

**Paper Reference 4GE1/02**  
**Pearson Edexcel**  
**IGCSE (9–1)**

# **Geography**

## **Paper 2: Human Geography**

**Thursday 13 June 2019 – Morning**

# **Resource Book**

**Do not return this Resource Book with the Question Paper.**

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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.

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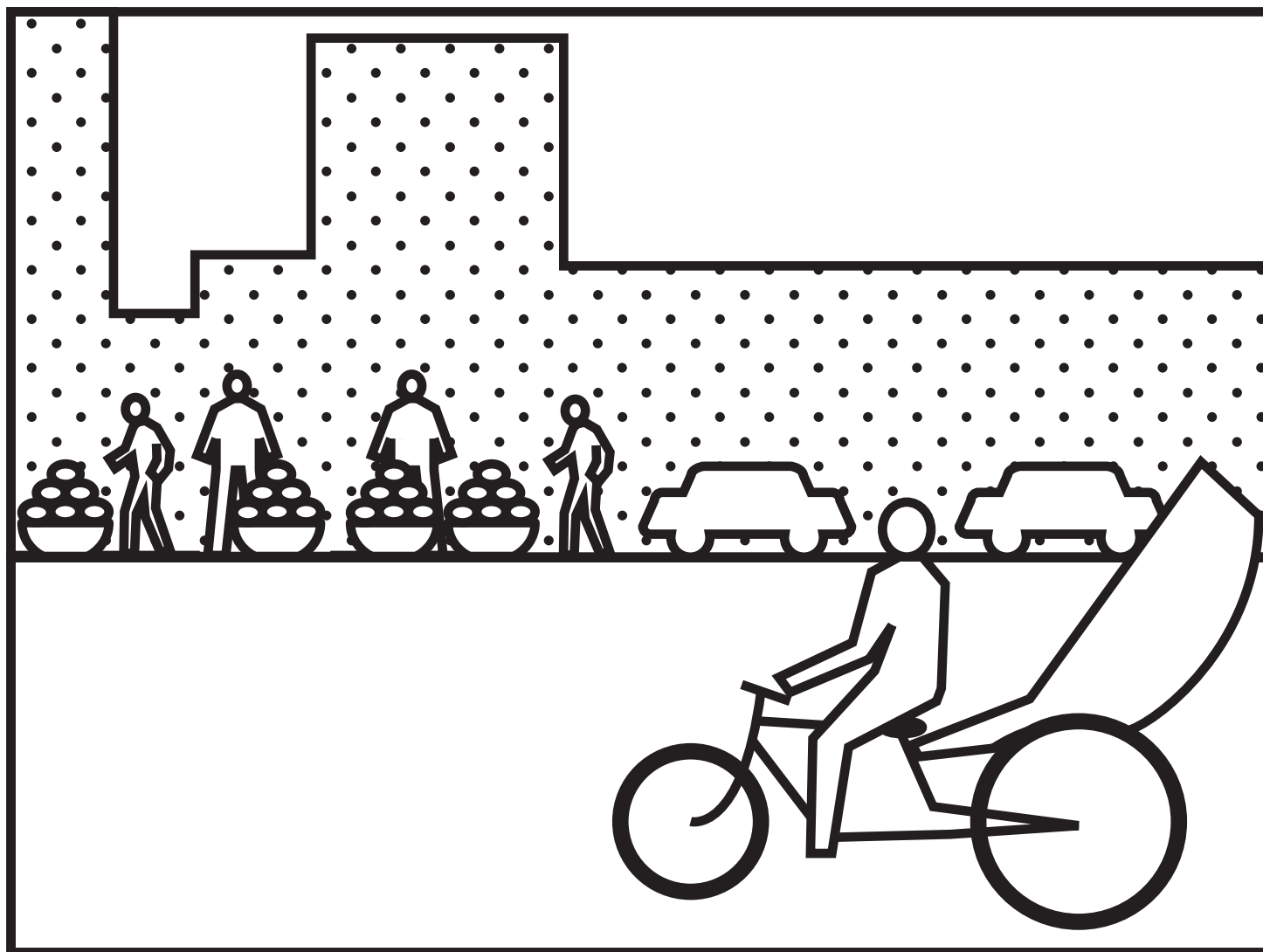
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Figure 1a

# Examples of informal employment in Bangladesh



Key:



Buildings



Cars



Large bowls of fruit



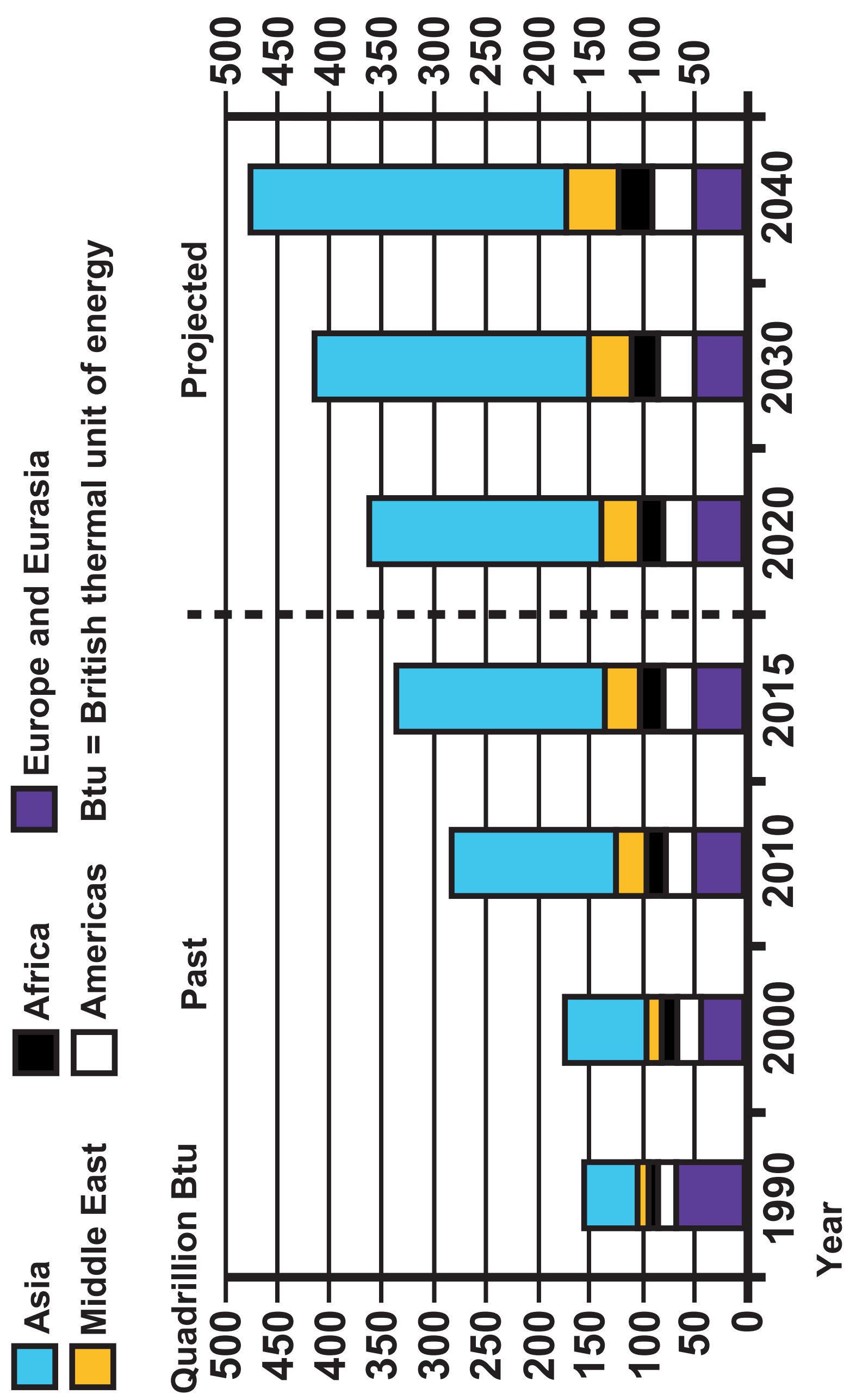
Man on a bike with passenger seat



People

(Source: © David Holmes)

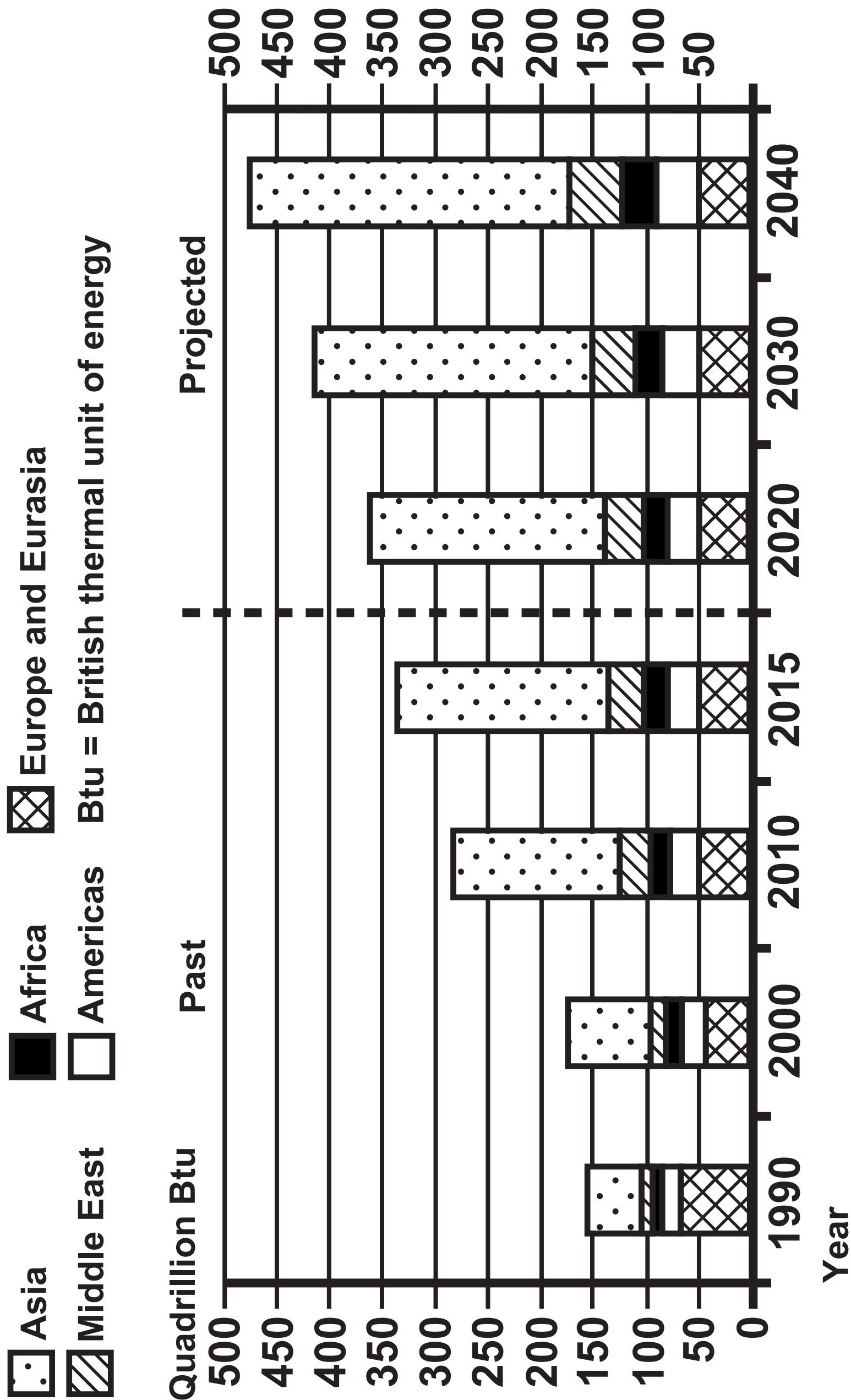
Figure 1b – Colour  
Past and projected energy consumption for selected regions



(Source: from <https://www.eia.gov/>)

Figure 1b – Black and White

Past and projected energy consumption for selected regions



(Source: from <https://www.eia.gov/>)

