21st International Geography Olympiad

Bangkok, Thailand

26 July – 1 August 2025

WRITTEN RESPONSE TEST

Resource Booklet

Do NOT open the Booklet before instructed to do so by a supervisor.

Do NOT write any of your answers in this Booklet.

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Written Response Test
Contributions from: Bulgaria, Canada, Denmark, Hungary, Poland and Singapore
Committee Convenor: Ivan Sulc (Croatia)
Director of Tests: Paul VanZant (Canada)

Section A: Landslides

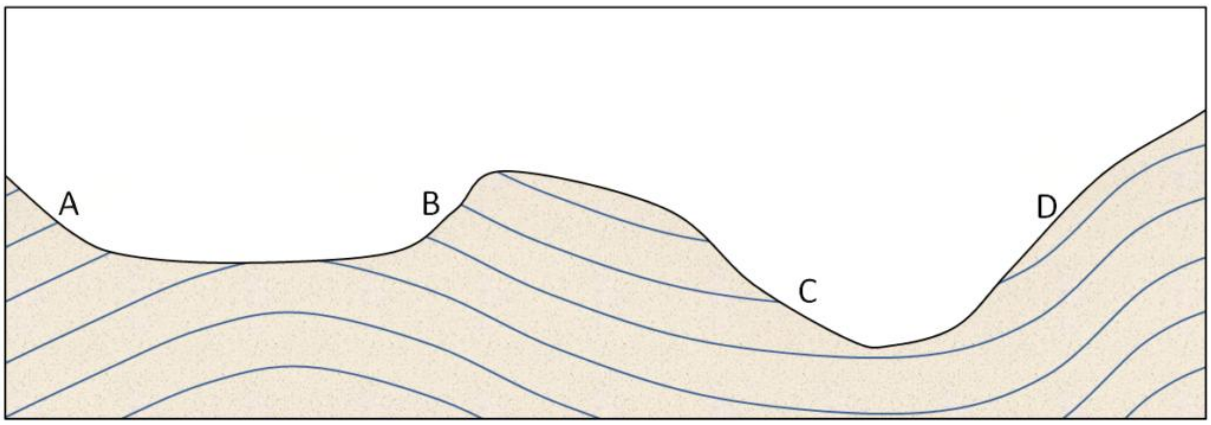

Figure A1: A diagram of anticlines and synclines

Figure A2: Remnants of a landslide that took place in La Conchita, California, USA (January 2005). Ten people were killed.

(https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/production/s3fs public/styles/full_width/public/LaConchia_USGS_Photo.jpg?itok=NS7eb4YQ)

