

93401R



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

Scholarship 2020 Geography

2.00 p.m. Monday 30 November 2020

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Scholarship Geography.

Check that this booklet has pages 2–26 in the correct order and that none of these pages is blank.

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.

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CLIMATE CHANGE

INTRODUCTION: THE GREENHOUSE EFFECT

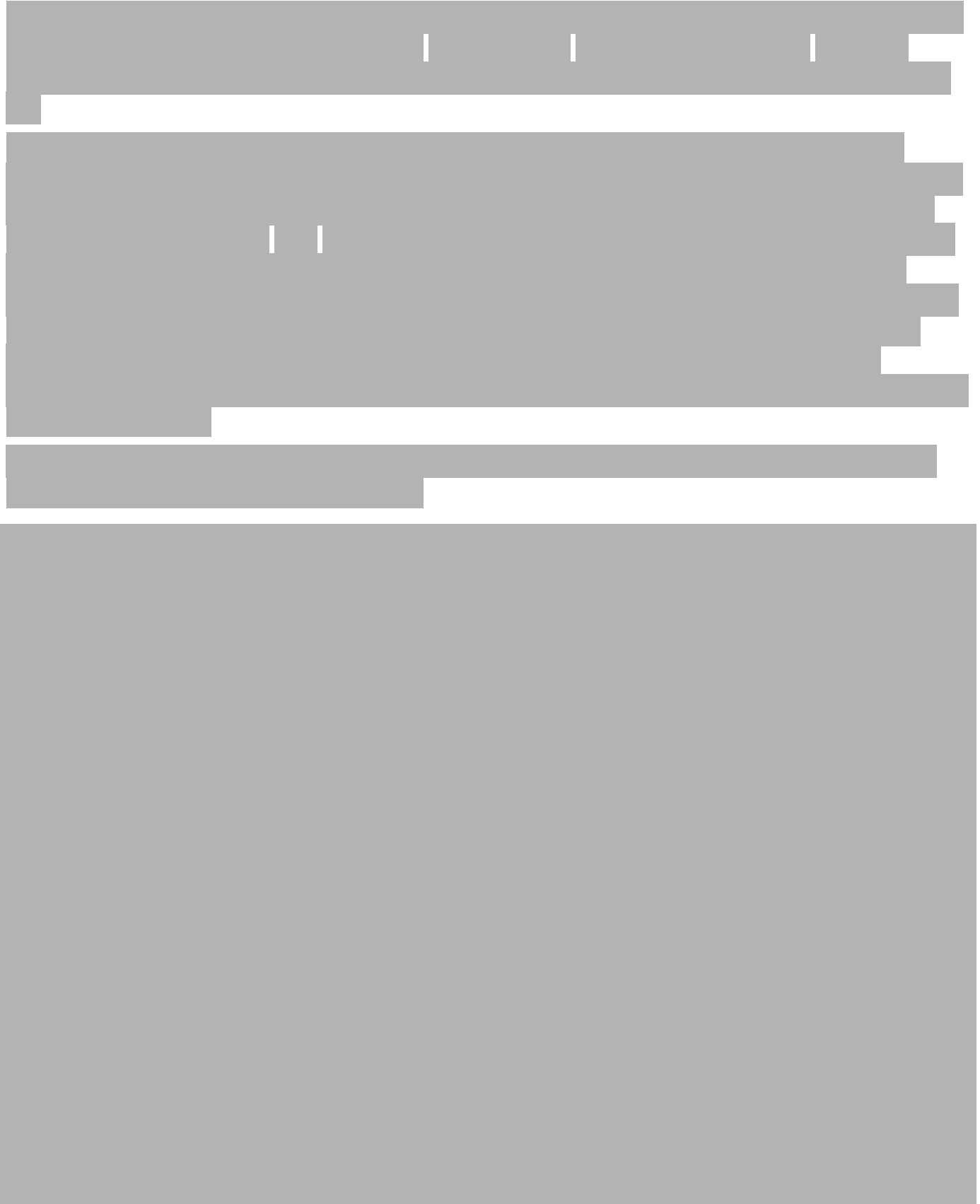