Figure 1c – Colour  
The Clark Fisher model

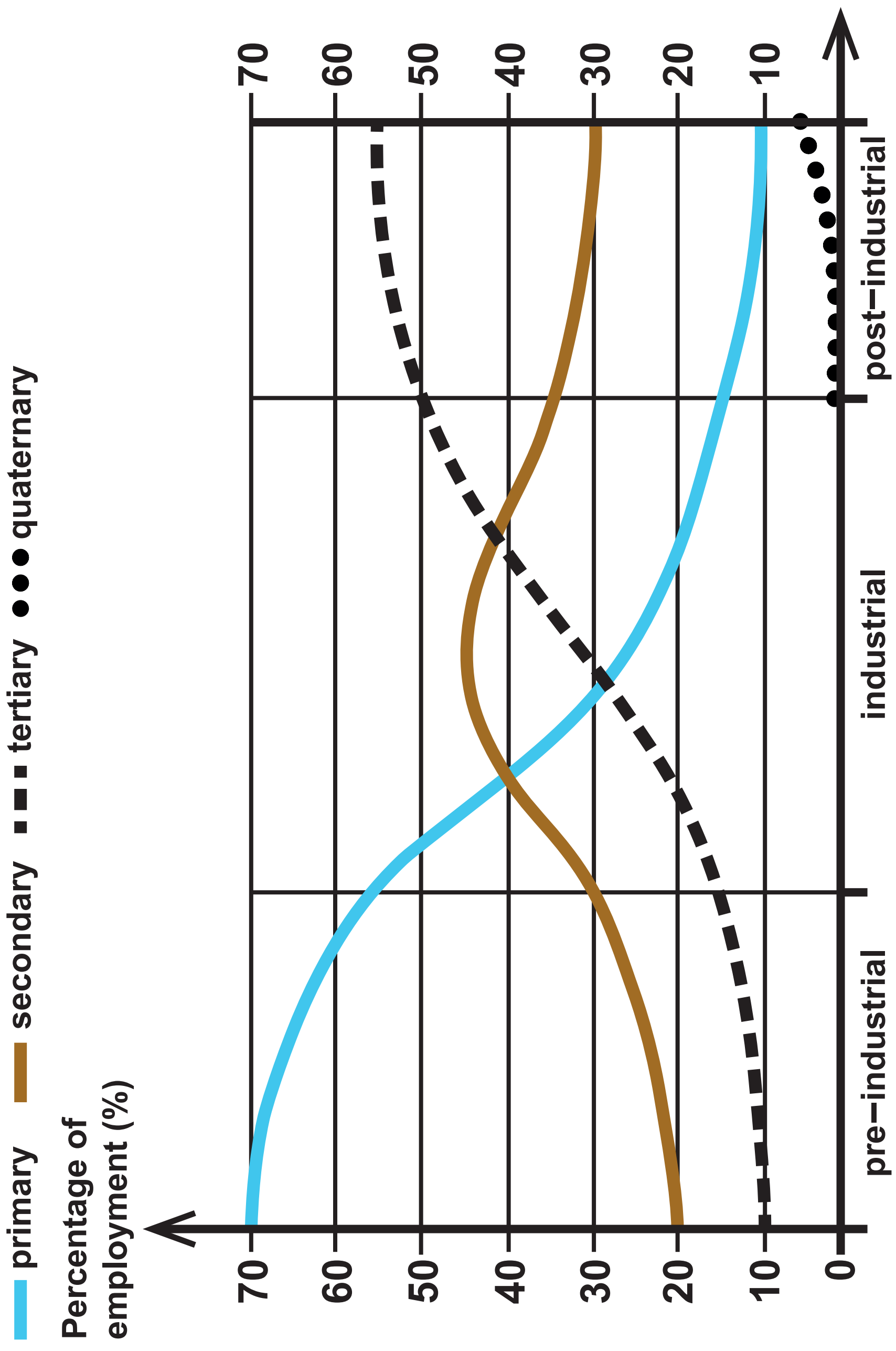


Figure 1c – Black and White  
The Clark Fisher model

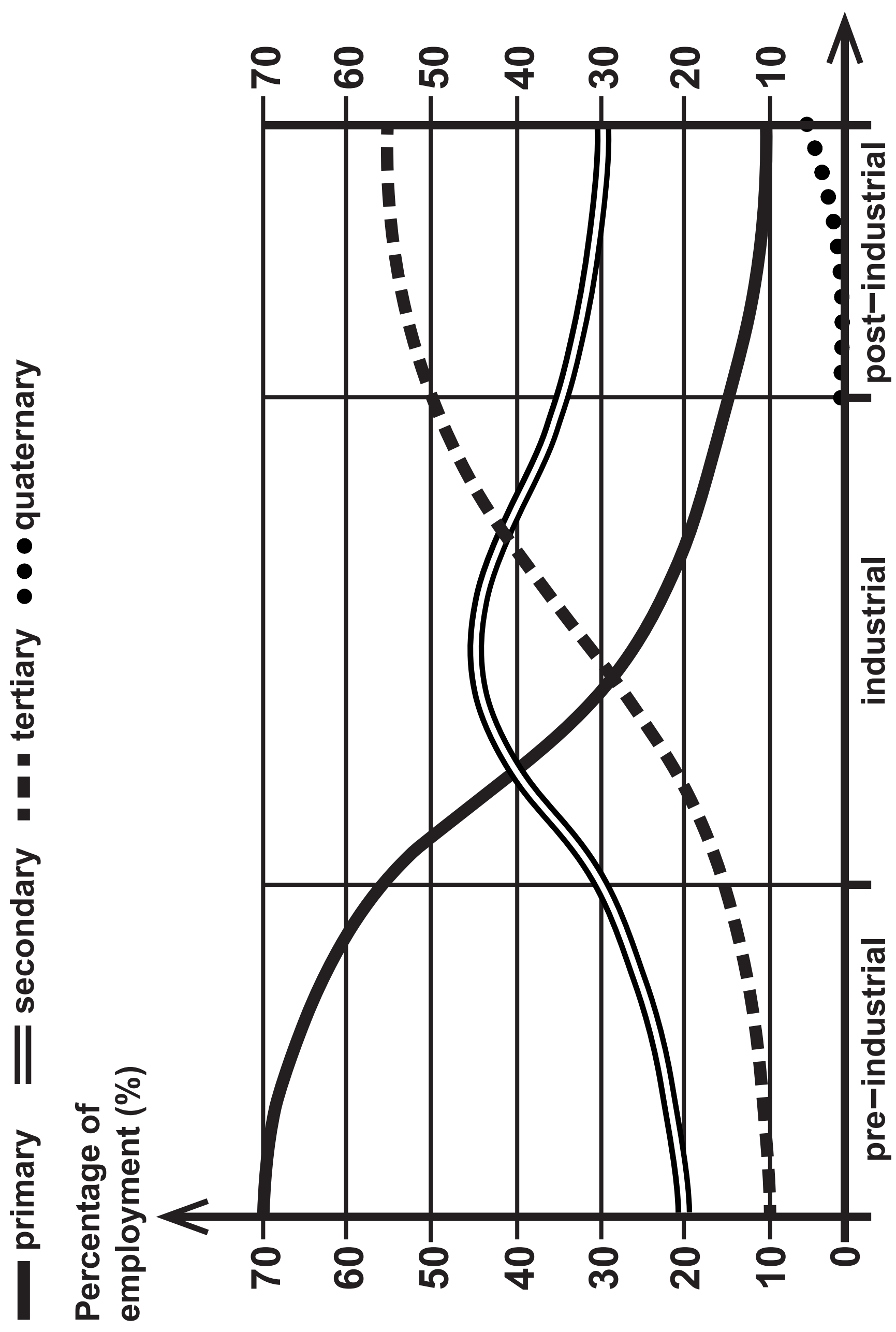
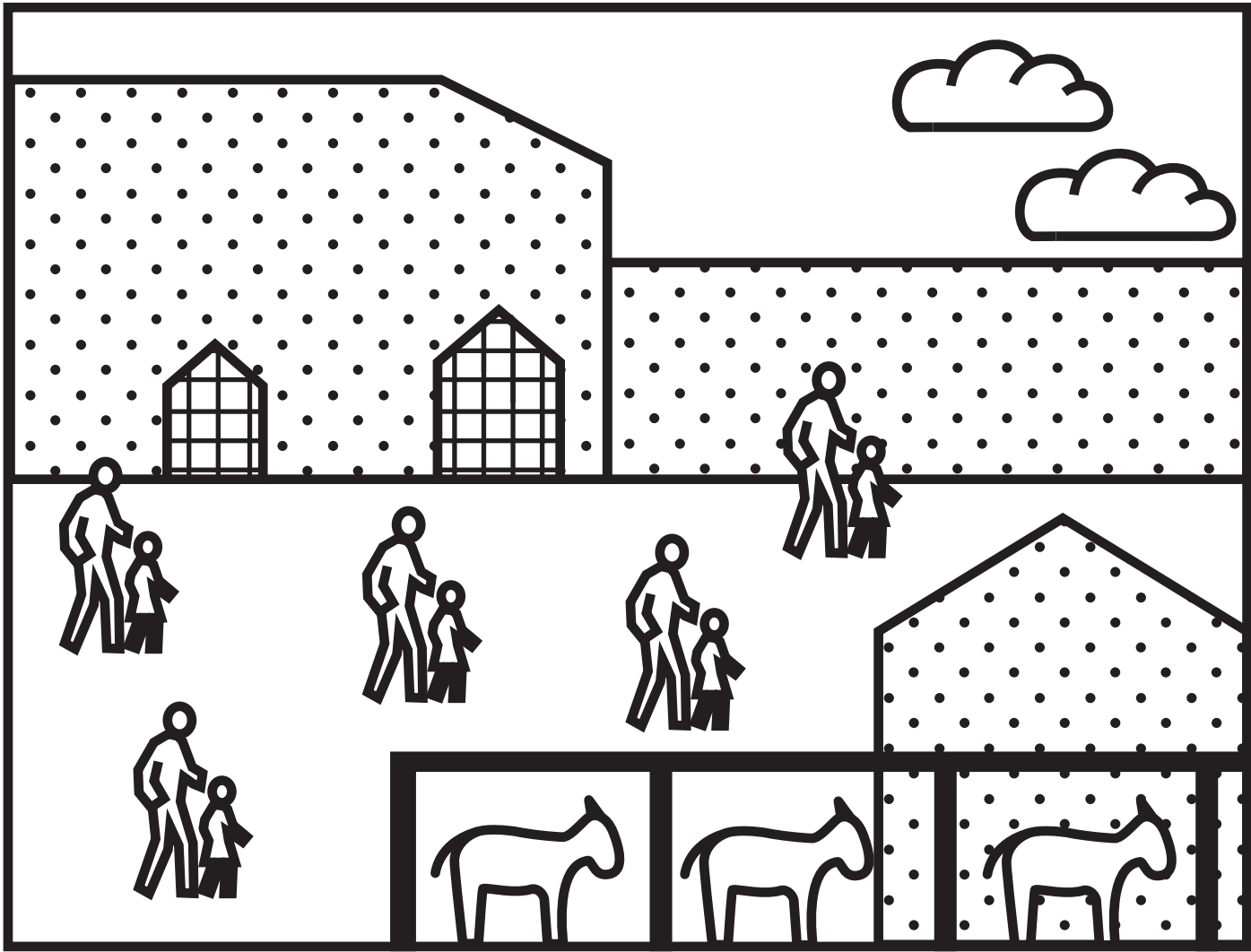




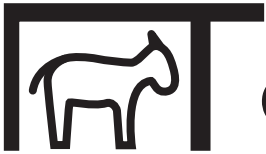
Figure 2a  
An example of arable farm diversification,  
south west England



Key:



People with children



Goats in a pen



Buildings



Play equipment



Clouds

(Source: © David Holmes)

Figure 2b

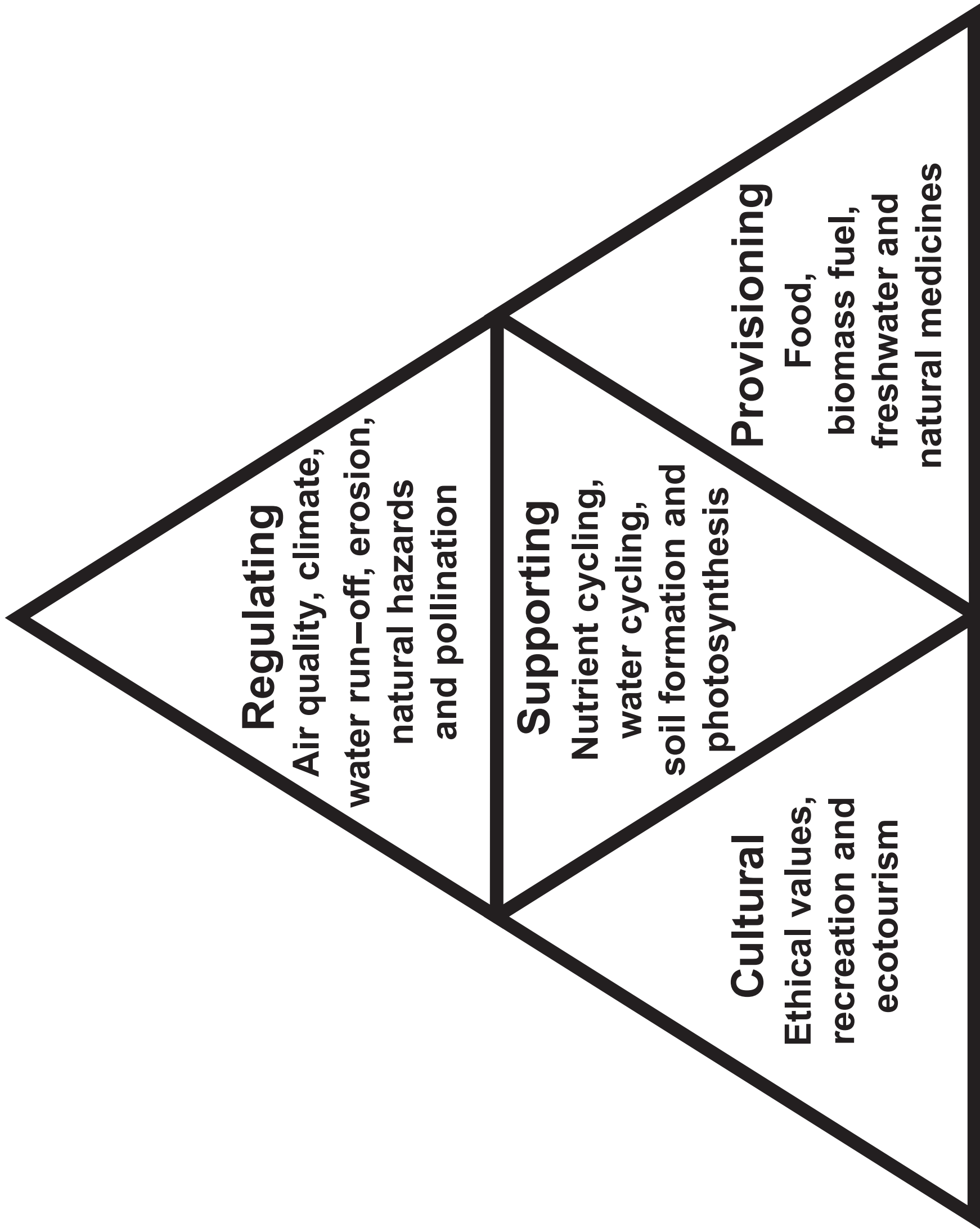
Changes in China’s grain production, 1949–2015

Year	Million tonnes of grain
1949	100
1978	300
1998	500
2015	621

(Source: © Reuters)

Figure 2c

Examples of natural ecosystems, goods and services

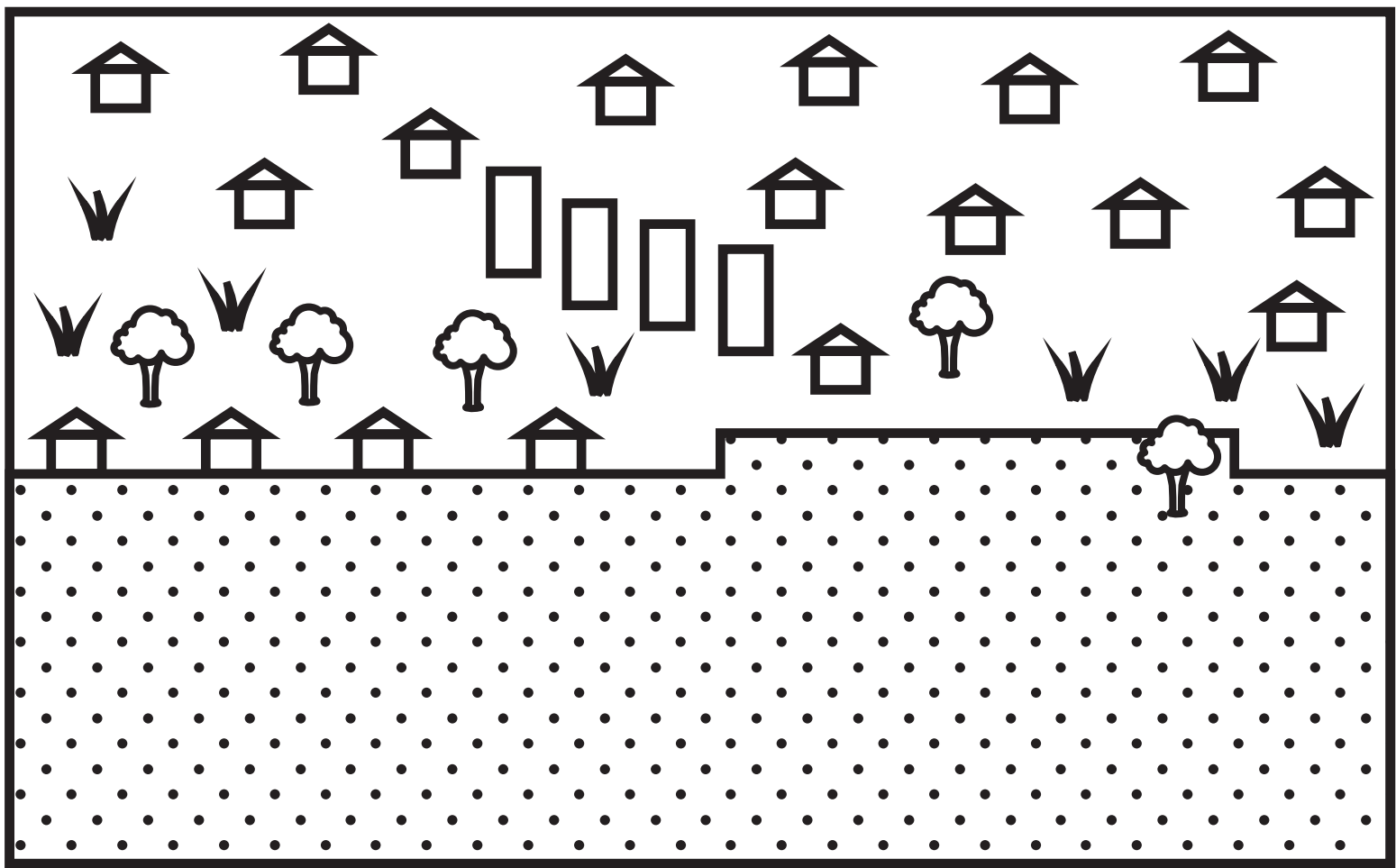


(Source: from <https://askabiologist.asu.edu/explore/biomes>)



Figure 3a

An urban area in part of Nairobi, Kenya



Key:

-  High density shanty housing       Houses       Flats       Grass       Trees

(Source: © David Holmes)

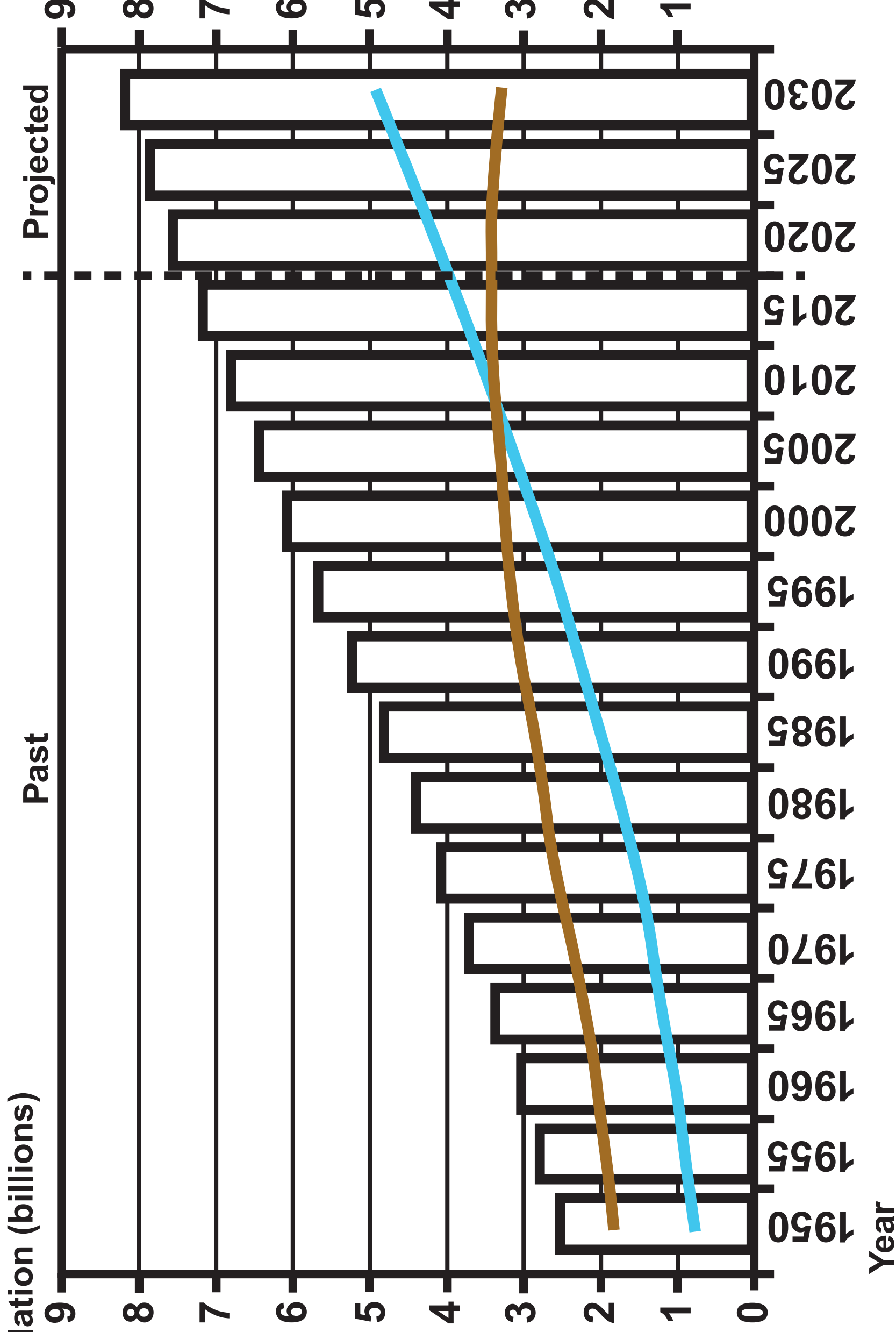
Figure 3b

## Six factors that can influence quality of life



# Changing global urban and rural population estimates: past and projected

█ Total world population 
 █ Urban world population 
 █ Rural world population

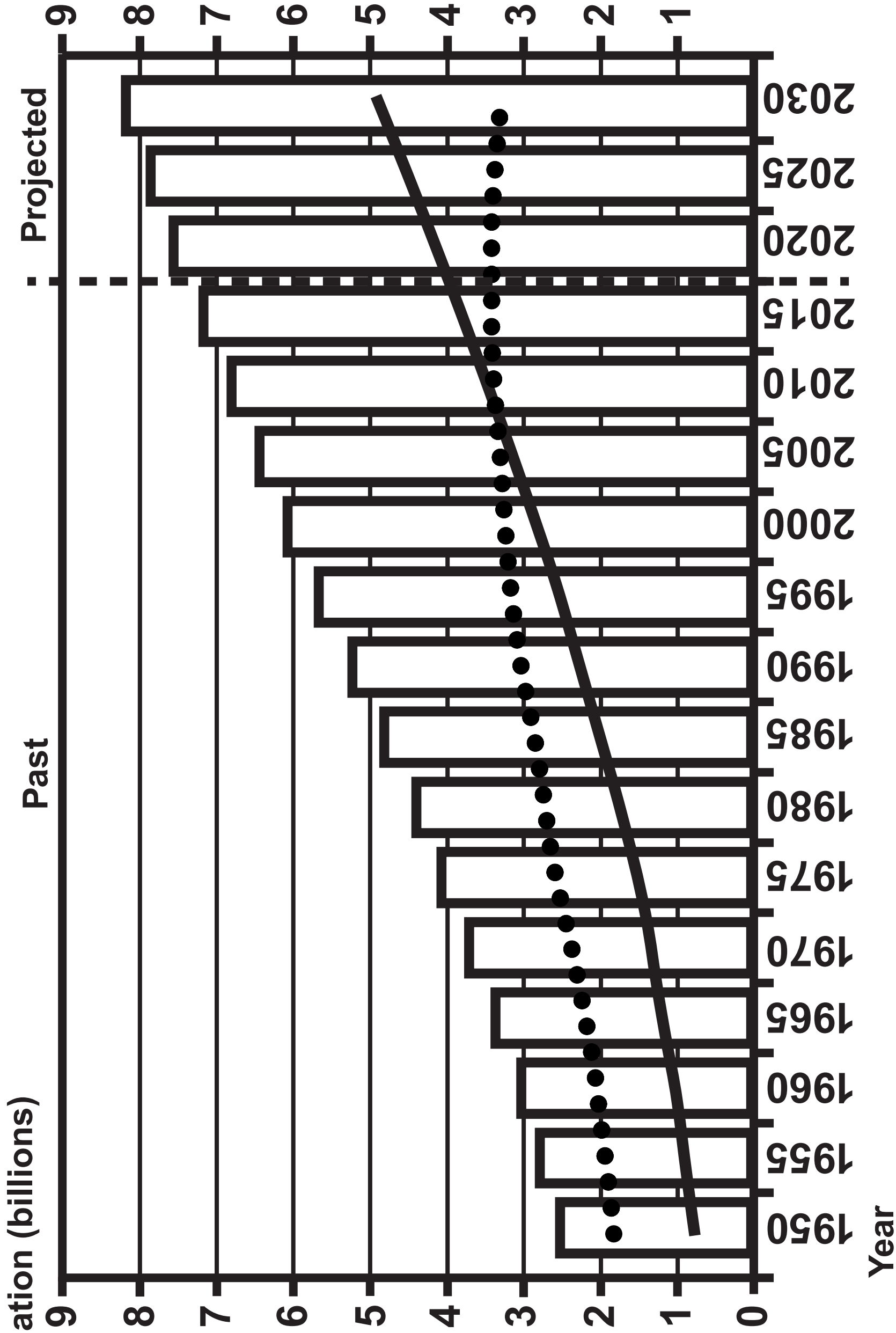


(Source: from <http://www.un.org/esa/population/publications/WUP2005/2005wup.htm>)