Section B: Waves and coastline

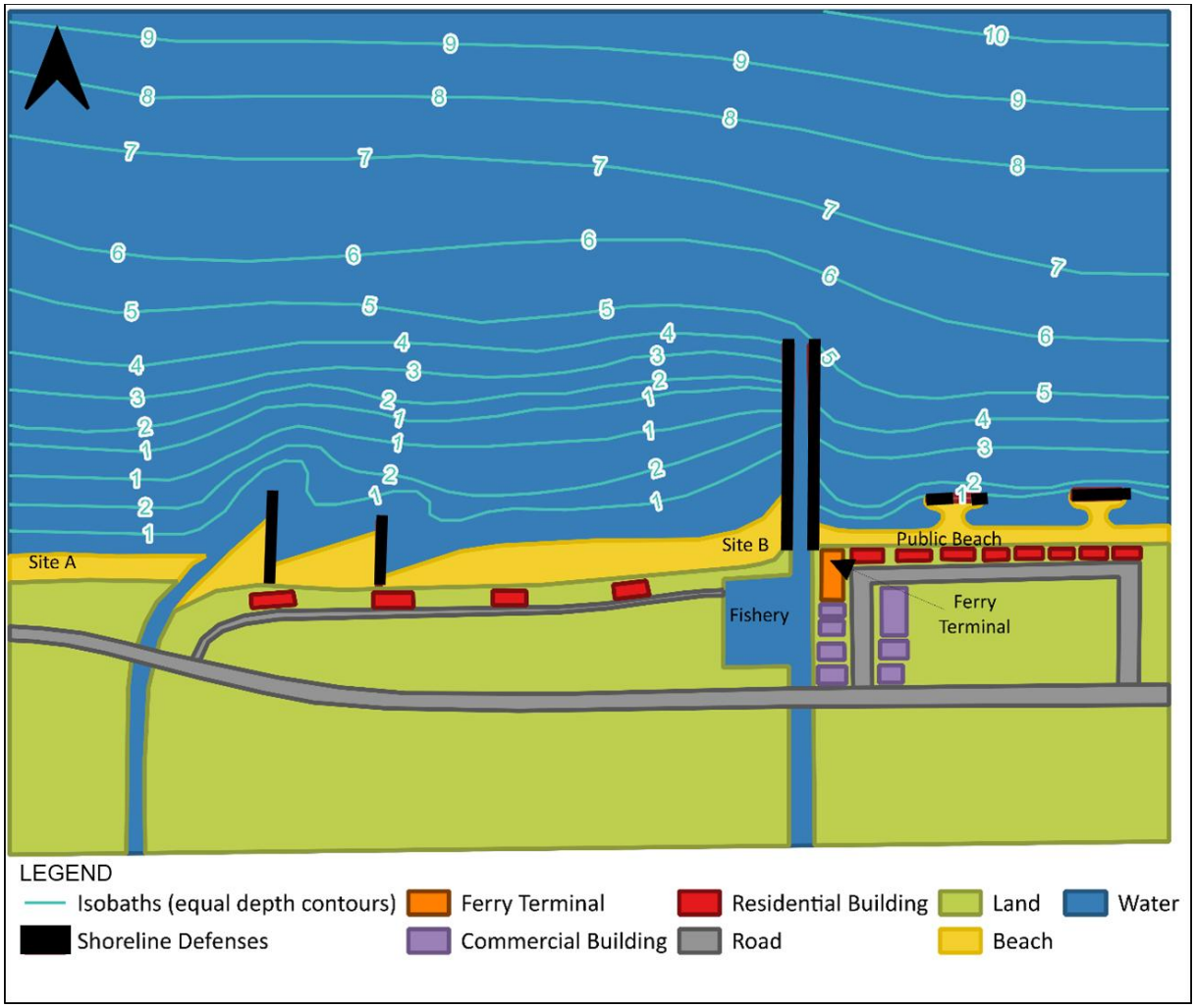

Figure B1: A fictional coastline. The underwater topography (bathymetry) of the area is represented by **isobaths or depth contours** with an interval of 1 metre. This area is microtidal with a maximum tidal range of 2 metres and is located at a latitude of 50°N. This coastal area includes a public beach with over 50,000 visitors per summer, a fishery, a ferry terminal and several residential properties.
(Created by B. Woodward)

Section C: Water stress

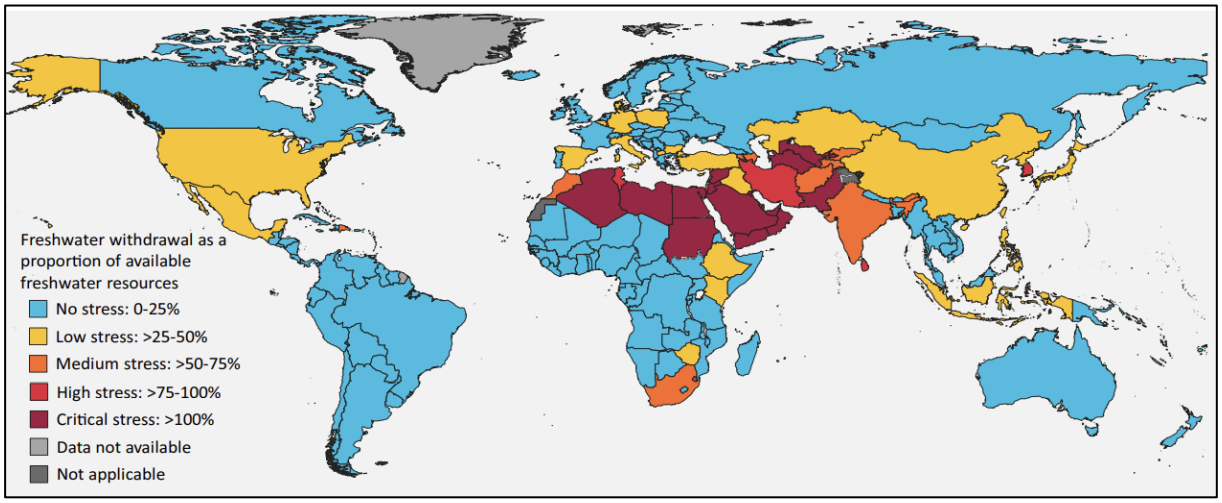

Figure C1. Current water stress by country – freshwater withdrawal as a proportion of available freshwater resources