Figure 1: The greenhouse effect

Global share of CO₂ emissions

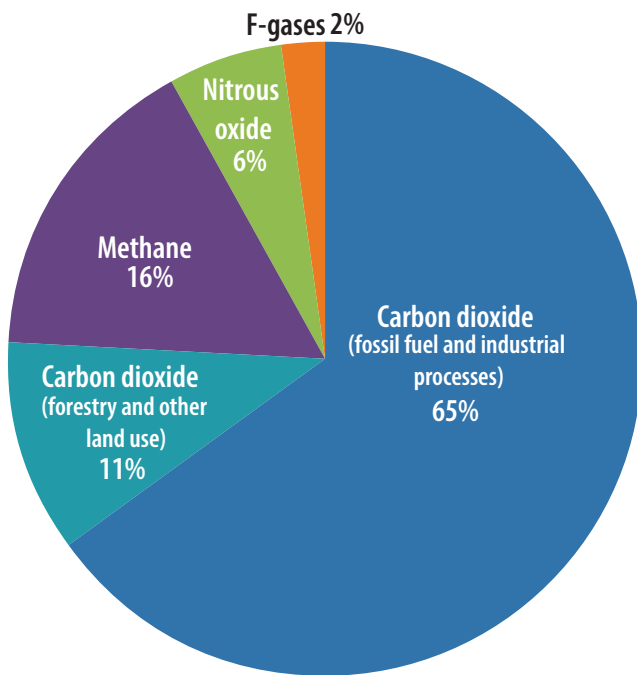


Figure 2: Global greenhouse gas emissions by gas

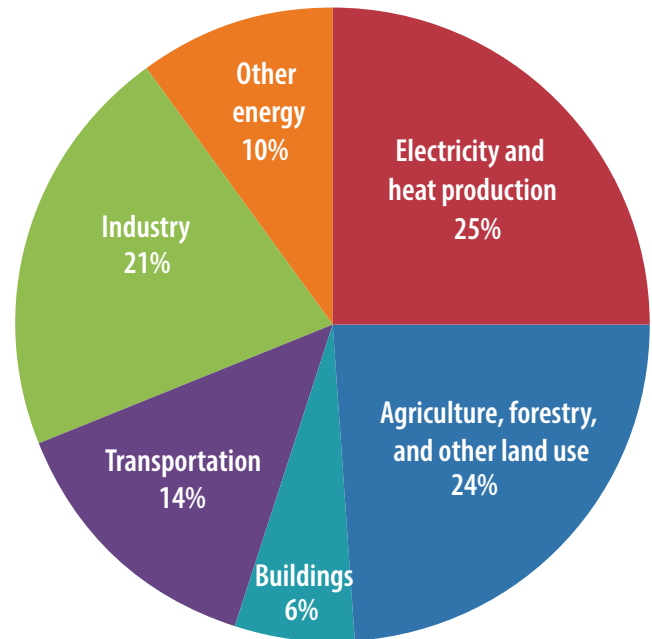


Figure 3: Global greenhouse gas emissions by economic sector



Figure 4: Annual CO₂ emissions per country

SECTION A – CULTURAL PROCESSES

HUMAN POPULATION AND CLIMATE CHANGE

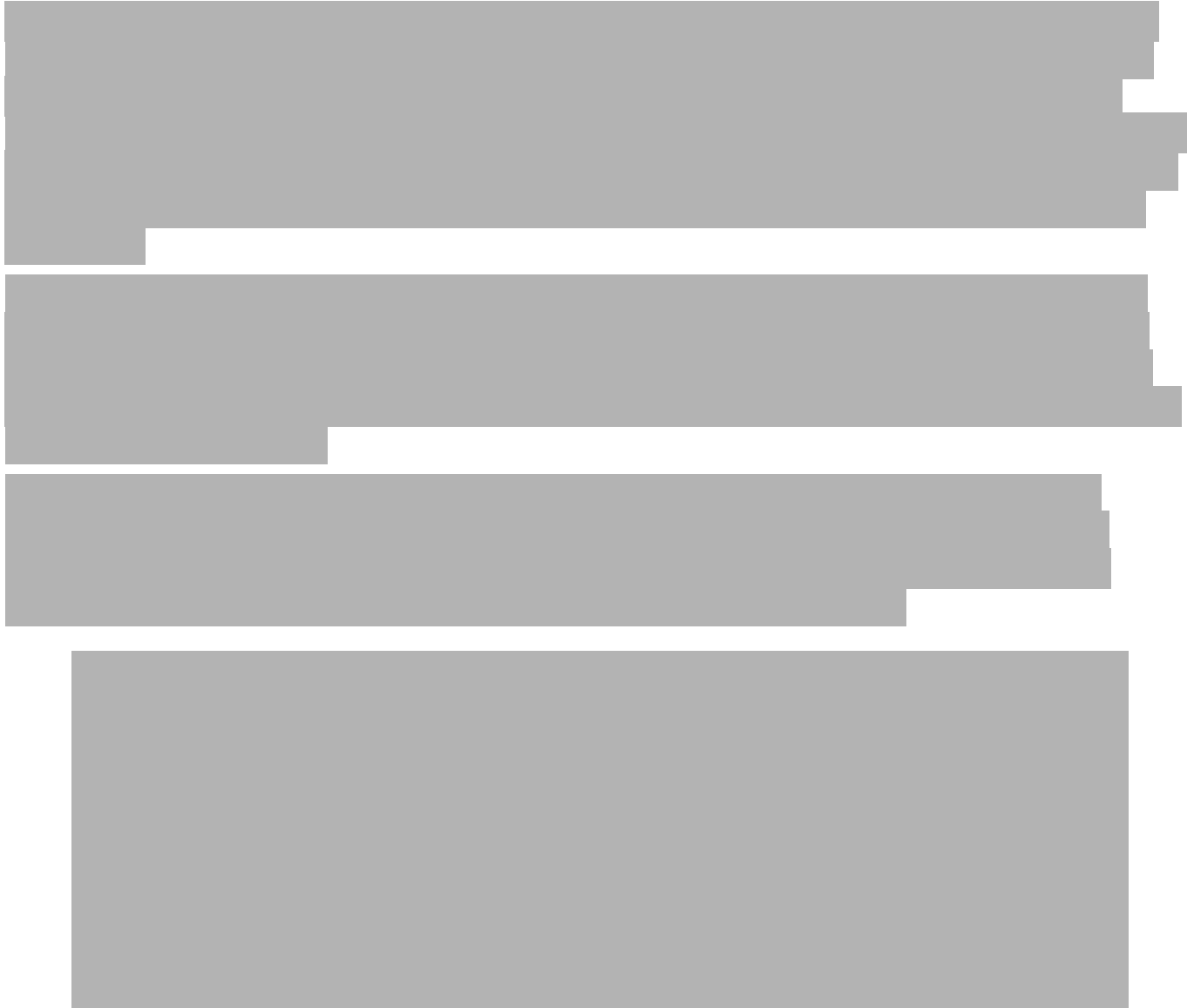


Figure 5: Population and CO₂ emissions, 1750–2015. Source: United Nations, 2017.

