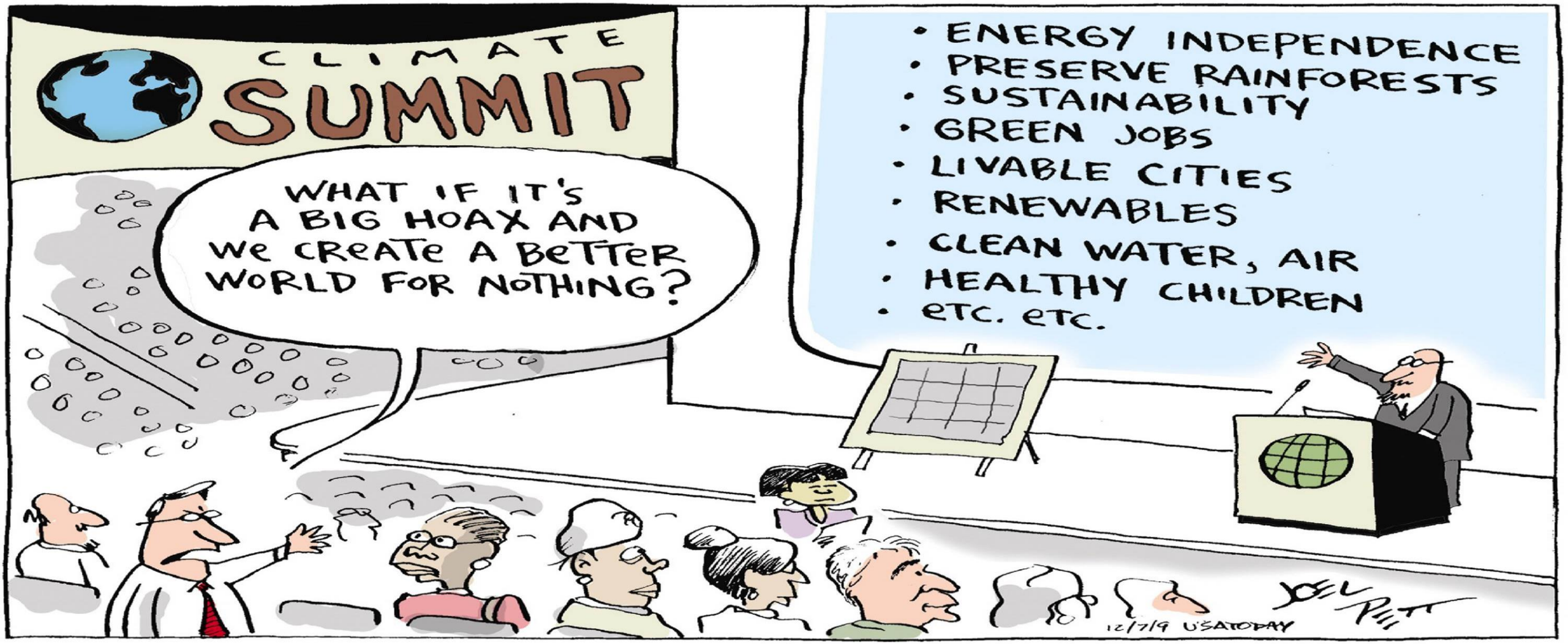
HOW TO BE ZERO CARBON CITIZEN?




CLIMATE CHANGE IS CAUSED BY TWO THINGS: HUMAN ACTIVITY ...
... AND HUMAN INACTION!
Time to act!
COP24
CHAPPATTE
The New York Times


THE BEST PART IS: THE LIL'DARLIN' LEAVES NO CARBON FOOTPRINT!
COAL
POWER
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WWW.ARTLEYTOONS.COM
ARTLEY


ICU
They told me to make some lifestyle changes... And you?
U.N.
BIO-
DIVERSITY
REPORT
MARGULIES
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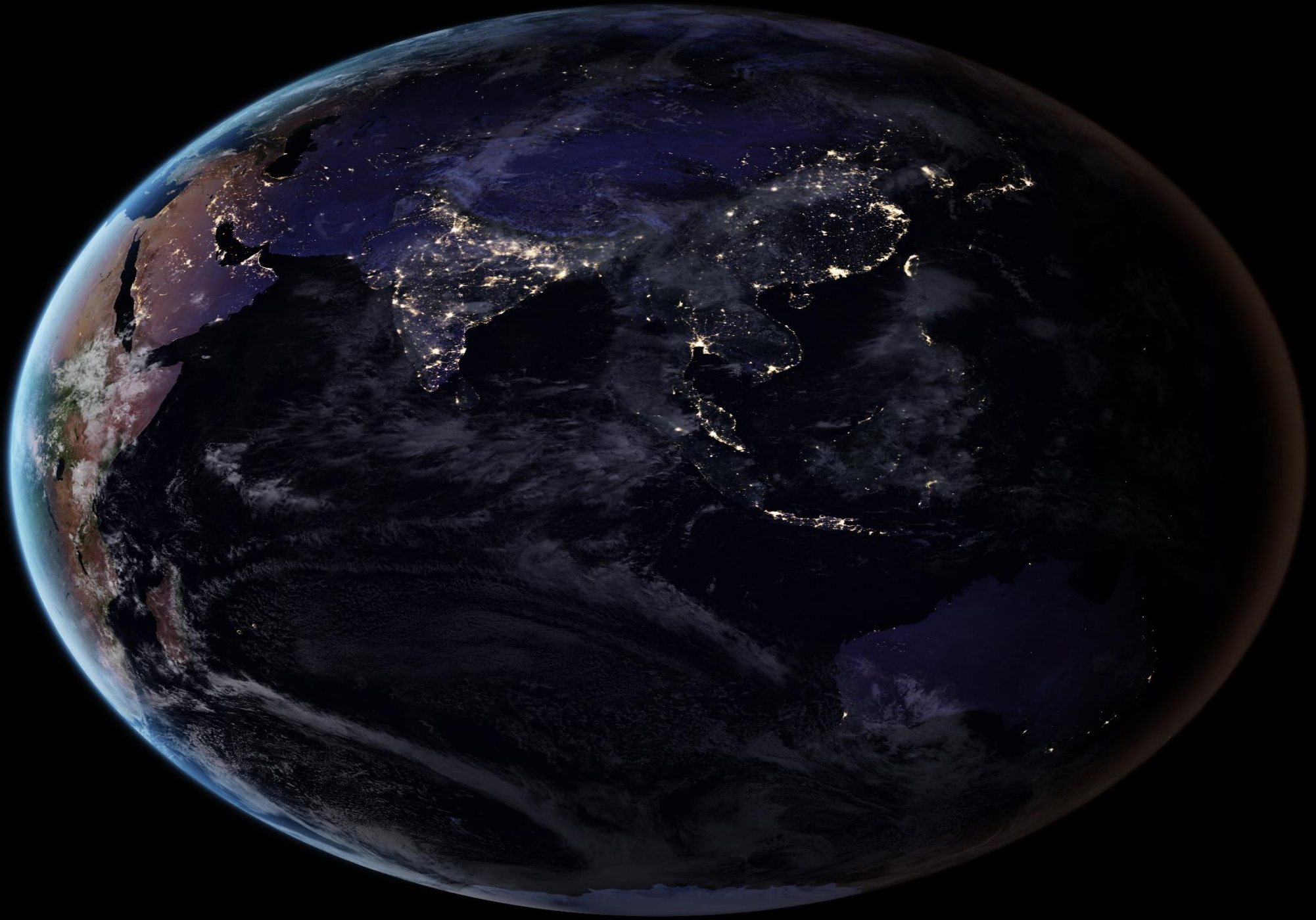
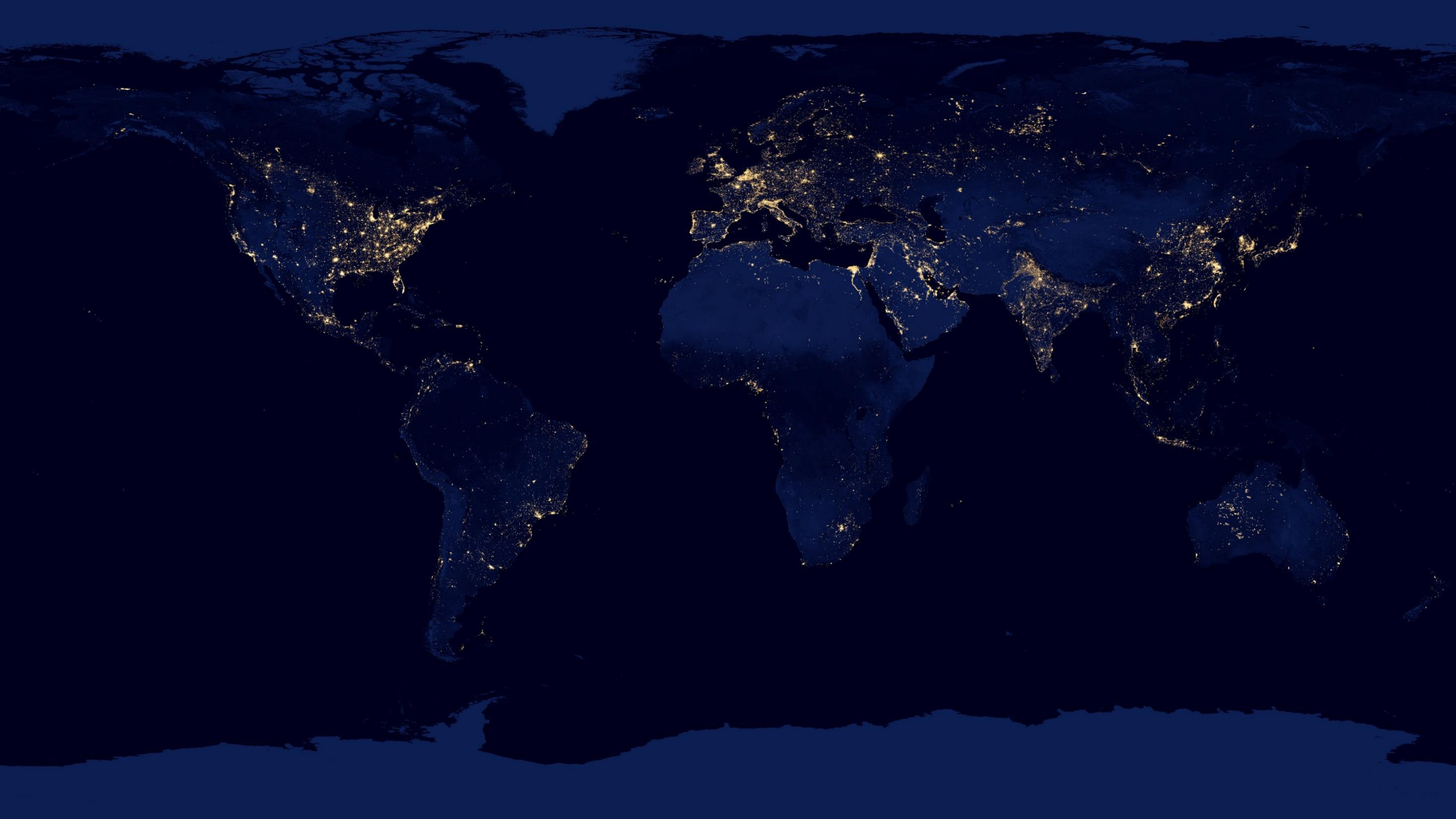
SUSTAINABLE DEVELOPMENT GOALS

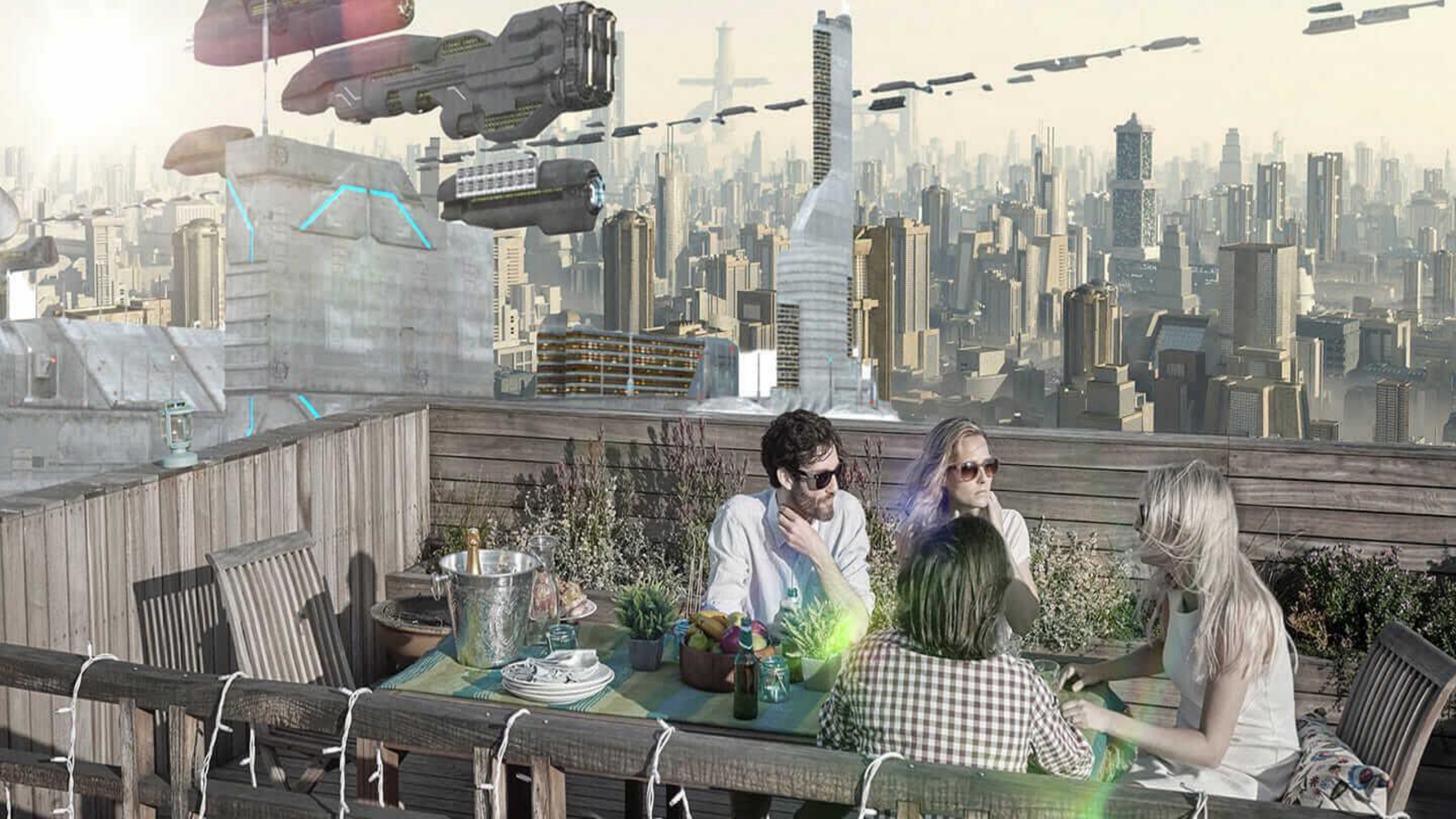
13 CLIMATE ACTION

Take urgent action to combat climate change and its impacts

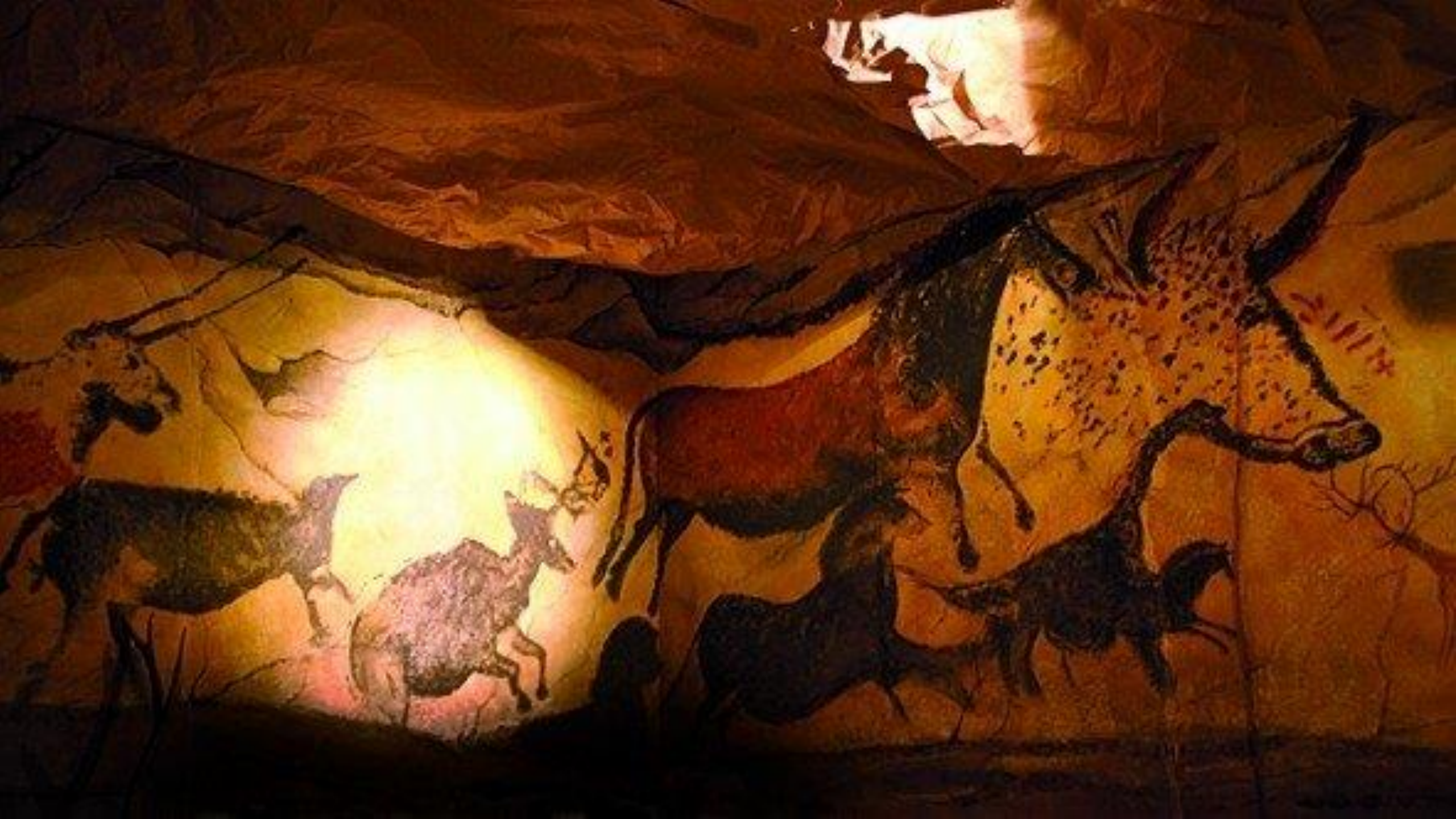

SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
Women globally depend on natural resources for their livelihoods, economic prosperity and well-being
2 ZERO HUNGER
Giving women equal access to productive resources would lift 100 million people out of hunger
3 GOOD HEALTH AND WELL-BEING
Health and nutrition for women and their families are affected by unequal access to food, energy and clean water
4 QUALITY EDUCATION
Formal and informal education can build the capacity of women girls men and boys to be better stewards of their environments
5 GENDER EQUALITY
Drivers of environmental change are differentiated by gender. Women and men do not share equal access to or control of natural resources, environmental goods
6 CLEAN WATER AND SANITATION
Women spend 16 million hours per day collecting water in 25 Sub-Saharan countries, leading to time poverty
7 AFFORDABLE AND CLEAN ENERGY
Access to energy reduces drudgery and improves rural women's health, social conditions, productivity and physical environments
8 DECENT WORK AND ECONOMIC GROWTH
Women earn 24% less than men globally; the work of women in providing food for their households through agriculture and fishing is often unpaid or under-valued
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Women's empowerment as consumers, entrepreneurs and leaders in the green economy leads to economic growth
10 REDUCED INEQUALITIES
Within and among countries, women's access to ecosystem goods and services is a distinguishing factor for empowerment and well-being
11 SUSTAINABLE CITIES AND COMMUNITIES
Gender inequalities that exist in cities where urbanization and climate change impact the natural environment, can result in men and women having inequitable access to essential services
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Due to a lack of data, the impact on the well-being of women within increasing global demand for water, food, energy, timber and fibre is nearly invisible
13 CLIMATE ACTION
Natural disasters and conflicts influenced by climate change impact men and women differently, with women among the most physically and economically vulnerable
14 LIFE BELOW WATER
Women should be empowered as responsible consumers of personal care products and engaged in sustainable biodiversity management and conservation
15 LIFE ON LAND
Women play an important role as stewards of land in farming wood collection and biodiversity conservation, but they have limited ownership and rights to land
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
In conflict-affected settings, women and men contribute to conflict prevention and peacebuilding through equal rights to, and equitable management of, land and other natural resources
17 PARTNERSHIPS FOR THE GOALS
The needs and perspectives of women, including gender-responsive budgeting should be integrated into the means and partnerships for implementing sustainable development