Figure 3c – Black and White

# Changing global urban and rural population estimates: past and projected

□ Total world population — Urban world population ● Rural world population



(Source: from <http://www.un.org/esa/population/publications/WUP2005/2005wup.htm>)

Figure 4a

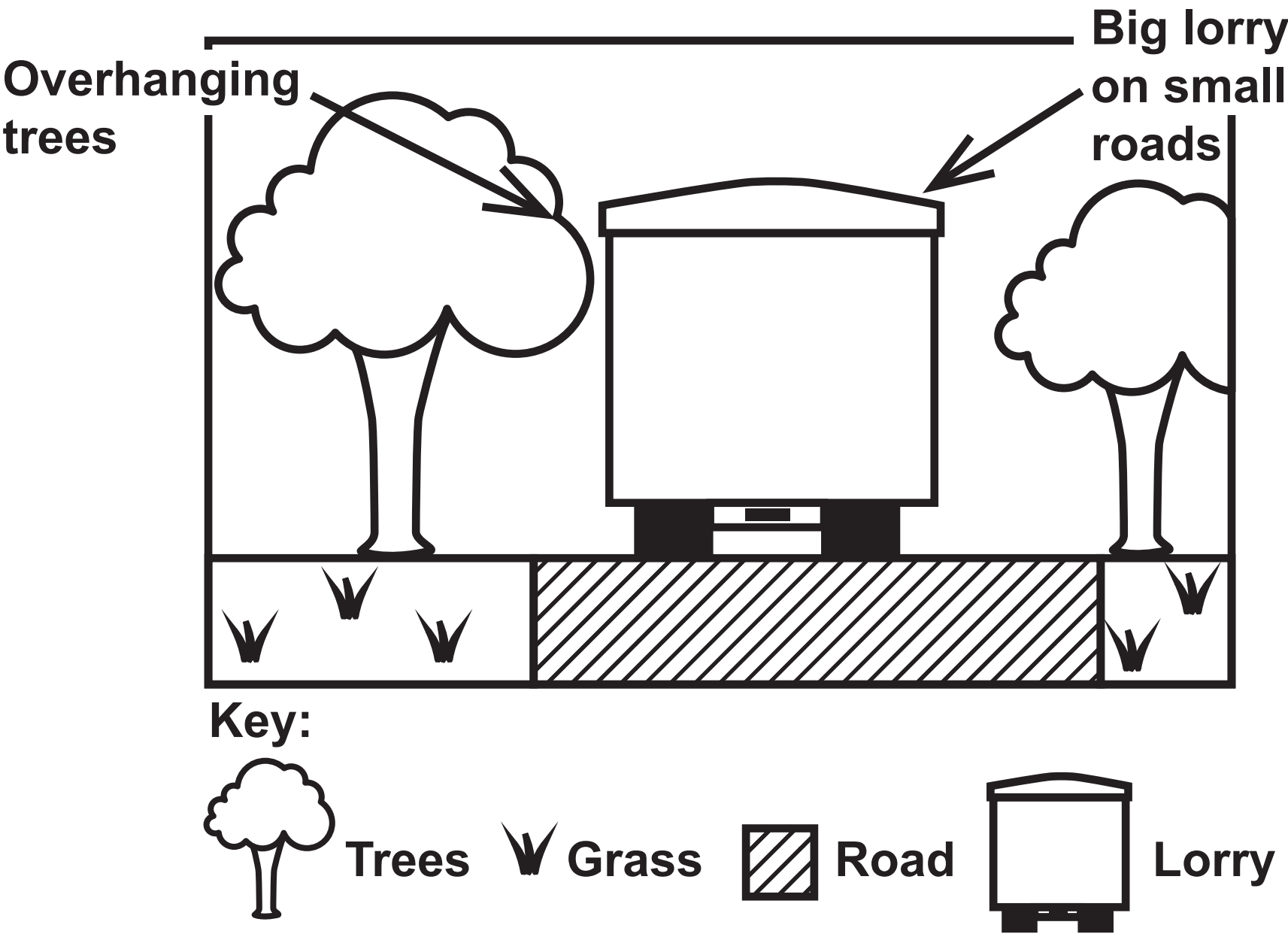
Results from a survey of people’s views on a proposed biomass power plant

Question	People’s views				Total
	Strongly disagree	Slight disagreement	Not sure	Slight agreement	
A				3	3
B				7	7
C	2	5	3		20
D	6	1	3		10
E	2	2	2	2	8
F		5	5		10
G	1	6	3		10
H			1	2	9



Figure 4b

Photographic results evidence lorry traffic on small roads



(Source: © Kumar Sriskandan / Alamy Stock Photo)

Figure 4c

## **Presentation of attitudes towards the biomass power plant**

**“I’m really happy that this energy development is planned as I hope to be able to get work at the power station.”**

**This has been pinned to the wall on a note.**

Figure 5a

Results from a survey of people’s views on a proposed tourist development

Question number	People’s views				Total
	Strongly disagree	Slight disagreement	Not sure	Slight agreement	
1				3	3
2				7	7
3	2	5	3		20
4	6	1	3		10
5	2	2	2	2	8
6		5	5		10
7	1	6	3		10
8			1	2	9



Figure 5b

# Photographic results evidence lorry traffic on small roads

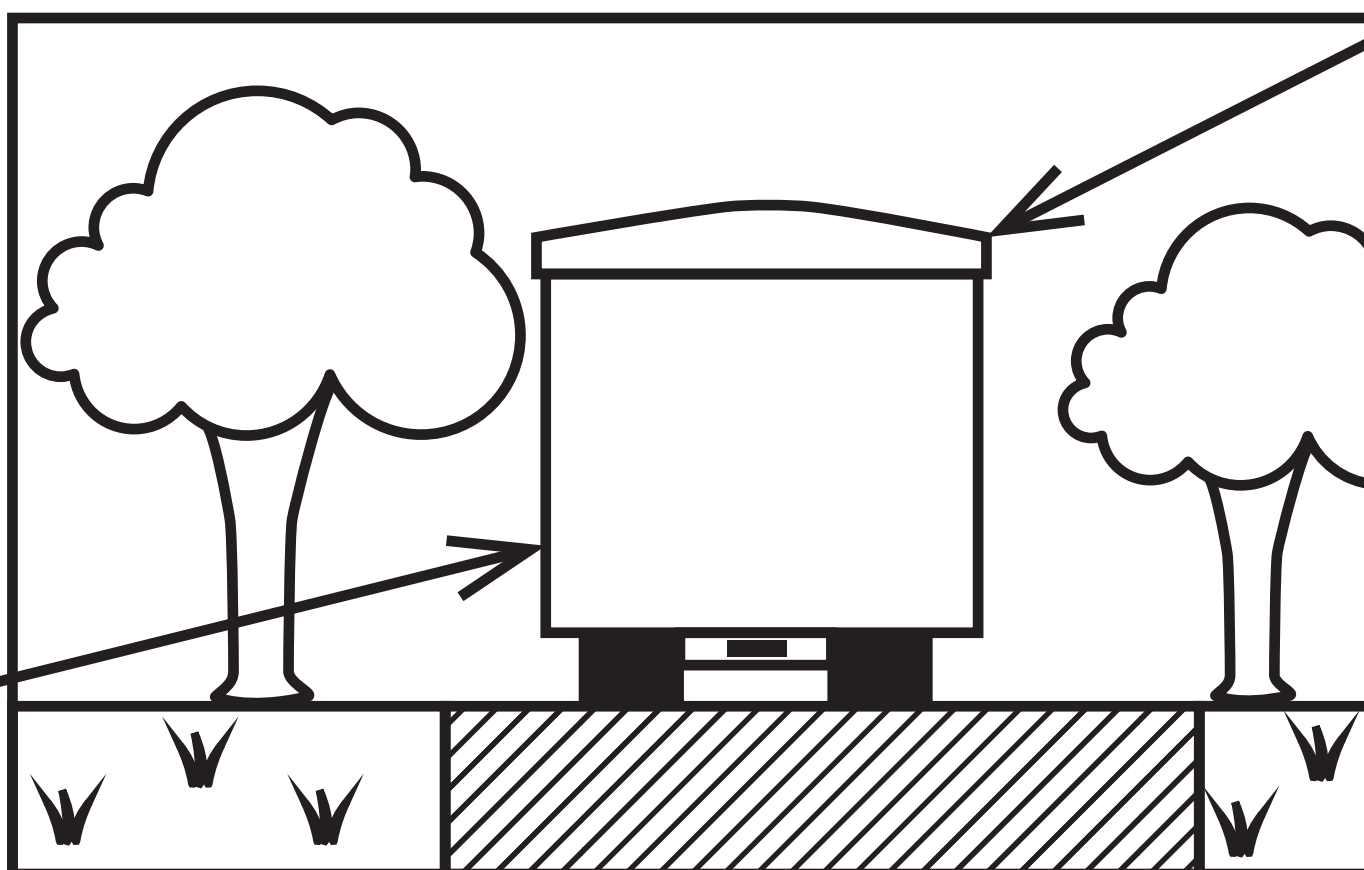
Lorry carrying building materials

Cover to contain building materials

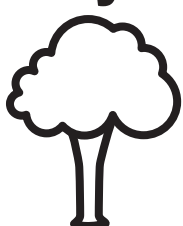


Cover to contain building materials

Lorry carrying building materials



Key:



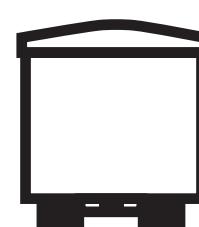
Trees



Grass



Road



Lorry

(Source: © Kumar Sriskandan / Alamy Stock Photo)

Figure 5c

## Presentation of attitudes towards the tourist development

**“I’m really happy that this tourist development is planned as I hope to be able to get work at the new resort.”**

**This has been pinned to the wall on a note.**

Figure 6a

Results from a survey of people’s views on a new waste incinerator

Question number	People’s views				Total
	Strongly disagree	Slight disagreement	Not sure	Slight agreement	
1				3	3
2				7	7
3	2	5	3		20
4	6	1	3		10
5	2	2	2	2	8
6		5	5		10
7	1	6	3		10
8			1	2	9



Figure 6b

Photographic results evidence lorry traffic on small roads

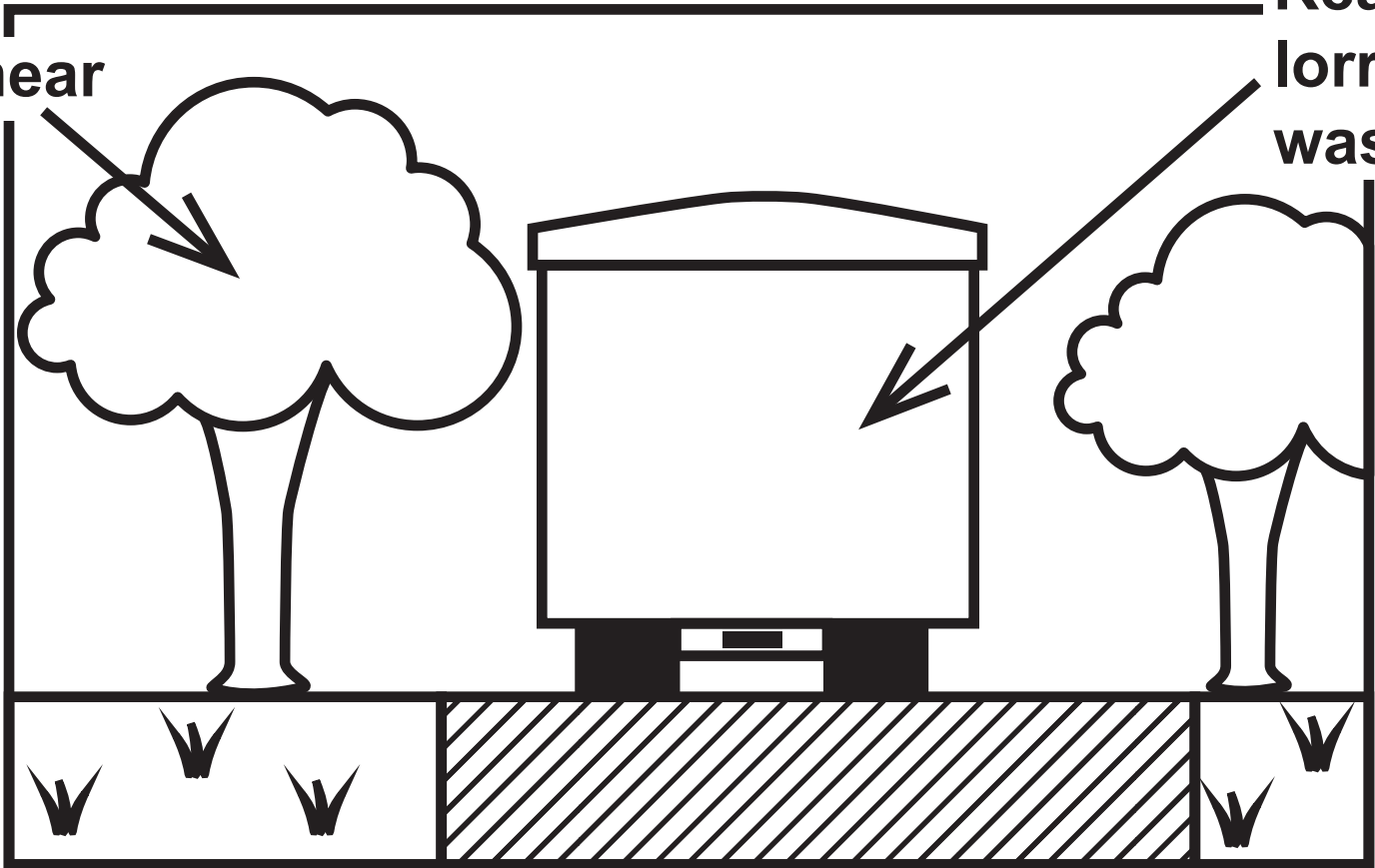
Tree near road

Rear view of lorry carrying waste



Tree near road

Rear view of lorry carrying waste



Key:



Trees



Grass



Road



Lorry

(Source: © Kumar Sriskandan / Alamy Stock Photo)

