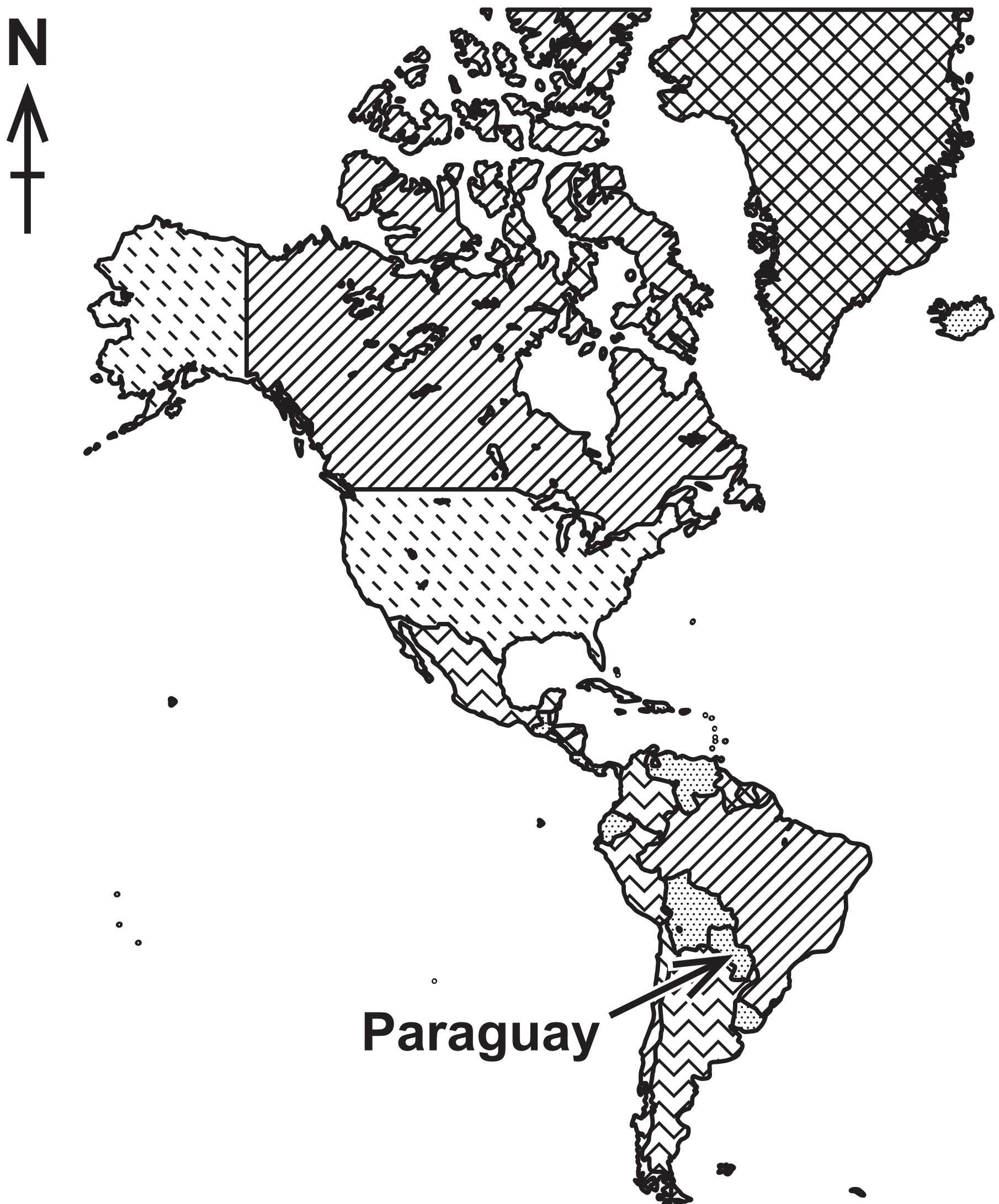
Global foreign direct investment (FDI), 2019



Turn over

Figure 8a – Diagram Part 2 (Black and White)

Global foreign direct investment (FDI), 2019



Turn over

Figure 8a – Diagram Part 3 (Black and White)
Global foreign direct investment (FDI), 2019