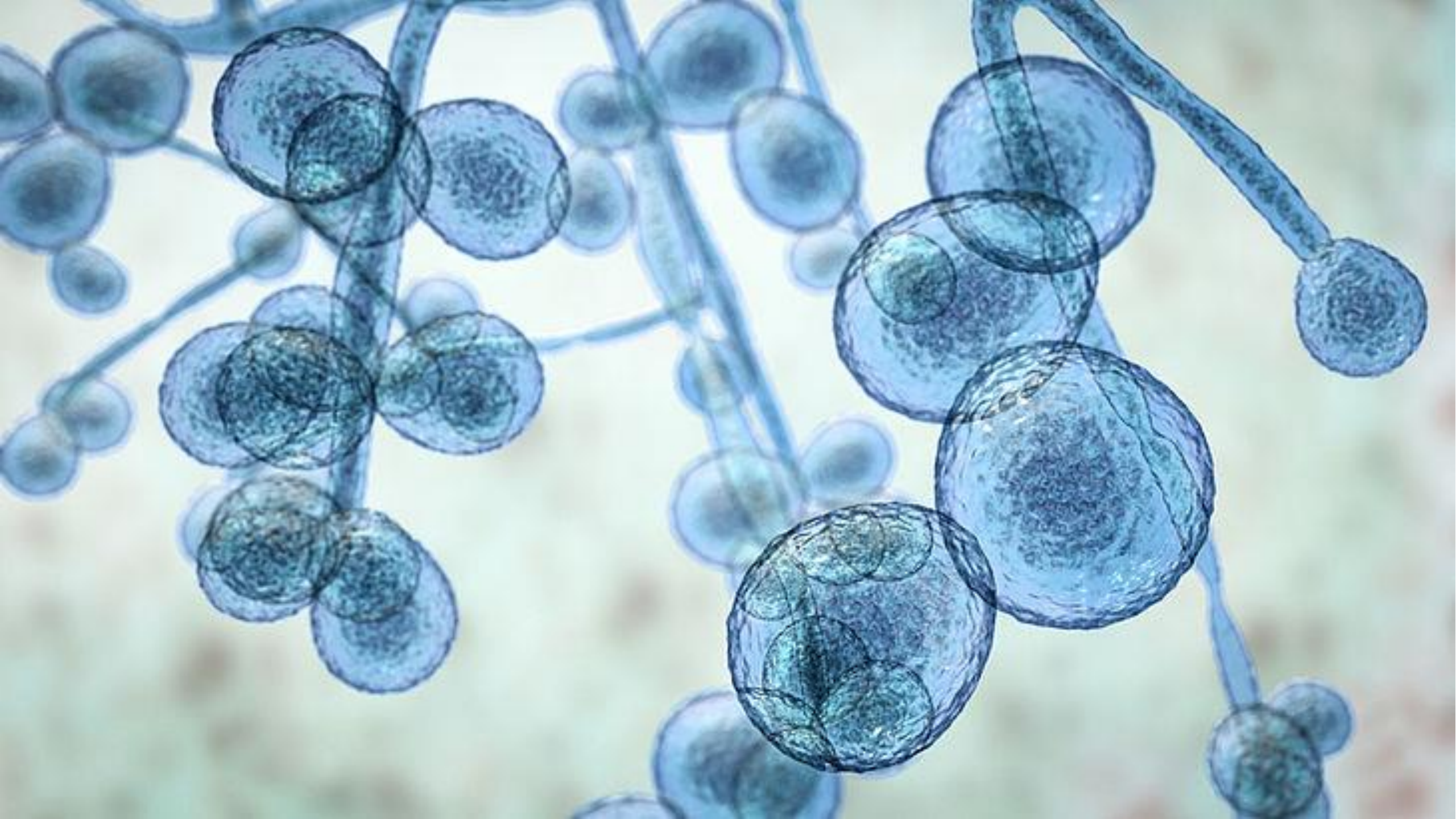


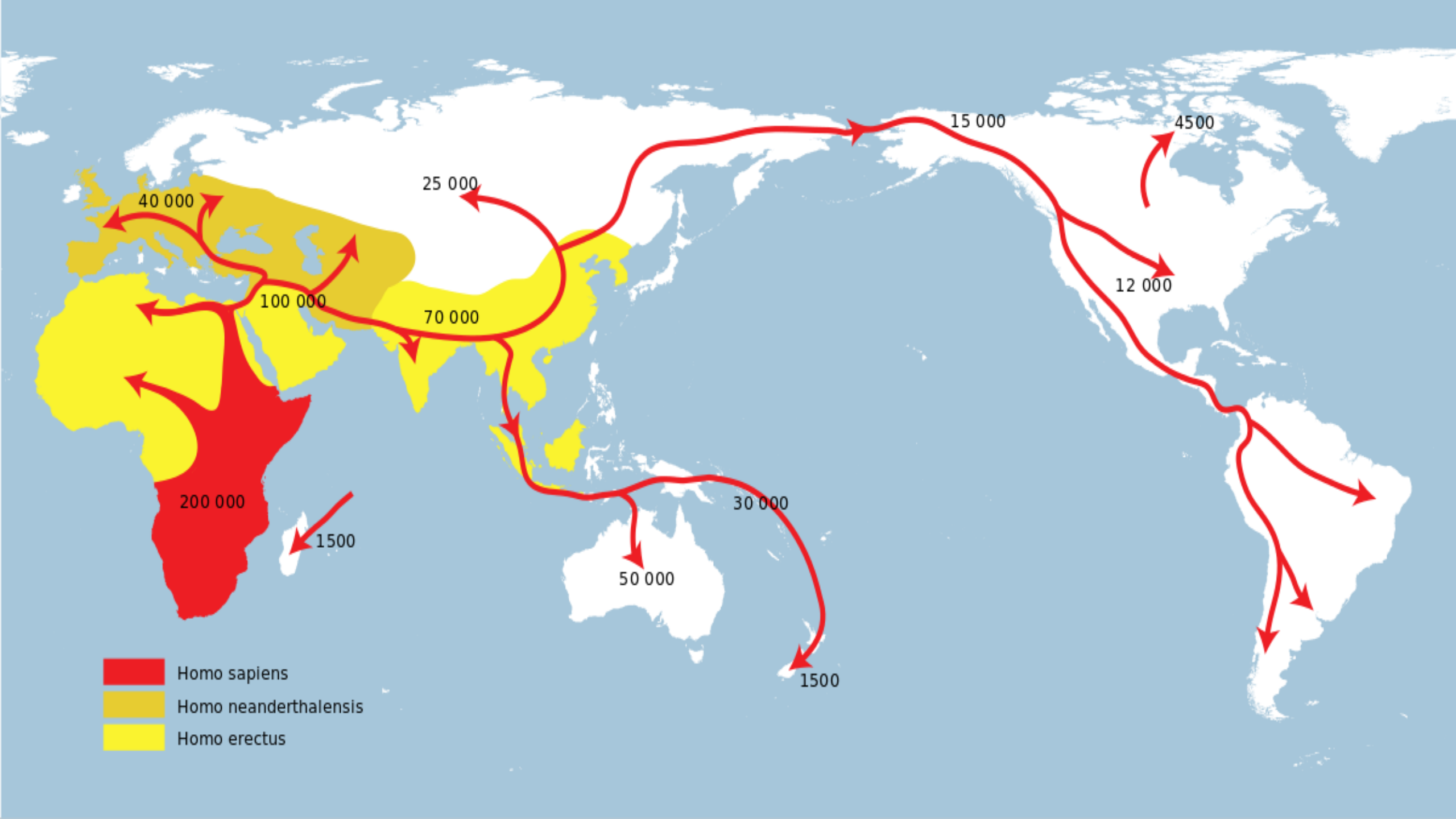


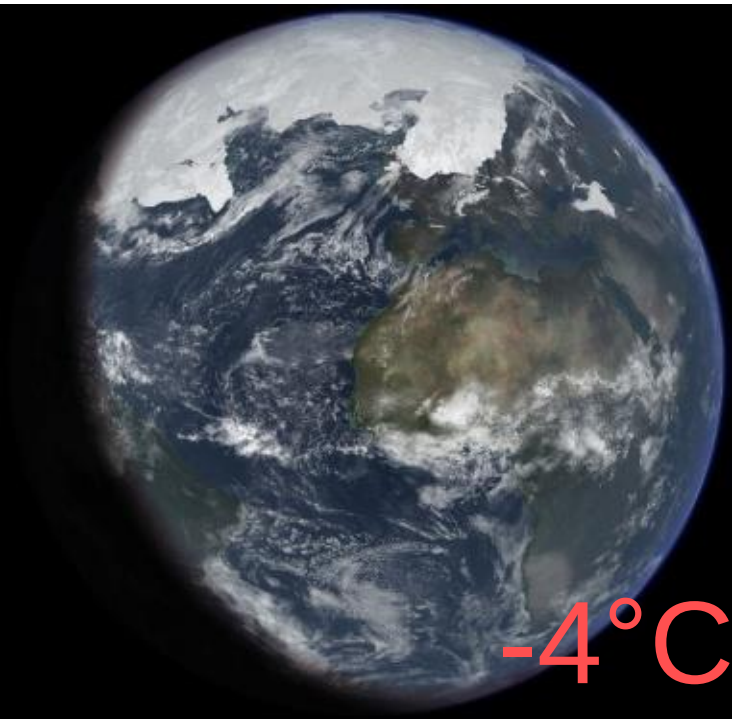


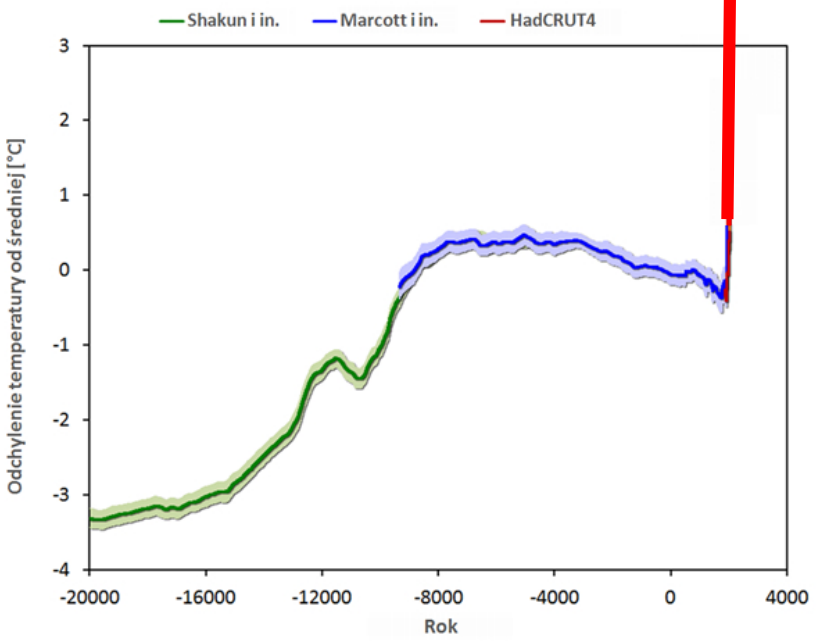

OCEANIX CITY





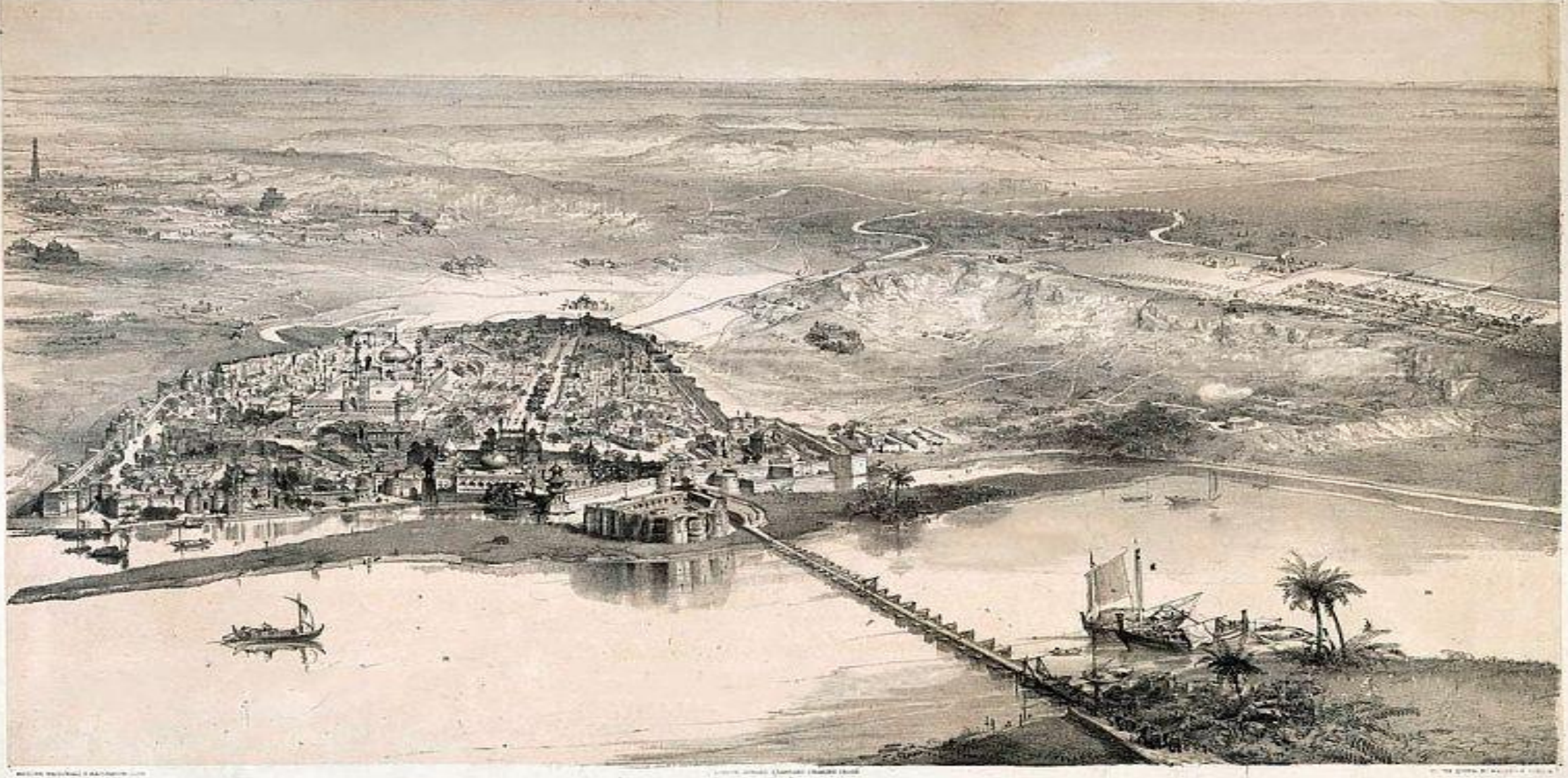

40 000
25 000
15 000
4500
100 000
70 000
12 000
200 000
30 000
1500
50 000
1500
Homo sapiens
Homo neanderthalensis
Homo erectus


-4°C


Shakun i in.
Marcott i in.
HadCRUT4
Odchylenie temperatury od średniej [°C]
3
2
1
0
-1
-2
-3
-4
-20000
-16000
-12000
-8000
-4000
0
4000
Rok


+6°C

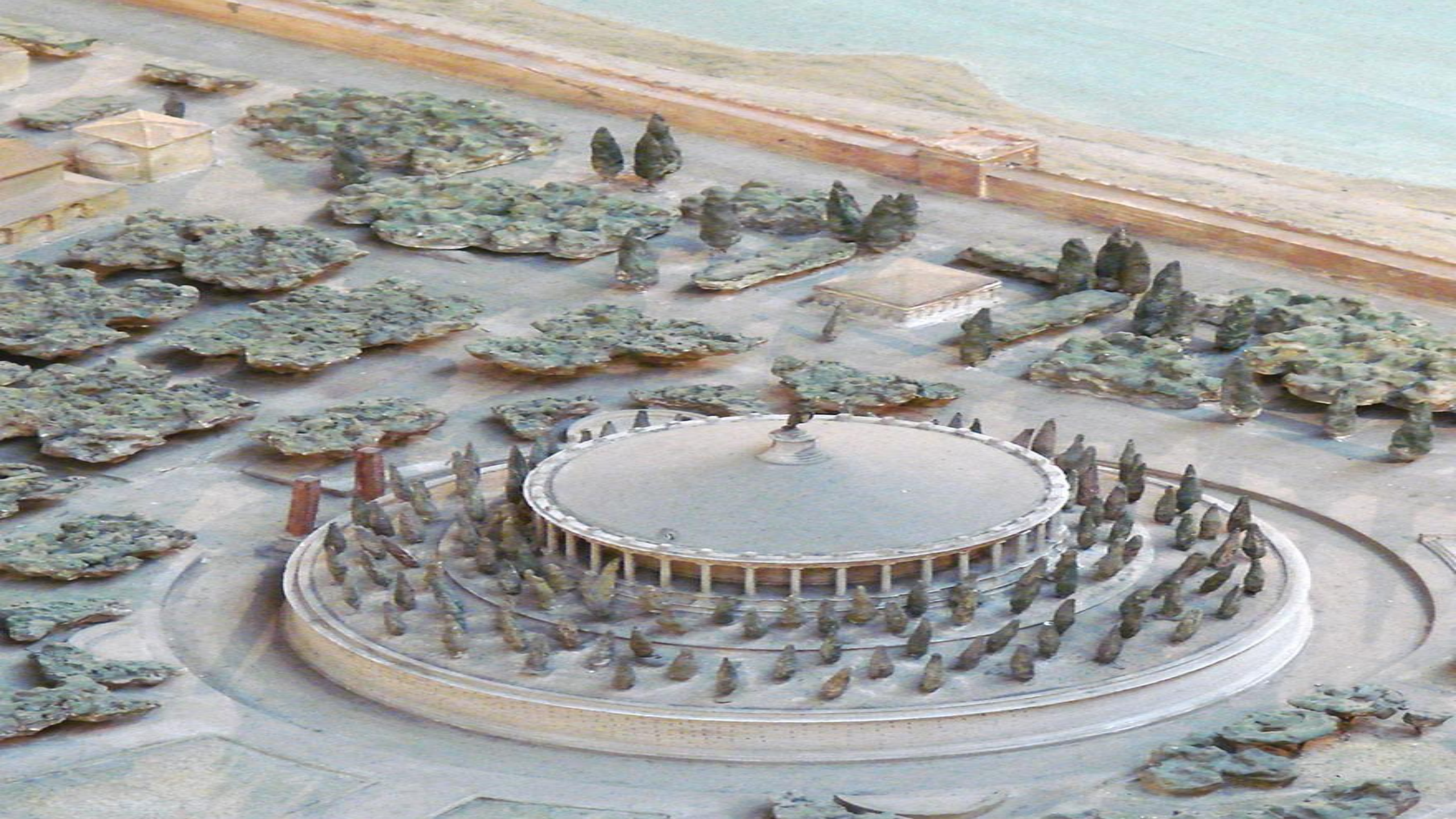

& Gloria summa
Orbis Eous,
Platea



DELHI, AND SURROUNDING COUNTRY.

DRAWN AND ETCH'D BY A. MACLURE, FROM ORIGINAL NATIVE DRAWINGS &c. &c.

LITHOG AT HAUTHORN'S GALL



SPECIMENS FROM MR. PUNCH'S INDUSTRIAL EXHIBITION OF 1850.

(TO BE IMPROVED IN 1851).

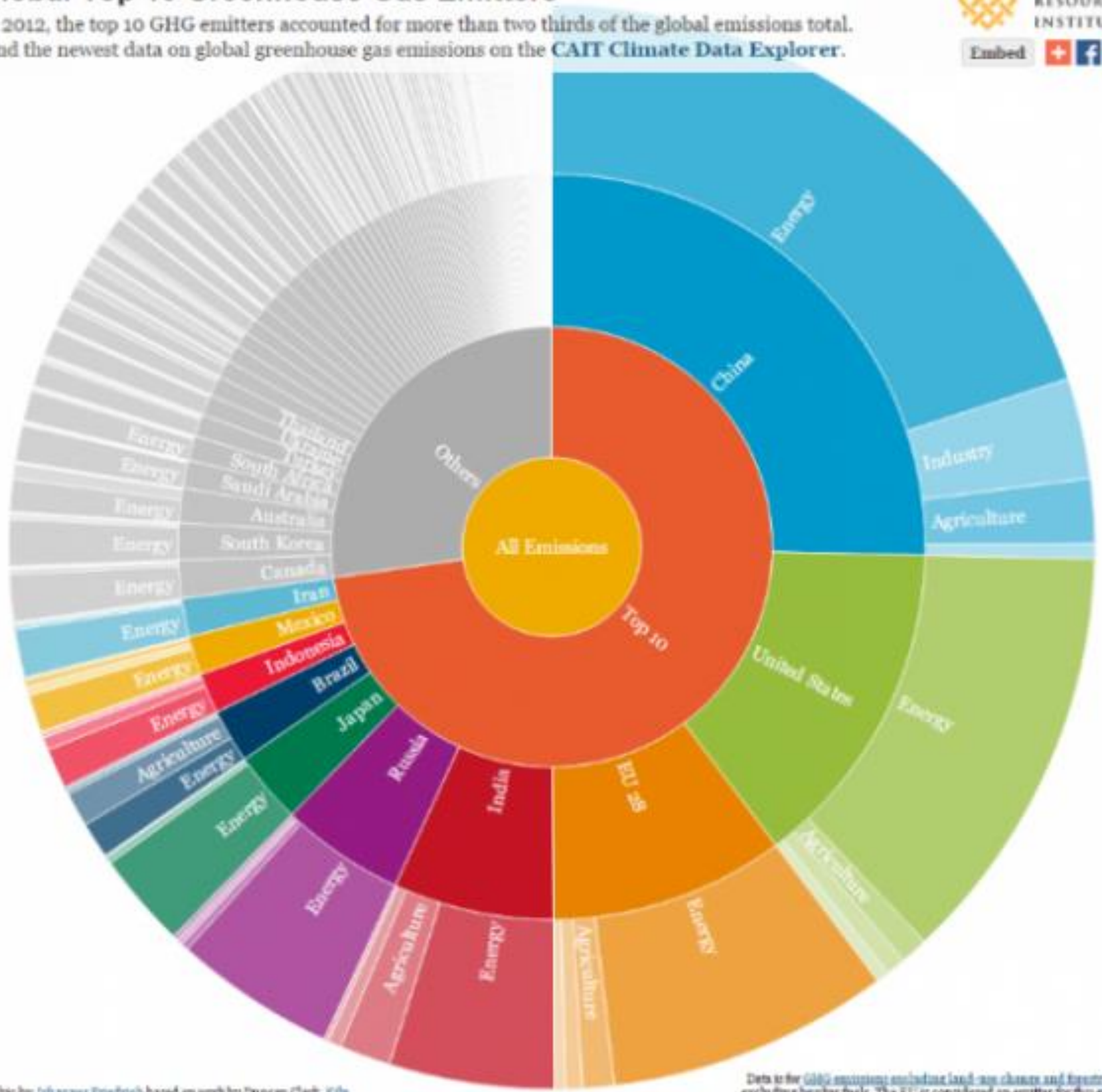
"IN THE CAUSE OF OUR WORKING SISTERS."

(See Suffragette Manifestos.)

Flower Woman. "I WISH THEM SUFFRAJETTES WOULD MOVE ALONG. THEY'VE RUINED MY BUSINESS TO-DAY!"

Global Top 10 Greenhouse Gas Emitters

In 2012, the top 10 GHG emitters accounted for more than two thirds of the global emissions total.
Find the newest data on global greenhouse gas emissions on the **CAIT Climate Data Explorer**.