(https://www.unwater.org/sites/default/files/app/uploads/2021/12/SDG-6-Summary-Progress-Update-2021_Version-July-2021a.pdf)

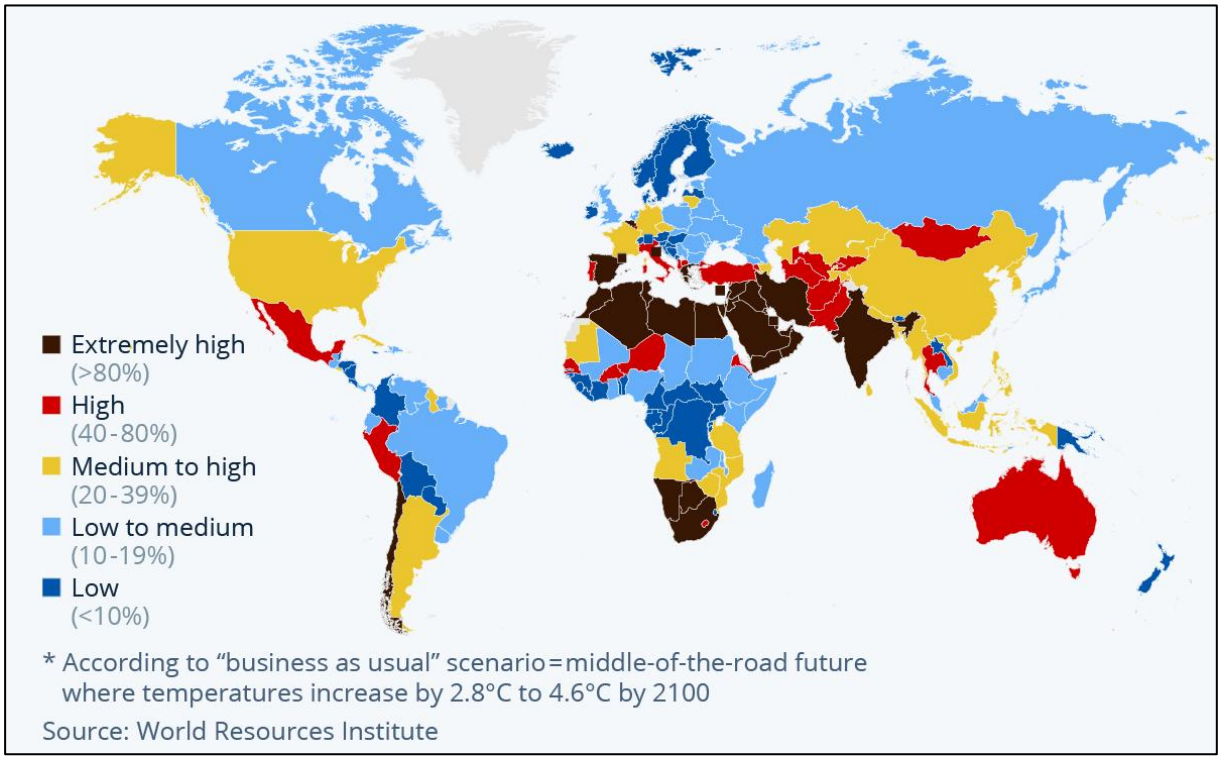

Figure C2. Projected water stress in 2050 (ratio of human water demand to water availability)

(https://earthobservatory.nasa.gov/images/152703/deluge-in-the-united-arab-emirates)