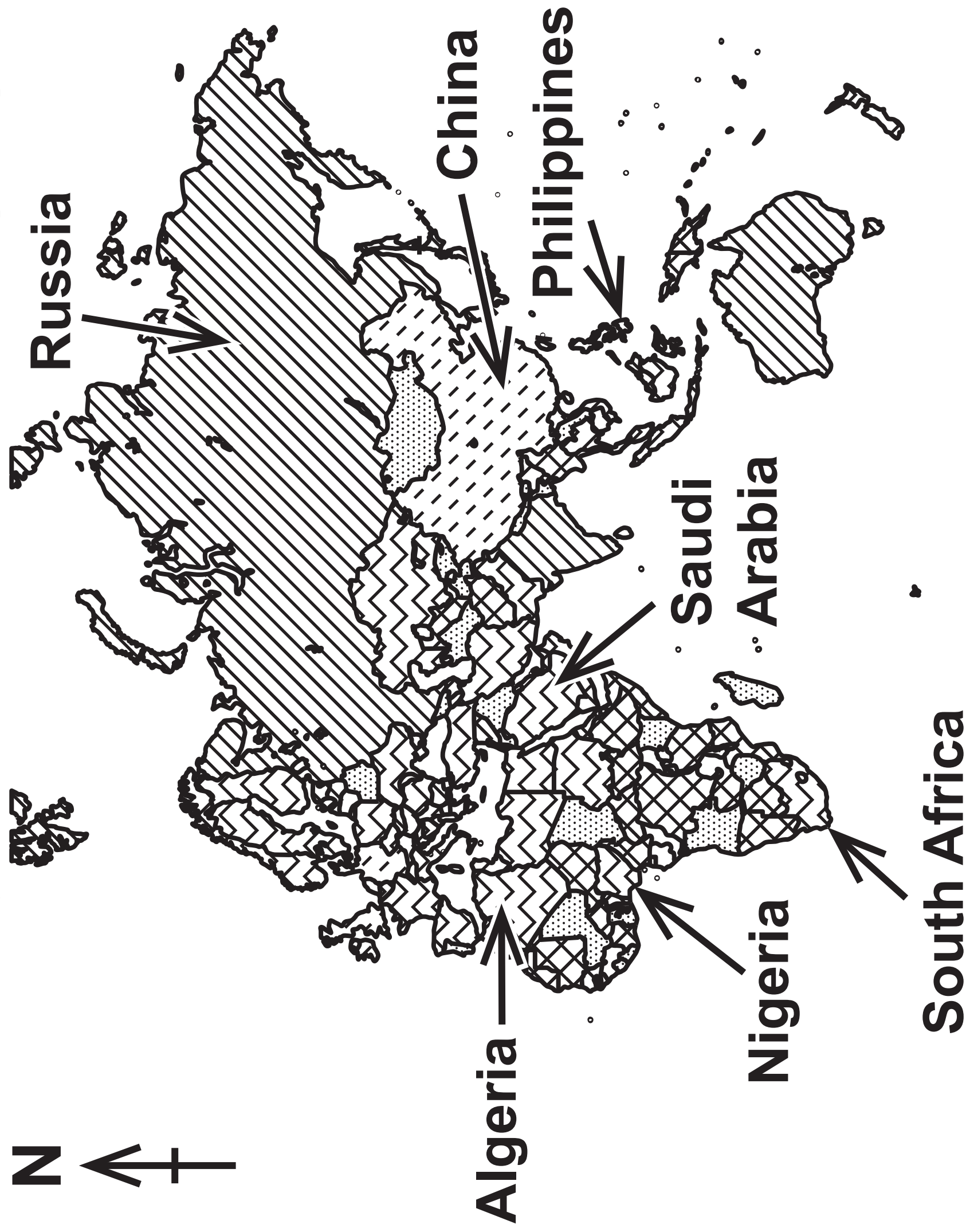


Figure 8b

Information about three transnational corporations (TNCs)

Shoe manufacturer TNC

- Present in **39** countries.
- **486** factories.
- **1·09** million workers.
- Headquarters: Oregon, USA.
- Accused of poor working conditions in some factories.

Research and pharmaceutical TNC

- **99,000** employees worldwide.
- Present in over **39** countries.
- Revenue of over **US\$40** billion.
- Headquarters: London, UK.
- Mainly targets more developed countries, but the company has several programmes that help less developed countries.

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Turn over

Figure 8b continued.