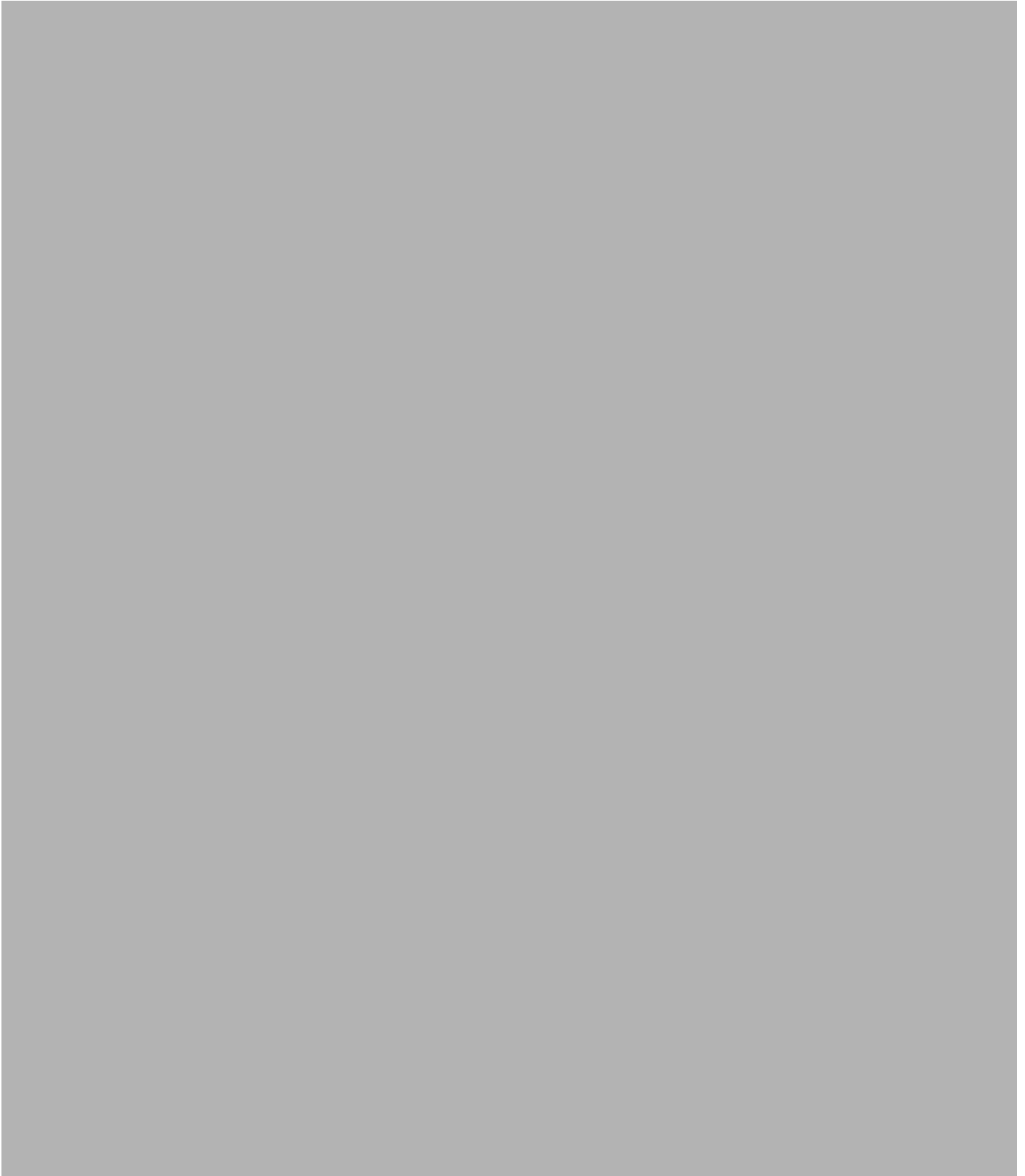
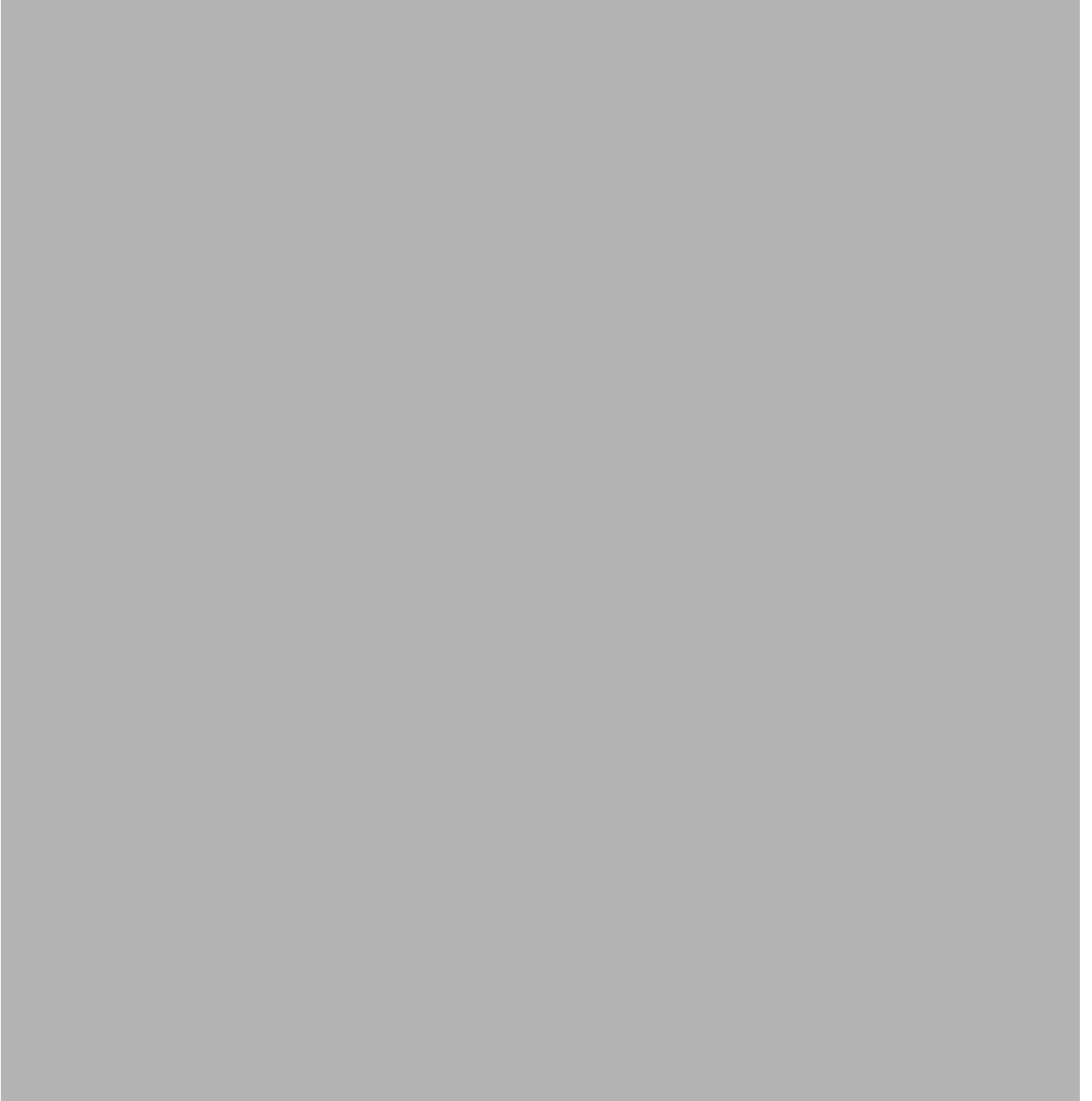