Section D: Global energy consumption

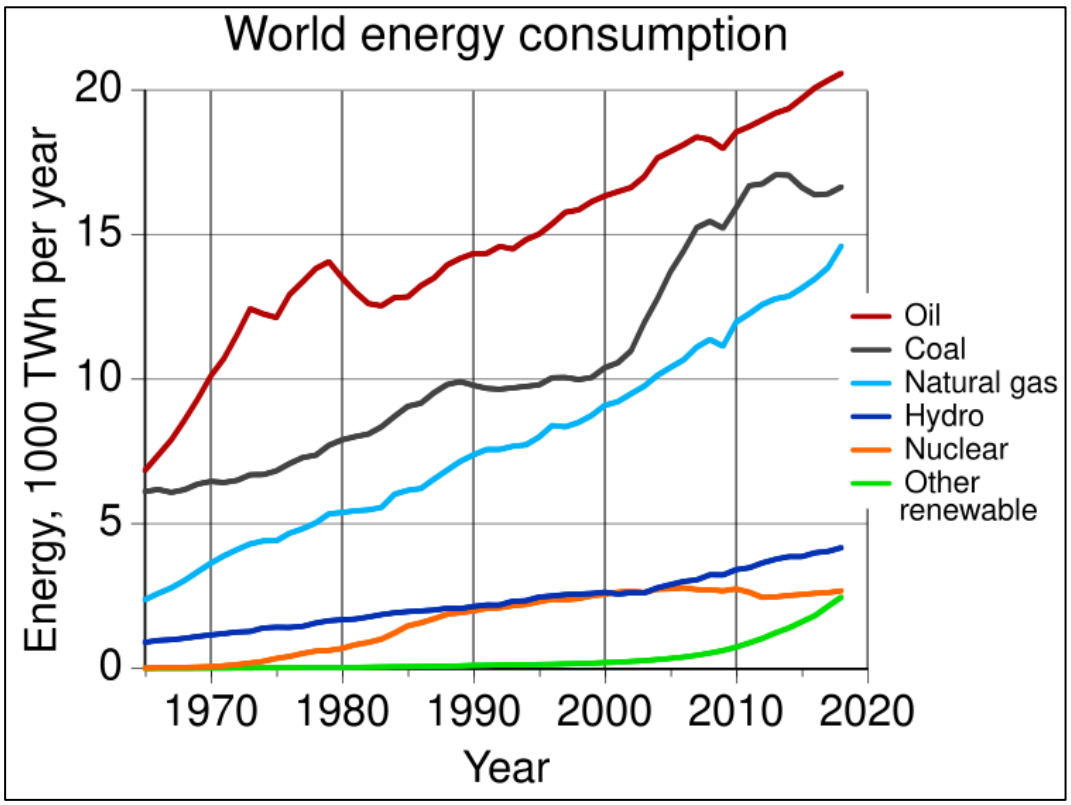

Figure D1. Structure of world energy consumption by source from 1965 to 2018 (https://en.m.wikipedia.org/wiki/File:World_energy_consumption.svg)

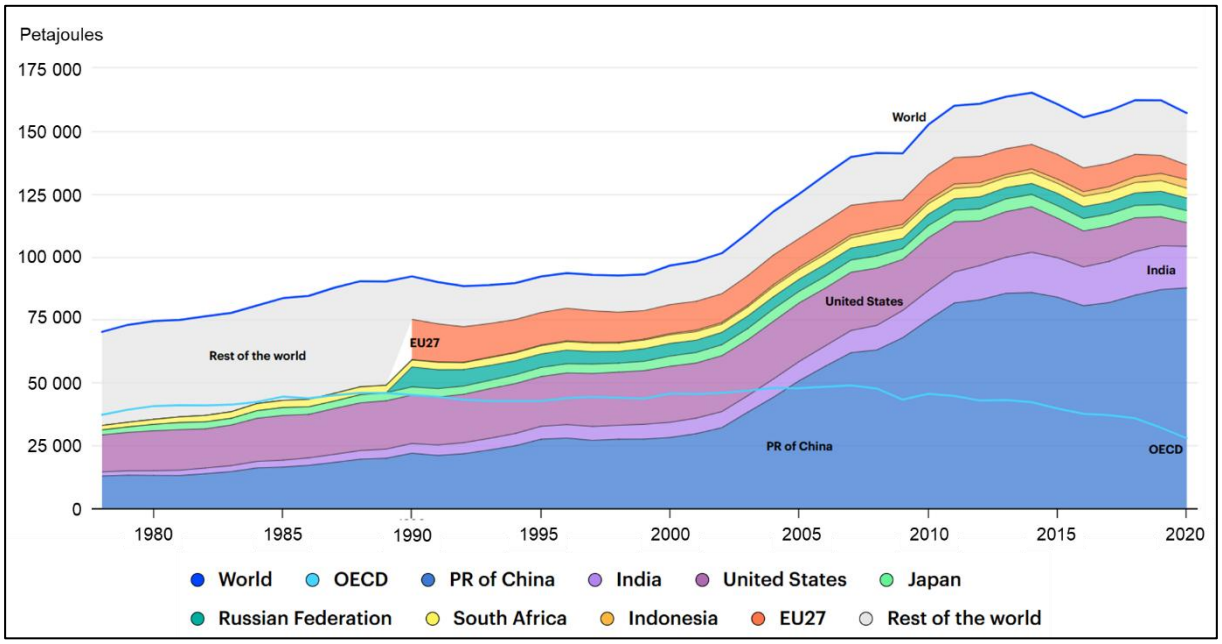

Figure D2. World coal consumption in selected countries and regions from 1978 to 2020 (https://www.iea.org/data-and-statistics/charts/world-coal-consumption-1978-2020)