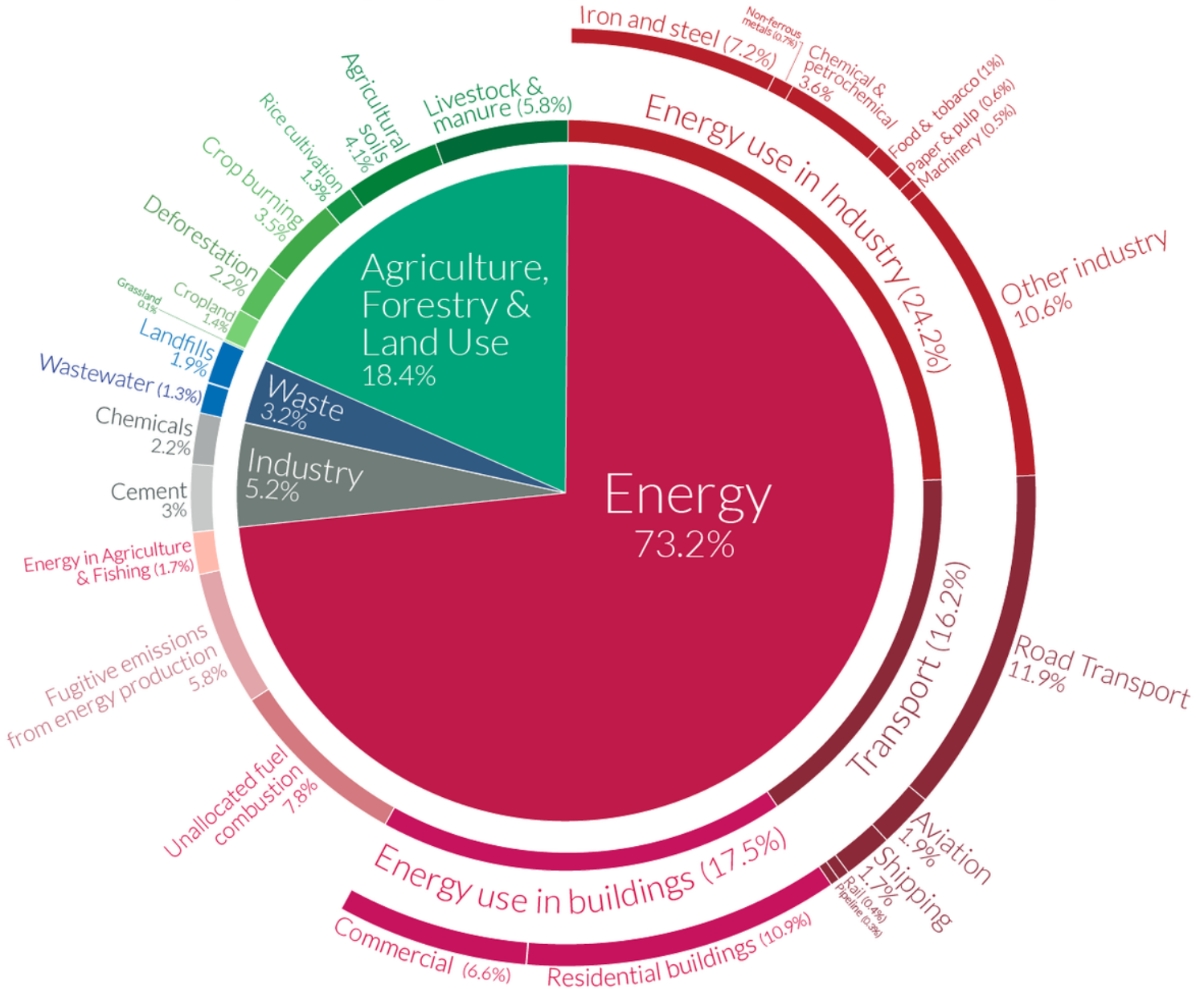
Graphic by Johannes Friedrich based on work by Duncan Clark, Kiln, Mike Bostock and Jason Davies. Thanks also to Jamie Cotta.

Data is for GHG emissions excluding land-use change and forestry and excluding bunker fuels. The EU is considered an emitter for this graph. For more information visit our WRI blog.

Global greenhouse gas emissions by sector

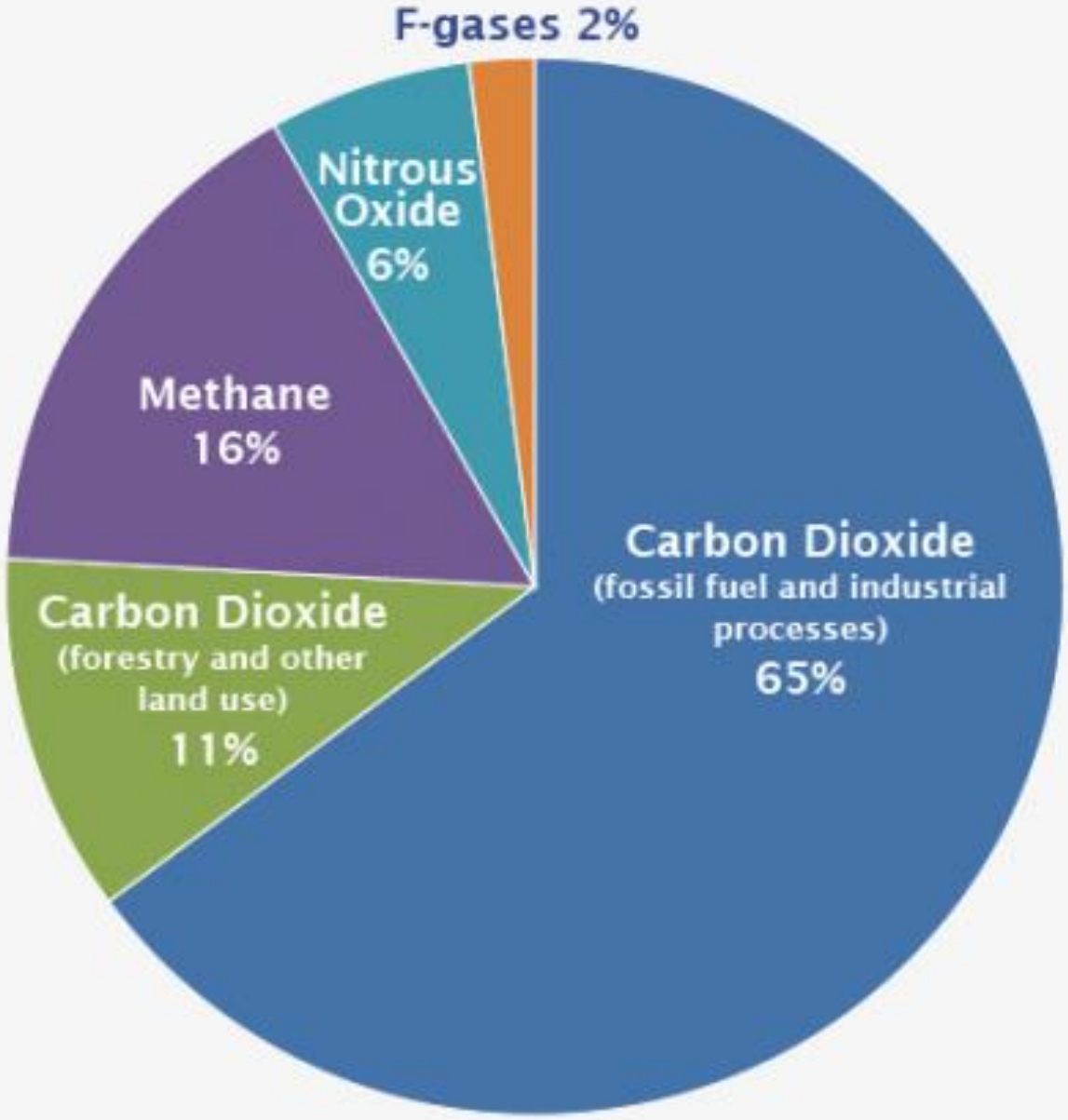
This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO_2eq.

Our World in Data



Source: Climate Watch, the World Resources Institute (2020).

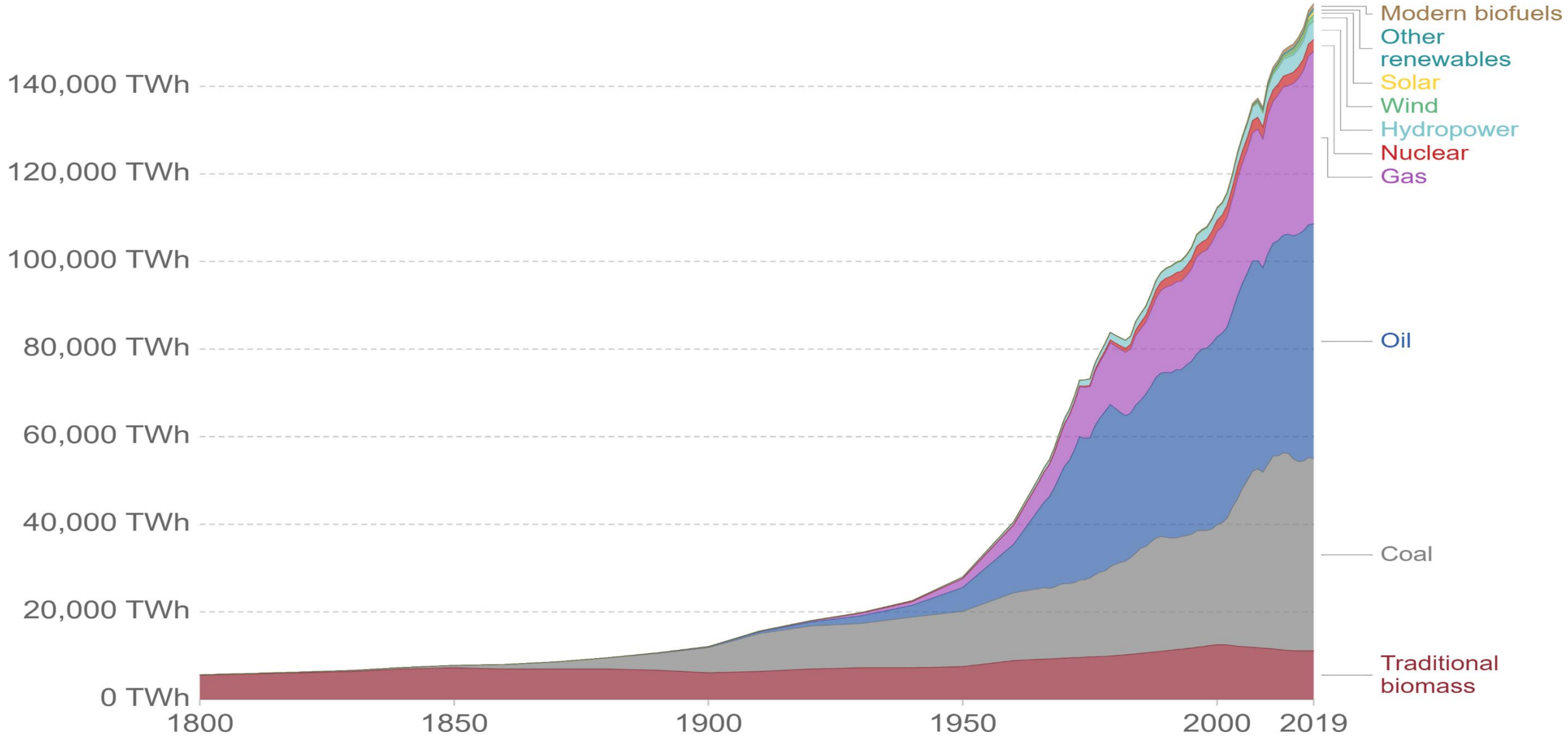
Global Greenhouse Gas Emissions by Gas



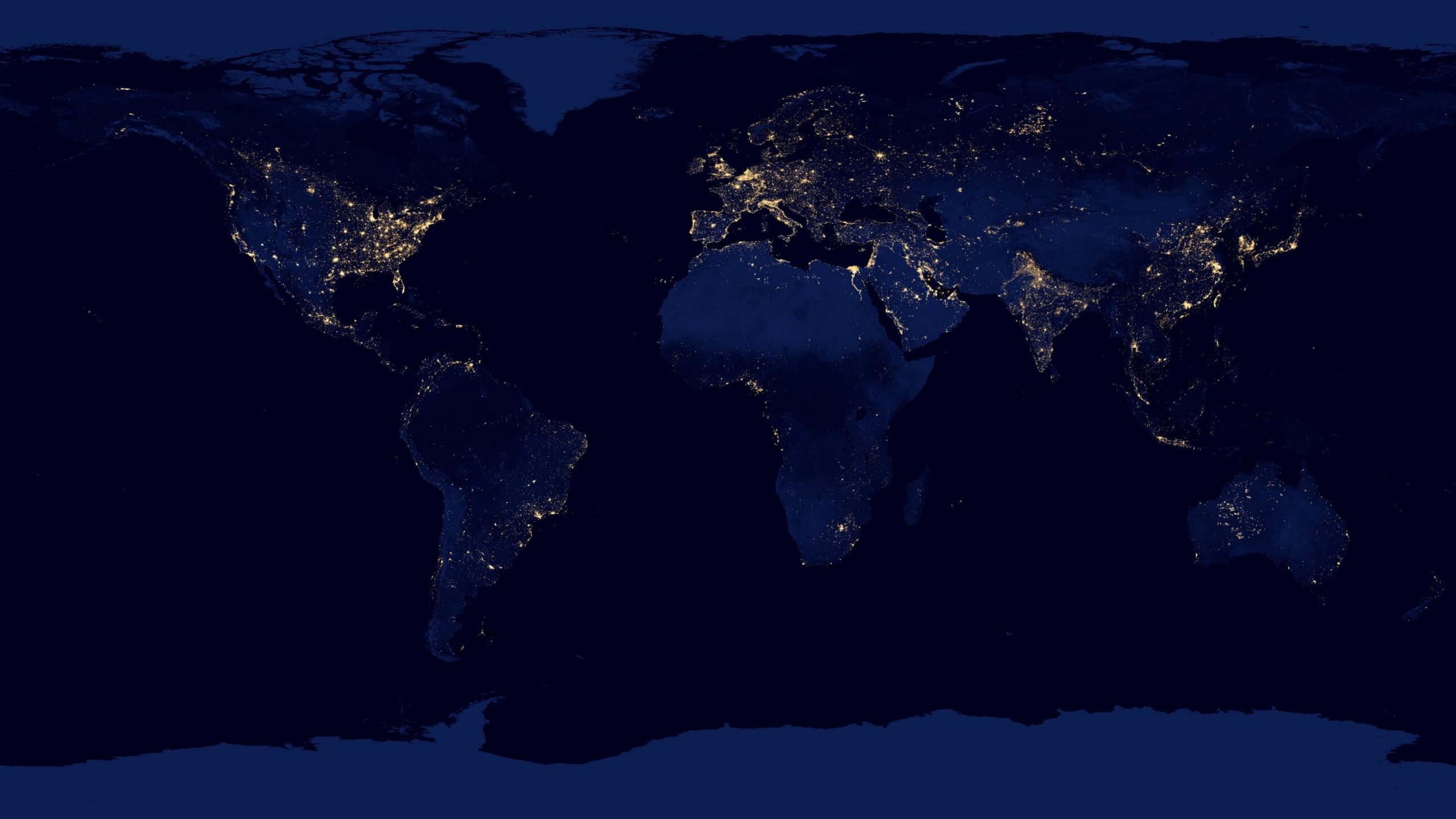
Global direct primary energy consumption

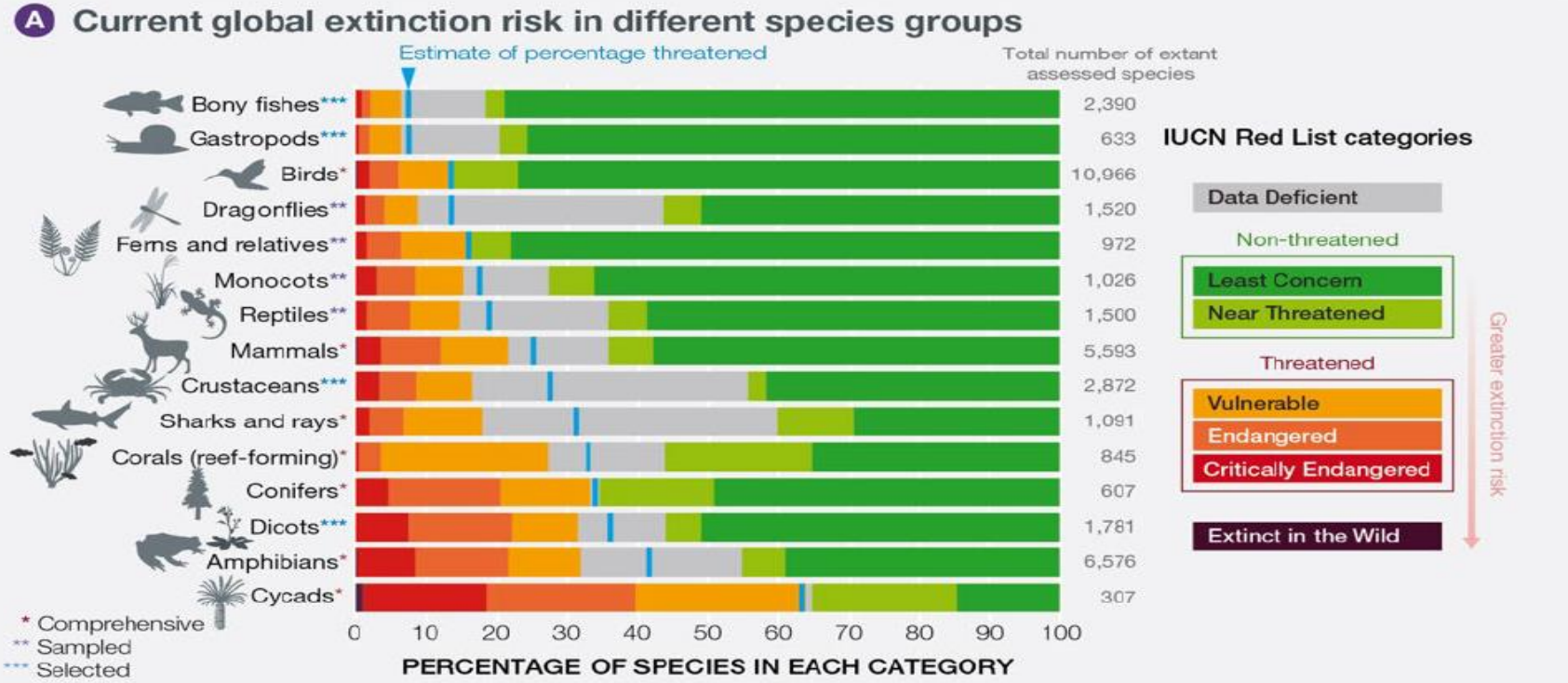
Direct primary energy consumption does not take account of inefficiencies in fossil fuel production.

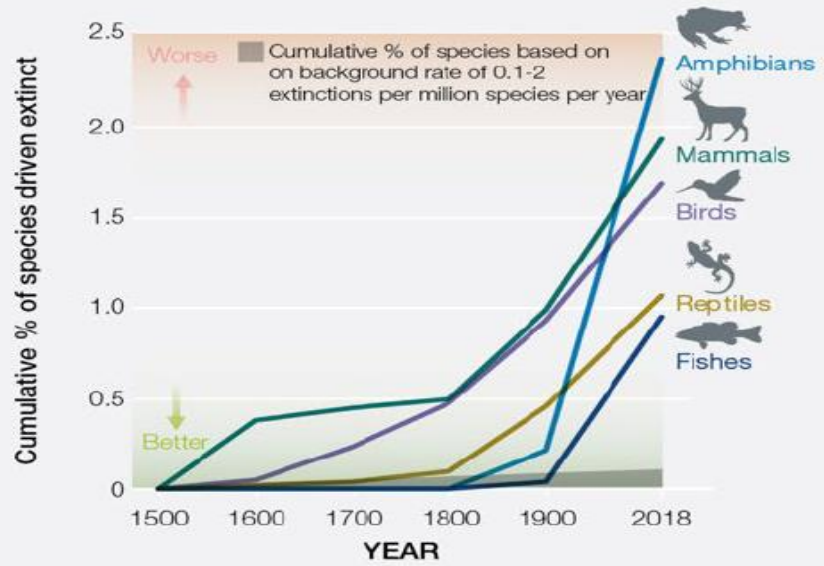
Our World in Data

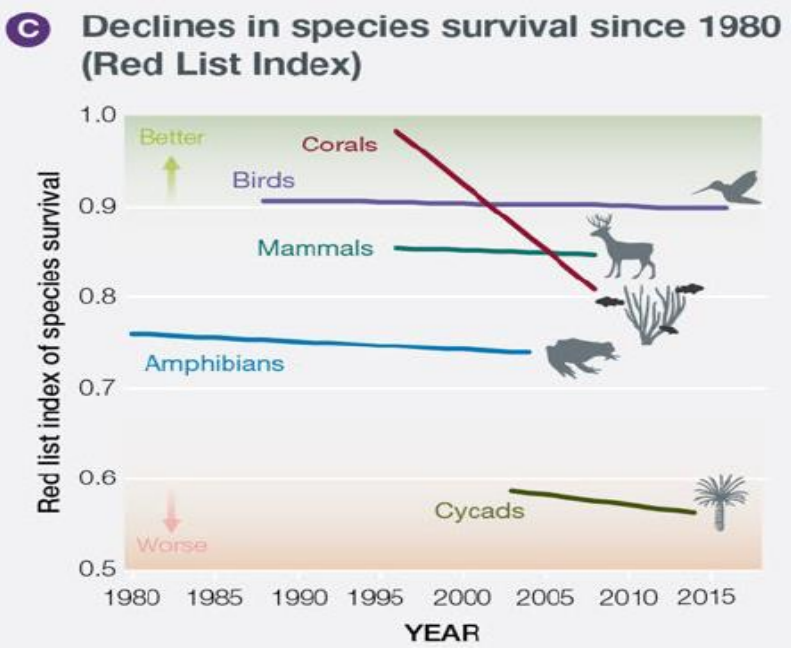


Source: Vaclav Smil (2017) and BP Statistical Review of World Energy









100
leading experts from

45
countries

3000
scientific papers drawn on

7300
comments improved

Worldwide Land Degradation and Restoration Assessment Report | March 2018 | #IPBES6

ipbes
Science and Policy for People and Nature

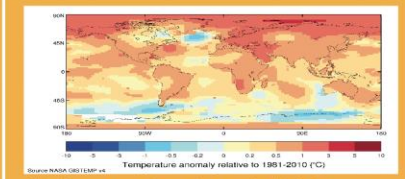
Anthropocene – the era of *homo sapiens*

- In the last 50 years the world's population has doubled, the size of world's economy had been increased fourfold, international trade had been increased tenfold, the food market has tripled;
- There are 25% endangered world's species and about a milion of those who will extinct out during the upcoming decades;
- Humanity has transformed 75% of the earth's Surface;
- The pressure of human activity is noticable on 66% of World's Ocean;
- 85% of the marshes were lost;
- Since 2000 over 32 million ha of tropical forests had been deforested;
- By 2016, 559 out of 6190 farm animals species had disappeared;
- The great extinction of insects is a cause of massive loss of food production worth USD 235-577 billion;
- Since 1950, humanity has produced 8 billion tons of plastic;

Source: IPBES 2018, 2019 (Intergovernmental Platform on Biodiversity and Ecosystem Services)

THE GLOBAL CLIMATE 2015–2019

GLOBAL TEMPERATURE RISE



Global five-year average temperature anomalies (relative to 1981–2010) for 2015–2019. Data are from NASA GISTEMP v4. Data for 2019 to June 2019.