Figure 6c

## **Presentation of attitudes towards the waste incinerator**

**“I’m really unhappy that this development is planned as I worry about the noise and air pollution.”**

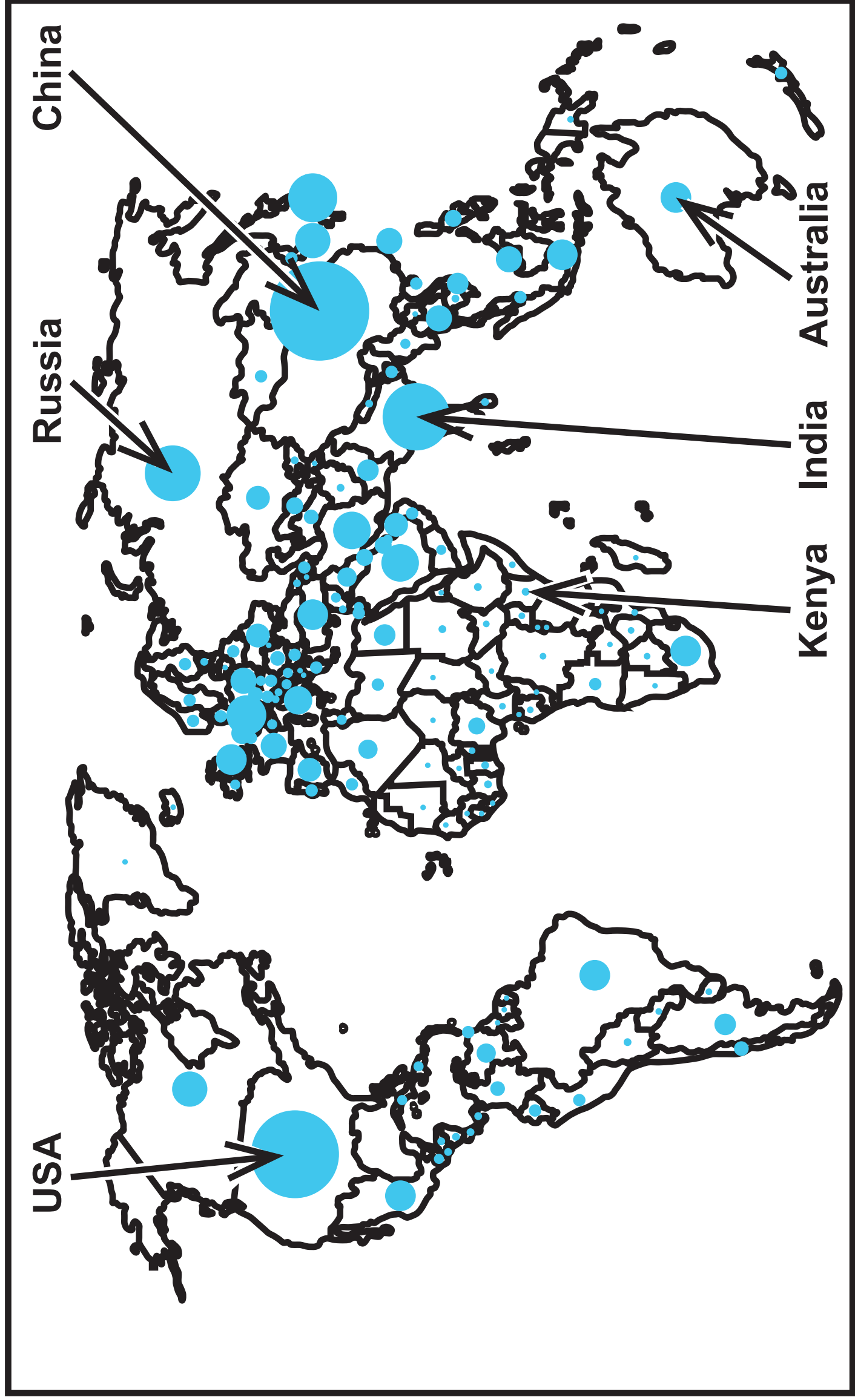
**This has been pinned to the wall on a note.**

Figure 7a – Colour

Map of global CO<sub>2</sub> emissions per country in 2016 (carbon footprint)



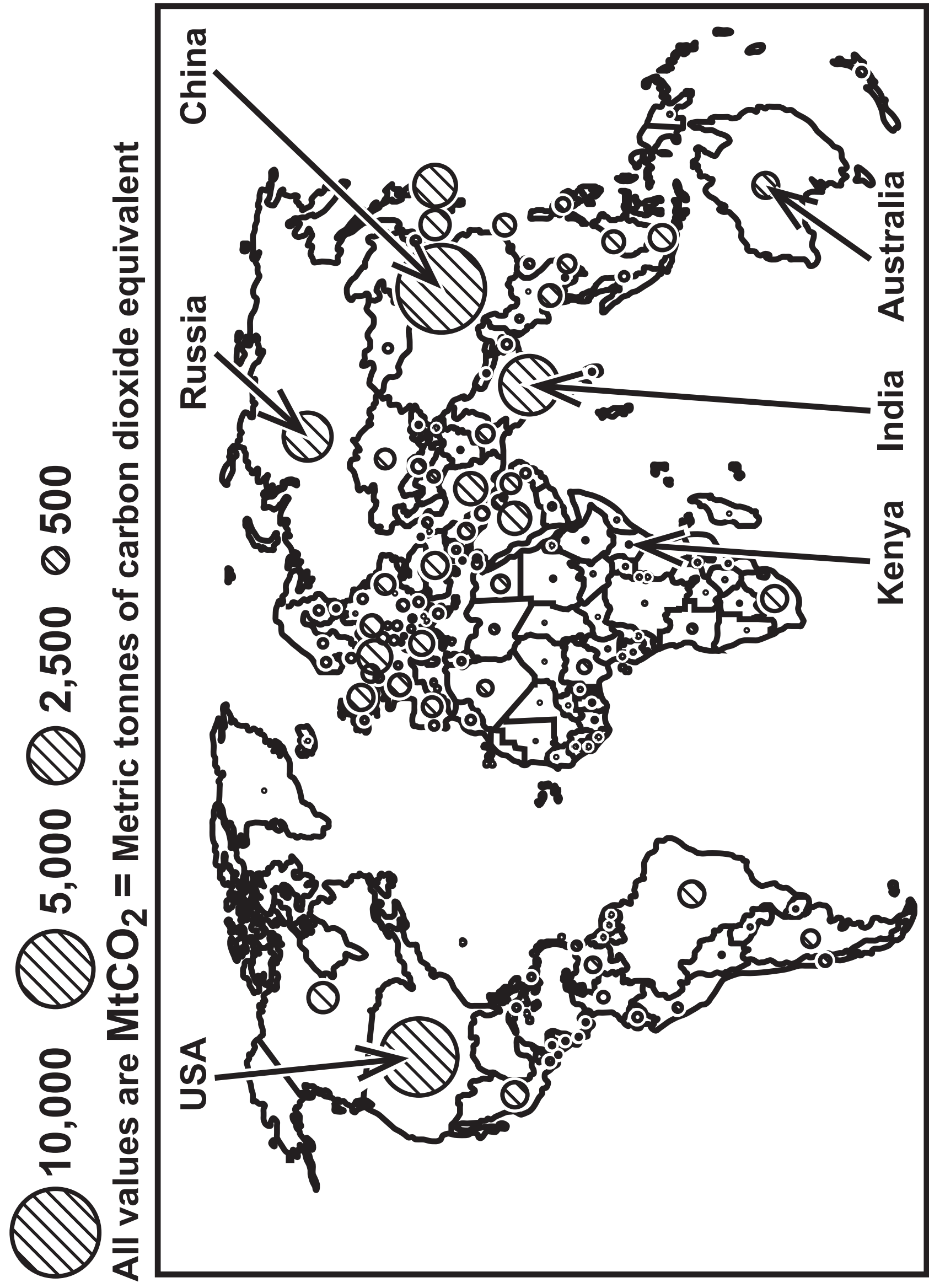
All values are MtCO<sub>2</sub> = Metric tonnes of carbon dioxide equivalent



(Source: from <http://www.globalcarbonatlas.org/en/CO2-emissions>)

Figure 7a – Black and White

Map of global CO<sub>2</sub> emissions per country in 2016 (carbon footprint)



(Source: from <http://www.globalcarbonatlas.org/en/CO2-emissions>)

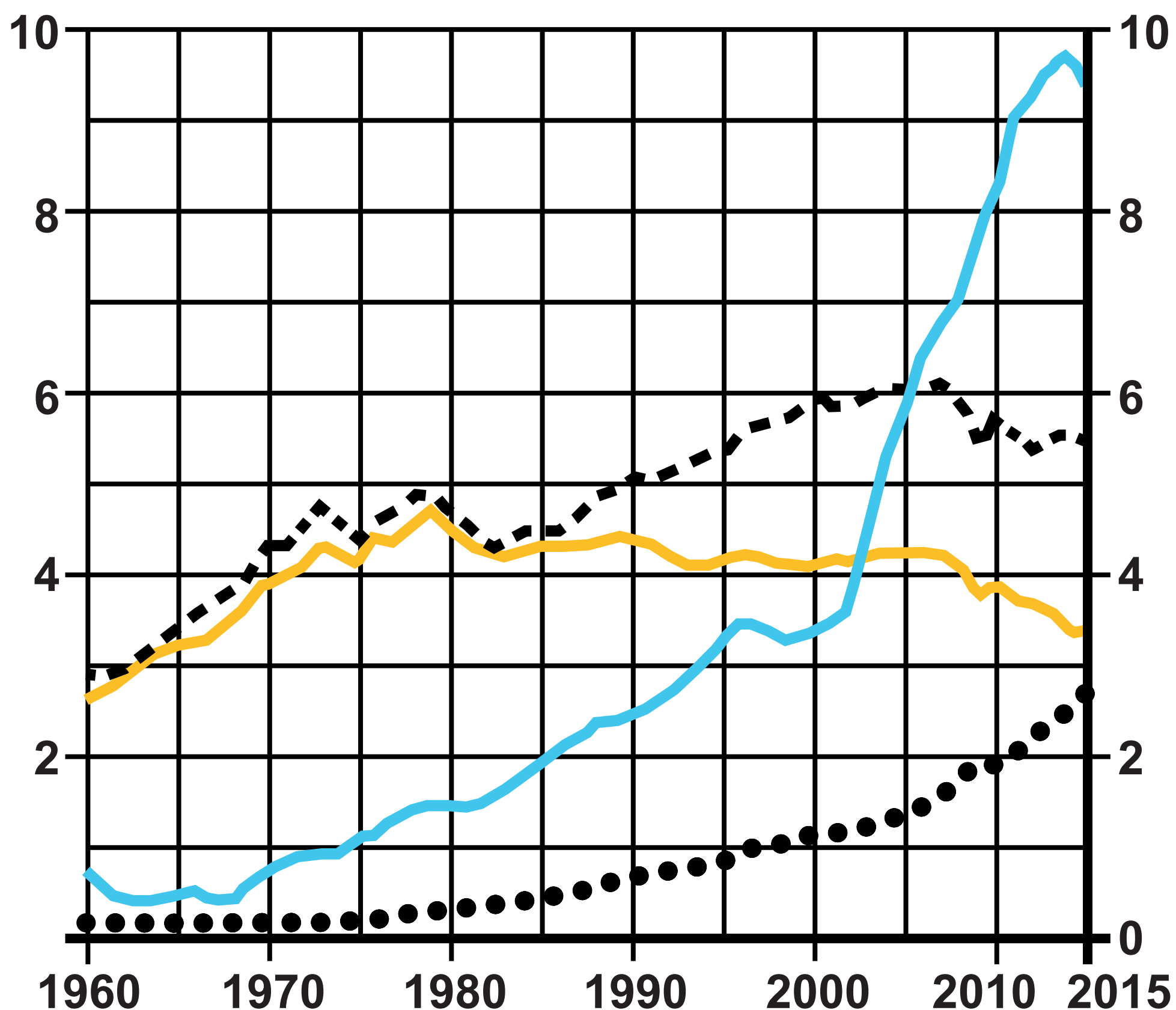


Figure 7b – Colour

## CO<sub>2</sub> emissions (gigatonnes) for selected countries and regions, 1960–2015

— China    - - - US    — EU    ••• India

CO<sub>2</sub> emissions  
(gigatonnes)



(Source: from <https://www.economist.com/blogs/graphicdetail/2015/12/climate-change>)

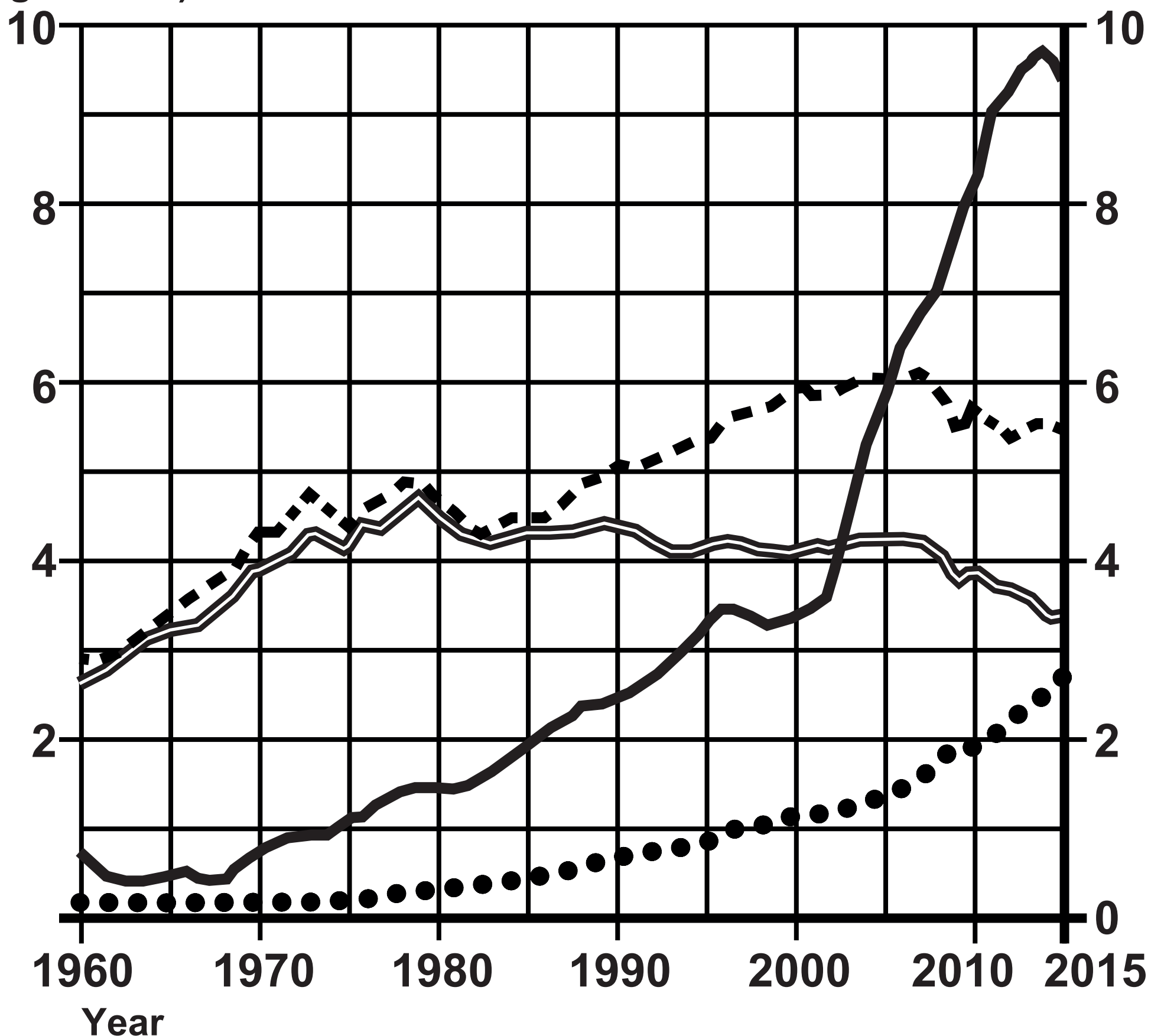


Figure 7b – Black and White

## CO<sub>2</sub> emissions (gigatonnes) for selected countries and regions, 1960–2015

— China    - - - US    = = = EU    ●●● India

CO<sub>2</sub> emissions  
(gigatonnes)



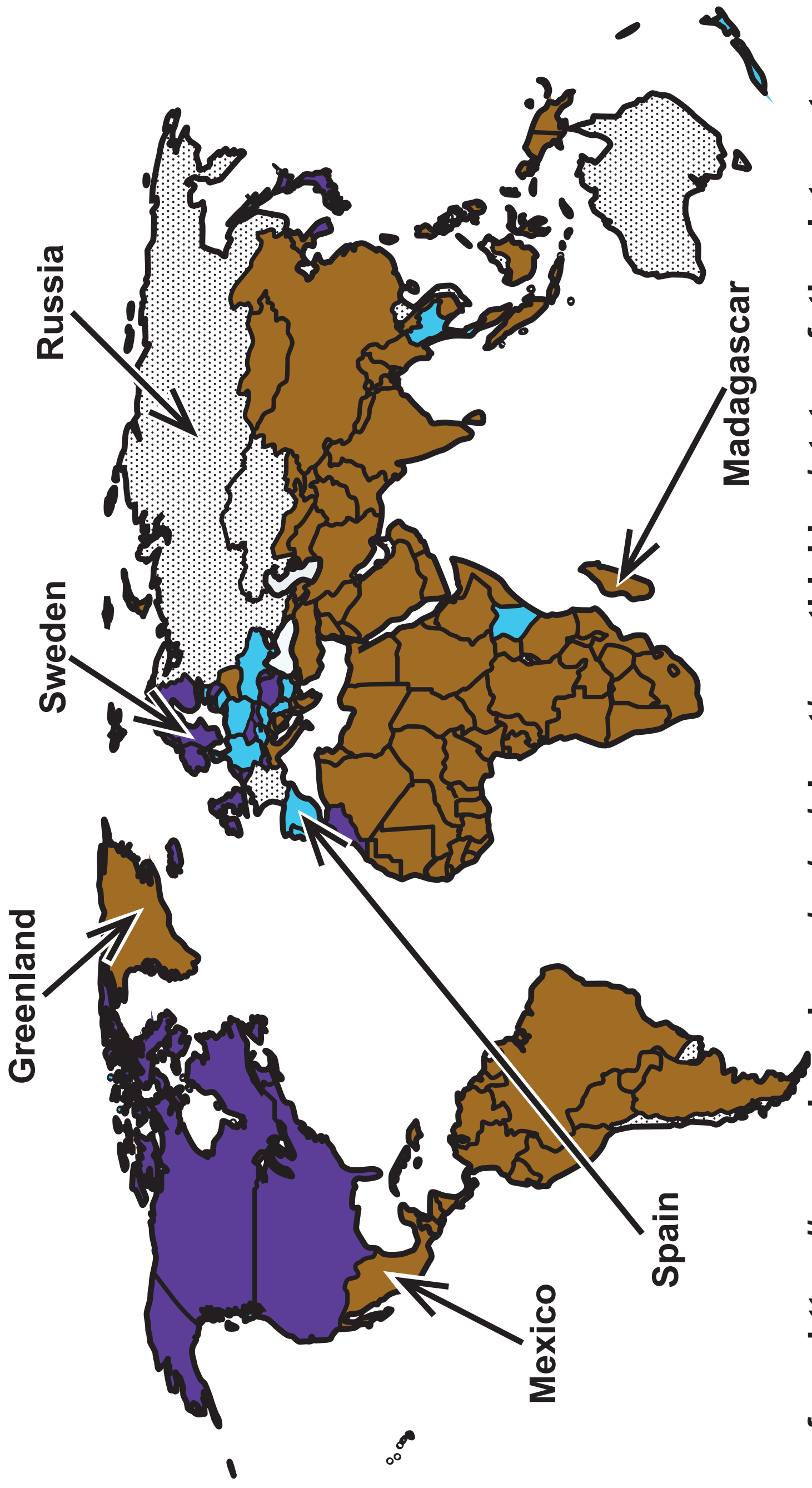
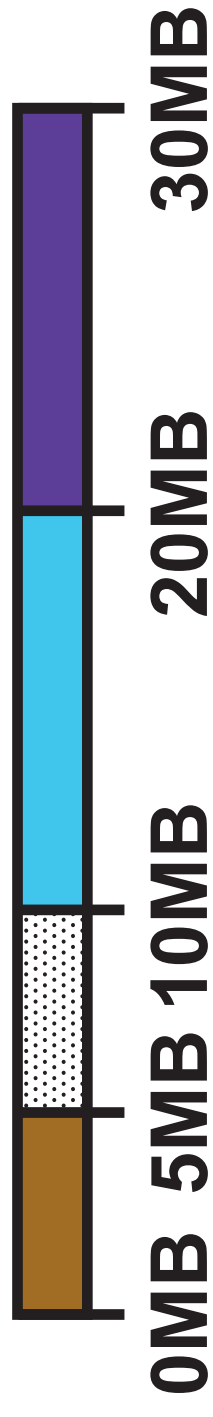
(Source: from <https://www.economist.com/blogs/graphicdetail/2015/12/climate-change>)

Figure 7c

Selected human activities as drivers of climate change

Human activities	Drivers (causes) of climate change
Air travel	Fossil fuel combustion from increasing global air travel produces CO <sub>2</sub> and nitrous dioxide.
Livestock farming	Cows and sheep produce large amounts of methane when they digest their food.
Industry	Energy is used in both the making and distribution of manufactured goods. These have a high global carbon footprint.
Electrical energy consumption	Global electricity consumption has risen from increasing wealth and changes in people’s lifestyles. A high proportion of electricity is produced from non–renewable sources.
Deforestation	Forests help balance gases in the atmosphere. Deforestation upsets this process, releasing more CO <sub>2</sub> into the atmosphere.