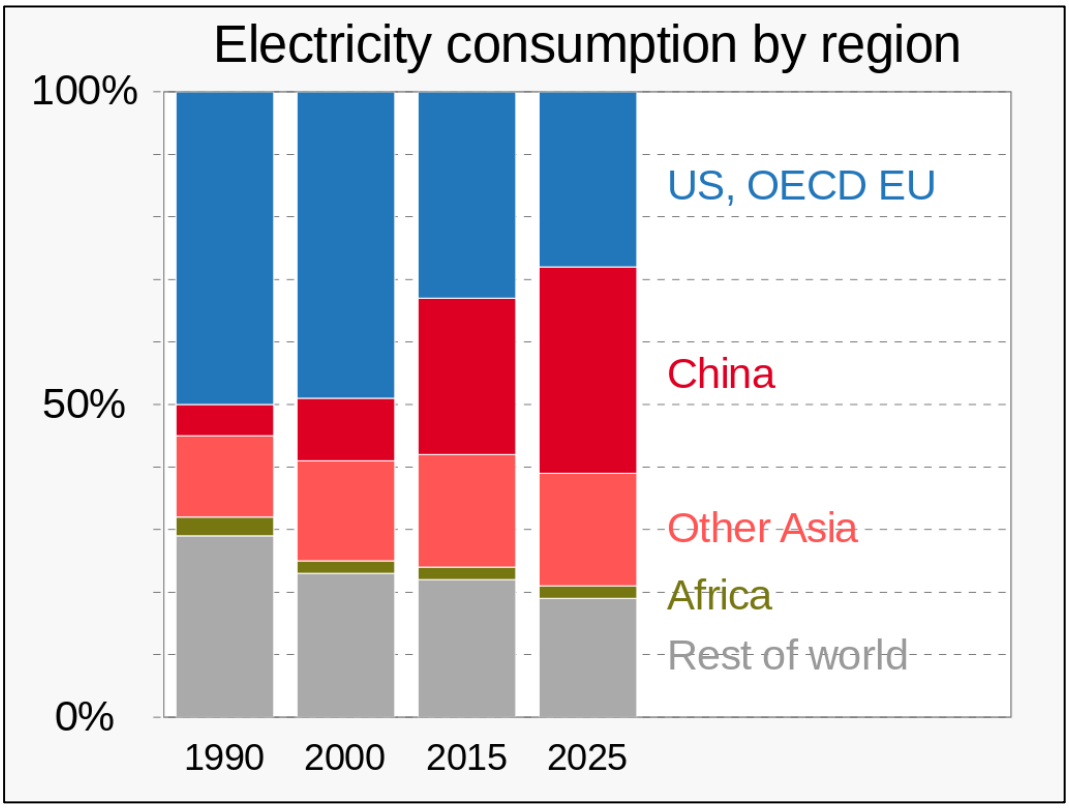

Figure D3. Electricity consumption in selected countries and regions in 1990, 2000, 2015 and 2025

(https://en.m.wikipedia.org/wiki/File:1990-_Electricity_consumption_-_shares_by_region_-_IEA_data.svg)