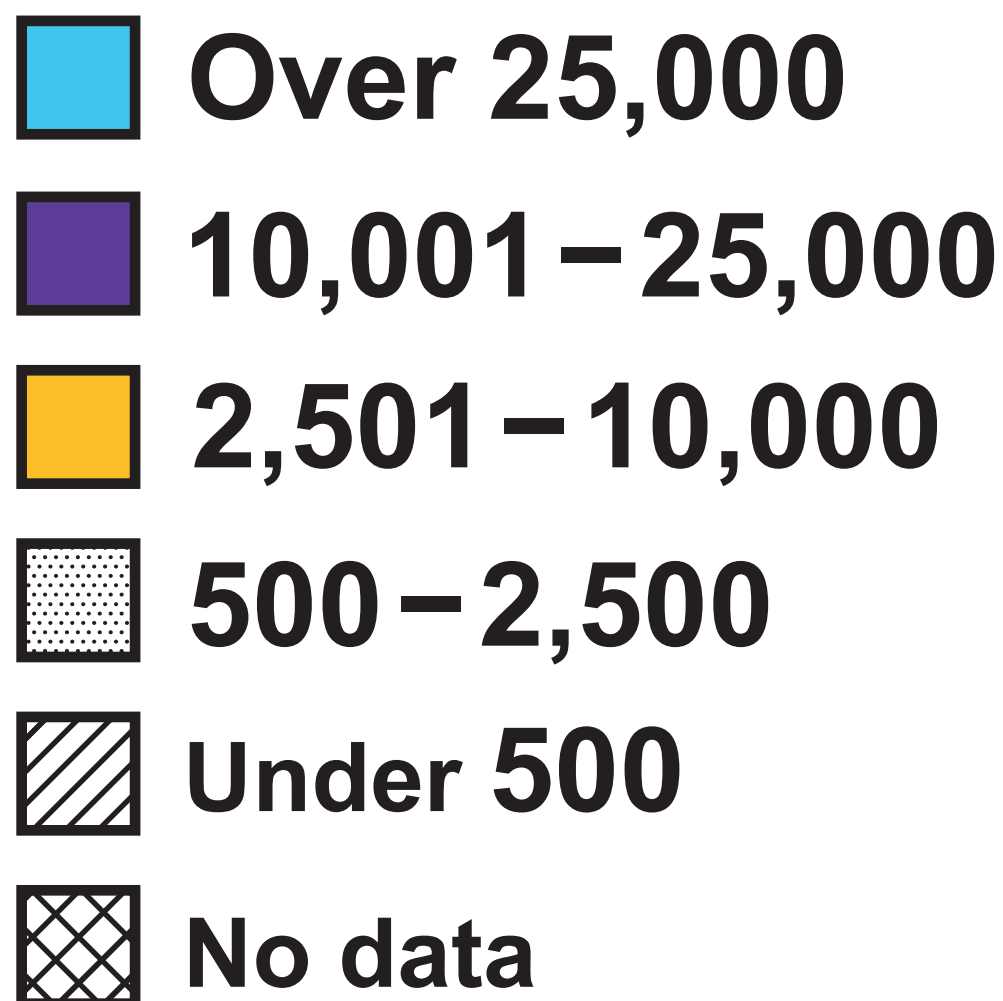
Soft drinks manufacturer, TNC

- Drinks are sold in more than **200** countries.
- Opened a new **US\$90** million research and development centre in India.
- Headquarters: **Atlanta, USA.**
- **Accused of depletion of groundwater in India.**

Figure 9a – Key (Colour)