## Average global internet speeds Megabytes (MB/sec)



(Source: from <https://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/state-of-the-internet-connectivity-visualization.jsp>)

Figure 8a – Colour (Part 1)

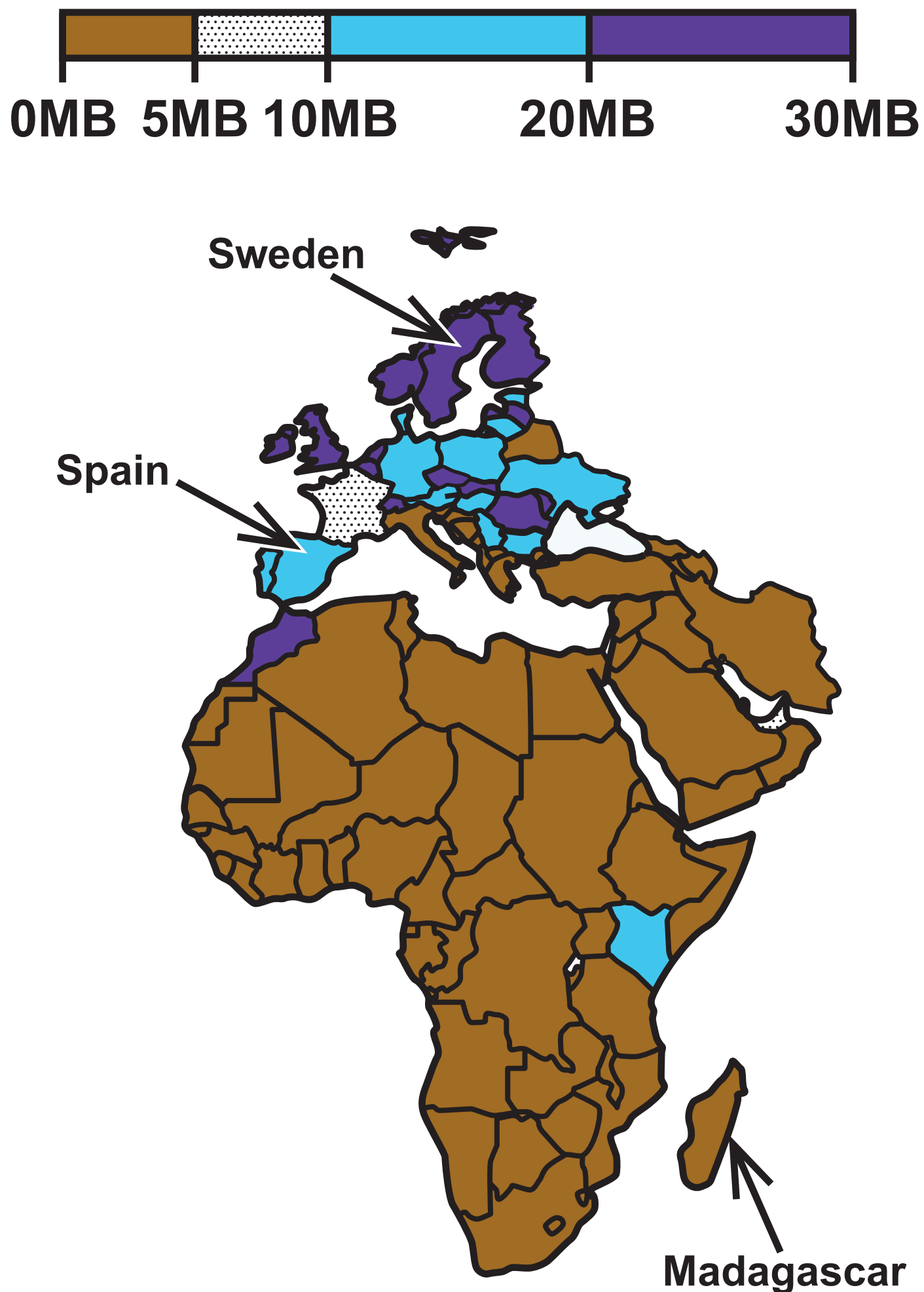
## Average global internet speeds

Megabytes (MB/sec)



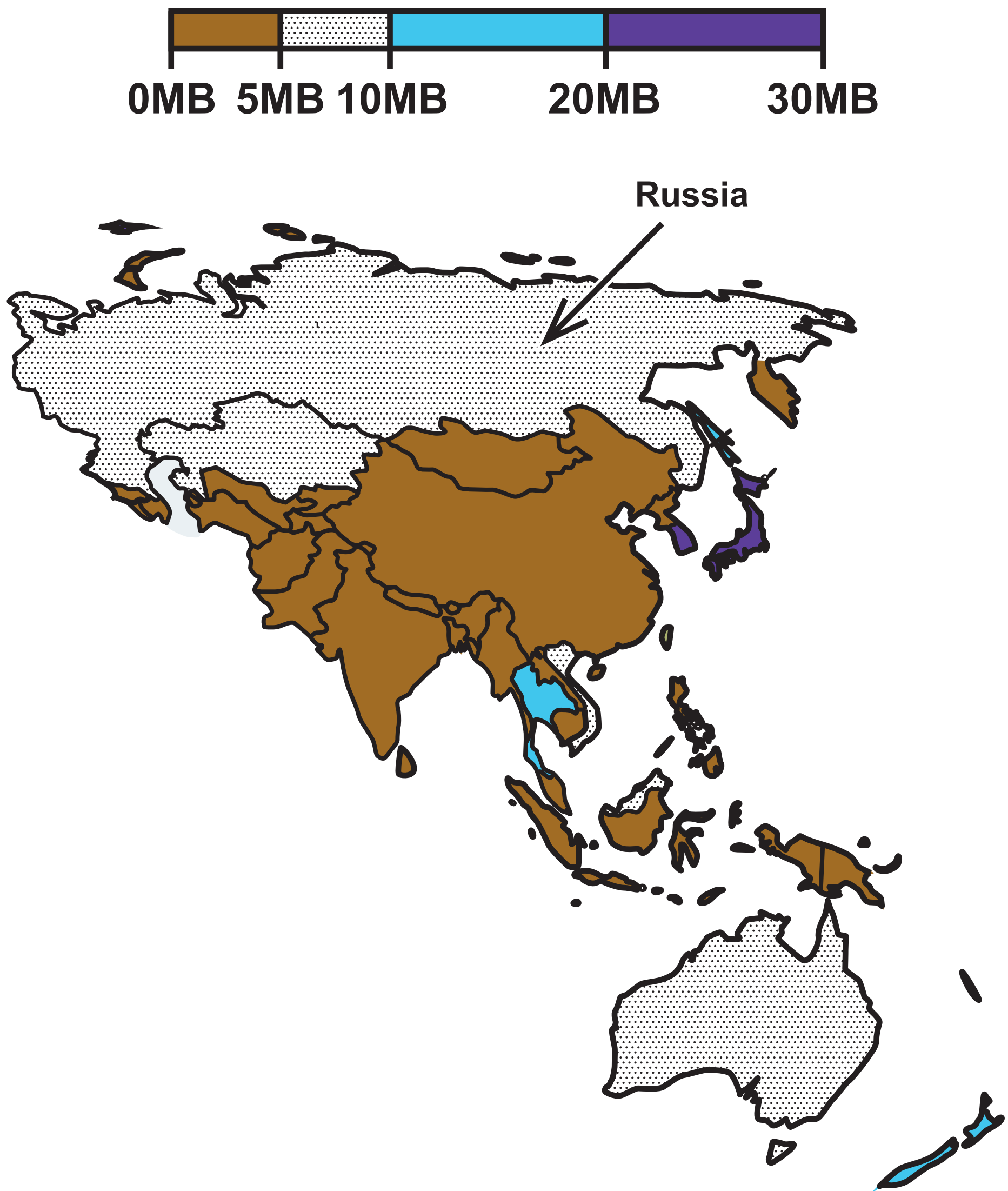
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Figure 8a – Colour (Part 2)  
Average global internet speeds  
Megabytes (MB/sec)



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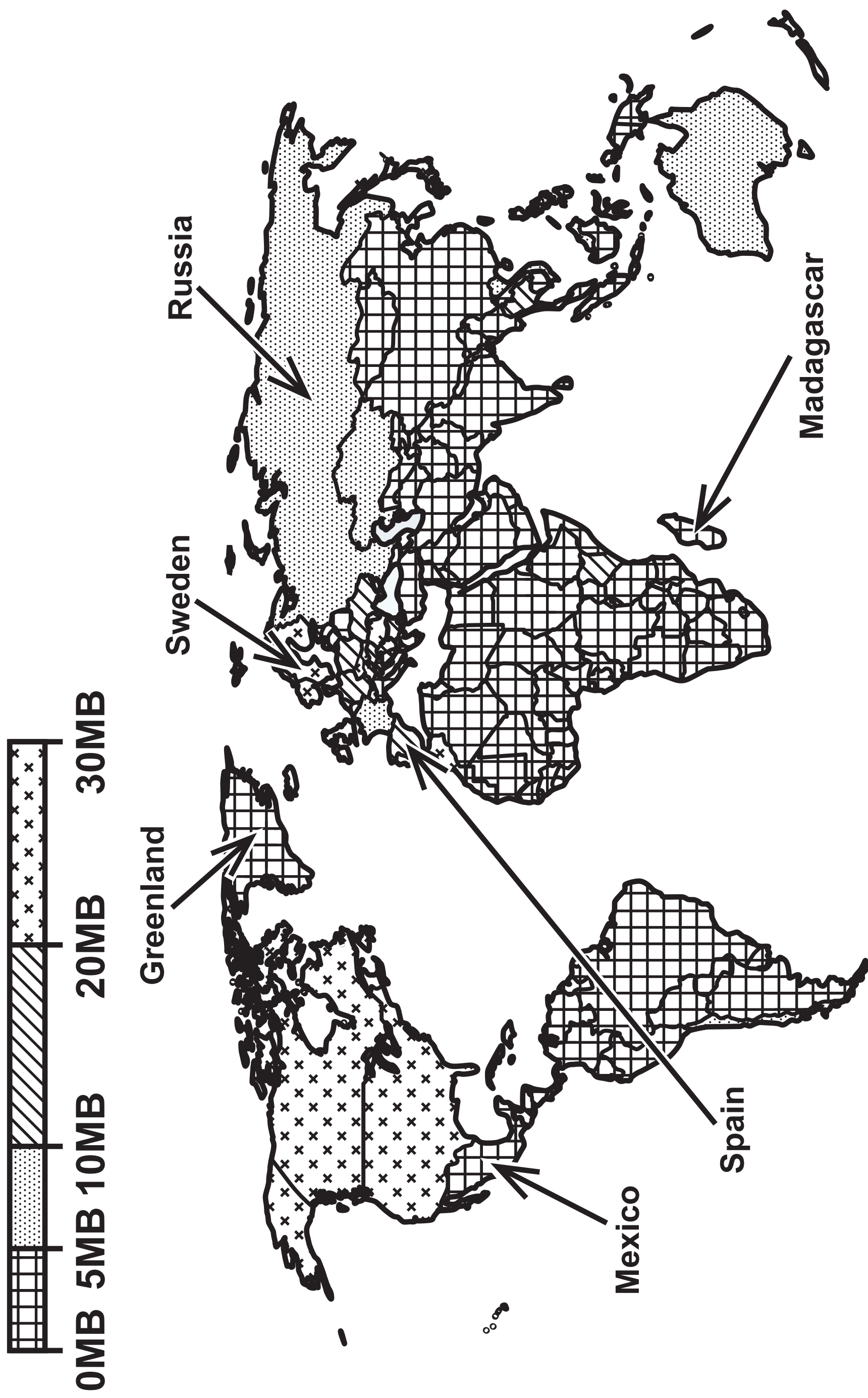
Figure 8a – Colour (Part 3)  
Average global internet speeds  
Megabytes (MB/sec)



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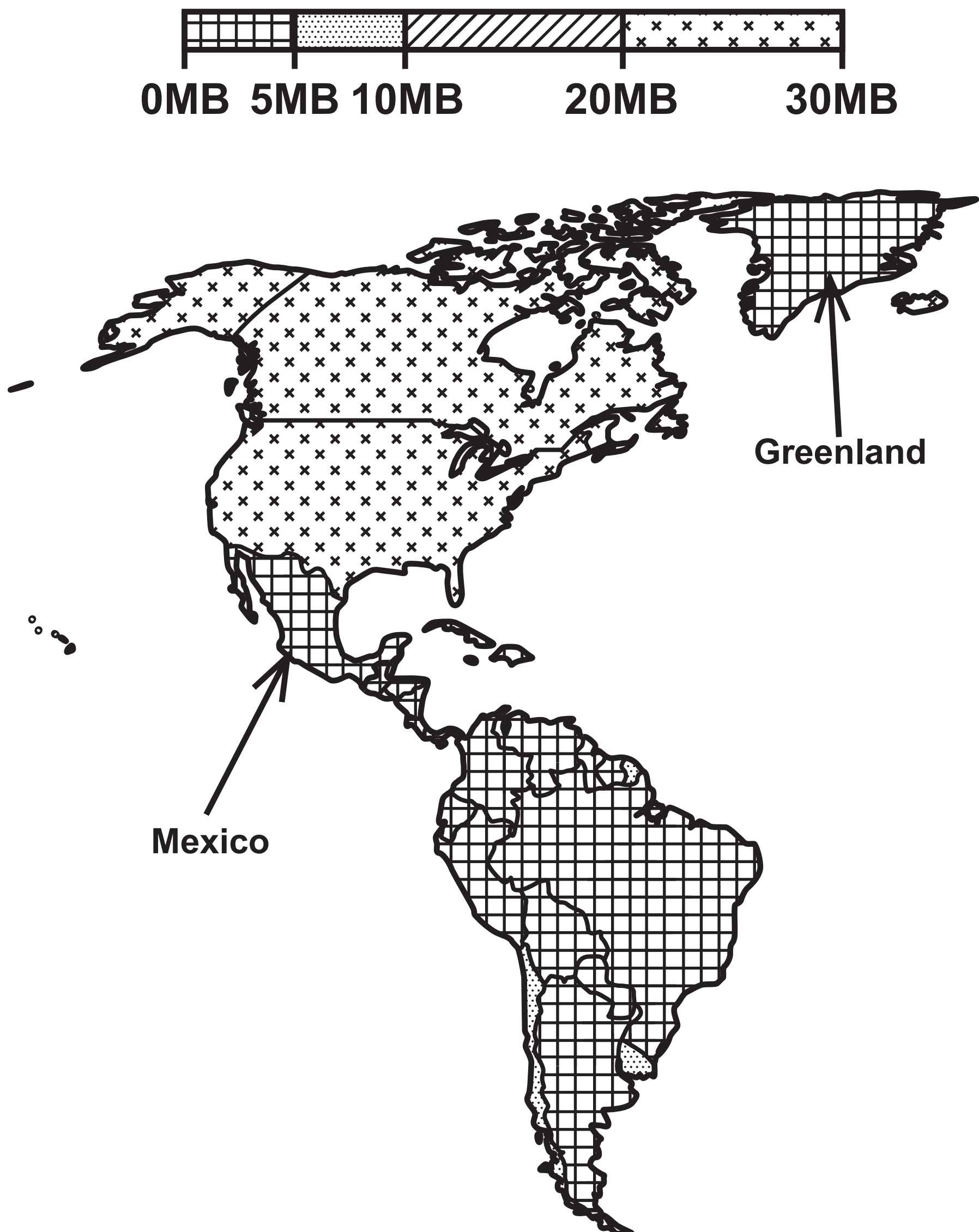