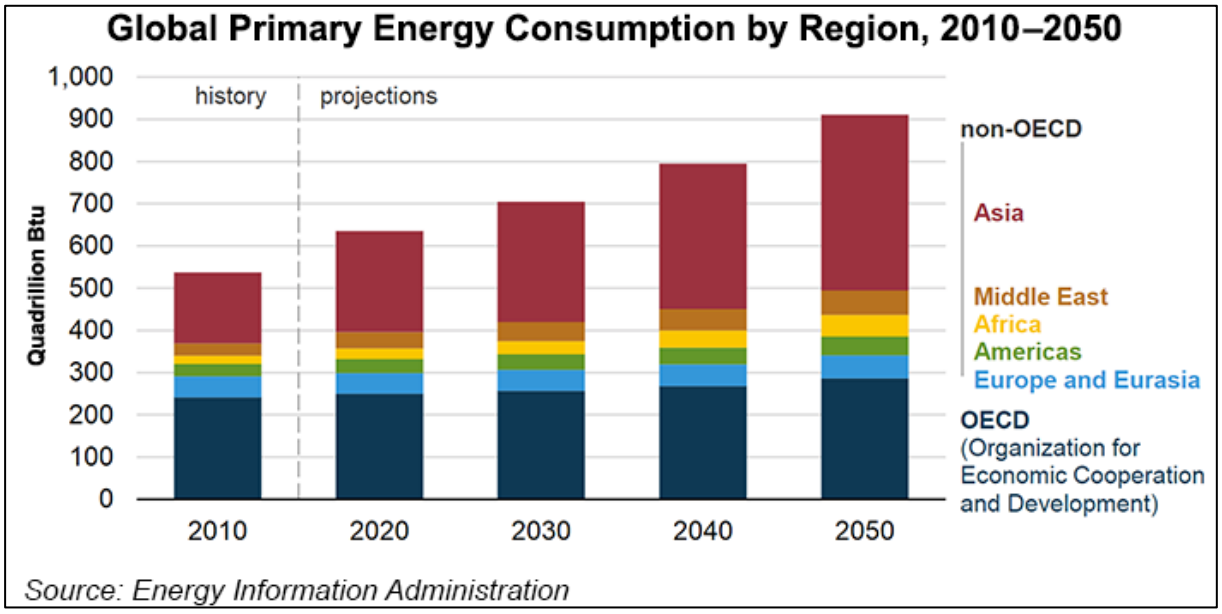

Figure D4. Projected global primary energy consumption by region until 2050, made in 2010

(https://www.flickr.com/photos/eiagov/48821414017)

Section E: The Darién Gap

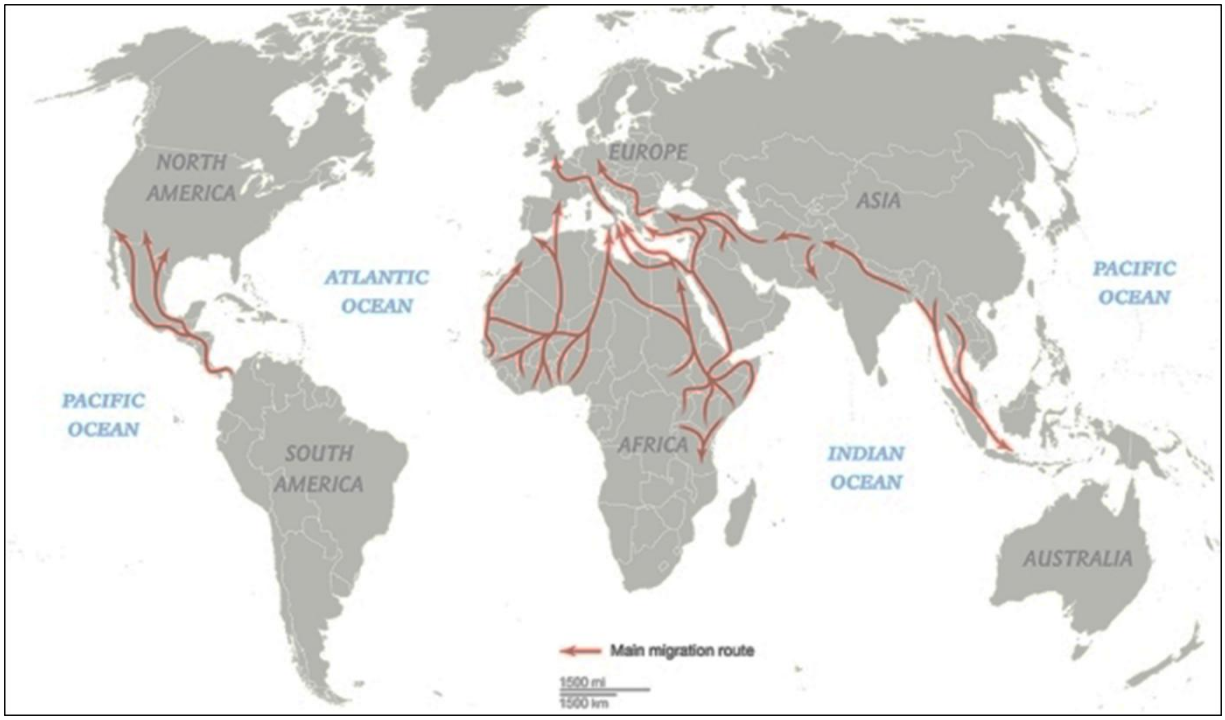

Figure E1: Main routes of irregular migration in the world
(https://allgeographynow.wordpress.com/2016/03/06/the-worlds-congested-human-migration-routes-in-5-maps/)

Text box E1. The Darién Gap

The Darién Gap is a geographical region that connects the American continents stretching across the southern province of Darién in Panama and the northern part of the department of Chocó in Colombia. It is the only gap (106 kilometres long) in the Pan-American Highway, a road system that runs from Alaska to Argentina. It consists of a large drainage basin, dense rainforest and mountains. Known for its remoteness, difficult terrain and extreme environment, it has a reputation as one of the most inhospitable regions in the world. The Darién Gap is largely undeveloped; there is no road, not even a primitive one, but criminal enterprises such as human and drug trafficking are widespread. Despite the dangerous conditions, the Darién Gap has become one of the busiest migration routes in the world since the 2010s.