Global Gross Domestic Product (GDP) per capita, 2021

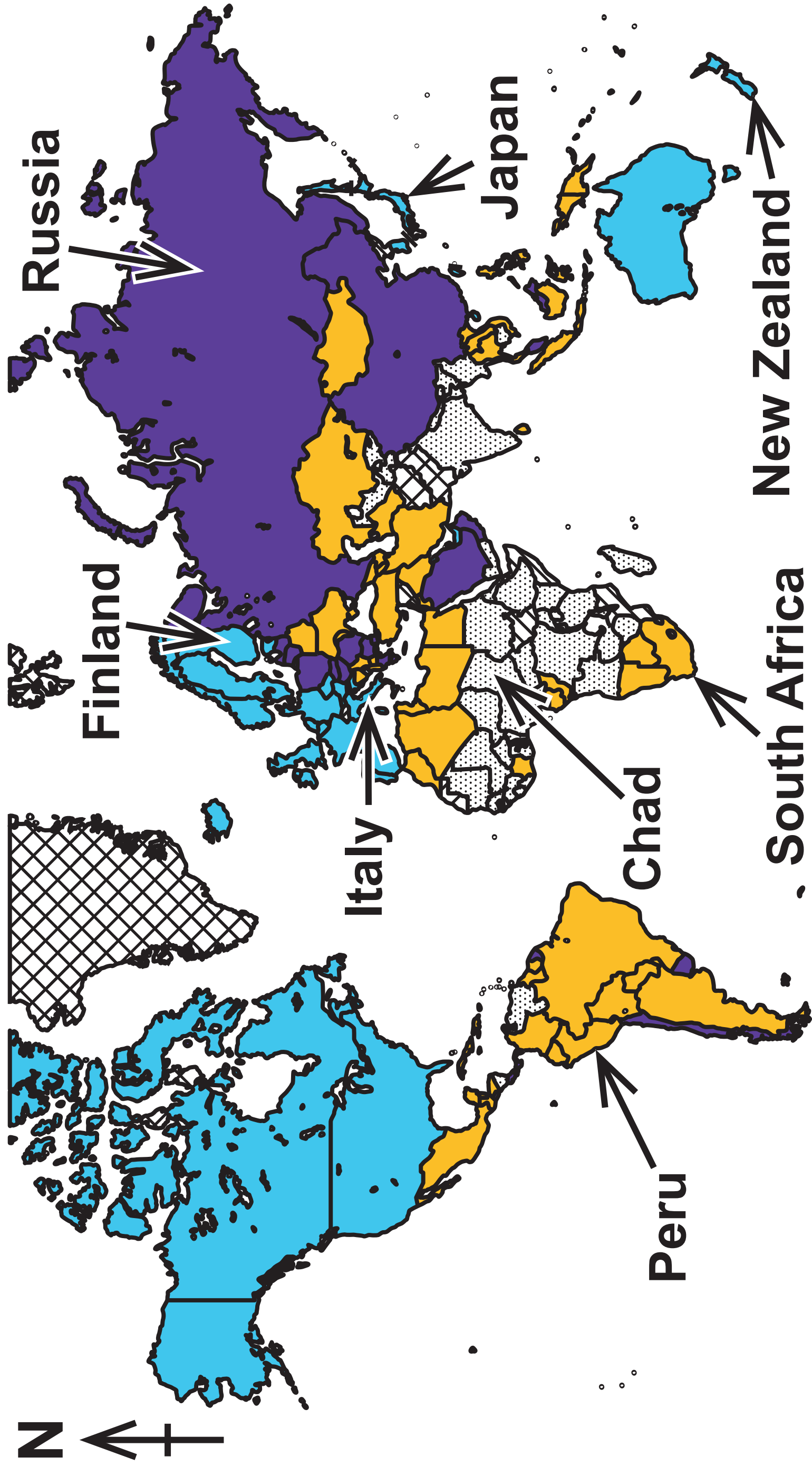
GDP per capita (US\$)



Turn over

Figure 9a – Diagram Part 1 (Colour)
Global Gross Domestic Product (GDP)

per capita, 2021



Turn over

Figure 9a – Diagram Part 2 (Colour)

Global Gross Domestic Product (GDP) per capita, 2021



Turn over

Figure 9a – Diagram Part 3 (Colour) Page 56

Global Gross Domestic Product (GDP)