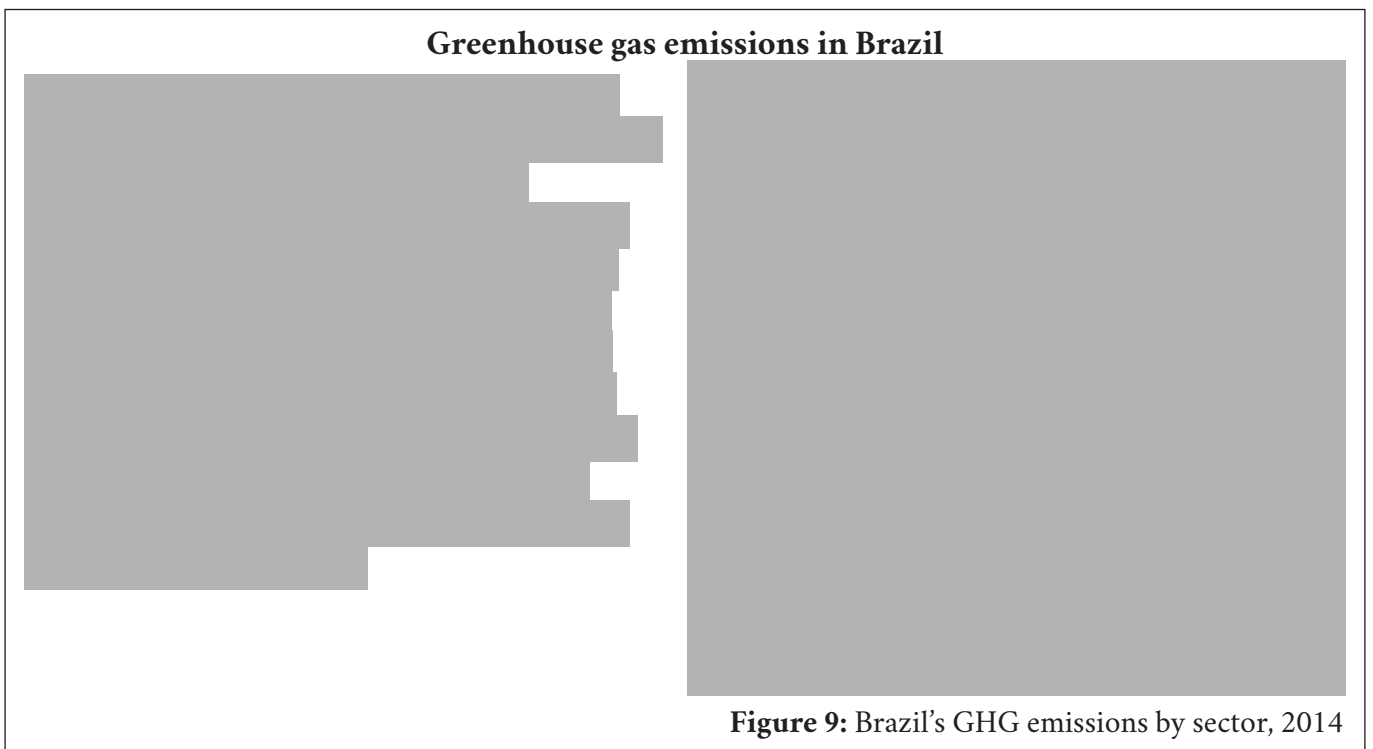
URBANISATION