2015–2019
- Warmest five-year period
- 0.2 °C higher than 2011–2015

2016
- Is the warmest year on record, over 1 °C higher than pre-industrial period

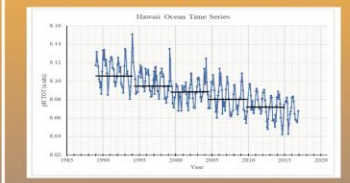
GREENHOUSE GAS CONCENTRATIONS INCREASE

Global mean surface concentrations 2015–2017

- CO_2 403 parts per million
- CH_4 1852 parts per billion
- N_2O 329 parts per billion

OCEAN ACIDIFICATION

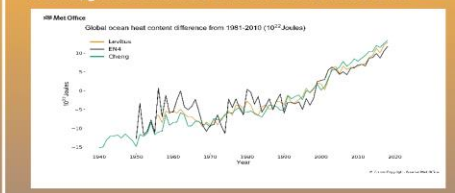
Ocean acidity increasing due to rising CO_2



pCO_2 and pH records from three long-term ocean observation stations.
Credit: IOC-UNESCO, NOAA-PMEL, IAEA OA-ICC.

OCEAN WARMING

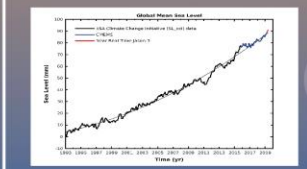
In 2018, global ocean heat content reached record levels



Source: NOAA NCEI, UK Met Office, IAP.

SEA LEVEL CONTINUES TO RISE

Global sea level continued to rise
Ice melt major contributor



Data source: European Space Agency (ESA) Climate Change Initiative (CCI) sea level data until December 2015,extended by data from the Copernicus Marine Service (CMEMS) as of January 2016

CRYOSPHERE

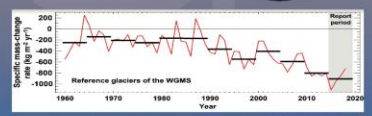
Ice melt is an indicator of global warming.

Arctic

Arctic average summer minimum and winter maximum sea-ice extents were well below the 1981–2010 average every year from 2015 to 2019.

Antarctic

Antarctic experienced its lowest and second lowest summer sea-ice extent in 2017 and 2018, respectively.



Average of observed annual specific mass-change rate of all World Glacier Monitoring Service (WGMS) reference glaciers,including pentadal means.

EXTREME EVENTS

Mortality and economic losses

2017
>2 000 DEATHS attributed to Hurricane *Maria*, Puerto Rico and Dominca

2015–2019
>8 900 DEATHS attributed to heatwaves worldwide

2017
>US$ 125 billion Economic losses attributed to Hurricane *Harvey*

2016
>US$ 16 billion Economic losses attributed to the wildfires in California

Large-scale heat extremes attributable to human influence

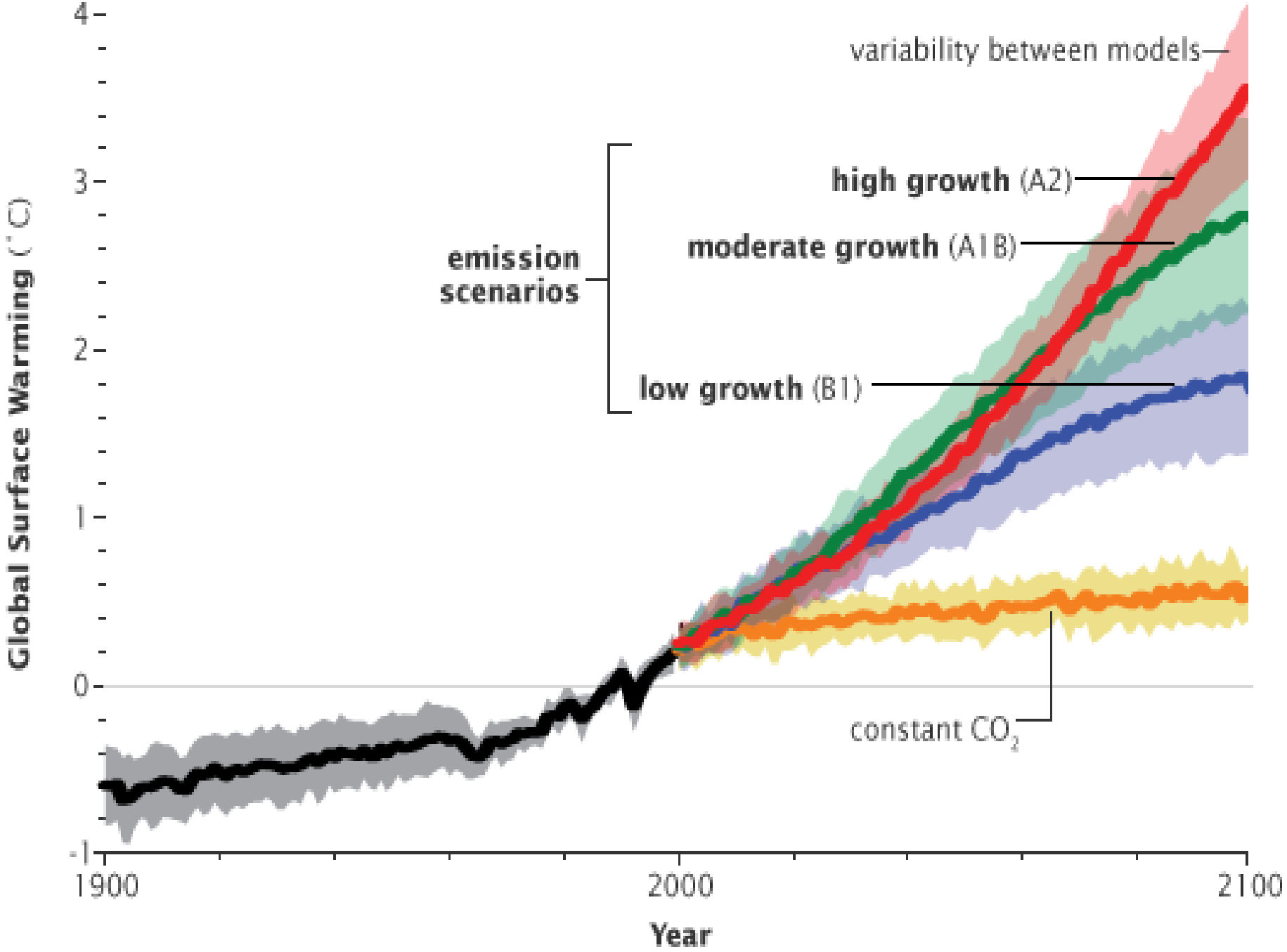
WATER
CLIMATE
WEATHER

WORLD METEOROLOGICAL ORGANIZATION

The Global Climate in 2015–2019 is part of the WMO Statements on Climate providing authoritative information on the state of the climate and impacts. It builds on operational monitoring systems at global, regional and national scales. Authored by; Peter Siegmund, lead author (Royal Netherlands Meteorological Institute), Jacob Abermann (University of Graz, Austria), Omar Baddour (WMO), Pep Canadell (CSIRO Climate Science Centre , Australia), Anny Cazenave (Laboratoire d'Etudes en Geophysique et Océanographie Spatiales CNES and Observatoire Midi-Pyrénées, France), Chris Derksen (Environment and Climate Change Canada), Arthur Garreau (Météo-France), Stephen Howell (Environment and Climate Canada), Kirsten Isensee (IOC-UNESCO), John Kennedy (UK Met Office), Ruth Mottram (Danish Meteorological Institute), Matthias Huss (ETH Zürich), Rodica Nitu (WMO), Selvaraju Ramasamy (Food and Agriculture Organization of the United Nations (FAO)), Katherina Schoo (IOC-UNESCO), Michael Sparrow (WMO), Oksana Tarasova (WMO), Blair Trewin (Bureau of Meteorology, Australia), Markus Ziese (Deutscher Wetterdienst (DWD))


STEPHEN HAWKING?
THE END IS NEAR
WE'RE DOOMED! DOOMED, I TELL YOU!
CAM OTTAWACITIZEN


THE PRESIDENT OF THE UNITED


variability between models
high growth (A2)
moderate growth (A1B)
emission scenarios
low growth (B1)
constant CO_2
Global Surface Warming (°C)
4
3
2
1
0
-1
1900
2000
2100
Year

Summer maximum temperatures for a global temperature increase of 2.7°C by 2100 from 1850, which will be 4.7°C after 2100

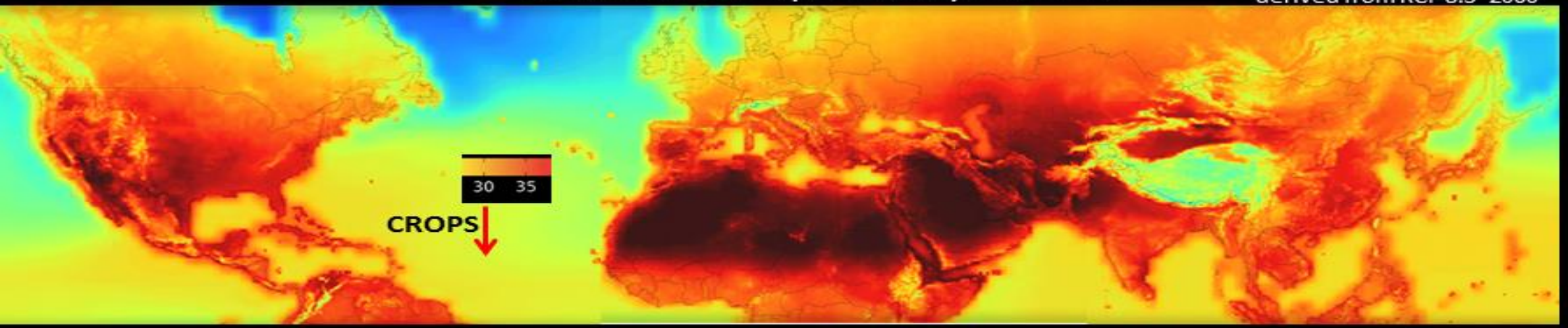
Surface warming from 1850
Daily maximum projected summer temperatures

NASA NEX

30 Oct 2015 The UN estimates that combined national emissions proposals lead to a temperature increase by 2100 of 2.7°C

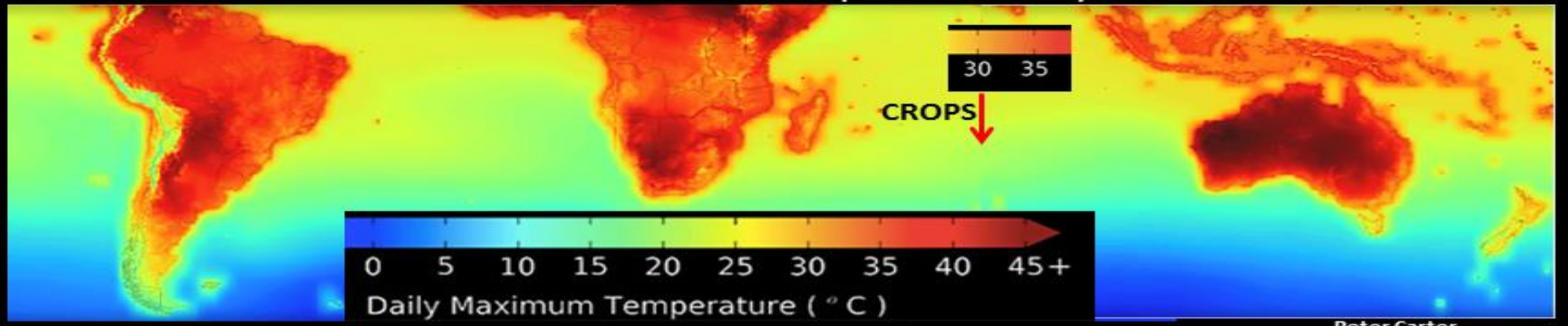
derived from RCP 8.5 2060

Northern hemisphere July maximum



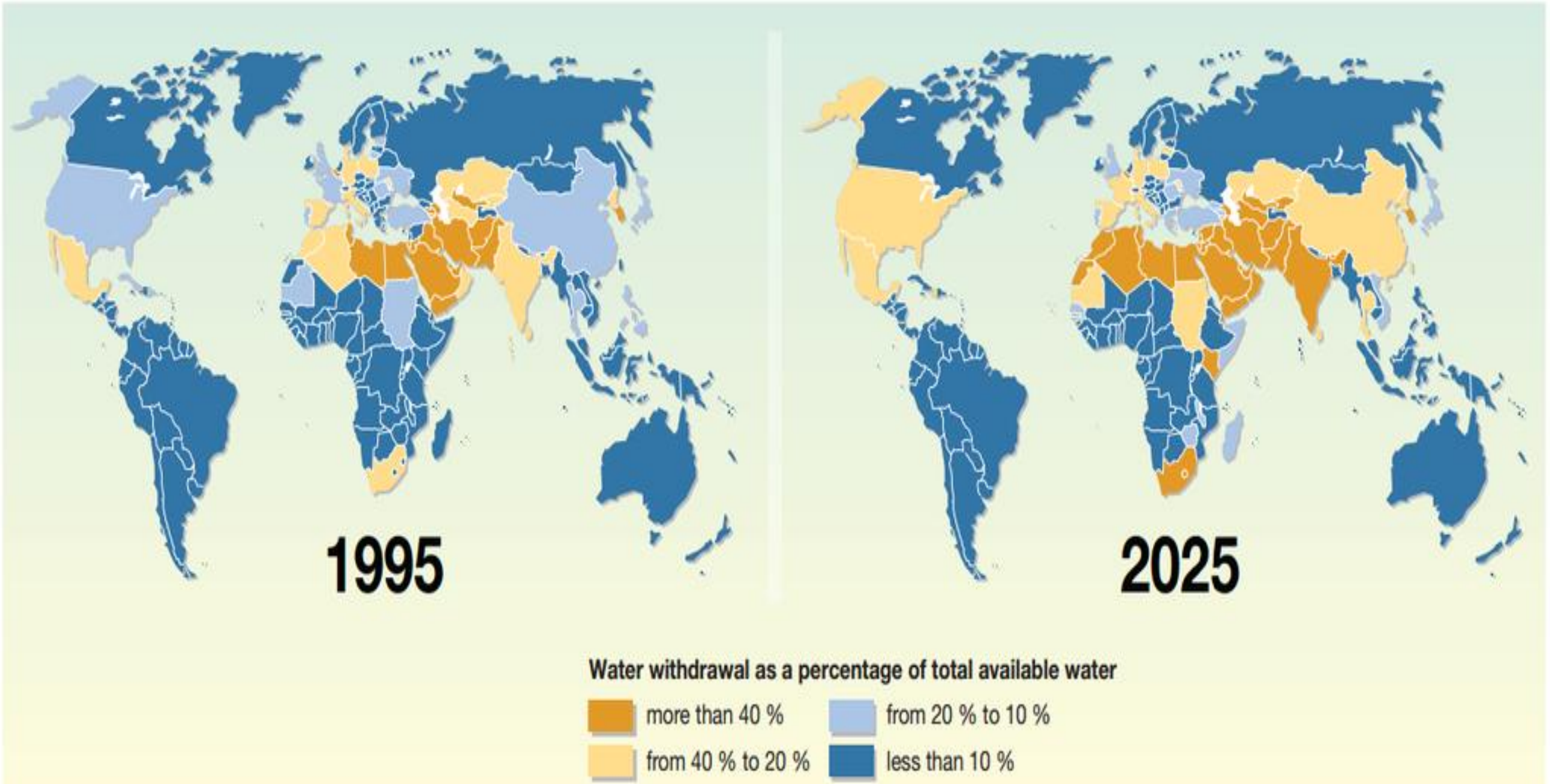
'Studies have documented a large negative sensitivity of crop yields to extreme daytime temperatures around 30°C '
(IPCC 2014 AR5 WG2 TS executive summary)