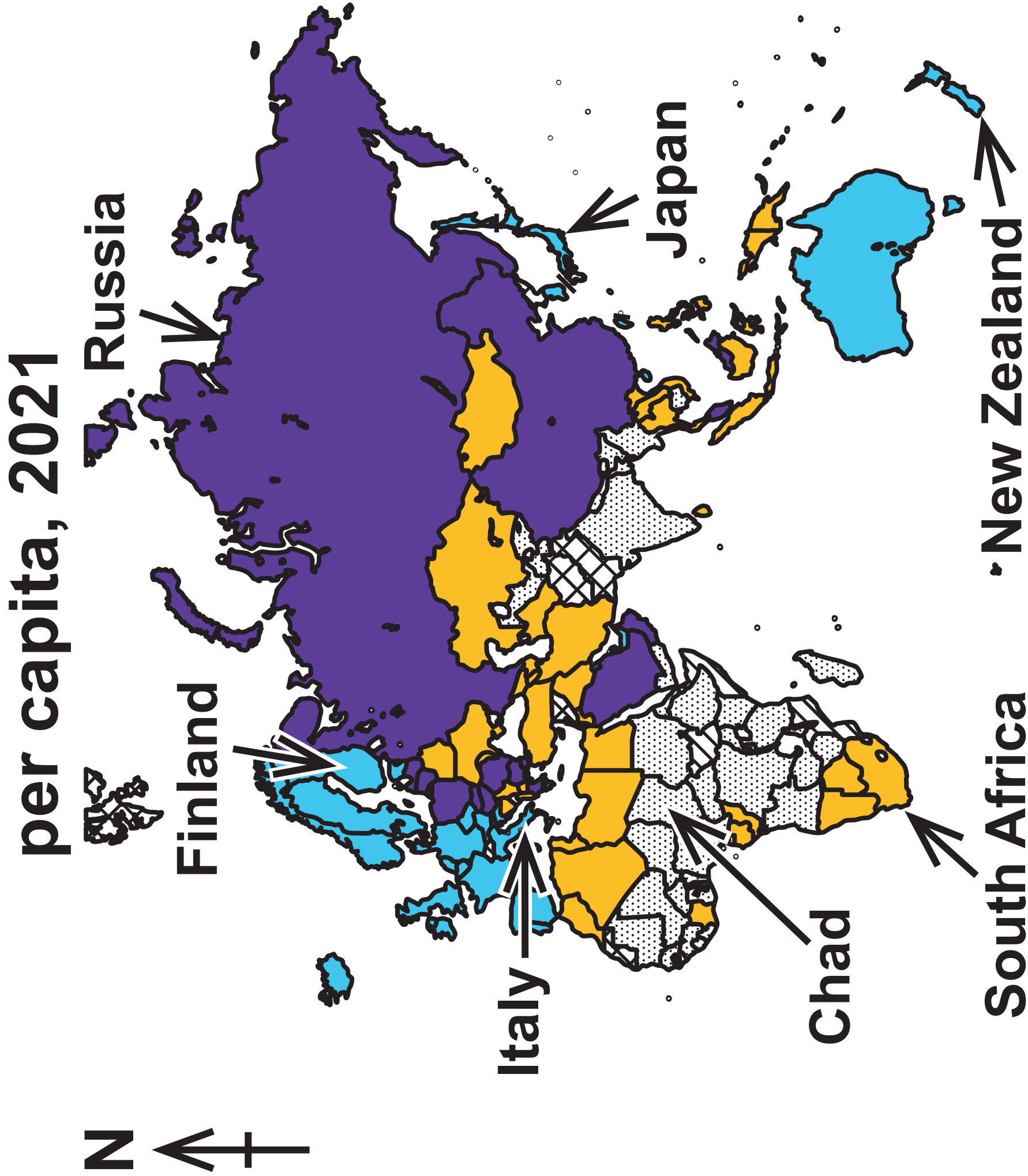
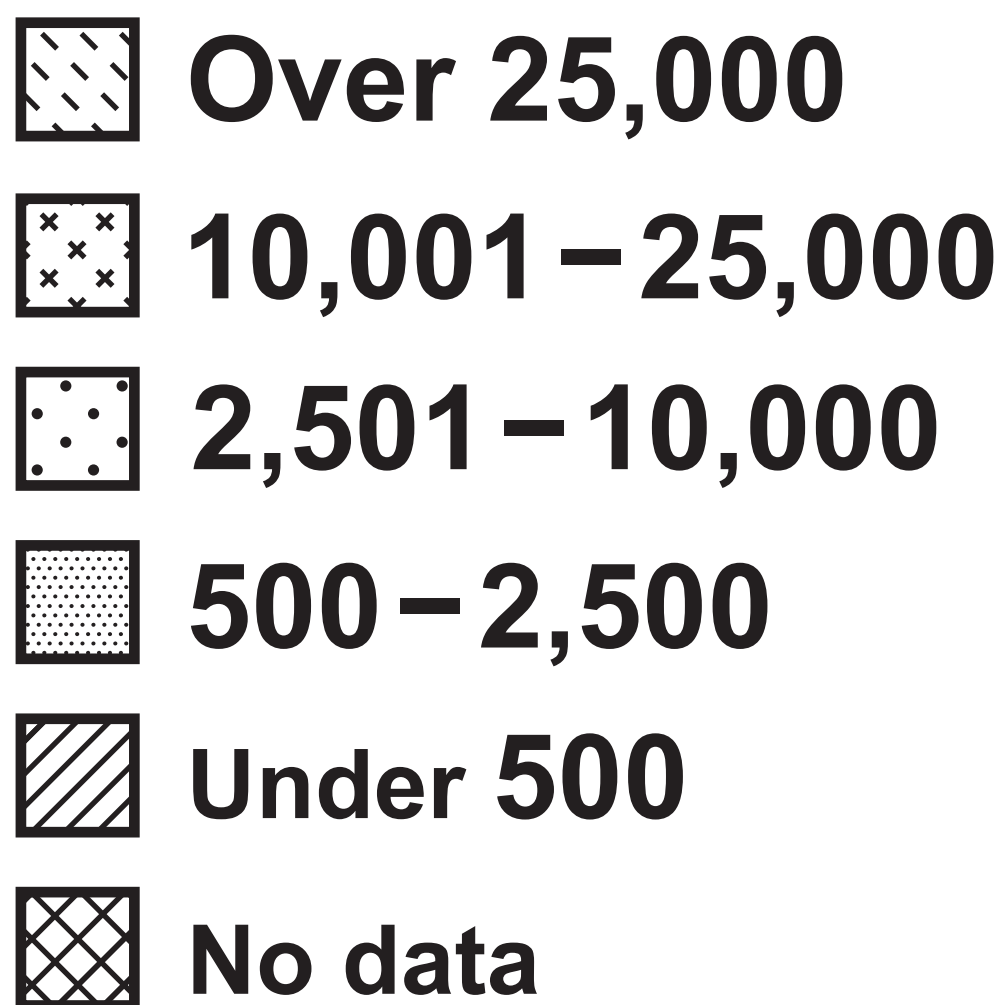