Figure 6: A global shift

INCREASING ENERGY CONSUMPTION



AGRICULTURE

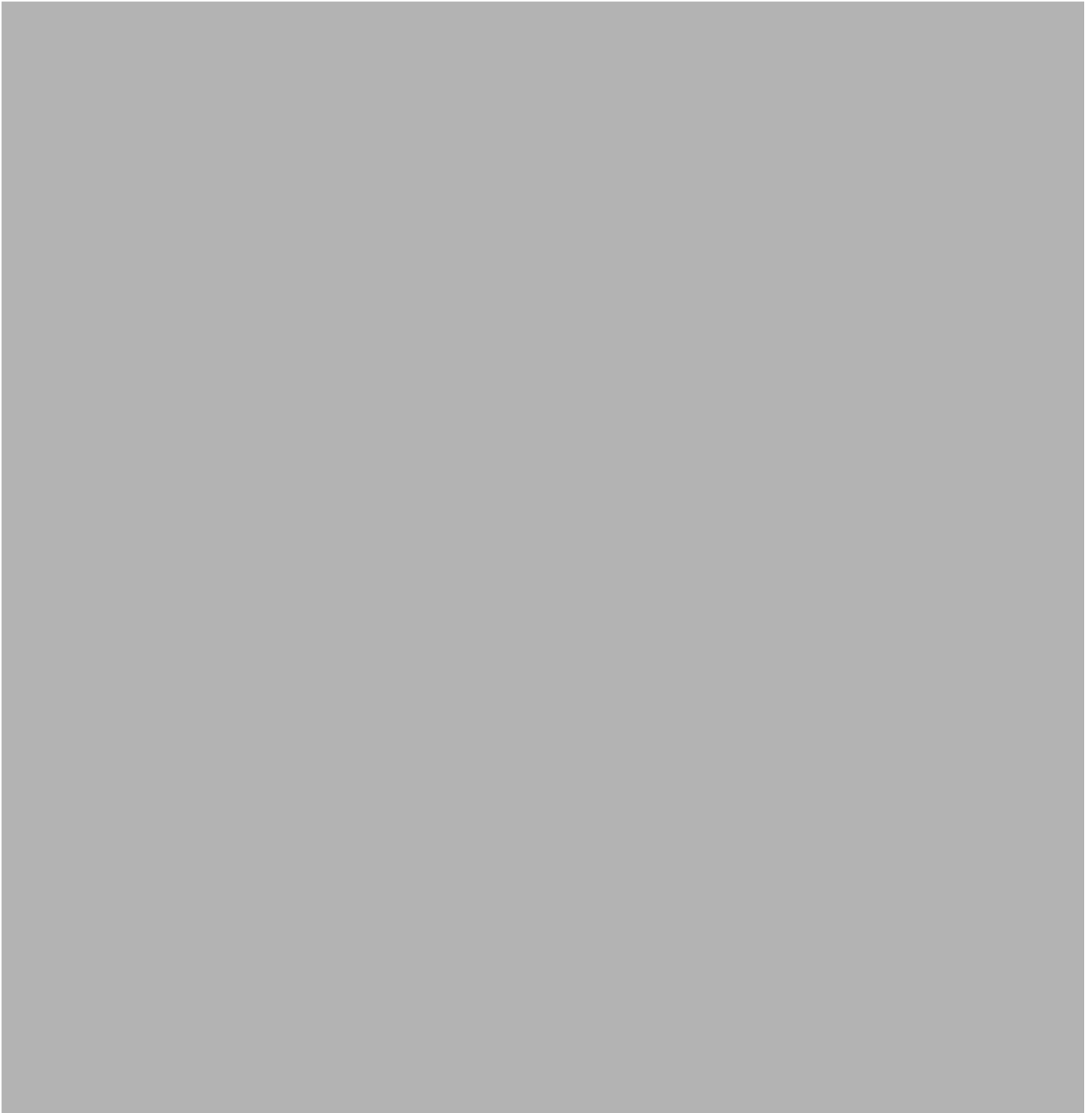
DEFORESTATION

Figure 10: Deforestation pressures

SECTION B – CURRENT IMPACTS OF FOSSIL FUELS

THE SOCIAL BENEFITS OF FOSSIL FUELS

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

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Oil and gas exploration – Taranaki



Figure 11: Oil and gas exploration in Taranaki

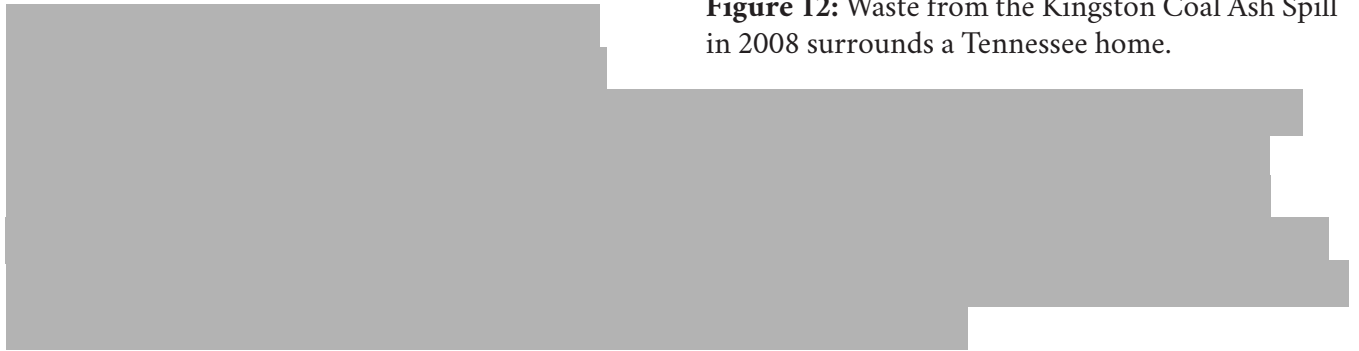


THE ENVIRONMENTAL IMPACTS OF THE FOSSIL FUEL INDUSTRY

Fossil fuel waste



Figure 12: Waste from the Kingston Coal Ash Spill in 2008 surrounds a Tennessee home.



Health costs – United States



Water impact

[REDACTED]

[REDACTED]