The most important reception point for migrants in Panama is Bajo Chiquito with 200-300 inhabitants. It began as a small jungle village that lived from fishing and agriculture, but recently migration has changed the reality. It transformed into a bustling transit hub as thousands of migrants passed through daily. Many locals left agriculture and opened new businesses to cater to migrants, from which the local residents profited as well. From a small farming village cut-off from the world, it became a small town with that received basic services because of migration needed for a large influx of people.

(https://www.connectas.org/especiales/bajo-chiquito-how-migration-transformed-a-village-in-the-jungle/, https://en.wikipedia.org/wiki/Dari%C3%A9n_Gap)

Figure E2: Location of the Darién Gap
(https://www.cfr.org/article/crossing-darien-gap-migrants-risk-death-journey-us)

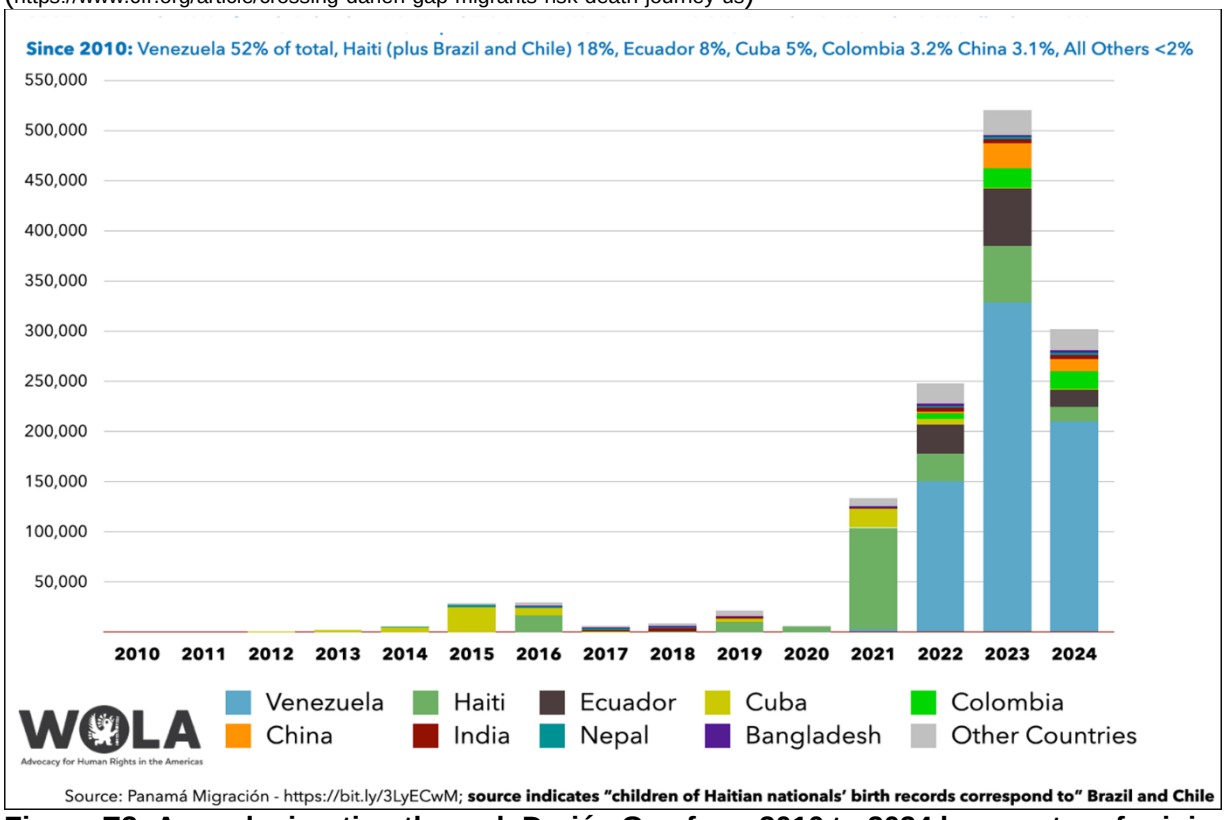

Figure E3: Annual migration through Darién Gap from 2010 to 2024 by country of origin
(https://i0.wp.com/borderoversight.org/wp-content/uploads/2025/02/wola_migration_charts.001-9.png?ssl=1)