# Average global internet speeds Megabytes (MB/sec)



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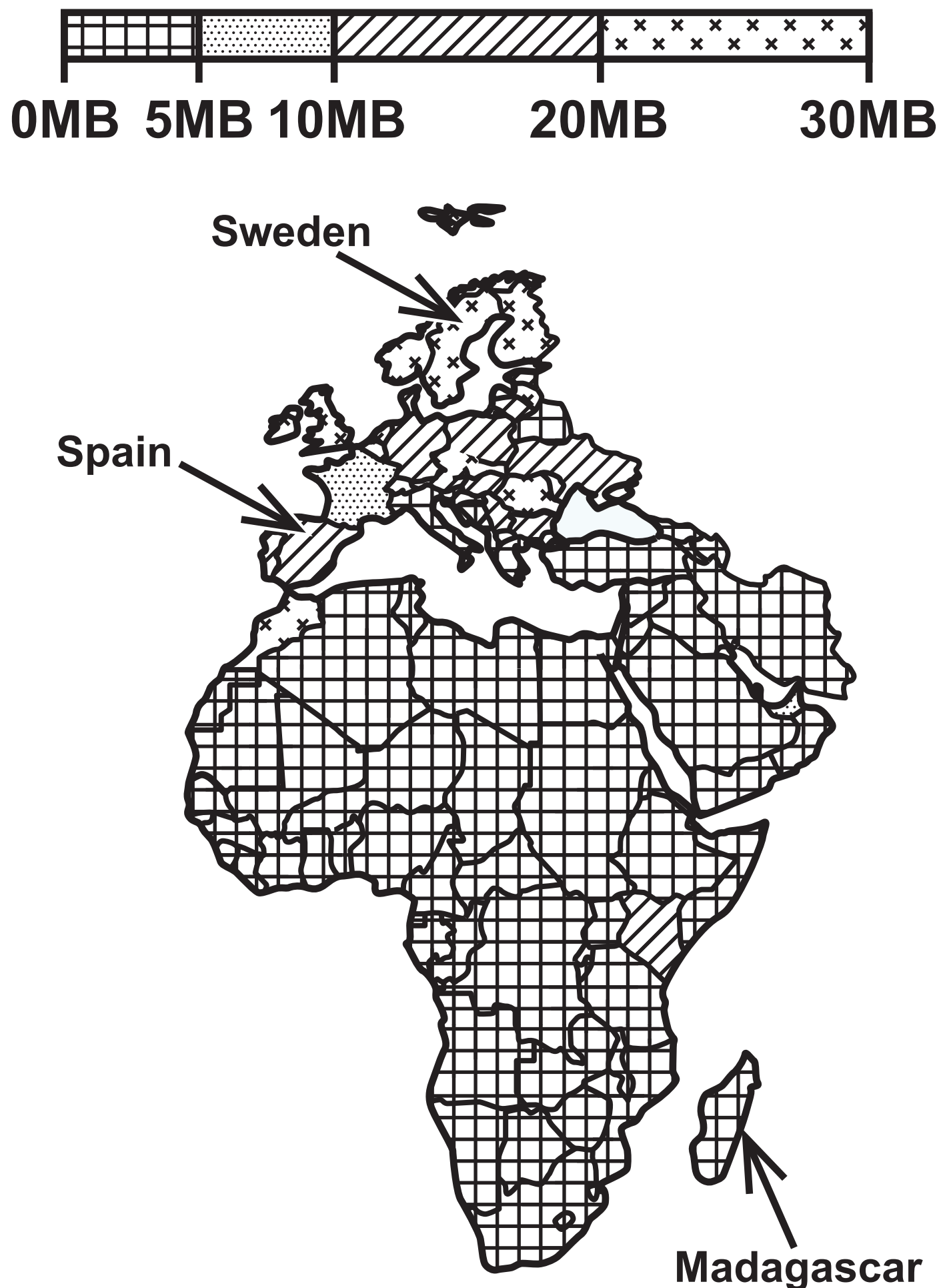
Figure 8a – Black and White (Part 1)  
Average global internet speeds  
Megabytes (MB/sec)



(Source: from <https://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/state-of-the-internet-connectivity-visualization.jsp>)



Figure 8a – Black and White (Part 2)  
Average global internet speeds  
Megabytes (MB/sec)



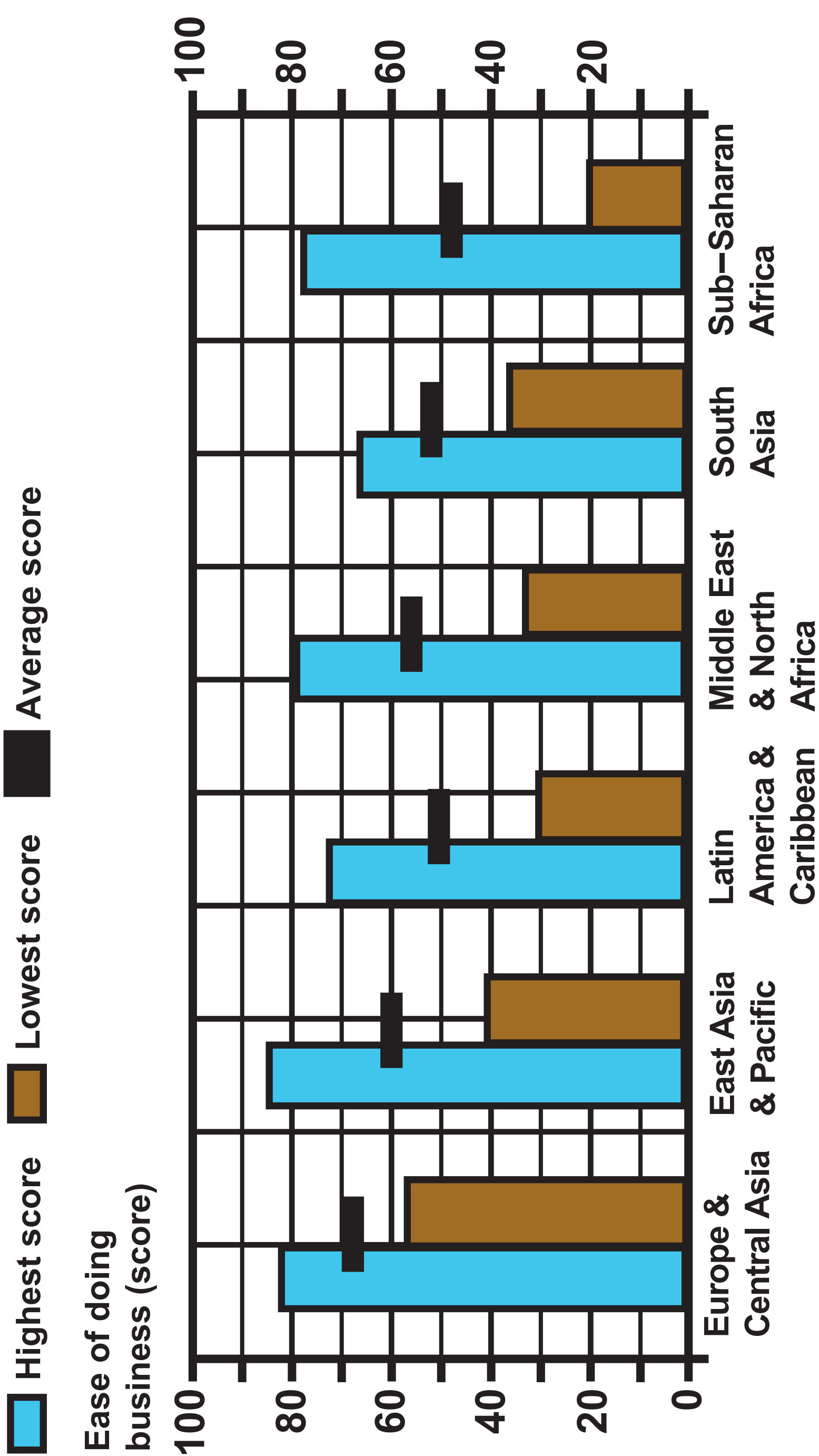
(Source: from <https://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/state-of-the-internet-connectivity-visualization.jsp>)

Figure 8a – Black and White (Part 3)  
Average global internet speeds  
Megabytes (MB/sec)



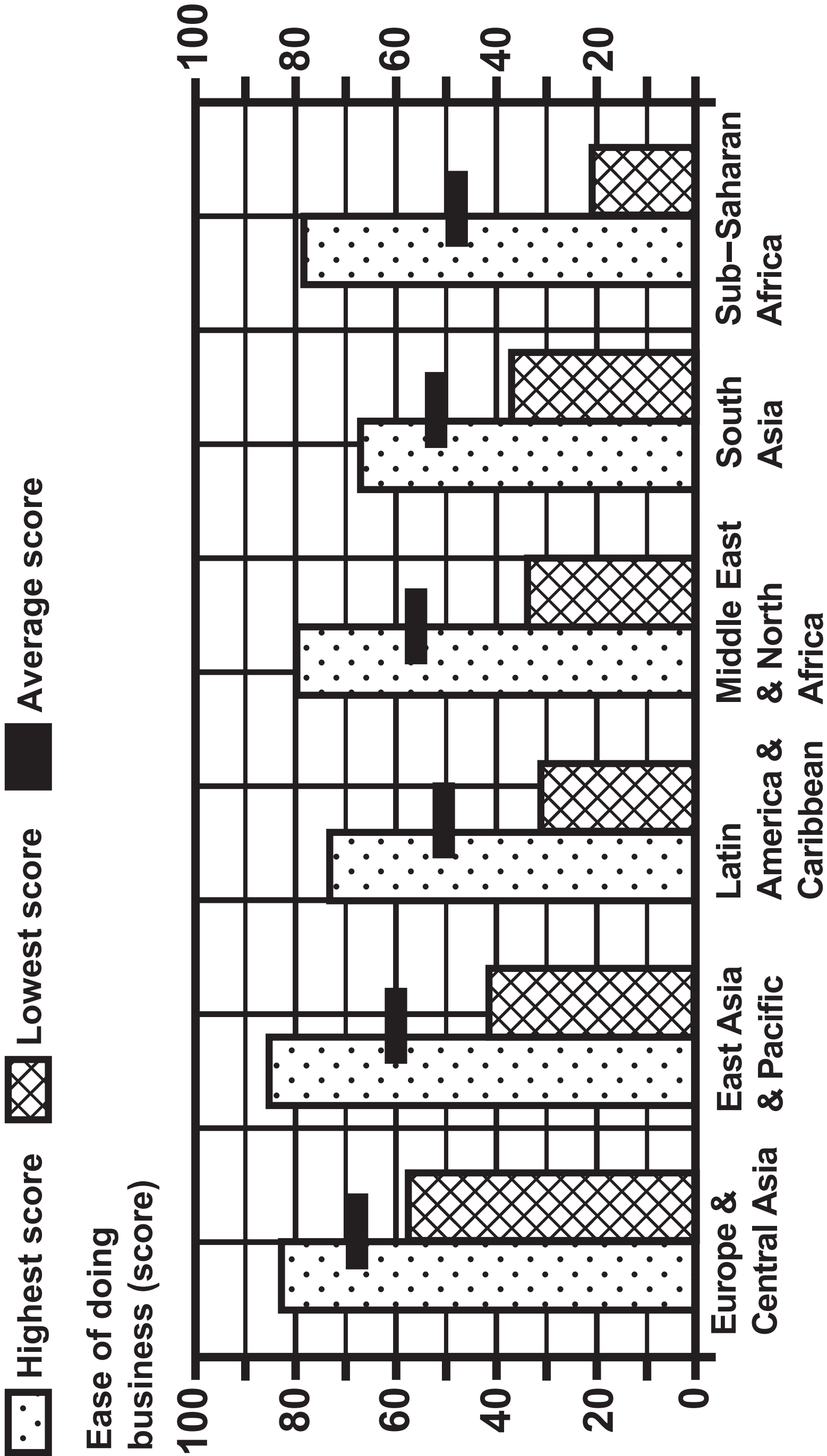
(Source: from <https://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/state-of-the-internet-connectivity-visualization.jsp>)

Figure 8b – Colour  
Ease of doing business index, by world region



(Source: Crown Copyright)

Figure 8b – Black and White  
Ease of doing business index, by world region



(Source: Crown Copyright)

Figure 8c

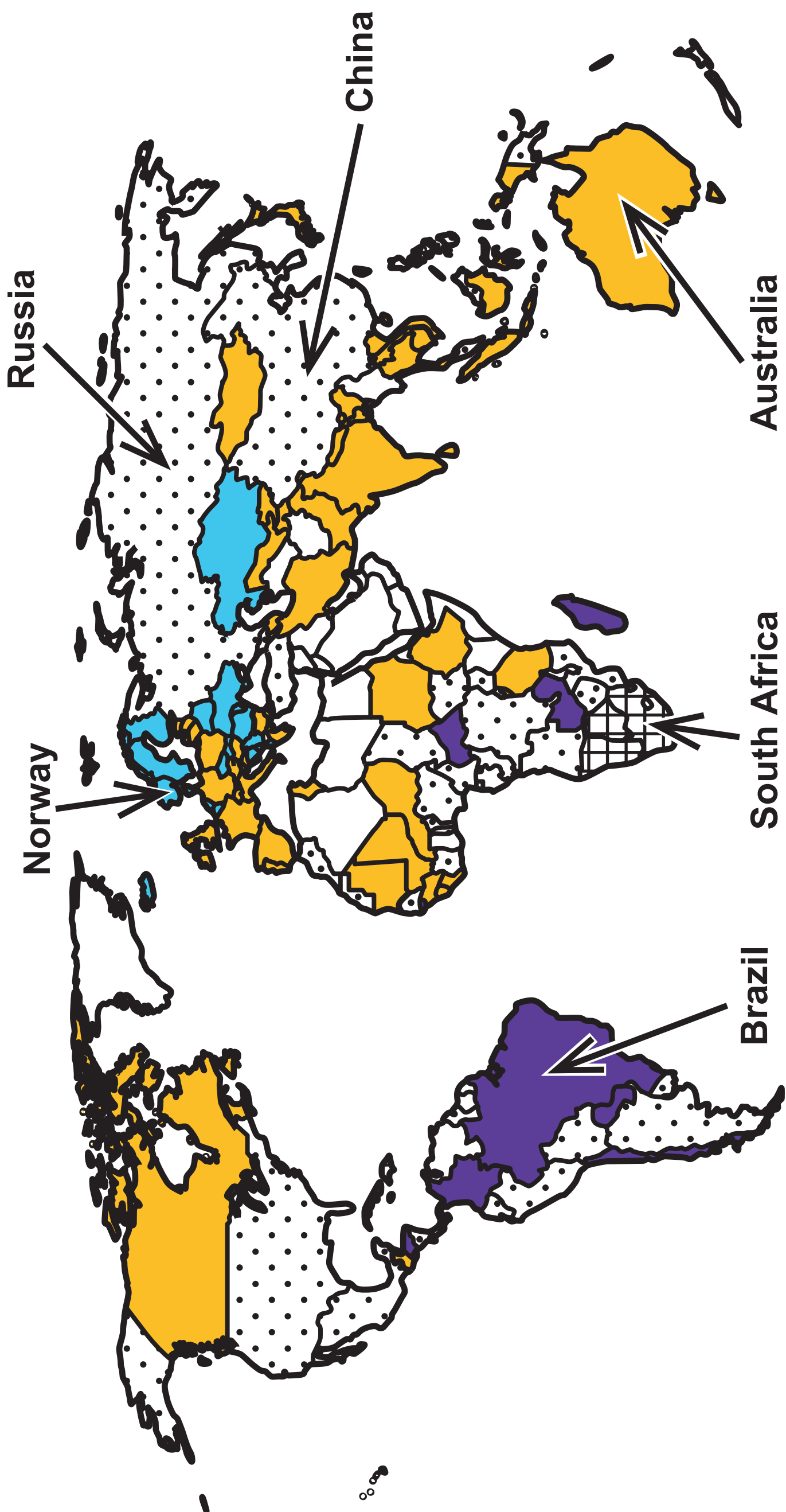
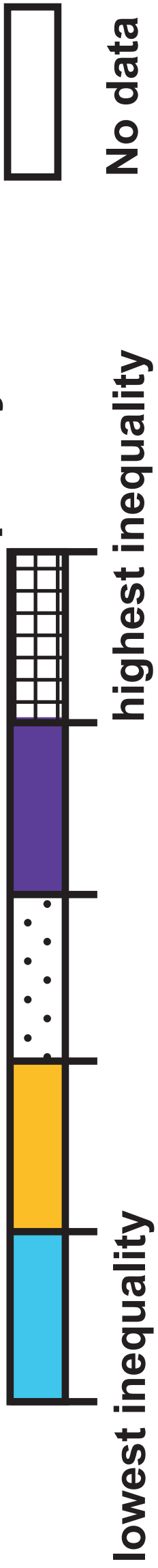
## Selected activities as drivers of globalisation

<b>Activities</b>	<b>Drivers (causes) of globalisation</b>
<b>Transport technology</b>	Range and frequency of aircraft routes mean that it is now much cheaper and easier to travel.
<b>Communication and information technology</b>	Improvements in technology mean that people and companies can be better connected to their customers.
<b>Global businesses (TNCs)</b>	Companies have complex logistical operations and supply chains, which now operate at a global scale due to better connectivity.
<b>Global institutions</b>	A range of institutions promote and manage world trade, improve governance and attempt to raise living standards.
<b>Flexible labour force</b>	People adapt to work in different businesses and in different locations.