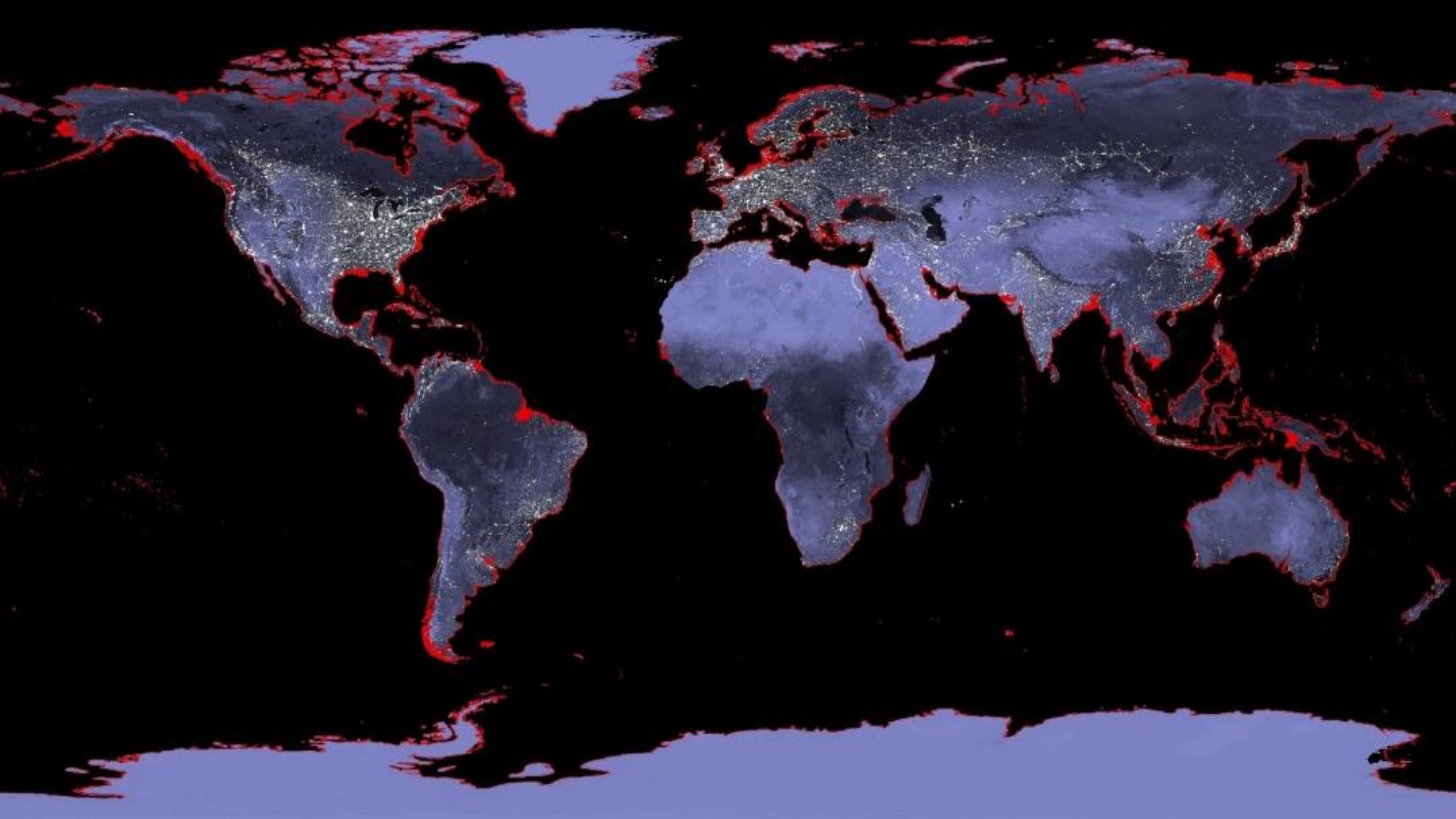
Southern hemisphere January maximum

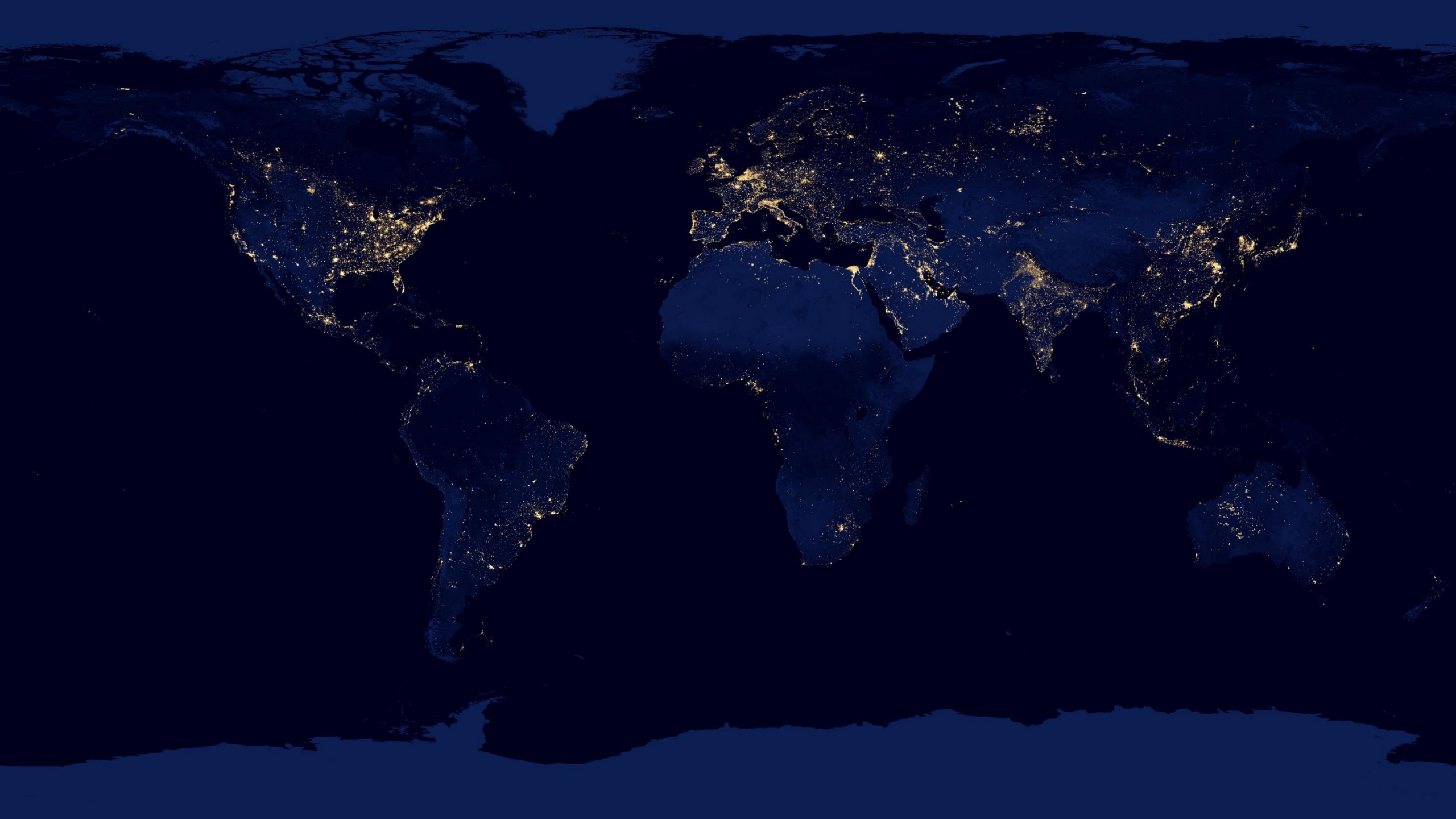


Peter Carter

United Nations Environment Programme – Global water withdrawal projections







UNITED NATIONS UNIVERSITY

UNU-EHS

Institute for Environment and Human Security

KIRIBATI: CLIMATE CHANGE AND MIGRATION

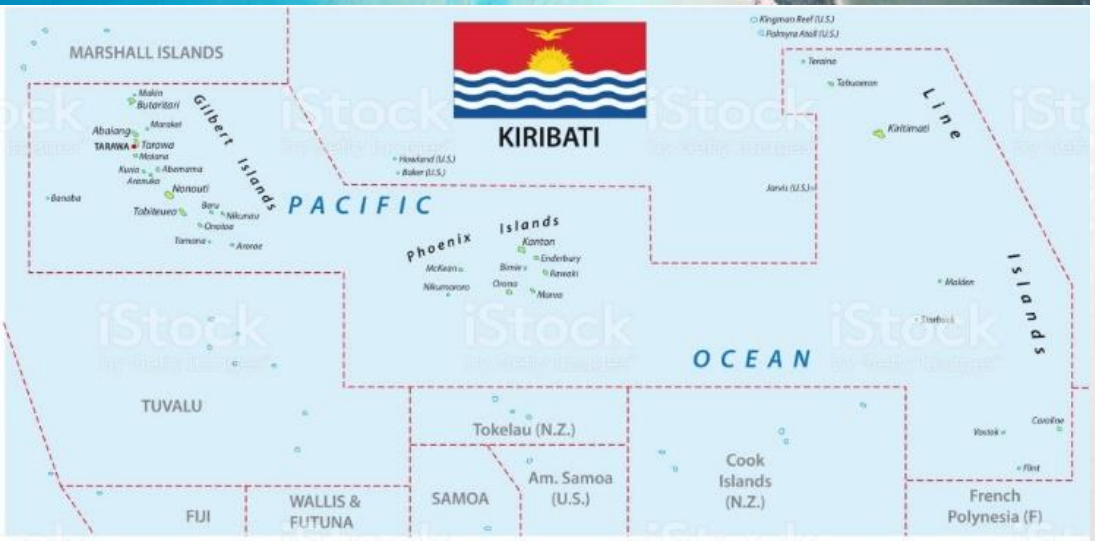
RELATIONSHIPS BETWEEN HOUSEHOLD VULNERABILITY, HUMAN MOBILITY AND CLIMATE CHANGE

REPORT
NO. 20

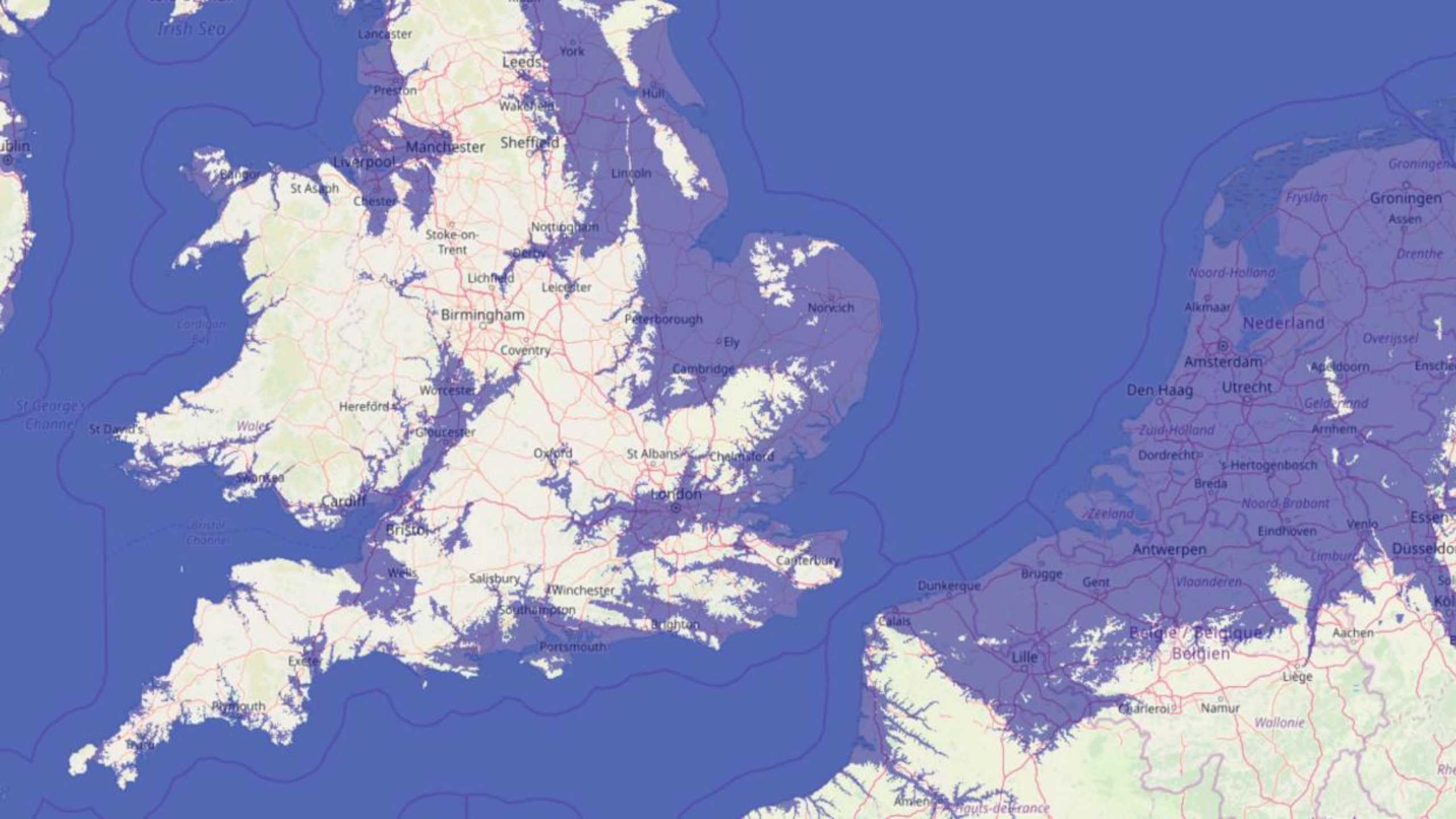
November 2016

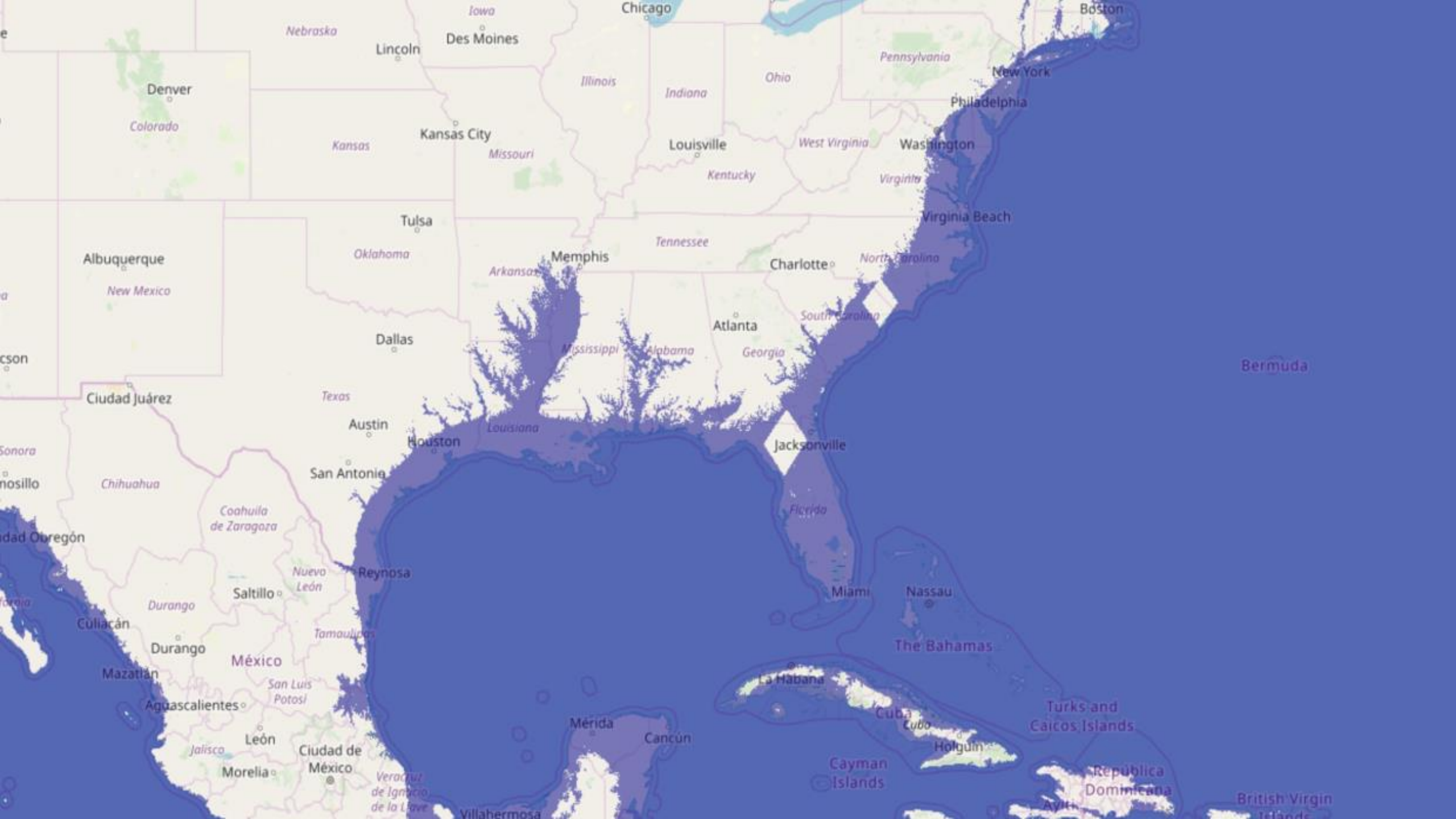
UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

ROBERT OAKES, ANDREA MILAN
AND JILLIAN CAMPBELL


MARSHALL ISLANDS
KIRIBATI
Gilbert Islands
Line Islands
Phoenix Islands
PACIFIC
OCEAN
TUVALU
Tokelau (N.Z.)
SAMOA
Am. Samoa (U.S.)
Cook Islands (N.Z.)
FIJI
WALLIS & FUTUNA
French Polynesia (F)

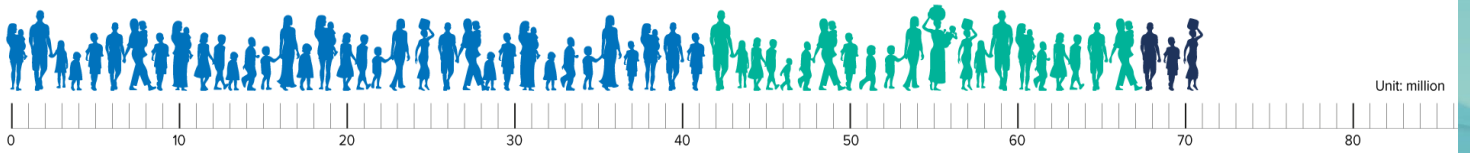

Kiribati, Mikronezja i Nauru zajmują łącznie powierzchnię 1,5 tys. km kw. To tyle co Warszawa, Łódź, Trójmiasto i Wrocław. Zamieszkuje je nieco ponad 200 tys. osób. Podnoszący się poziom oceanów zagraża istnieniu tych krajów.
Mikronezja
Nauru
Kiribati
tvn 24


Irish Sea
Lancaster
York
Leeds
Preston
Hull
Wakefield
Manchester
Sheffield
Liverpool
Bangor
St Asaph
Chester
Lincoln
Stoke-on-Trent
Nottingham
Derby
Lichfield
Leicester
Birmingham
Peterborough
Norwich
Ely
Coventry
Cambridge
Worcester
Hereford
St David's
Gloucester
Oxford
St Albans
Chelmsford
Swansea
Cardiff
London
Bristol
Canterbury
Wells
Salisbury
Winchester
Southampton
Brighton
Portsmouth
Exeter
Plymouth
Groningen
Assen
Fryslân
Drenthe
Noord-Holland
Alkmaar
Nederland
Overijssel
Amsterdam
Apeldoorn
Den Haag
Utrecht
Gelderland
Zuid-Holland
Arnhem
Dordrecht
's Hertogenbosch
Breda
Noord-Brabant
Zeeland
Eindhoven
Venlo
Antwerpen
Limburg
Brugge
Gent
Vlaanderen
Dunkerque
Calais
België / Belgique / Belgien
Lille
Aachen
Liege
Charleroi
Namur
Wallonie


Chicago
Boston
Iowa
Nebraska
Des Moines
Lincoln
Pennsylvania
New York
Illinois
Indiana
Ohio
Denver
Philadelphia
Colorado
Kansas City
Kansas
Missouri
Louisville
West Virginia
Washington
Kentucky
Virginia
Virginia Beach
Tulsa
Tennessee
Albuquerque
Oklahoma
Memphis
Charlotte
Arkansas
New Mexico
Atlanta
Dallas
Mississippi
Alabama
Georgia
Bermuda
Ciudad Juárez
Texas
Austin
Louisiana
Houston
Jacksonville
San Antonio
Chihuahua
Florida
Coahuila de Zaragoza
Reynosa
Nuevo León
Miami
Nassau
Saltillo
Durango
Culiacán
Tamaulipas
The Bahamas
Durango
México
Mazatlán
La Habana
San Luis Potosí
Aguascalientes
Cuba
Turks and Caicos Islands
Mérida
Cancún
León
Jalisco
Holguín
Ciudad de México
Cayman Islands
Morelia
República Dominicana
Veracruz de Ignacio de la Llave
Villahermosa
British Virgin Islands


Dębki
KARWIA
Białogóra
Kopalino
Wierzchucino
Krokowa
Władysławowo
Łeba
Ulinia
Sasino
Ciekocinko
Choczewo
Łebcz
Swarzewo
CHAŁUPY
Nadole
Żarnowska
Gniewino
Mechowo
Puck
Zwartowo
Jastarnia
JURATA
Rzucewo
Salino
Wicko
Mrzezino
Cecenowo
Łebień
Wysokie
Rewa
Bolszewo
216
Wejherowo
Reda
Mechelinki
Hel
Łęczyce
6
Luzino
Rumia
Lębork
Nowy Dwór Wejherowski
Radosław
Gdynia
Rybki
Potęgowo
Runowo
E28
Szemud
Koleczkowo
Zatoka Gdańska
Linia
Kielno
Chwaszczyno
Sopot
Cewice
JELITKOWO
PRZYMORZE
Mikorowo
OLIWA
NOWY PORT
Siemirowice
Kamienica Królewska
Strysza Buda
20
Karwno
MATARNIA
Przodkowo
Pieski
Krynica Morska
Czarna Dąbrówka
Sierakowice
Gdańsk
Żukowo
7
Rokity
Kaszubski Park Krajobrazowy
Kartuzy
Mikoszewo
Jantar
Kąty Rybackie
Stegna
Sztutowo
Gowidlino
Mezowo
Kowale
Borkowo
Koszwały
Łupawsko
Podjazy
Kolbudy
Pruszcz Gdański
Ostrzyce
Cieplice
Cedry Wielkie
Kolano
Ciepłewo
Sulęczyno
Gostkowo
Szymbark
Ostaszewo
Nowy Dwór Gdański
Stężyca
Ostrów Mausz
Przywidz
Wisła
91
Pszczółki
Bytów
Elbląg

70.8 million forcibly displaced people worldwide



Internally Displaced People
41.3 million

Refugees
25.9 million
20.4 million under UNHCR's mandate
5.5 million Palestinian refugees under UNRWA's mandate

Asylum-seekers
3.5 million

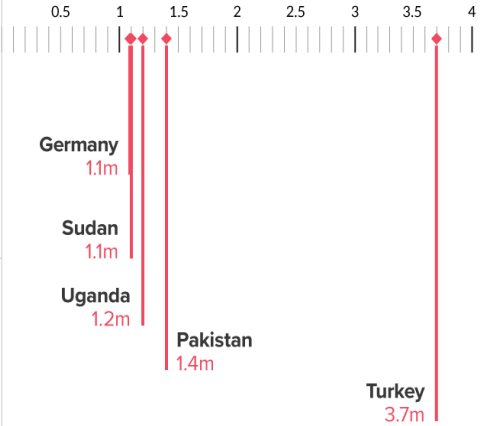
Where the world's displaced people are being hosted

About 80 per cent of refugees live in countries neighbouring their countries of origin

57% of UNHCR refugees came from three countries

341,800
new asylum seekers
The greatest number of new asylum applications in 2018 was from Venezuelans

Top refugee-hosting countries



UNHCR has data on
3.9 million
stateless people
but there are thought to be millions more

92,400
refugees resettled

37,000 people
a day forced to flee their homes because of conflict and persecution

16,803 personnel
UNHCR employs 16,803 people worldwide
(as of 31 May 2019)

134 countries
We work in 134 countries (as of 31 May 2019)

We are funded almost entirely by voluntary contributions, with 86 per cent from governments and the European Union and 10 per cent from private donors

UNHCR
The UN Refugee Agency

WILL CLIMATE CHANGE LEAD TO AN EVEN BIGGER REFUGEE CRISIS?

CLIMATE REFUGEES
ENVIRONMENTALLY-DRIVEN MIGRANTS
WITHIN THEIR COUNTRY OR ABROAD
CLIMATE CHANGE ADVERSELY AFFECTS THEIR LIVES OR LIVING CONDITIONS
NOT PROTECTED UNDER INTERNATIONAL LAW

HOW MANY PEOPLE DISPLACED?

SINCE 2008
21.5 MILLION

2014
17.5 MILLION

2016 (BY DISASTER)
24.2 MILLION

ESTIMATIONS:

2030: NUMBER OF PEOPLE EXPOSED TO FLOODING
54 MILLION

2050: NUMBER OF PEOPLE AFFECTED BY CLIMATE CHANGE
200 MILLION

2100: NUMBER OF PEOPLE COULD BECOME CLIMATE REFUGEES DUE TO RISING OCEAN LEVELS
2 BILLION

WHAT IS THE CAUSE?

SEA-LEVEL RISE

DROUGHT, DESERTIFICATION AND WATER SCARCITY

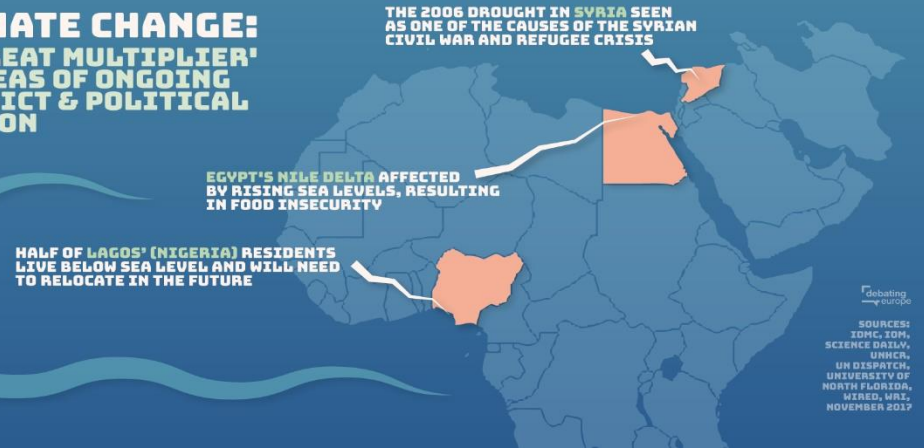
EXTREME WEATHER EVENTS: FLOODS, STORMS, WILDFIRES, EXTREME TEMPERATURE

WHO IS MOST AT RISK?