Figure 9a – Key (Black and White)

Global Gross Domestic Product (GDP) per capita, 2021

GDP per capita (US\$)



Turn over

Figure 9a – Diagram Part 1 (Black and White)
Global Gross Domestic Product (GDP)

per capita, 2021

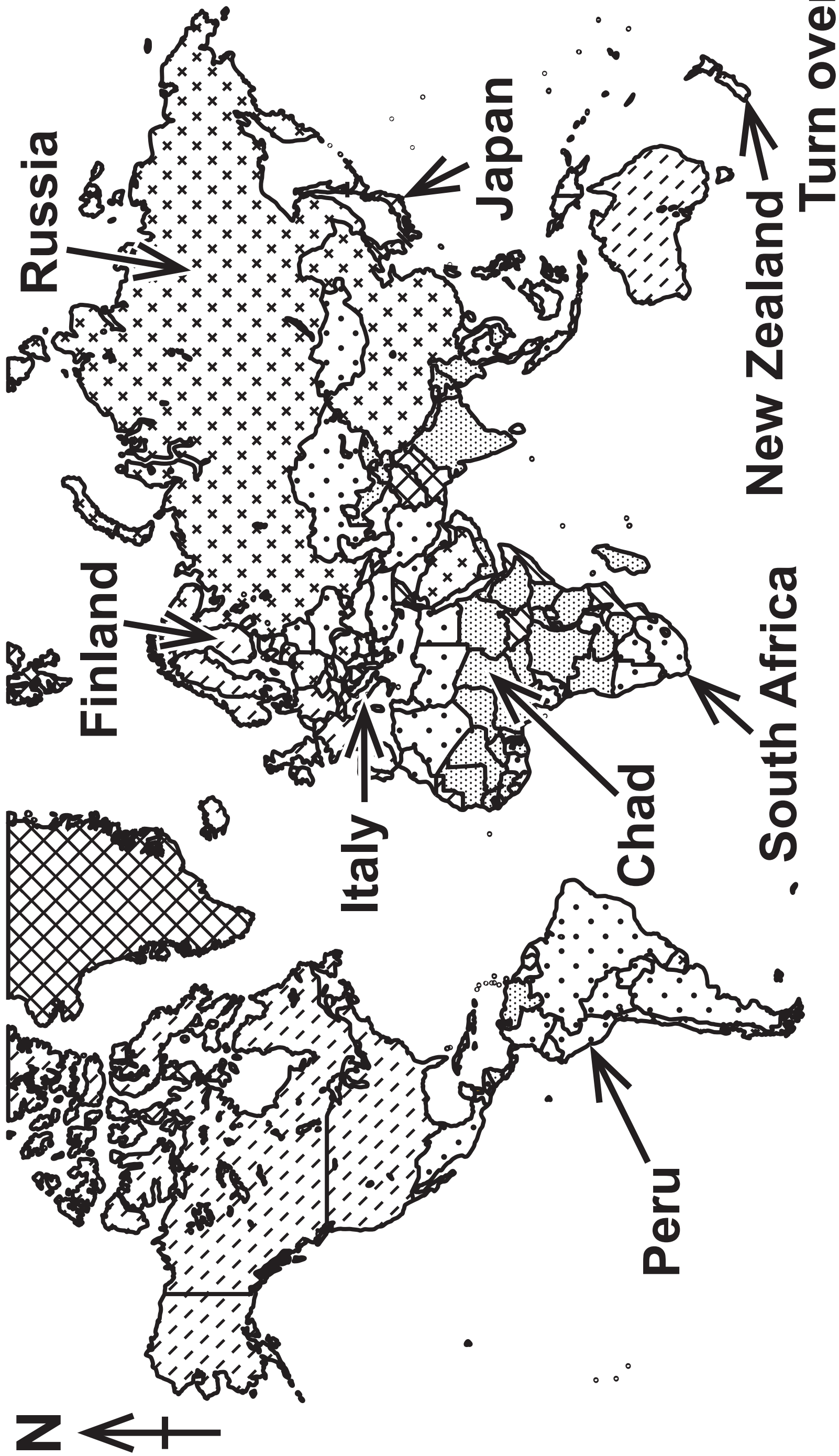
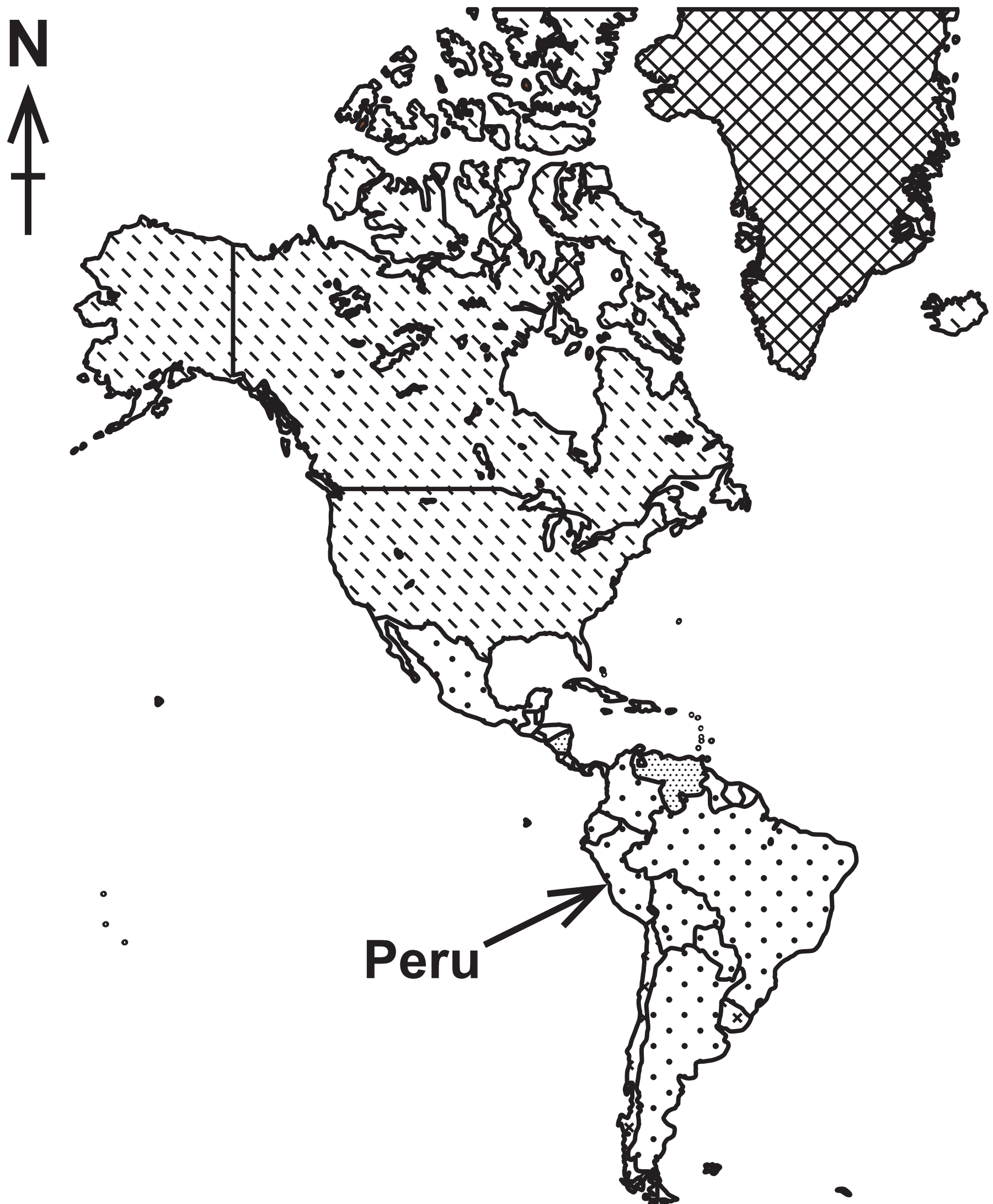


Figure 9a – Diagram Part 2 (Black and White)