Figure 9a – Colour

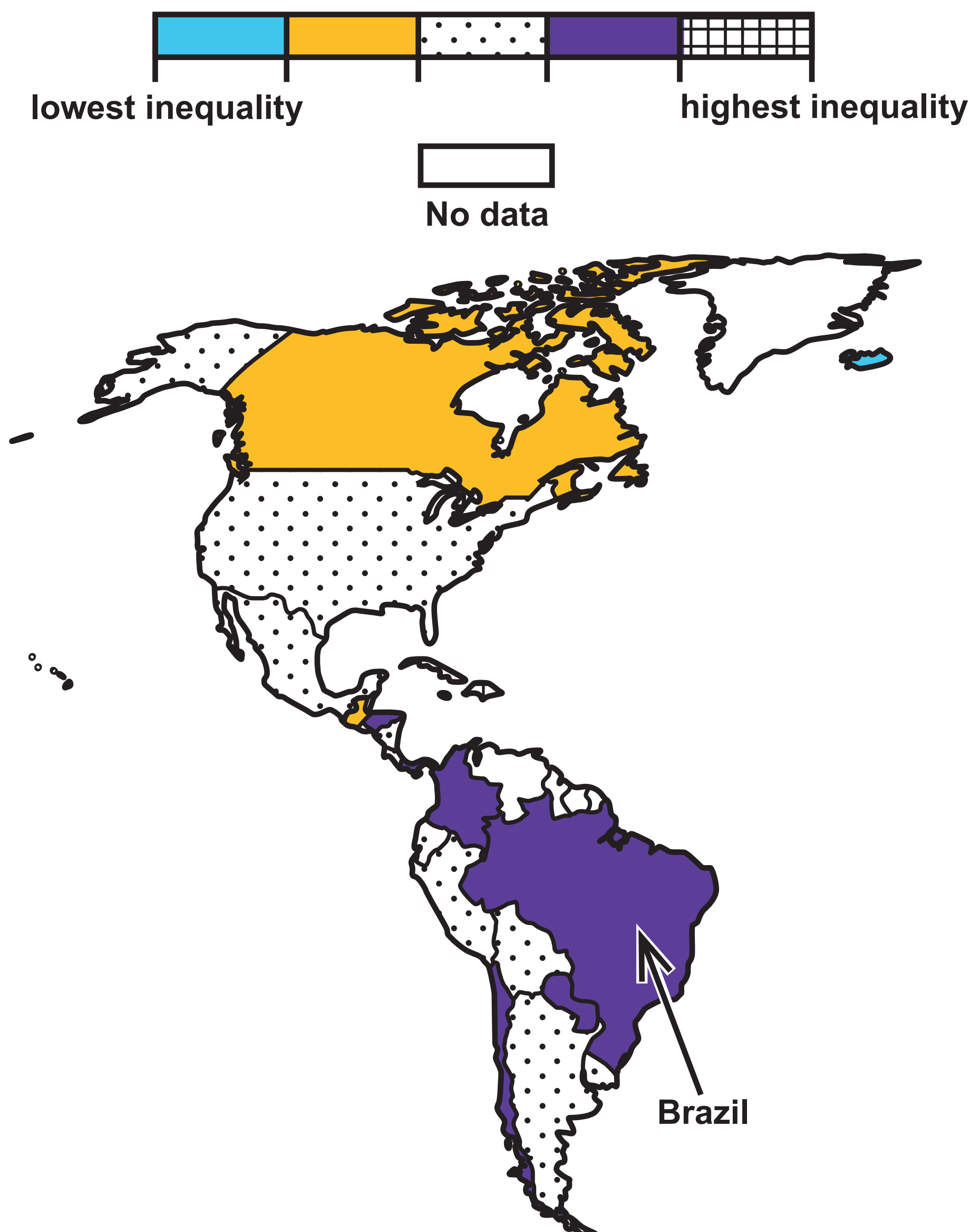
Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

Figure 9a – Colour (Part 1)

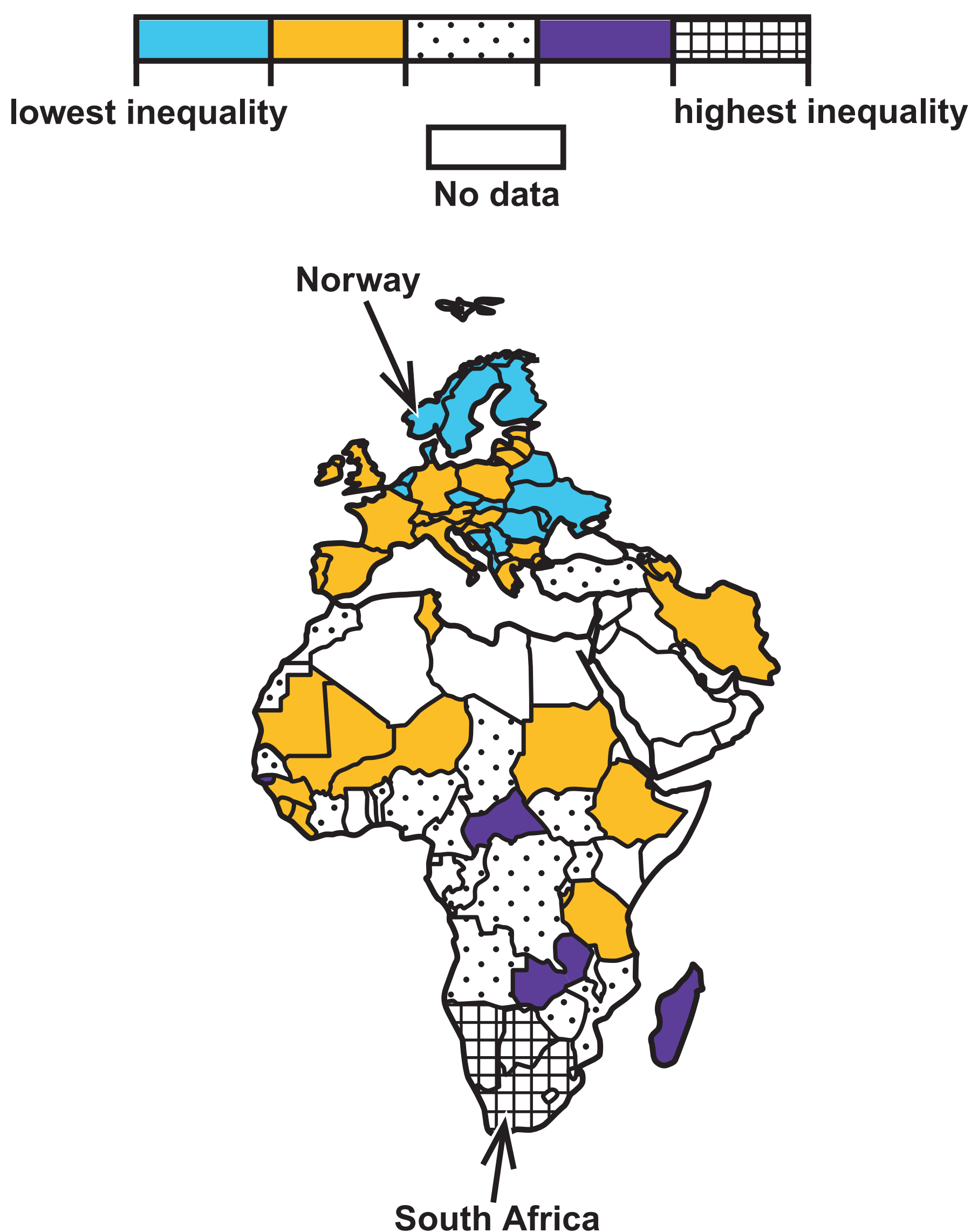
## Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

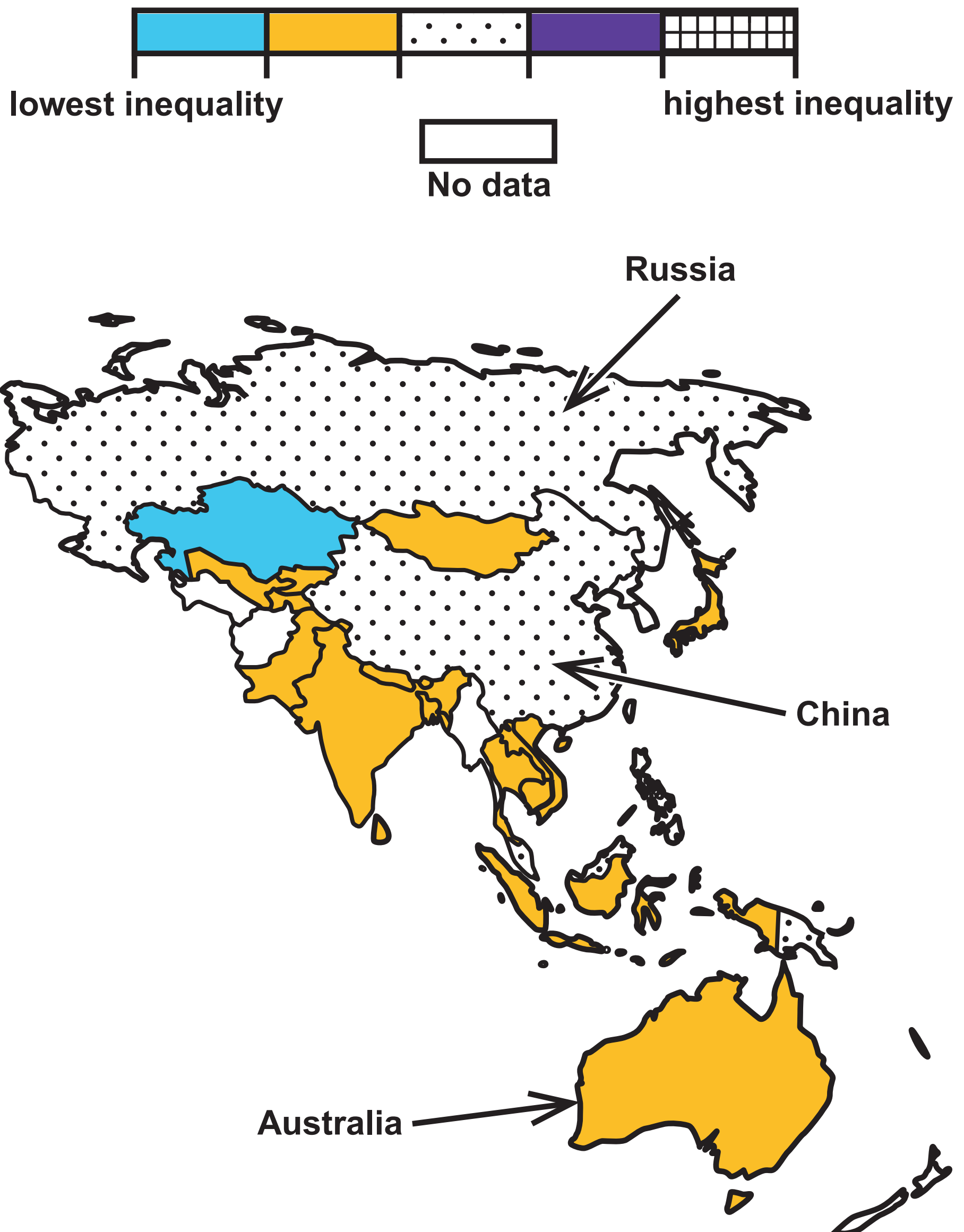
Figure 9a – Colour (Part 2)

## Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

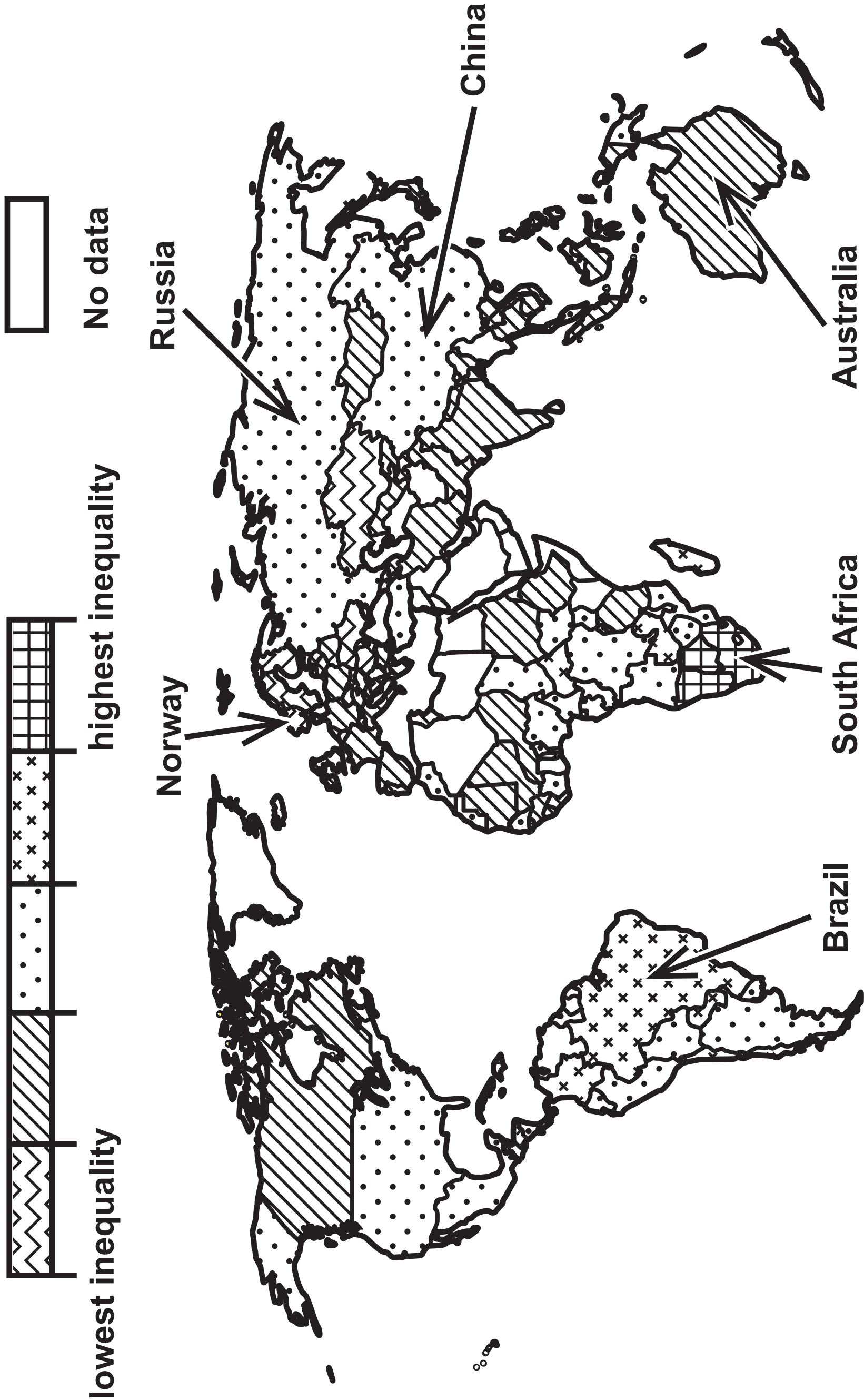
Figure 9a – Colour (Part 3)  
Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

Figure 9a – Black and White

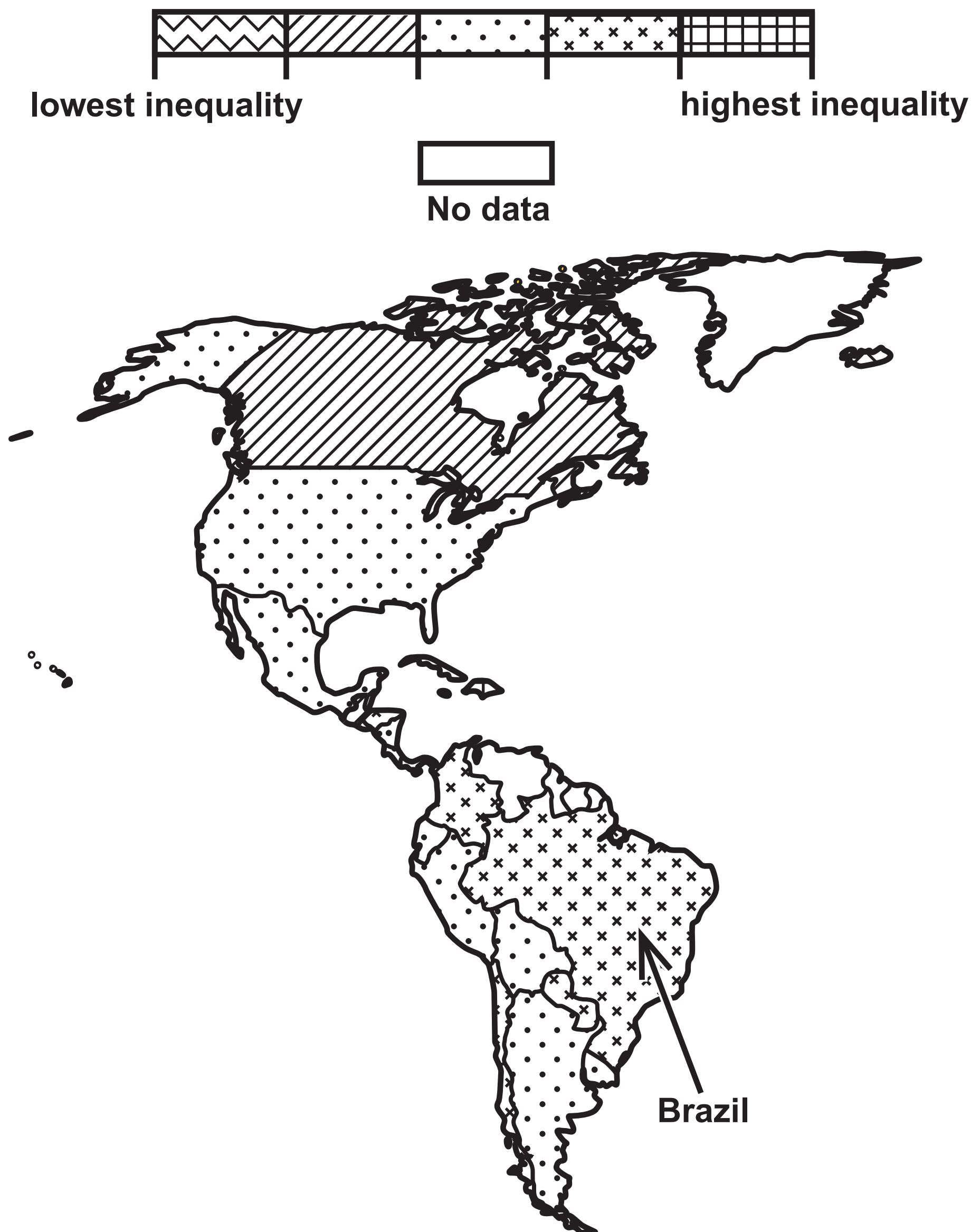
Global index of inequality, 2017



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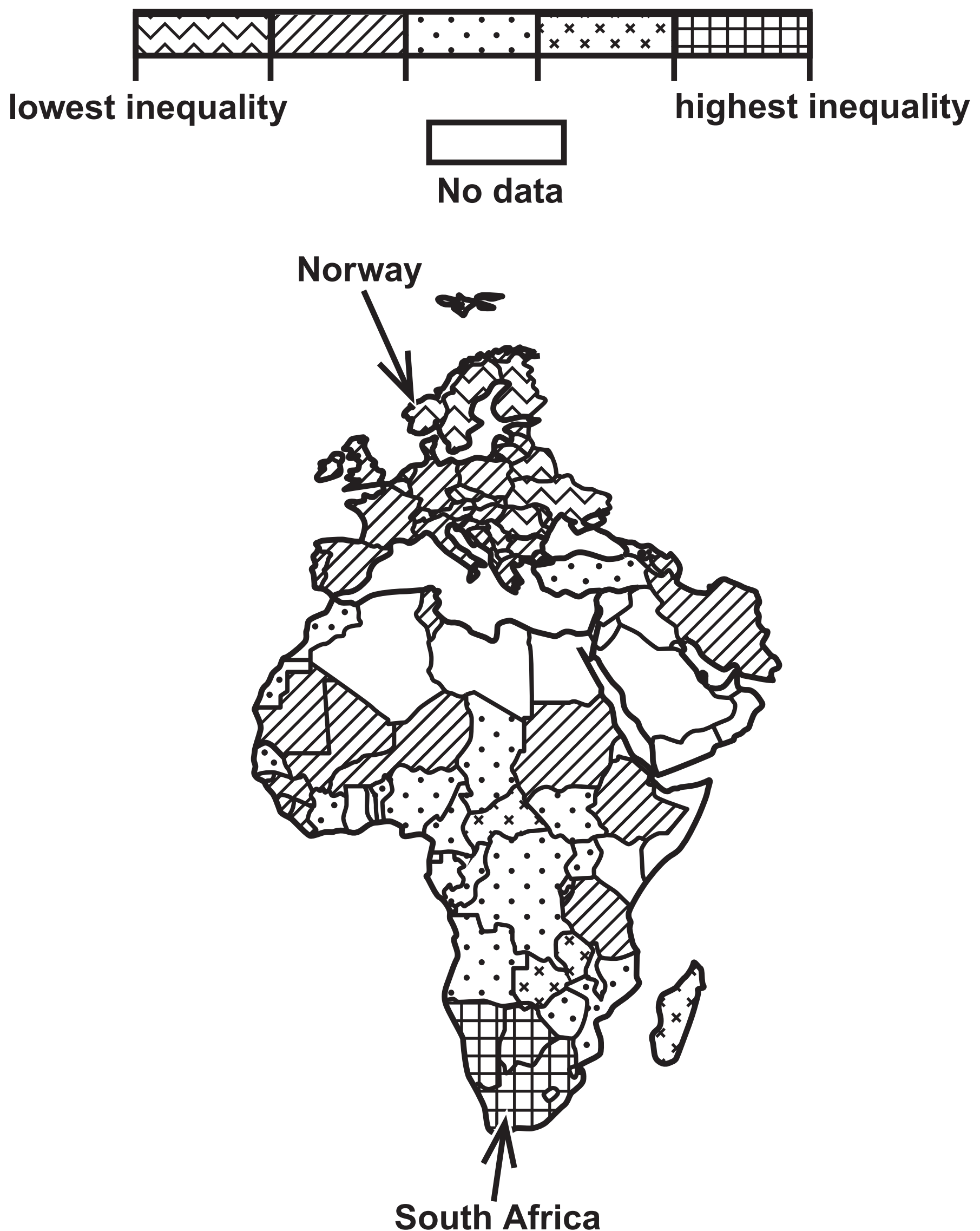