*1 US gallon = 3.8 litres

IMPACTS ON INDIGENOUS COMMUNITIES

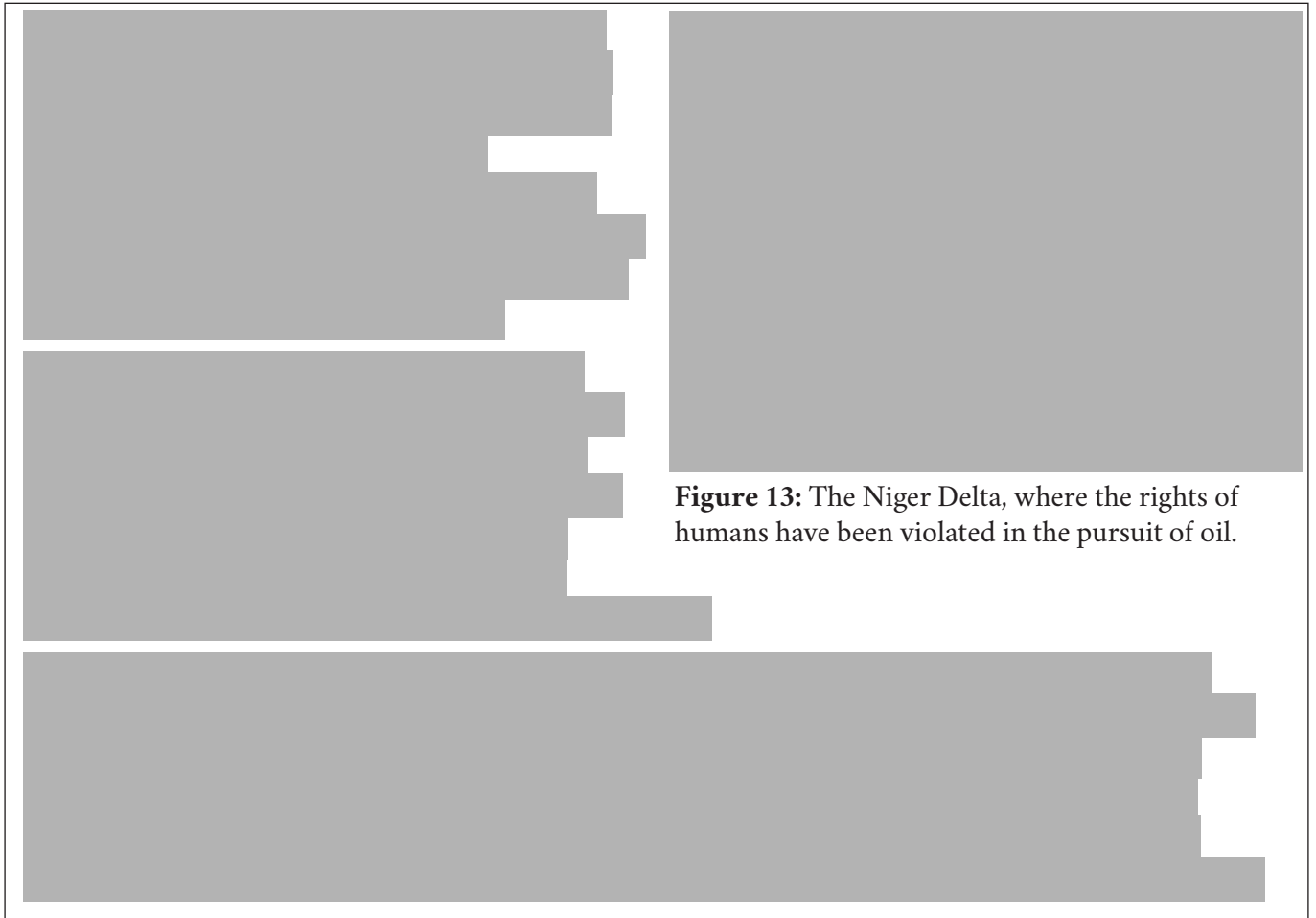


Figure 13: The Niger Delta, where the rights of humans have been violated in the pursuit of oil.

The rich and poor divide



POLITICAL IMPACTS**Fossil fuel subsidies reform**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A global industry



Figure 14: Oil and gas supply chain



Figure 15: World oil transit chokepoints

Does the oil industry lead to corruption?



Figure 16: Oil exports (% GDP) and corruption perception ranking. Countries with oil exports > 5% of GDP shown on right axis, and their ranking in Transparency International's Corruption Perception Index, left axis. The dark blue (diamond) trendline shows the trend of oil exports. The orange trend is corruption ranking for all countries. Interestingly, by not considering the Islamic countries, the trendline (blue) of the corruption ranking is nearly parallel to the oil exports.



IMPACTS ON COUNTRIES RELIANT ON OIL EXPORTS

Collapse of economies

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The oil 'resource curse' – African nations



Figure 17: Oil revenues as a percentage of total state revenues in seven African oil-exporting nations