DEVELOPING COUNTRIES:
ALREADY AFFECTED BY POVERTY AND WAR
LACKING ECONOMIC RESOURCES

EXAMPLES:
DROUGHTS IN SOMALIA (2011, 2012, 2017)
FLOODS IN PAKISTAN (2010 – 2012, 2017)

CLIMATE CHANGE:
A 'THREAT MULTIPLIER' IN AREAS OF ONGOING CONFLICT & POLITICAL TENSION

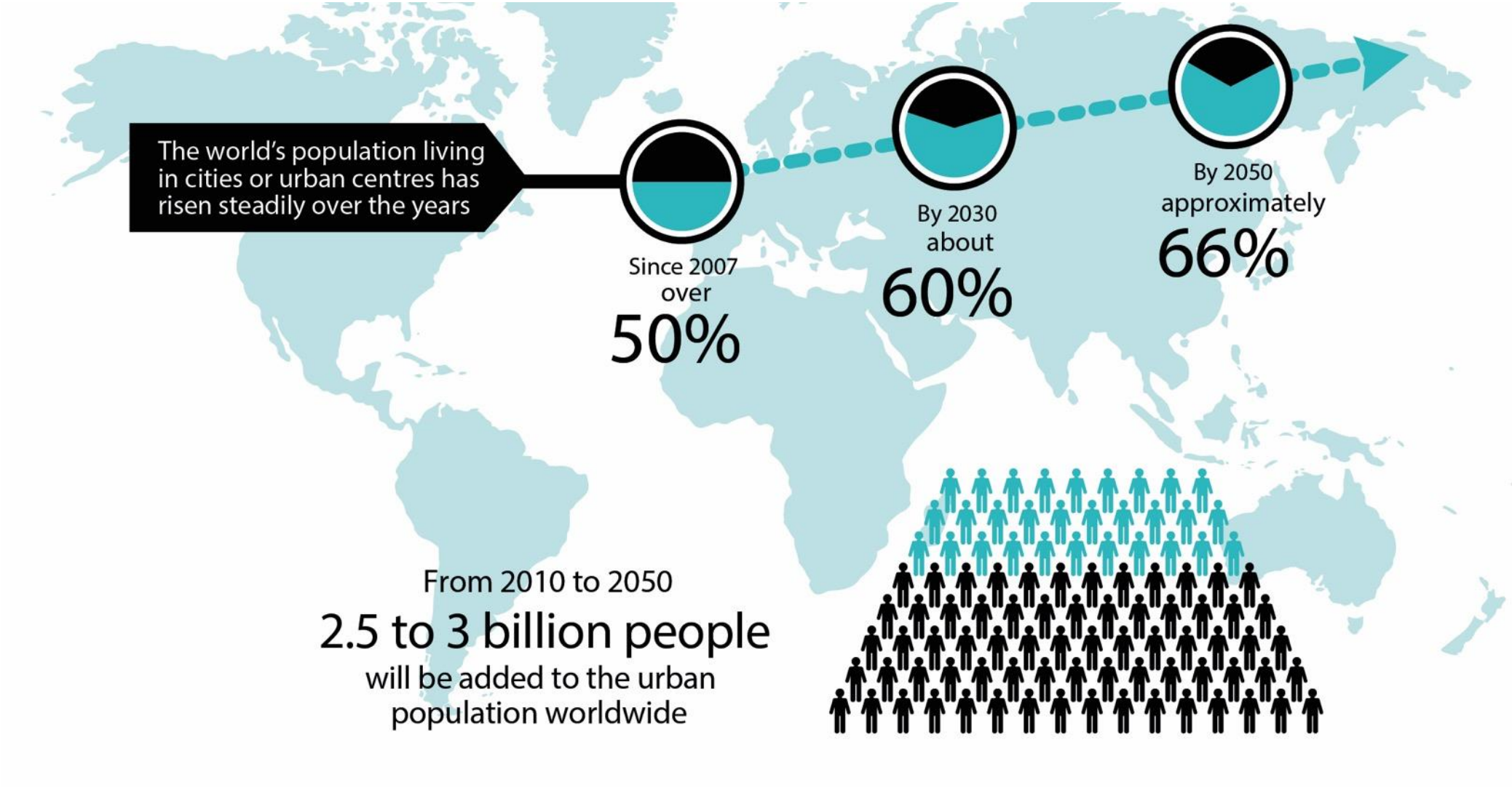


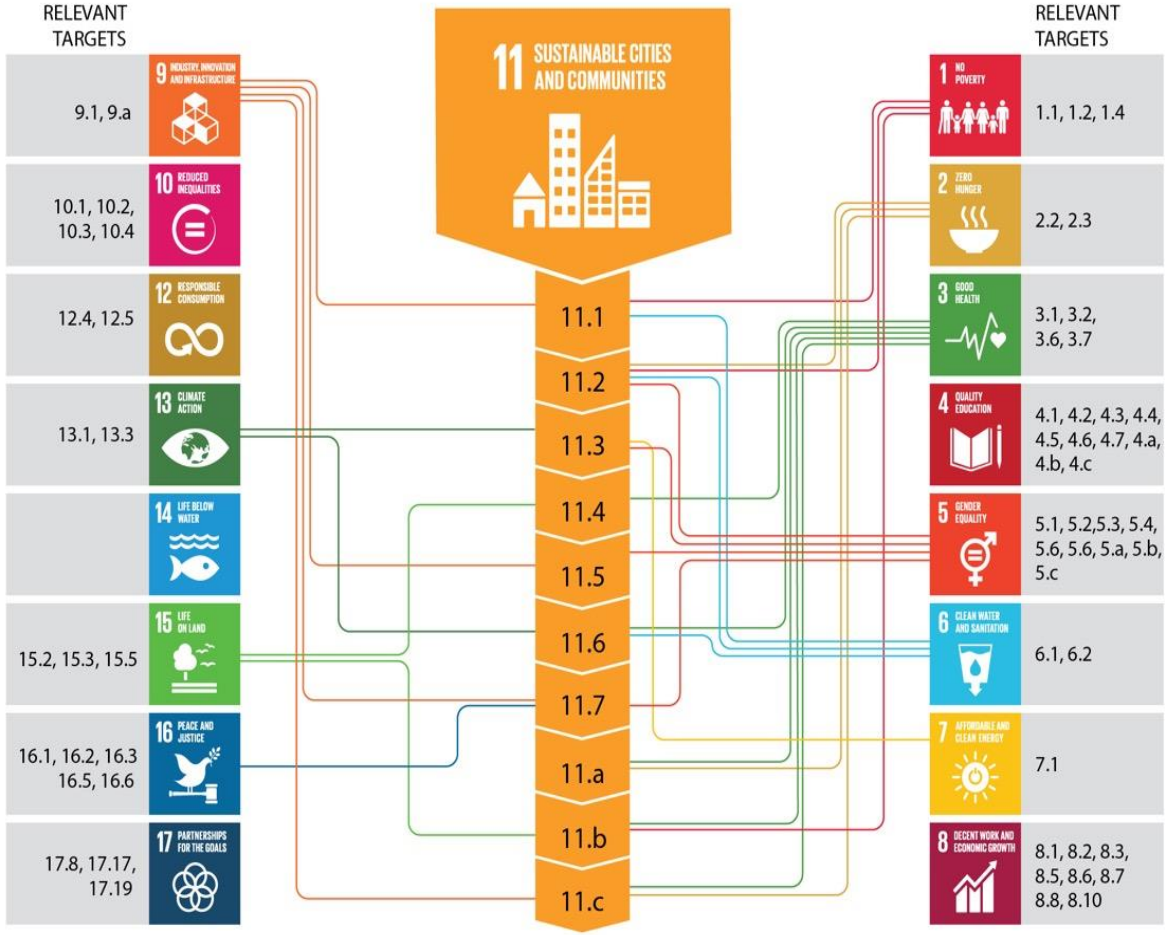
debating europe

SOURCES:
IDMC, IOM, SCIENCE DAILY, UNHCR, UN DISPATCH, UNIVERSITY OF NORTH FLORIDA, WIRED, WAI, NOVEMBER 2017

Urbanization is an unstoppable phenomenon

The World is Rapidly Urbanizing, 3% of land, 60-80% of energy consumption





Source: UN-Habitat

11 SUSTAINABLE CITIES AND COMMUNITIES

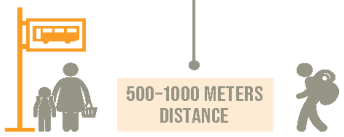
MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

BEFORE COVID-19

SHARE OF URBAN POPULATION LIVING IN SLUMS ROSE TO 24% IN 2018

ONLY HALF

THE WORLD'S URBAN POPULATION HAS **CONVENIENT ACCESS** TO PUBLIC TRANSPORT (2019)



AIR POLLUTION CAUSED 4.2 MILLION PREMATURE DEATHS IN 2016

COVID-19 IMPLICATIONS

OVER 90% OF COVID-19 CASES ARE IN **URBAN AREAS**

47% OF POPULATION LIVE WITHIN 400 METRES WALKING DISTANCE TO OPEN PUBLIC SPACES

11 SUSTAINABLE CITIES AND COMMUNITIES

SUSTAINABLE CITIES: WHY THEY MATTER

What's the goal here?

To make cities inclusive, safe, resilient and sustainable

Why?

Over 90 per cent of COVID-19 cases are occurring in urban areas, with the 1 billion residents of the world's densely populated slums being hit the hardest. Even before the coronavirus, rapid urbanization meant that 4 billion people – over half of the global pupulation – in the world's cities faced worsening air pollution, inadequate infrastructure and services, and unplanned urban sprawl. Successful examples of containing COVID-19 demonstrate the remarkable resilience and adaptability of urban communities in adjusting to new norms.

What are some of the most pressing challenges that cities face today?

Inequality and the levels of urban energy consumption

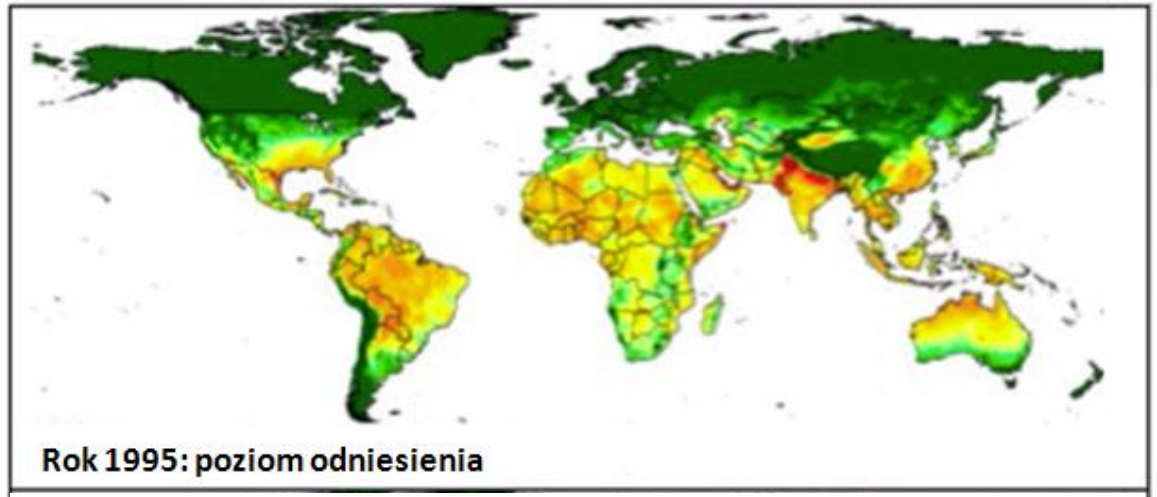
9 in 10 people living in urban areas worldwide were breathing air that did not meet the World Health Organization's air quality guidelines

ipcc
INTERGOVERNMENTAL PANEL ON Climate change

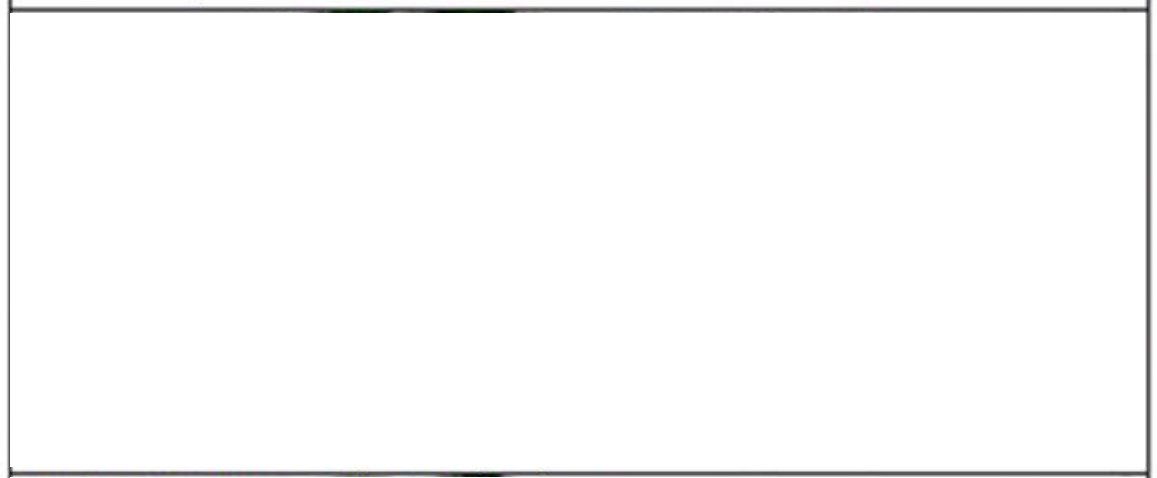
WMO UNEP

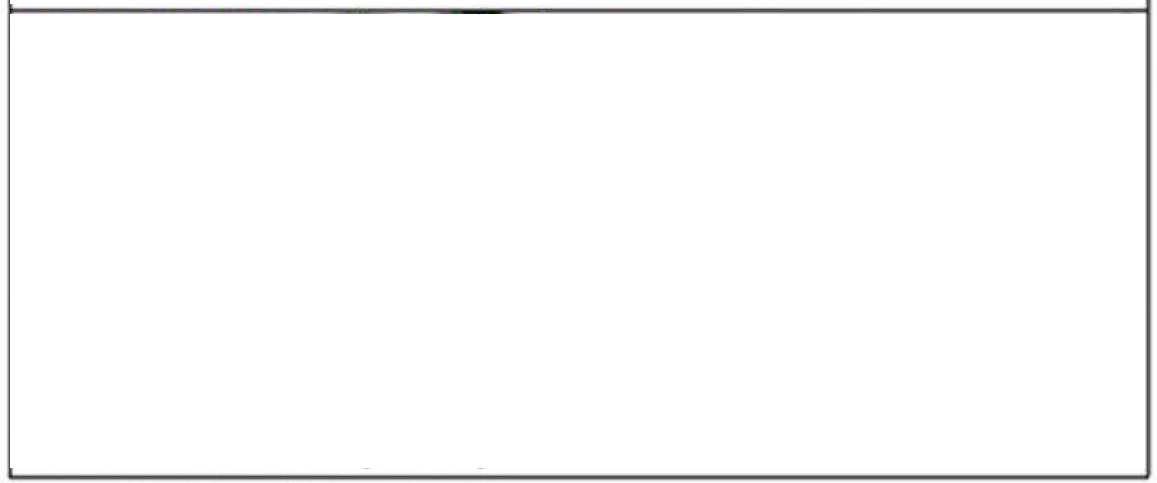
Global Warming of 1.5 °C

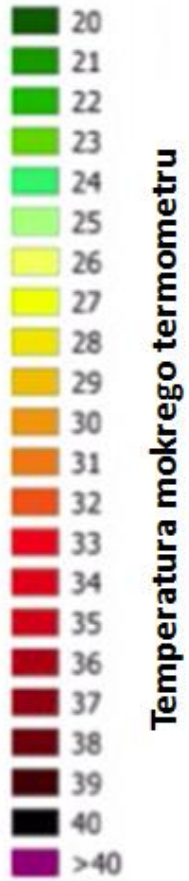
An IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.



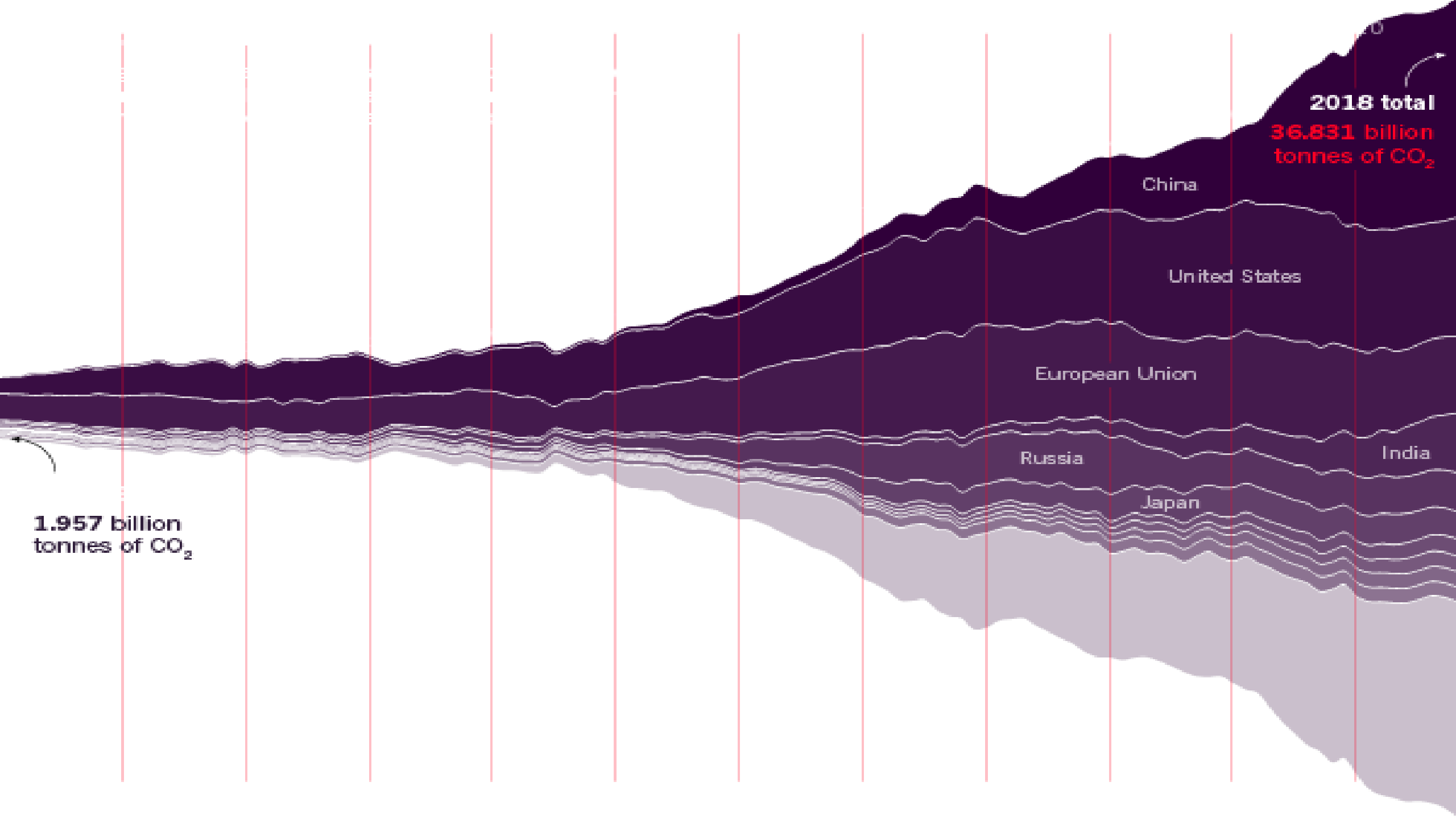
Rok 1995: poziom odniesienia







Temperatura mokrego termometru

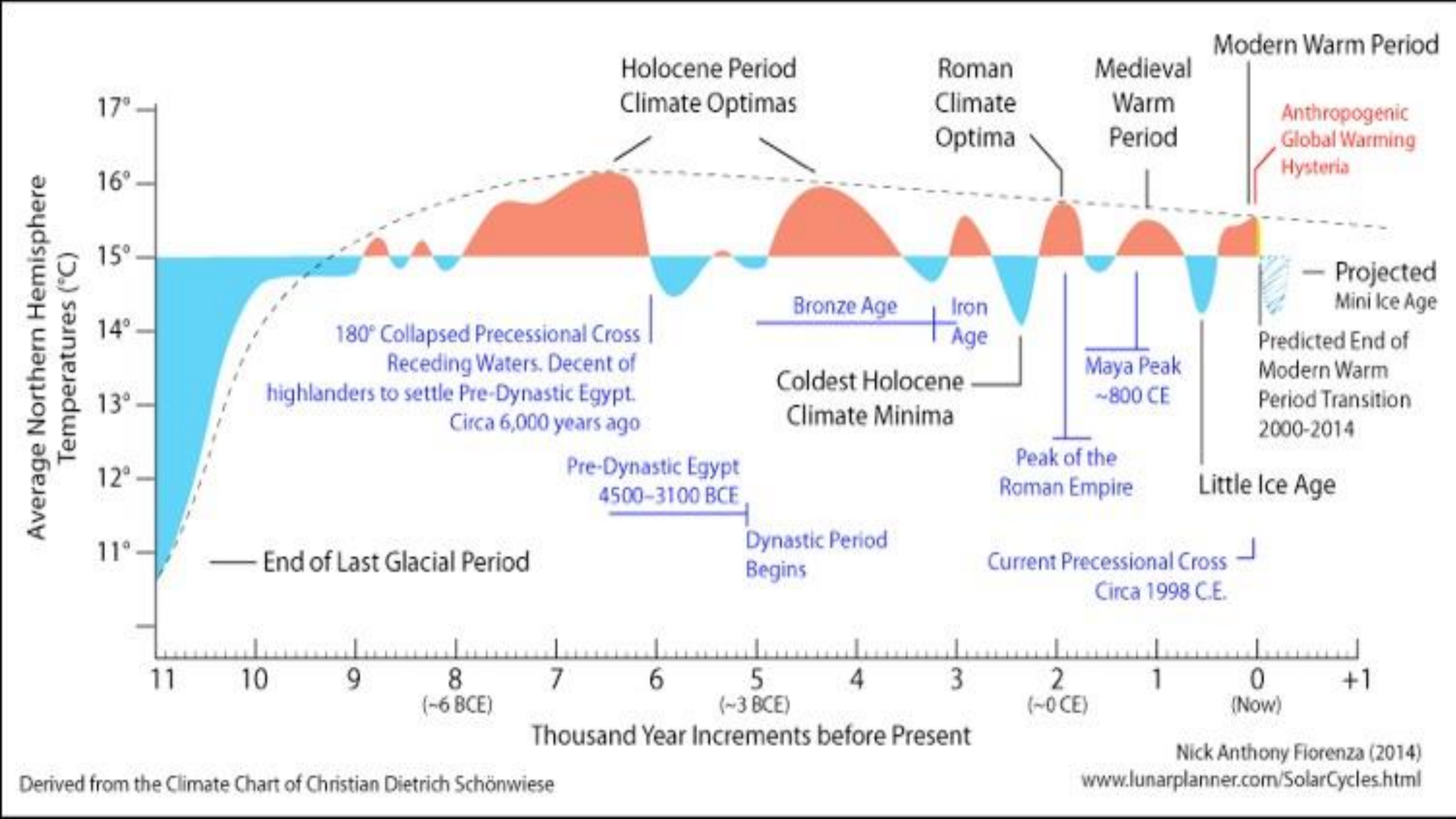

2018 total
36.831 billion
tonnes of CO_2
China
United States
European Union
Russia
India
Japan
1.957 billion
tonnes of CO_2