Section F: Urban Heat Island

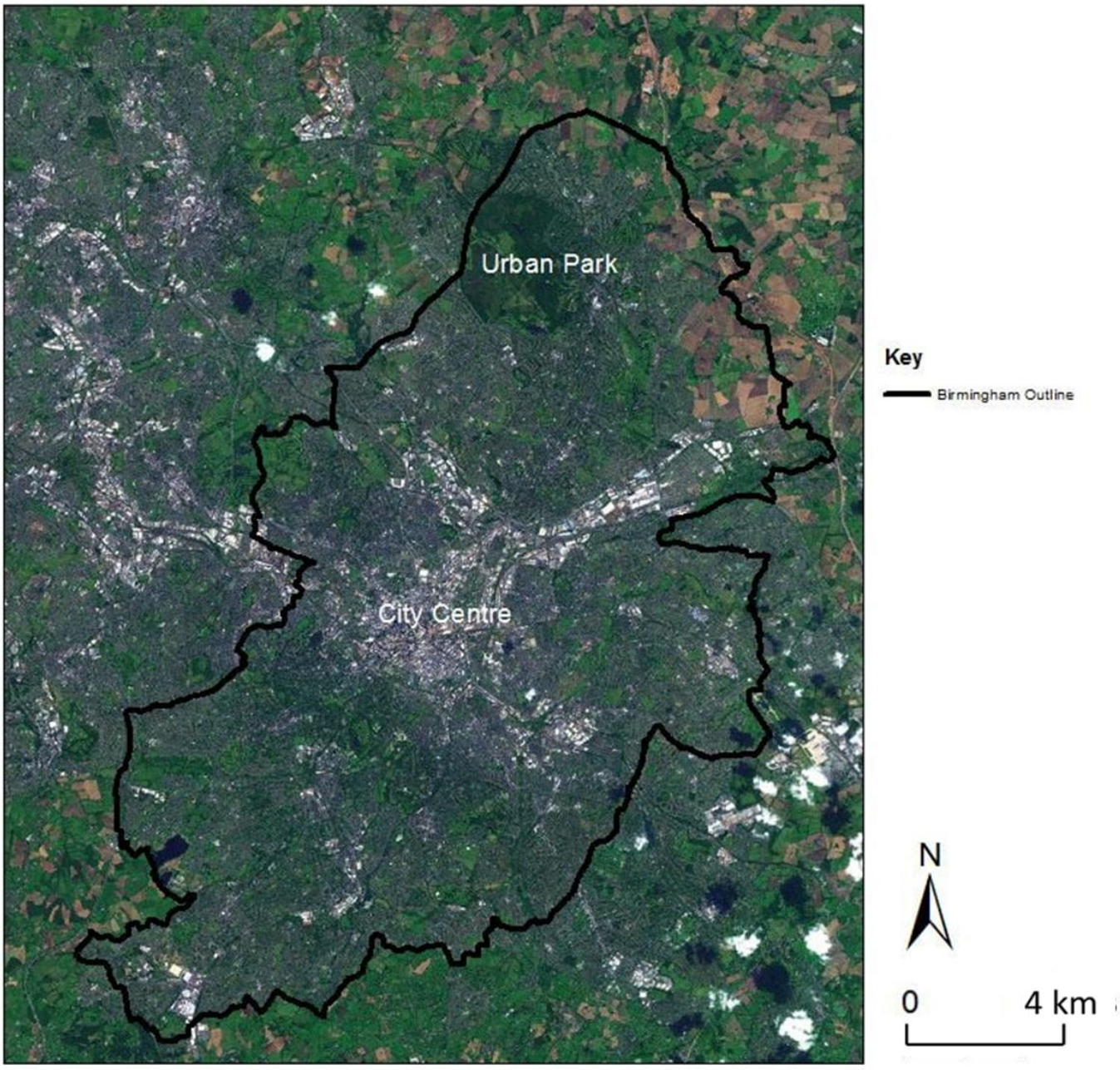

Figure F1: Satellite image of Birmingham and the surrounding urban area
(https:// https://www.metlink.org/fieldwork-resource/urban-heat-island-introduction/)

end ■