Figure 18: Conditions for children in seven African oil-exporting nations

SECTION C – FUTURE PREDICTED IMPACTS

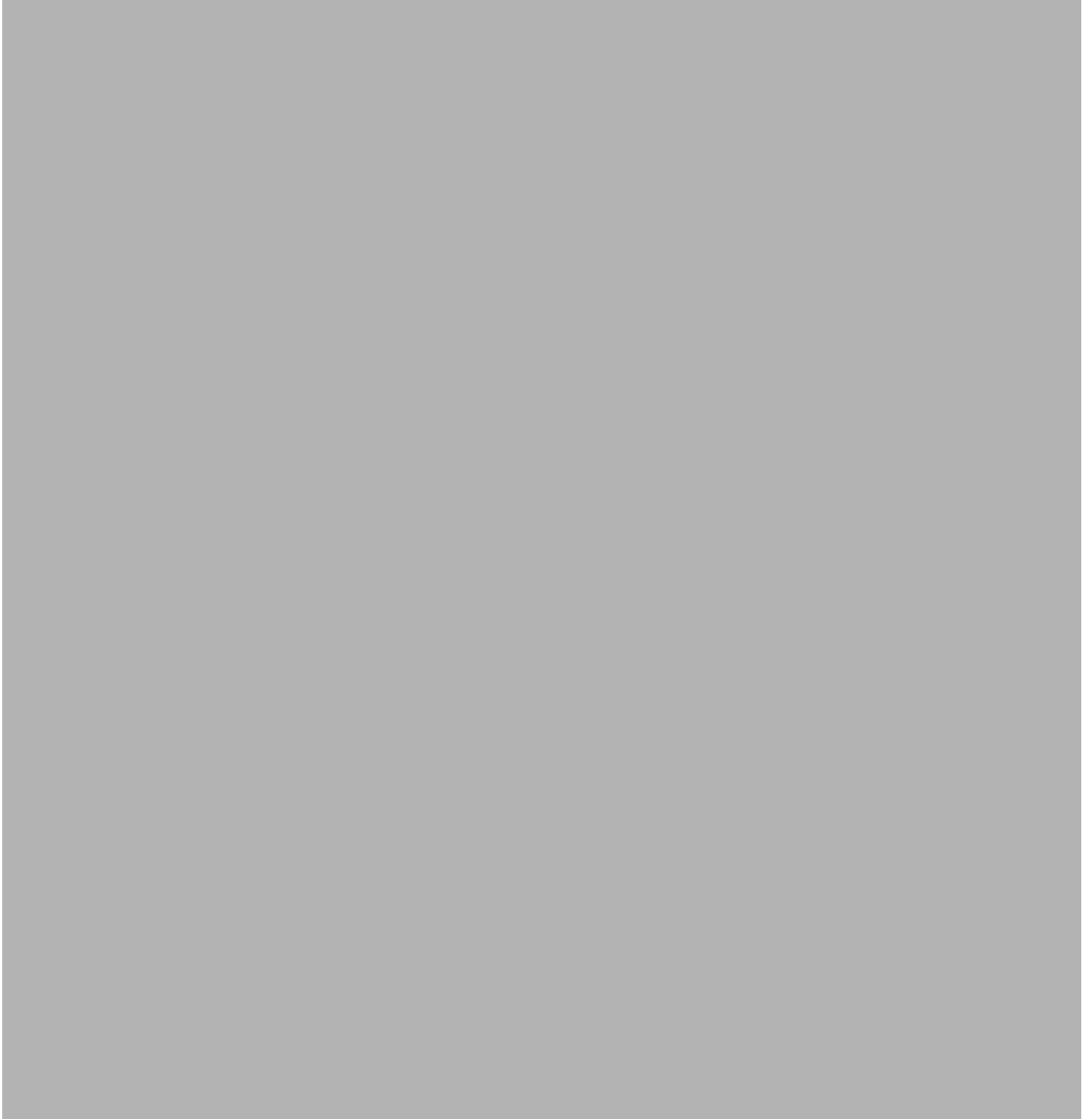


Figure 19: Climate change vulnerability index

BANGLADESH: IMPACTS ON CHILDREN**Figure 20:** Flooding in Bangladesh

INCREASED BUSHFIRE RISK

Australia



Figure 21: Bushfire trends in southern Australia



New Zealand



GLOBAL ECONOMIES SHRINK



THE CLIMATE-HEALTH CONNECTION

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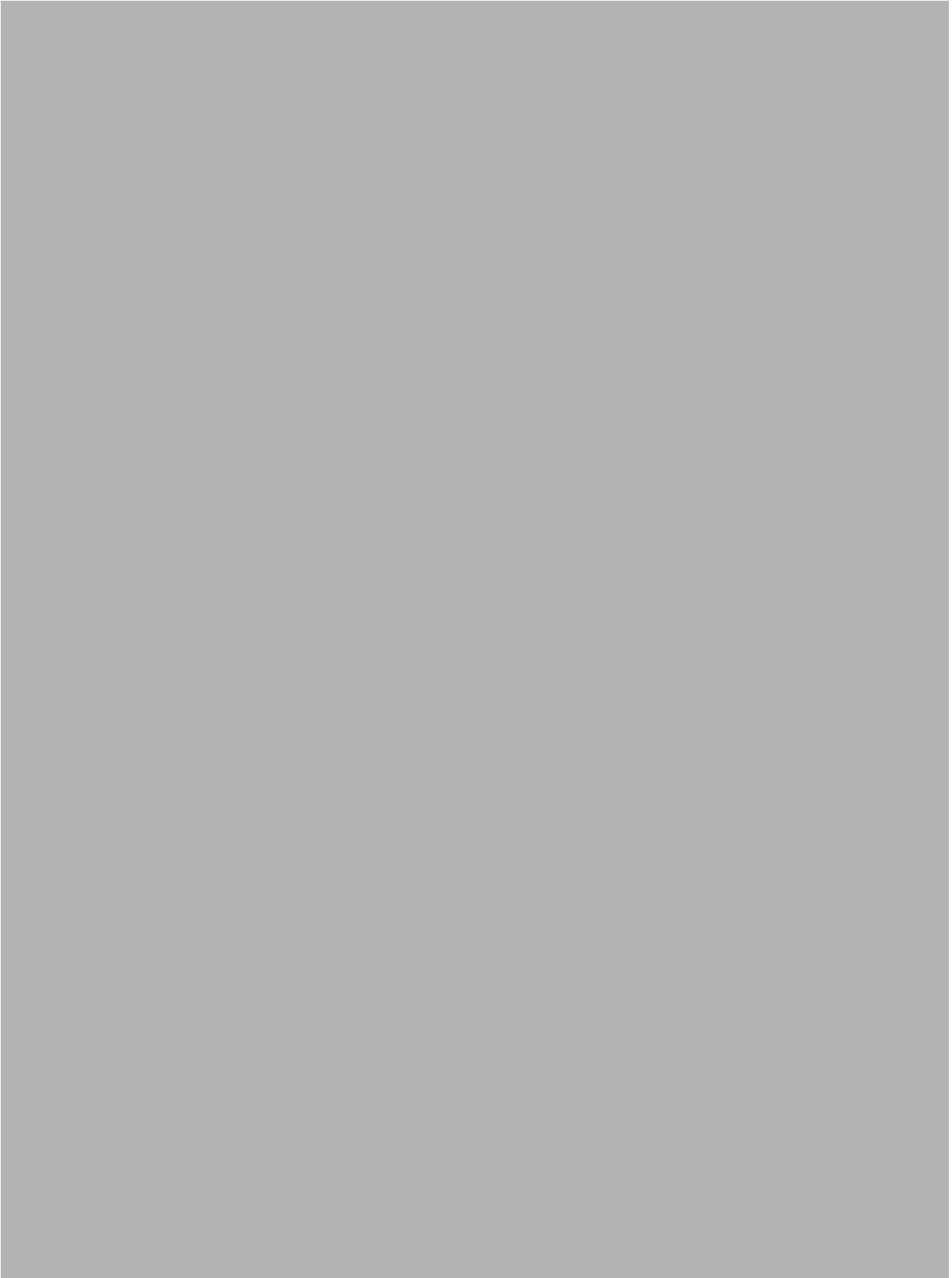