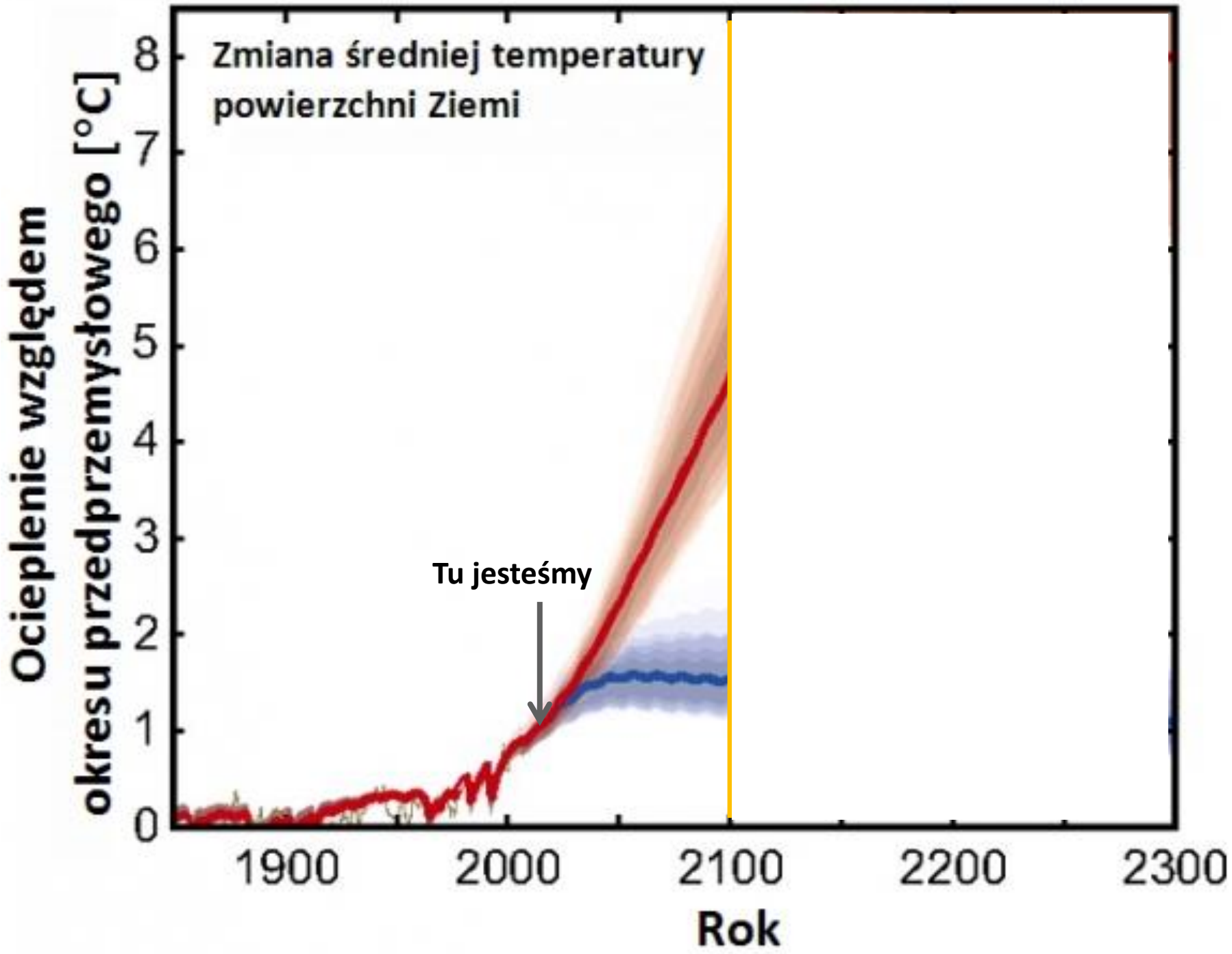
Annual Global CO_2 Emissions

(1751-2019)

Sources: Carbon Budget Project (2017), Global Carbon Budget (2019), Peter Frumhoff (2014)

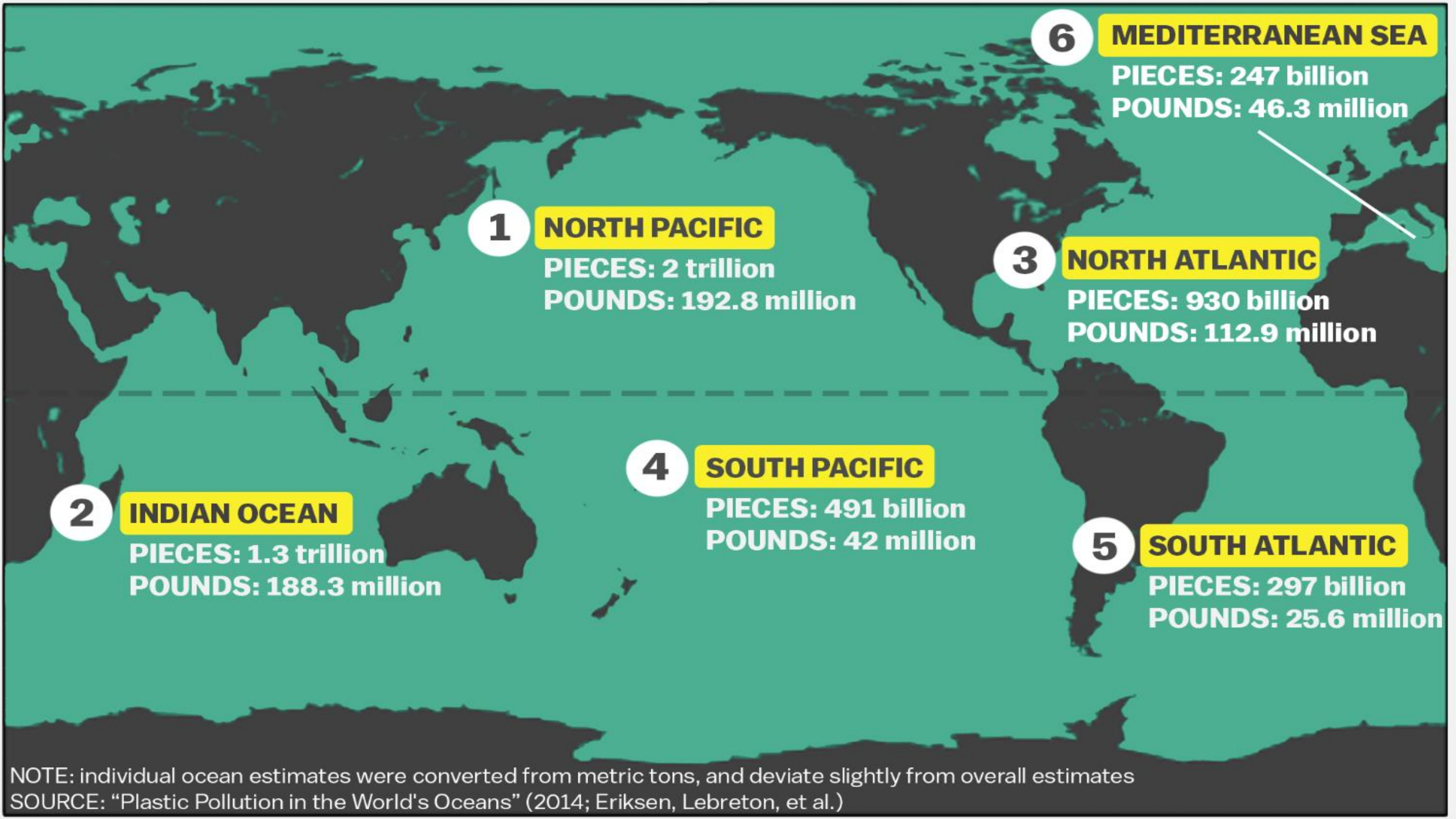
The Institute for European Environmental Policy (2020)


Modern Warm Period
Holocene Period Climate Optimas
Roman Climate Optima
Medieval Warm Period
Anthropogenic Global Warming Hysteria
17°
16°
15°
14°
13°
12°
11°
Average Northern Hemisphere Temperatures (°C)
Projected Mini Ice Age
Predicted End of Modern Warm Period Transition 2000-2014
Bronze Age
Iron Age
180° Collapsed Precessional Cross Receding Waters. Decent of highlanders to settle Pre-Dynastic Egypt. Circa 6,000 years ago
Coldest Holocene Climate Minima
Maya Peak ~800 CE
Pre-Dynastic Egypt 4500–3100 BCE
Peak of the Roman Empire
Little Ice Age
Dynastic Period Begins
End of Last Glacial Period
Current Precessional Cross Circa 1998 C.E.
11
10
9
8 (~6 BCE)
7
6
5 (~3 BCE)
4
3
2 (~0 CE)
1
0 (Now)
+1
Thousand Year Increments before Present
Nick Anthony Fiorenza (2014)
www.lunarplanner.com/SolarCycles.html
Derived from the Climate Chart of Christian Dietrich Schönwiese


Zmiana średniej temperatury powierzchni Ziemi
Ocieplenie względem okresu przedprzemysłowego [°C]
0
1
2
3
4
5
6
7
8
Tu jesteśmy
1900
2000
2100
2200
2300
Rok

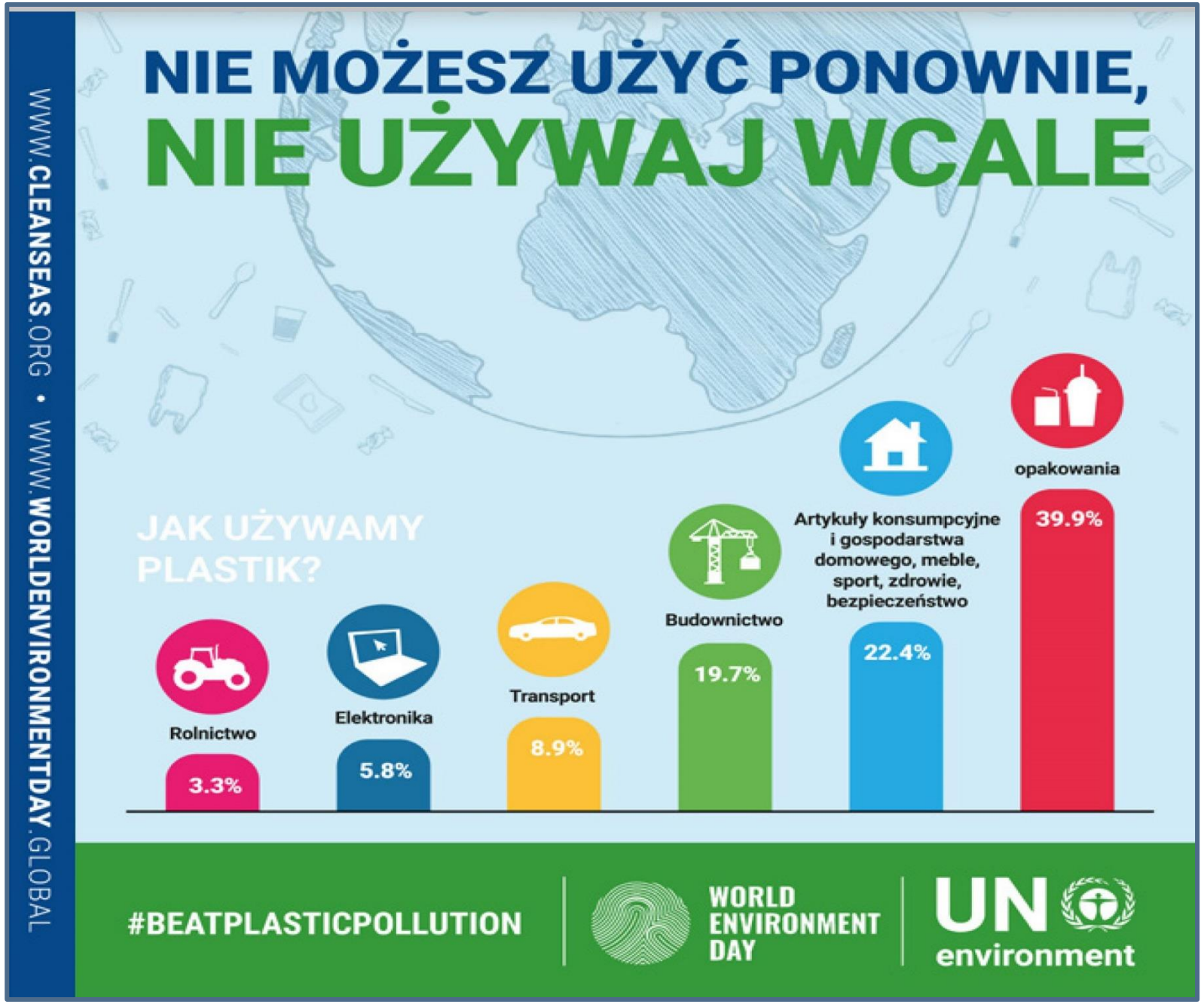
One cow = 250-300 litre of pure methane per day.
Life stock farming = 18% of greenhouse gas emmisions.

Foto: National Institute of Agricultural Technology, Argentina (INTA)

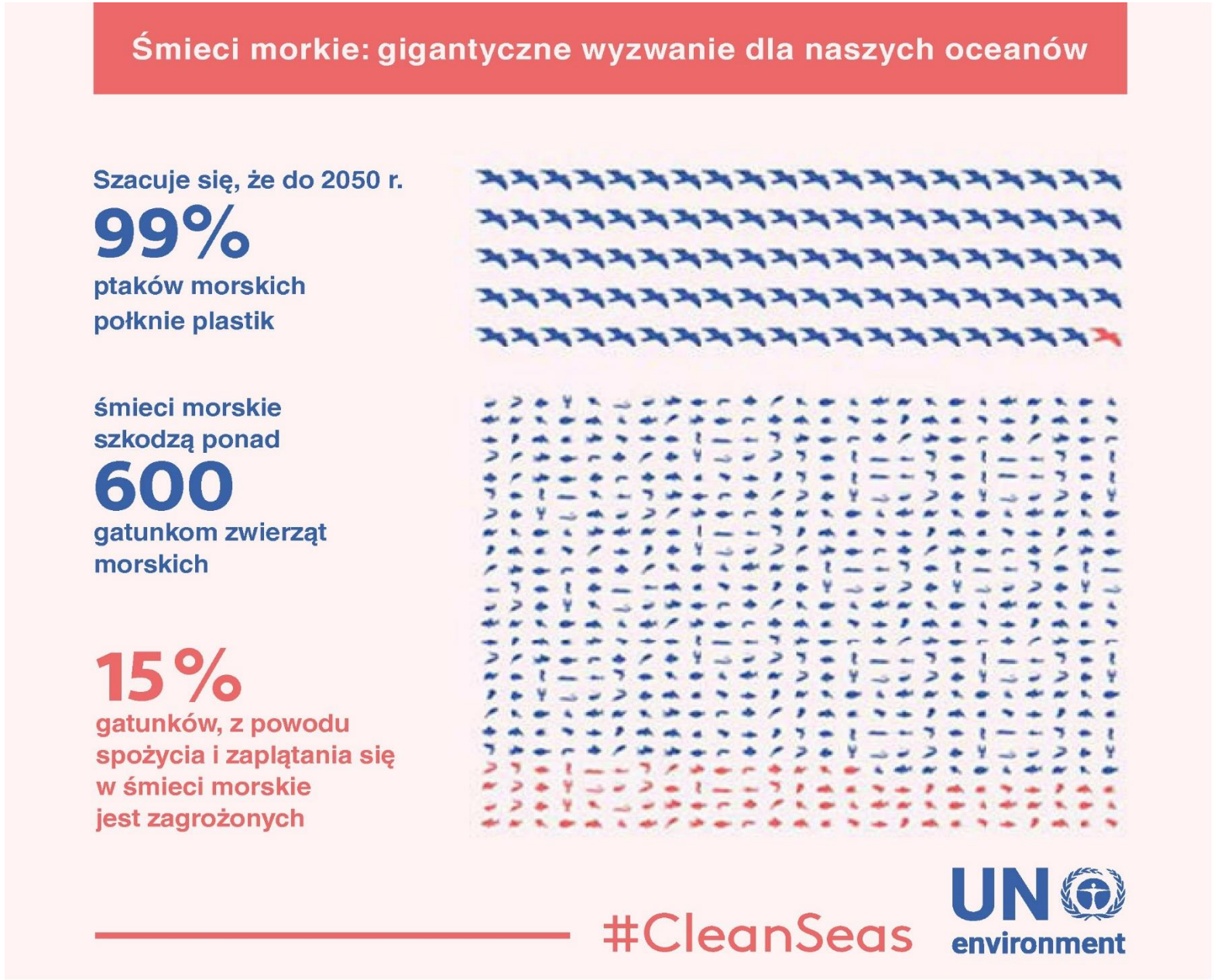


NOTE: individual ocean estimates were converted from metric tons, and deviate slightly from overall estimates
SOURCE: "Plastic Pollution in the World's Oceans" (2014; Eriksen, Lebreton, et al.)

Bazujac na danych ONZ,
aż 39,9% wytwarzanych
obecnie plastików
to opakowania.



Według danych ONZ kazdego roku prawie dwa miliardy ludzi przemieszcza sie w celach turystycznych. Wiekszosc z nich tra na plaze i zostawia na nich plastik.



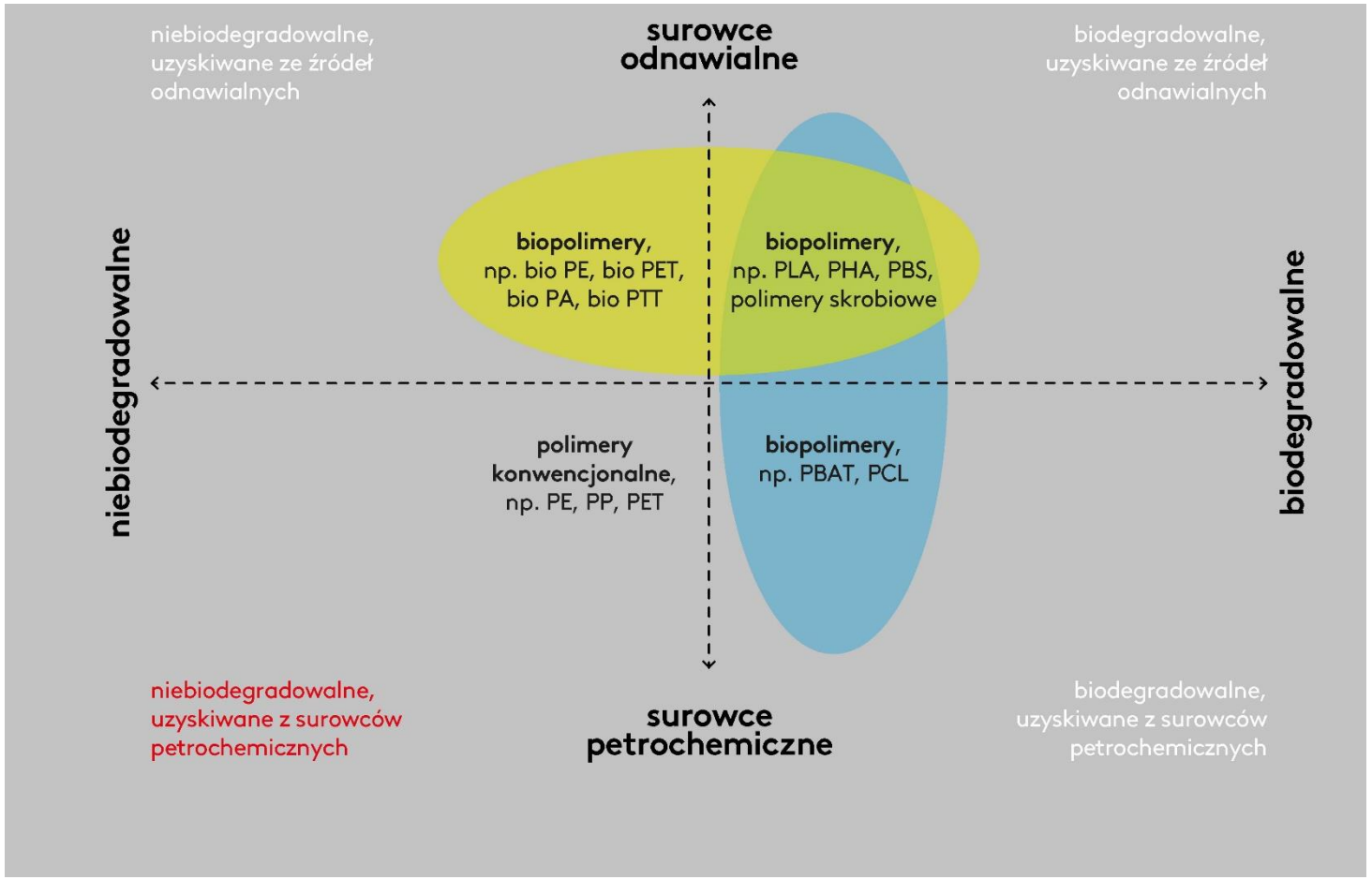
Według danych ONZ każdego roku prawie dwa miliardy ludzi przemieszcza się w celach turystycznych. Większość z nich trafia na plaże i zostawia na nich plastik.

Najczęściej spotykane naturalne polimery to:

· polisacharydy (celuloza, skrobia, glikogen)
· białka (gluten, kolagen, enzymy)
· inne formy naturalnych polimerów to lignina, poliestry.

Inne naturalne składniki bio materiałów:

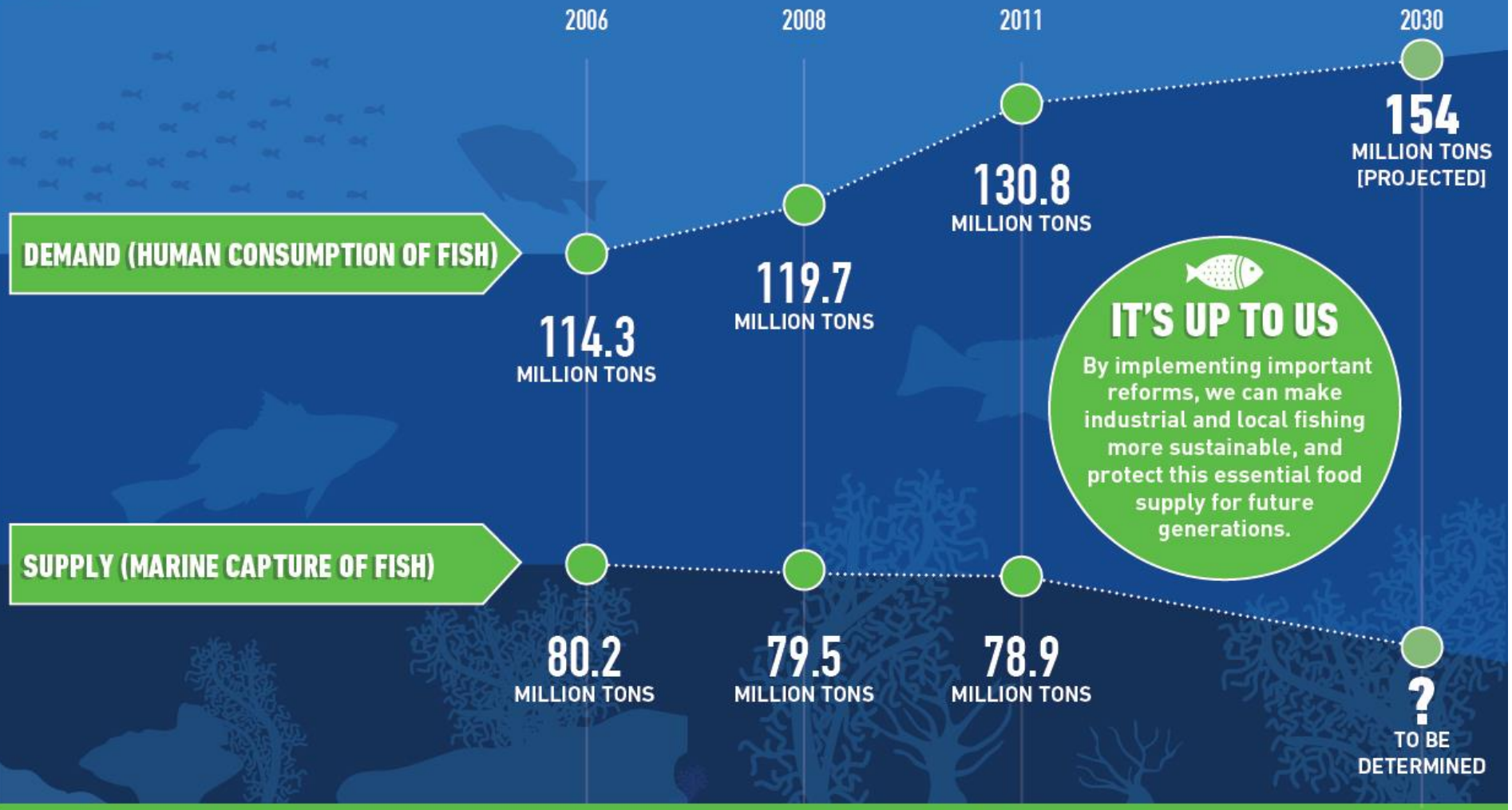
· bambus
· bagassa (włókno trzciny cukrowej)
· słoma przeniczna
· włókna traw
· wosk pszczeli
· cukier
· itd.