Global Gross Domestic Product (GDP) per capita, 2021



Peru

Turn over

Figure 9a – Diagram Part 3 (Black and White)
Global Gross Domestic Product (GDP)

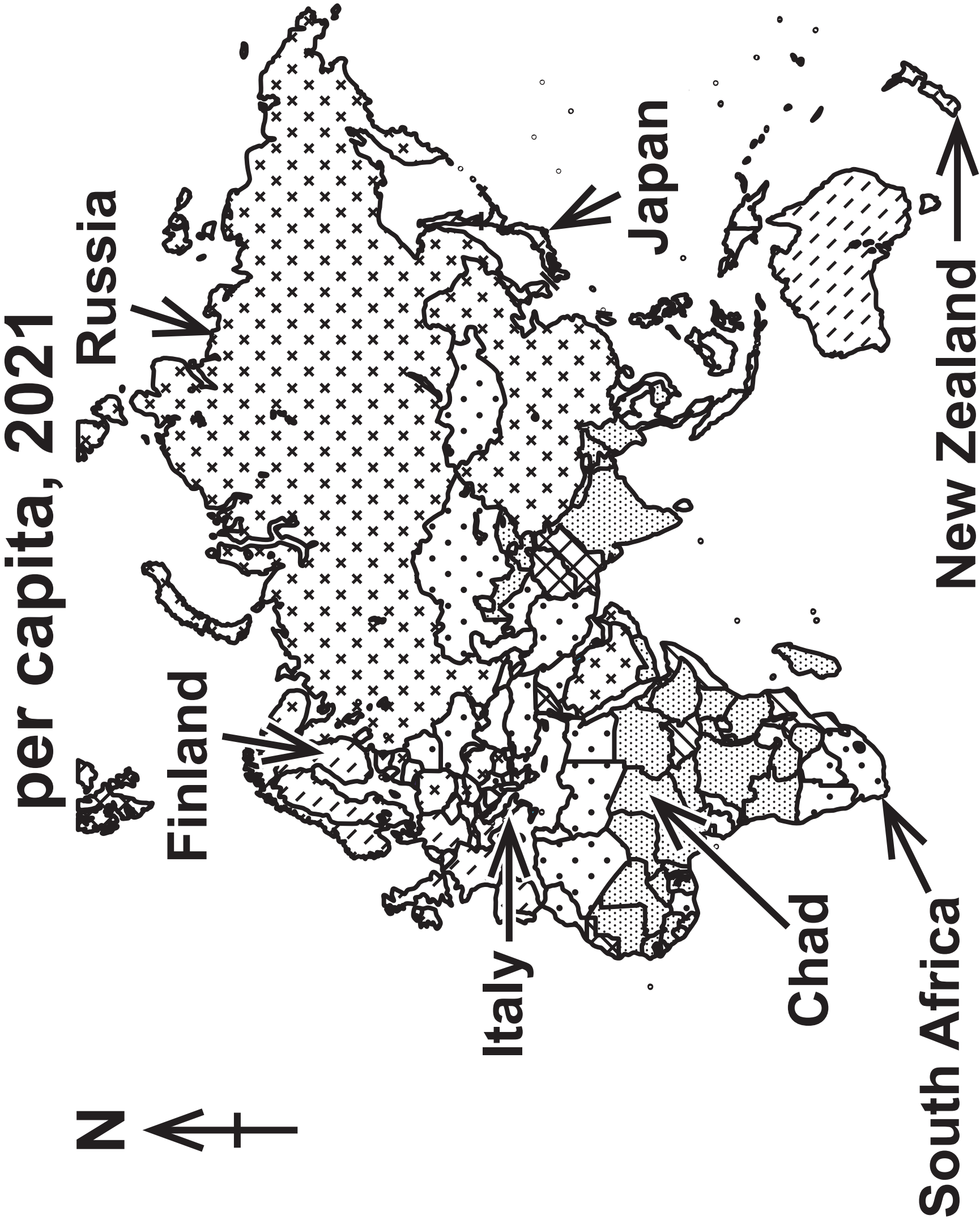


Figure 9b

Information about strategies for reducing the development gap

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

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

Solar Aid, NGO

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

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Figure 9b continued.

Government

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

Acknowledgements

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

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Figure 1b adapted from: <https://ourworldindata.org/energy/country/denmark>

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**Figure 3b adapted from:
<https://www.raconteur.net/infographics/8-ways-urban-demographics-are-changing/>**

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images/normal/18281.jpeg](https://cdn.statcdn.com/Infographic/images/normal/18281.jpeg)**

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Figure 9a adapted from:

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WEOWORLD](https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD)**