Figure 23: Climate change and malaria

Acknowledgements

Material from the following sources has been adapted for use in this examination:

Page 3

Text & Figure 1: <https://www.nccs.gov.sg/about-climate-change/how-we-are-affecting-climate-change/>

Page 4

Figures 2 & 3: <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>

Figure 4: <https://www.yahoo.com/news/global-co2-emissions-hit-record-120010006.html>

Page 5

Text: <https://ourworldindata.org/future-population-growth>
https://www.biologicaldiversity.org/programs/population_and_sustainability/climate/

Figure 5: <https://populationmatters.org/the-facts/climate-change>

Page 6

Text: <https://urban.yale.edu/research/theme-4>
<https://unfccc.int/sites/default/files/resource/docs/2017/sbsta/eng/inf03.pdf>

Figure 6: <https://www.visualcapitalist.com/investing-megatrend-rapid-urbanisation/>

Page 7

Text: <https://chinapower.csis.org/china-greenhouse-gas-emissions/>
<https://www.wri.org/blog/2017/04/interactive-chart-explains-worlds-top-10-emitters-and-how-theyve-changed>
<https://www.iea.org>
<https://thebulletin.org/2019/10/declining-us-greenhouse-gas-emissions-a-republican-fairy-tale/#>

Figure 7: <https://www.yahoo.com/news/global-co2-emissions-hit-record-120010006.html>

Page 8

Text (top): https://www.oecd.org/agriculture/ministerial/background/notes/4_background_note.pdf
<https://www.rainforest-alliance.org/articles/relationship-between-deforestation-climate-change>

Figure 8: <https://ccafs.cgiar.org/bigfacts/#theme=food-emissions&subtheme=direct-agriculture>

Text (bottom) & Figure 9 (Brazil): https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_Brazil%20GHG%20Emissions%20Factsheet.pdf

Page 9

Text: <http://www.mightyearth.org/heres-what-deforestation-looks-like-in-2019-and-what-we-can-do-about-it/>
<https://charterforcompassion.org/compassion-environment-reader/forests-and-plants/deforestation-and-greenhouse-gas-emissions>

Figure 10: <http://climate.org/deforestation-and-climate-change/>

Page 10

Text: <https://www.wsj.com/articles/the-social-benefits-of-fossil-fuels-far-outweigh-the-costs-1529258294>

Page 11:

Text: <https://www.nzpam.govt.nz/our-industry/value-benefits/>

Figure 11: <https://www.stuff.co.nz/taranaki-daily-news/103037490/governments-oil-and-gas-exploration-halt-was-a-kick-in-guts-for-taranaki>

Page 12–13

Text and Figure 12: <https://www.ucsusa.org/resources/hidden-costs-fossil-fuels>

Page 14

Text and Figure 13: <https://theconversation.com/how-the-pursuit-of-carbon-and-fossil-fuels-harms-vulnerable-communities-69364>

Page 15

Text (top): <https://www.advancedsciencenews.com/politics-of-fossil-fuel-subsidies-and-their-reform/>

Text (bottom): <https://www.cambridge.org/core/journals/mrs-energy-and-sustainability/article/social-and-economic-consequences-of-the-fossil-fuel-supply-chain/181CB4D021BA549E64D87B667D3FB987/core-reader>

Page 16–19

Figures 14, 15, 16, 17, & 18: <https://www.cambridge.org/core/journals/mrs-energy-and-sustainability/article/social-and-economic-consequences-of-the-fossil-fuel-supply-chain/181CB4D021BA549E64D87B667D3FB987/core-reader>

Page 18

Text: <https://www.investopedia.com/articles/investing/102015/currencies-most-affected-falling-oil-prices.asp>
<https://www.investopedia.com/ask/answers/032515/how-does-price-oil-affect-venezuelas-economy.asp>

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Text: <https://climate.nasa.gov/effects/>

Figure 19: <https://developmentwatchuk.wordpress.com/2011/03/20/climate-change-vulnerability-index-2011/>

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Text and Figure 20: <https://www.unicef.org/press-releases/climate-change-threatens-lives-and-futures-over-19-million-children-bangladesh>

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Text (Australia): http://www.climateinstitute.org.au/verve/_resources/fullreportbushfire.pdf
<http://www.bom.gov.au/weather-services/fire-weather-centre/bushfire-weather/index.shtml>

Figure 21: http://www.climateinstitute.org.au/verve/_resources/fullreportbushfire.pdf

Text (New Zealand): <https://www.newsroom.co.nz/@greenroom/2020/01/07/975194/burning-irony-climate-fix>
<https://www.sciencemediacentre.co.nz/2020/01/09/2019-nzs-fourth-warmest-year-on-record-expert-reaction/>

Page 23

Text: <https://www.sciencedaily.com/releases/2019/08/190819082450.htm>

Page 24

Text (top): https://www.researchgate.net/publication/316061759_Waterborne_Diseases_and_Climate_Change_Impact_and_Implications

Text (increased risk): https://www.cdc.gov/climateandhealth/pubs/VECTOR-BORNE-DISEASE-Final_508.pdf

Page 25

Figure 22: <https://www.cdc.gov/climateandhealth/effects/default.htm>

Figure 23: <https://www.semanticscholar.org/paper/Impact-of-Climate-Change-on-the-Geographic-Scope-of-Souza-Owusu/c784ae343df4167cfb1bb9cea9e729c784b896e8>