Figure 9a – Black and White (Part 1)  
Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

Figure 9a – Black and White (Part 2)  
Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

Figure 9a – Black and White (Part 3)  
Global index of inequality, 2017



(Source: from <https://www.theguardian.com/inequality/datablog/2017/apr/26/inequality-index-where-are-the-worlds-most-unequal-countries>)

# Regional trends in HDI for selected countries, 1980–2016

China — France ●●● United Arab Emirates — Brazil — Tunisia — Thailand

HDI (Human Development Index)

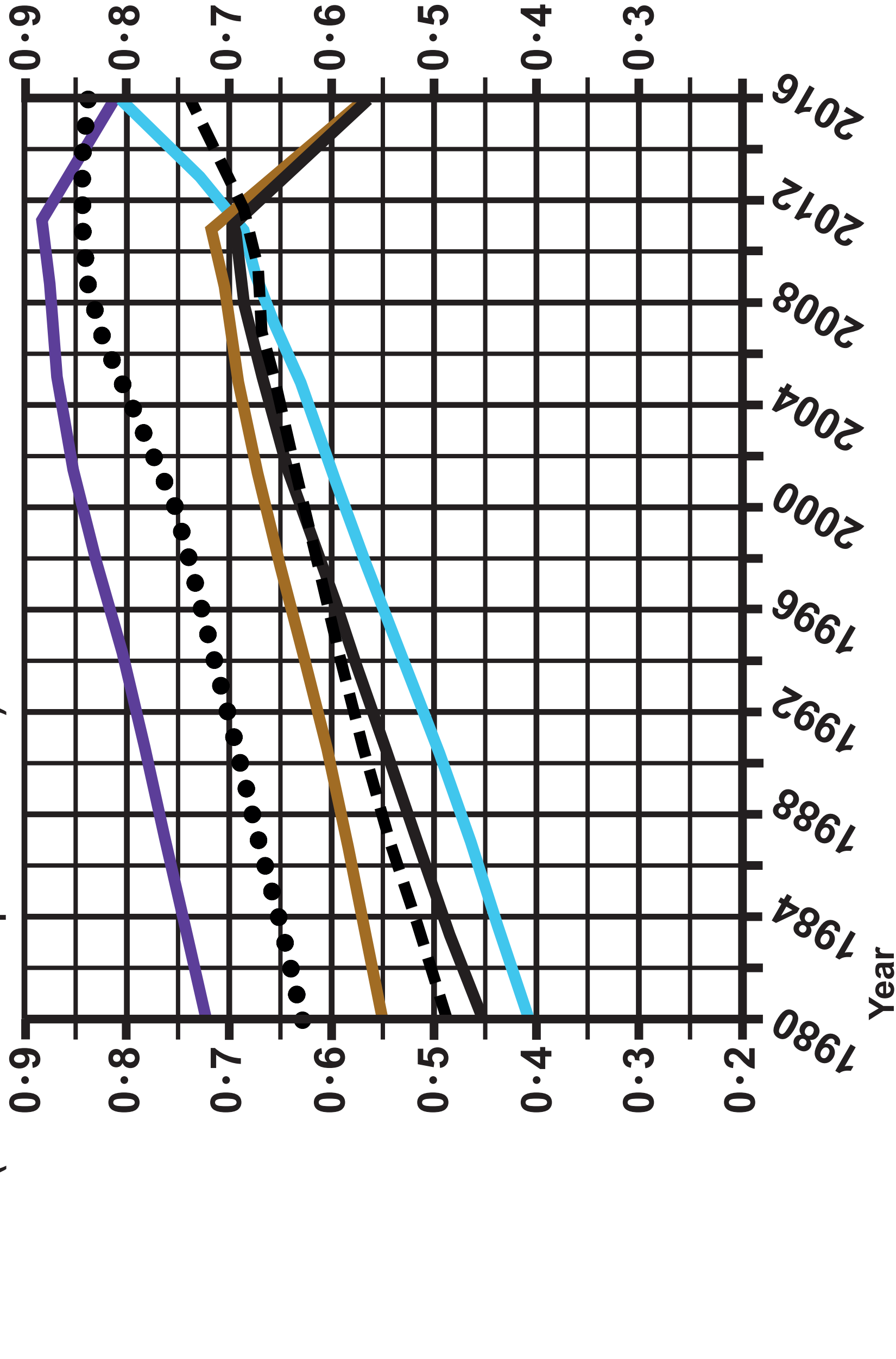


Figure 9b – Black and White

Regional trends in HDI for selected countries, 1980–2016

China — France ●● United Arab Emirates • — Brazil — Tunisia ■ — Thailand

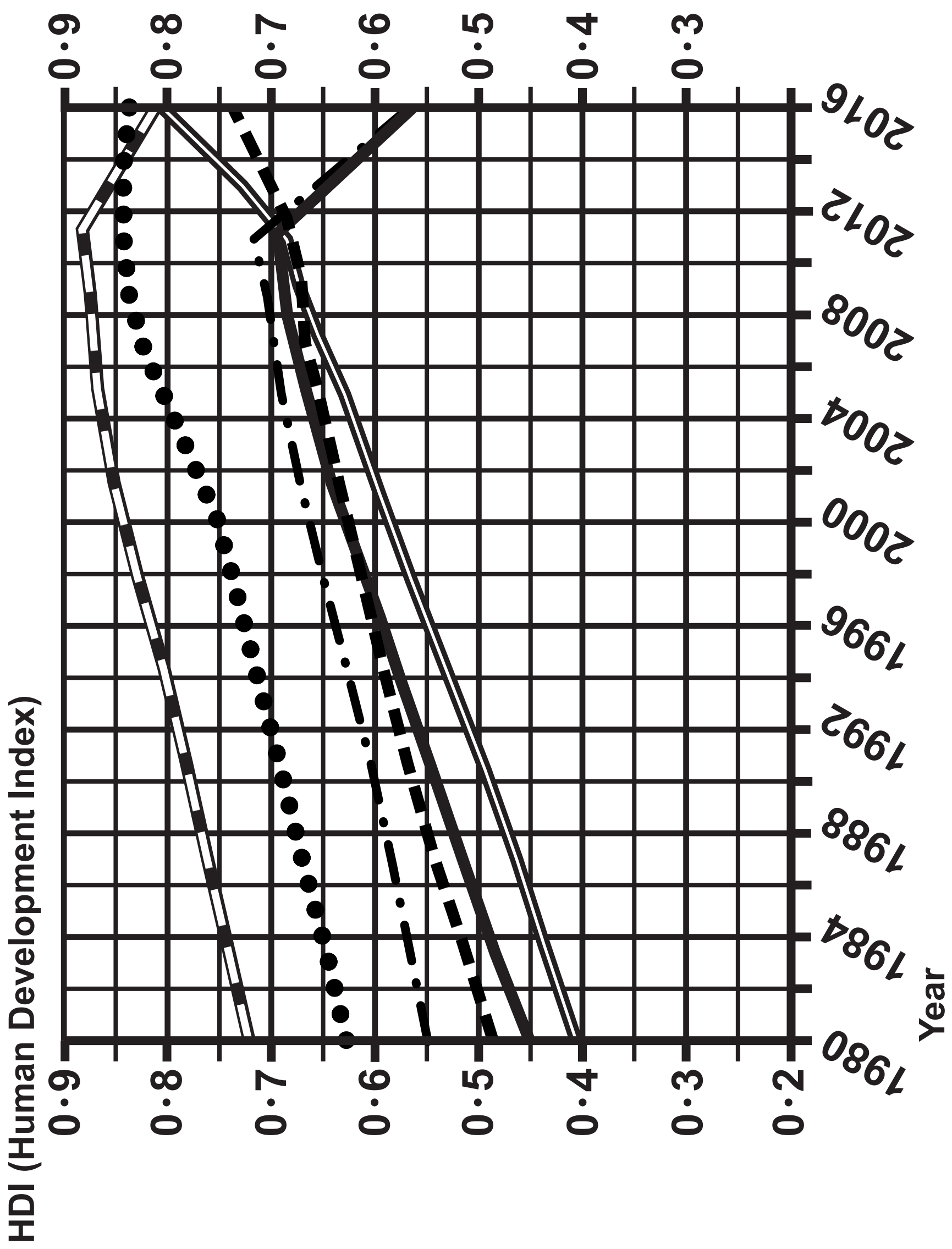




Figure 9b – Black and White (Part 1)

Regional trends in HDI for selected countries, 1980–2016

— China — France • — Brazil

HDI (Human Development Index)

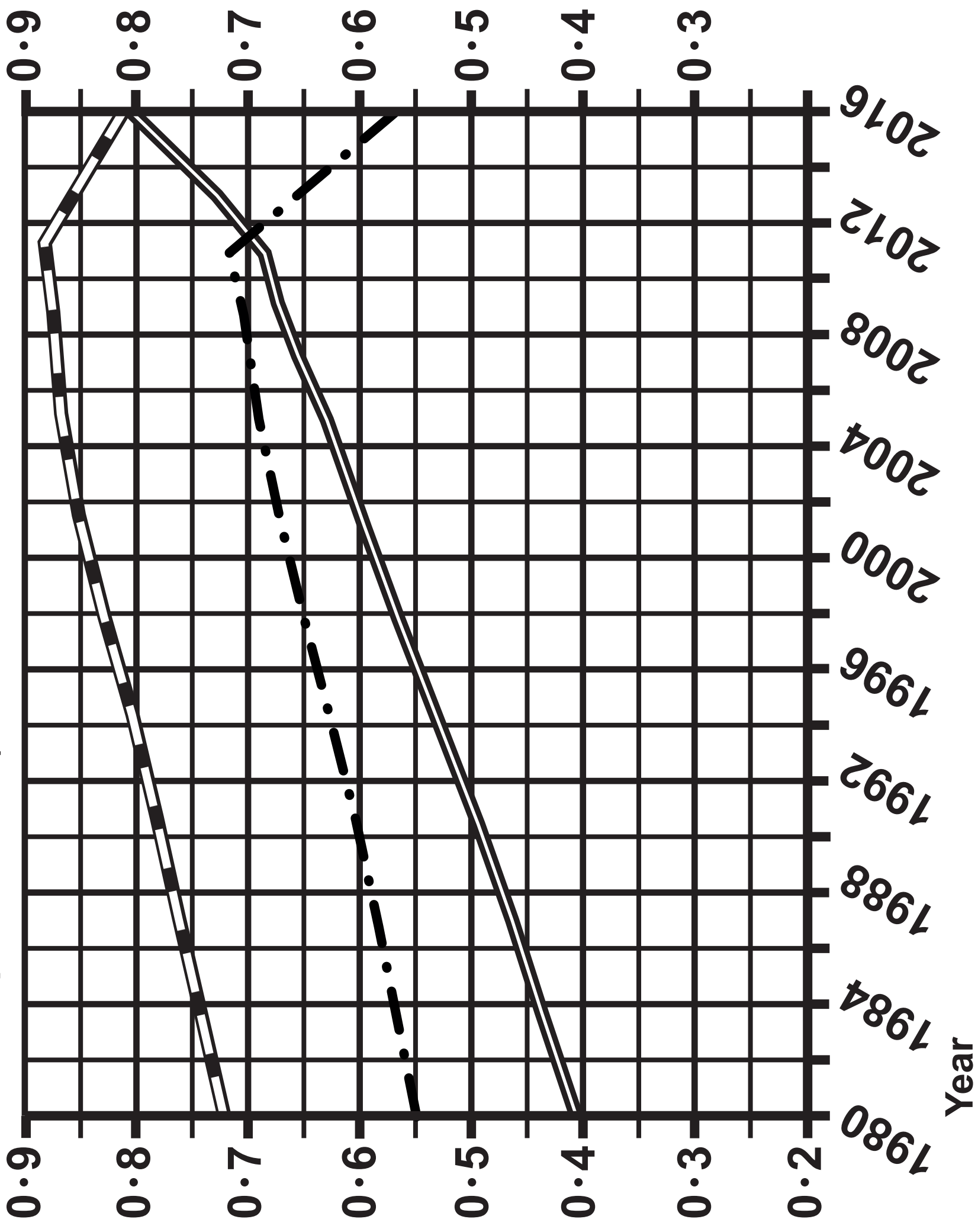
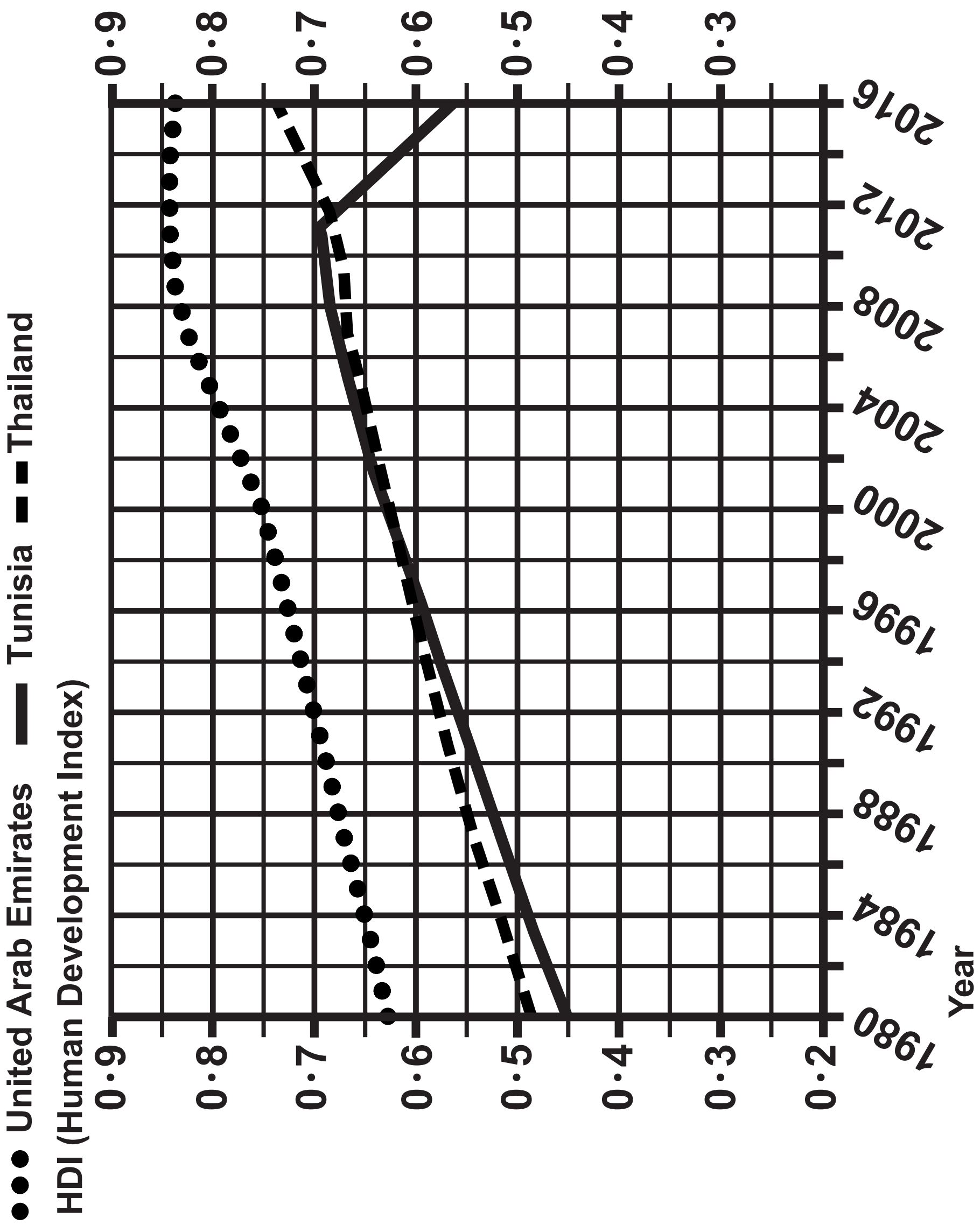


Figure 9b – Black and White (Part 2)

Regional trends in HDI for selected countries, 1980–2016



Selected causes of variations in global development

Cause	Drivers (causes) of global inequality
Climate change	Low income countries will experience the biggest effects of human–induced climate change over the next century: sea level rises, stronger cyclones, more unpredictable rains, and longer heatwaves.
Food and water security	Hurricanes and drought combined with poor soils may mean that some places have low food security. In extreme instances, this weakens and sometimes kills people.
Resource availability	Countries vary in the amount of natural resources they have to both use and export. Countries with few natural resources find it hard to create products that can be sold on world markets.
Governments	Good governance can promote and help manage inter country trade and aid, for example to help raise living standards and improve quality of life.
Demography	There are several factors involved, including fertility, mortality and immigration. These will have impacts on population age structures, for example.