THE WORLD'S FISH:
GROWING DEMAND. SHRINKING SUPPLY

Between 2006 and 2011, the global demand for fish protein grew by 16.5 million tons, but the amount of fish caught fell by 1.3 million tons. Without intervention, this disparity is likely to get a lot worse as the world's population continues to grow and the demand for fish protein is projected to rise by 20% by the year 2030.

That's why Bloomberg Philanthropies is partnering with Oceana, Rare and EKO Asset Management to work in key areas around the world to help restore fish populations and meet the dietary needs of a growing global population.



Learn more at www.bloomberg.org.

Bloomberg Philanthropies

GLOBAL CATCH SHARE FISHERIES

20-25% of global landings by volume and 15-20% by value are managed under catch shares. A catch share program allocates a secure area or privilege to harvest a share of a fishery's total catch to an individual or group. Programs establish appropriate controls on fishing mortality and hold participants accountable. Catch shares can be administered as quota-based programs or area-based programs, which are often called Territorial Use Rights for Fishing (TURFs).

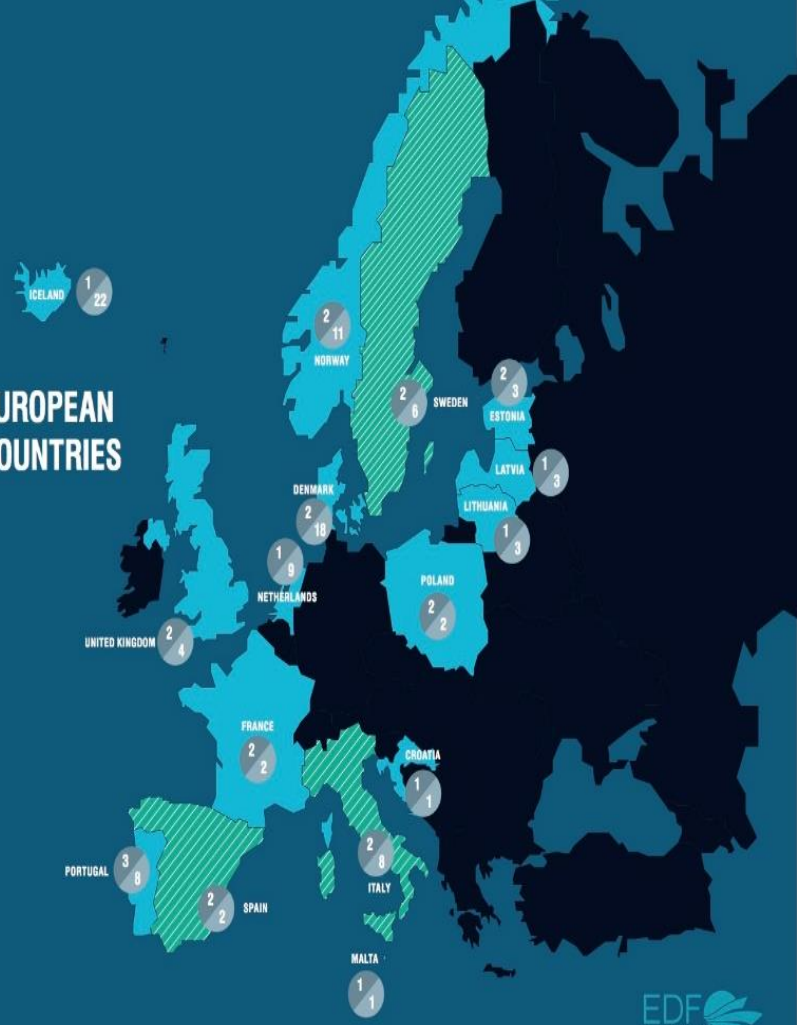
COUNTRIES WITH:

- Quota-Based Catch Shares
- Area-Based Catch Shares
- Both Types
- No Catch Shares

CATCH SHARE FISHERIES:

- Number of programs
- Number of unique species

EUROPEAN COUNTRIES



EDF ENVIRONMENTAL DEFENSE FUND

PERCENT OF GLOBAL LANDINGS UNDER CATCH SHARES

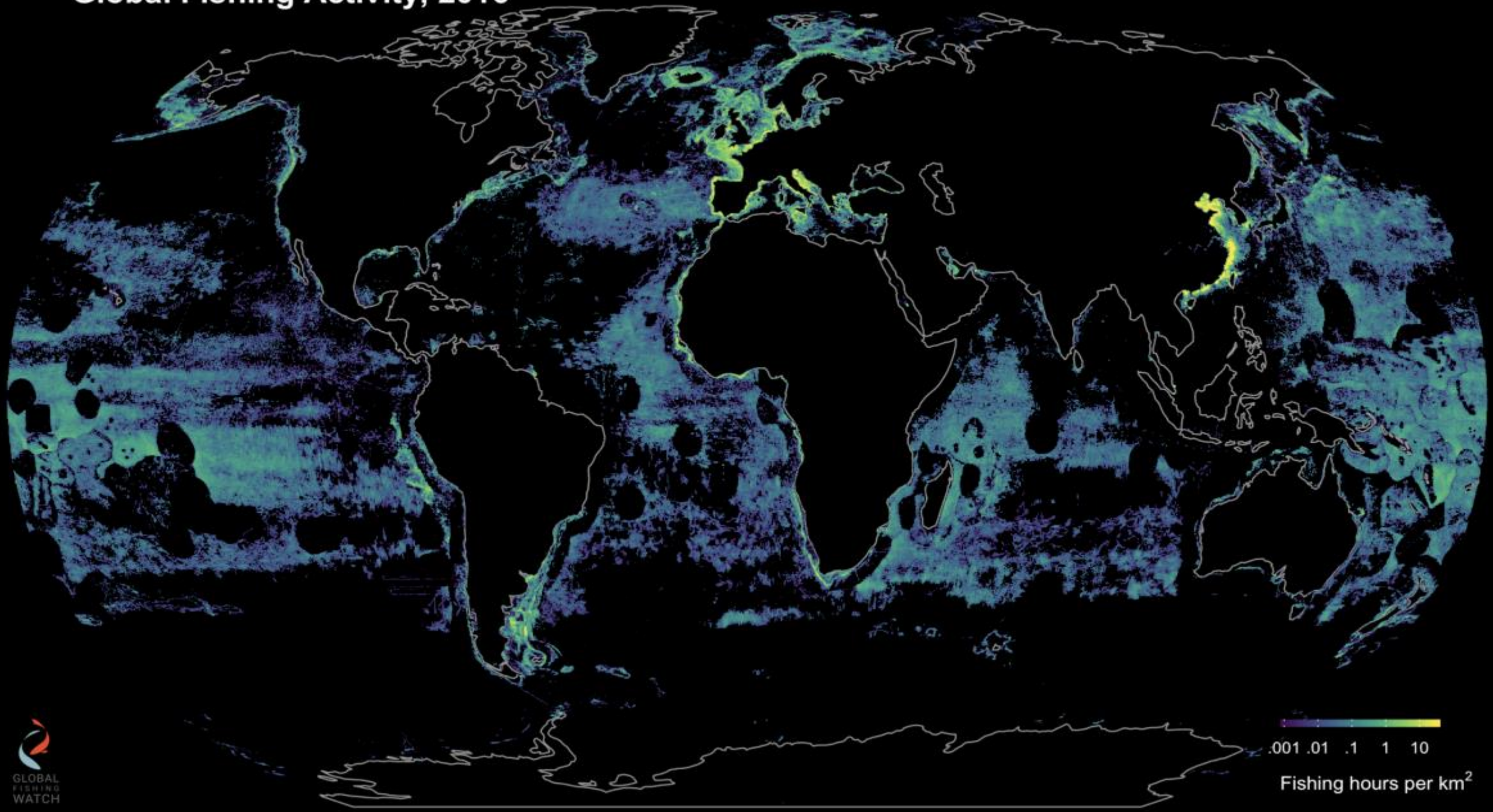
20-25%	Volume
15-20%	Value

LANDINGS BY GLOBAL FISHING NATIONS

CHINA	PERU	EUROPEAN UNION	INDONESIA	UNITED STATES	JAPAN	RUSSIAN FEDERATION	CHILE	INDIA	NORWAY	PHILIPPINES	VIETNAM	MYANMAR	REPUBLIC OF KOREA	MEXICO	THAILAND	MALAYSIA	MOROCCO	ICELAND	CANADA	130 NATIONS
16%	9%	6%	6%	5%	5%	5%	4%	4%	3%	3%	3%	2%	2%	2%	2%	2%	1%	1%	1%	16%

FAO DATA AS OF 2009.

Global Fishing Activity, 2016



GLOBAL FISHING WATCH

INTERNATIONAL CONGRESS ON GLOBAL FISHERIES PRODUCTION

CONGRESO INTERNACIONAL SOBRE PRODUCCIÓN PESQUERA MUNDIAL

VIGO, October 1st 2018

Co-organized by:

Food and Agriculture Organization of the United Nations

conxemar

@ConxemarOficial
#ConxemarFAOCongress

Islas Cíes. Propuesta Patrimonio de la Humanidad.
Cíes Islands. Proposed Heritage of Mankind

INVESTING FOR **SUSTAINABLE GLOBAL FISHERIES**

With support from:
Bloomberg Philanthropies' Vibrant Oceans Initiative
The Rockefeller Foundation

encourage capital

Bloomberg Philanthropies

The ROCKEFELLER FOUNDATION


COP25
CHILE
MADRID 2019
UN CLIMATE CHANGE CONFERENCE
TIME FOR ACTION
#TiempoDeActuar
#TimeForAction
Ms. Patricia Espinosa
UN Climate Change
Executive Secretary
Mr. António Guterres
Secretary-General


COP25
CHILE
MADRID 2019
UN CLIMATE CHANGE CONFERENCE
TIME FOR ACTION
#TiempoDeActuar
#TimeForA

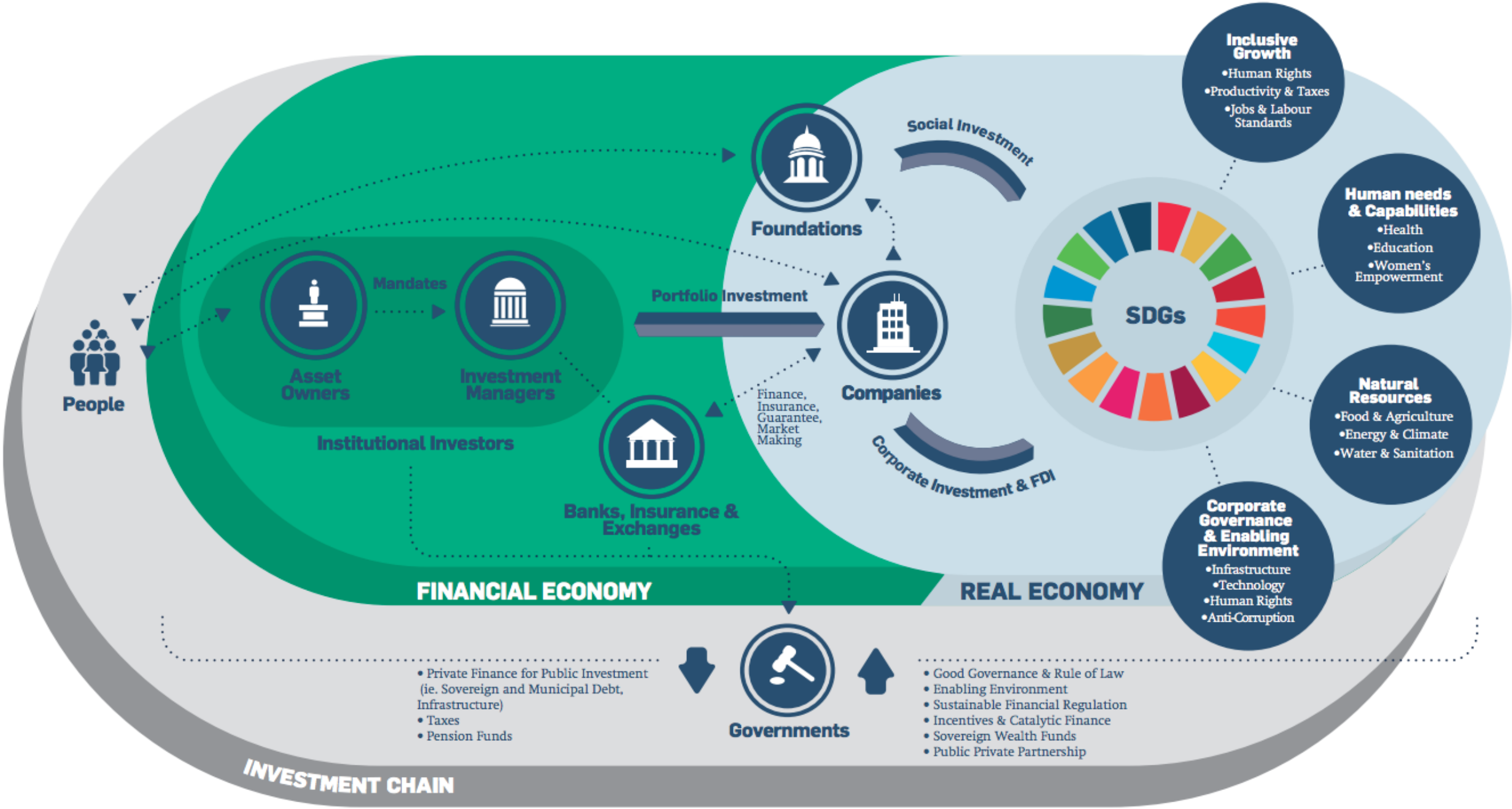

COP24·KATOWICE
UNITED NATIONS CLIMATE CHANGE CONFERENCE
DEPUTY EXECUTIVE SECRETARY
EXECUTIVE SECRETARY
PRESIDENT
SECRETARY TO THE GOVERNING BODIES
RAPPORTEUR
COP24·KATOWICE
UNITED NATIONS CLIMATE CHANGE CONFERENCE
POLAND 2018

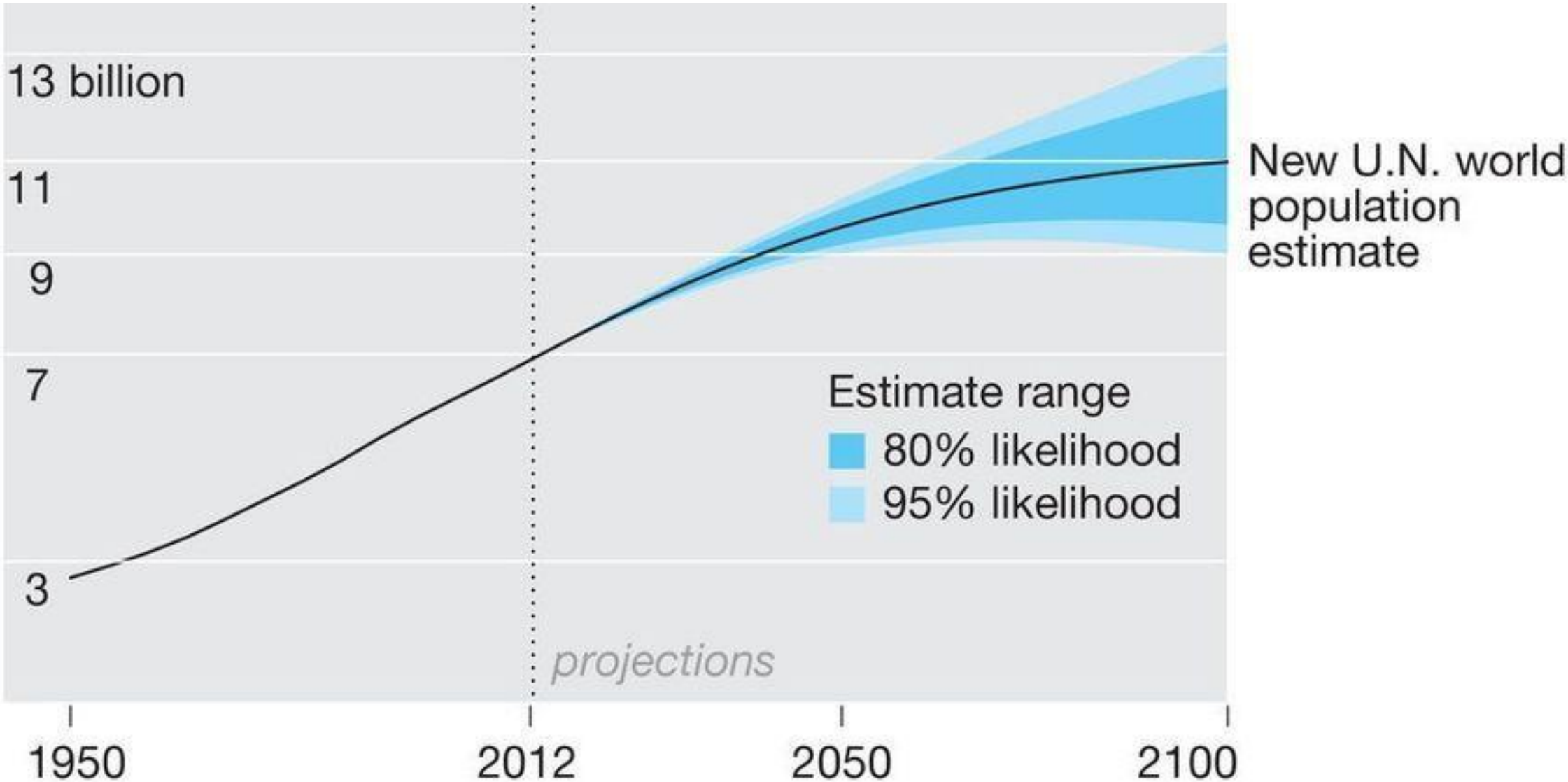

CLIMATE ACTION
DOMINICAN REPUBLIC
COSTA RICA
EGYPT


ANNUAL MEETING 202
WORLD ECONOMIC FORUM
50

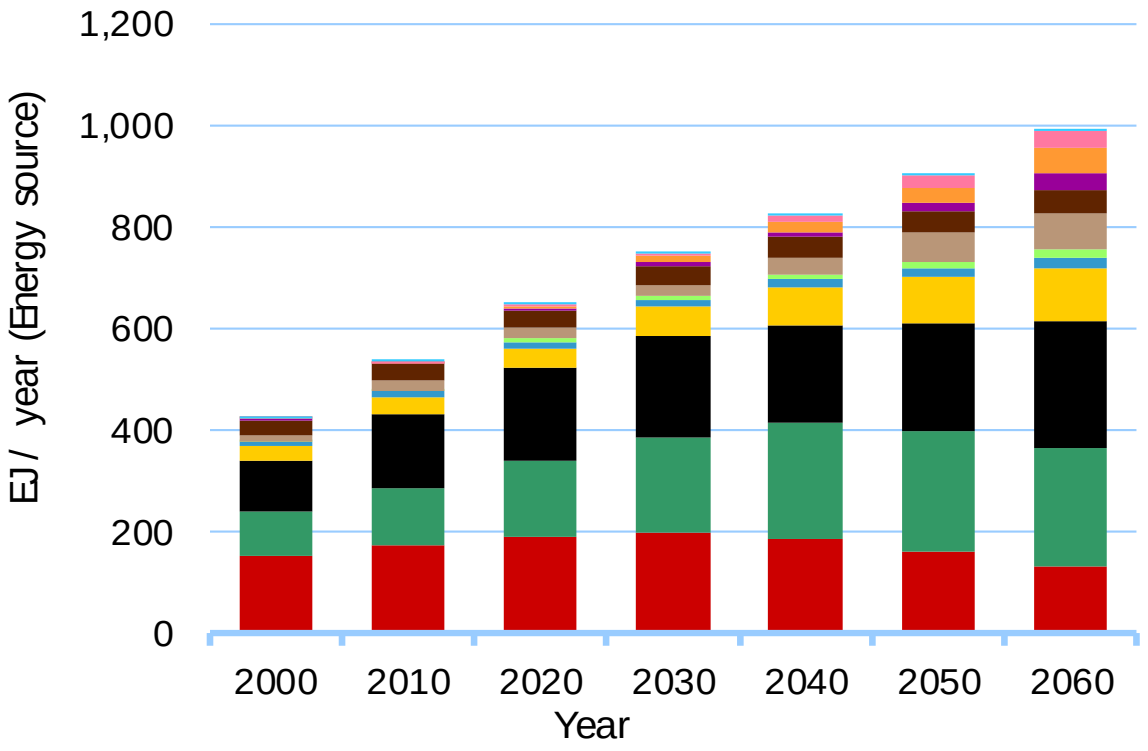

WORLD ECONOMIC FORUM
GUTERRES


United Nations
Sustainable Stock Exchanges
10 Year Anniversary
26 September 2019
New York, USA
10 YEARS
SSE
22-51
WALL ST


Inclusive Growth
•Human Rights
•Productivity & Taxes
•Jobs & Labour Standards
Human needs & Capabilities
•Health
•Education
•Women's Empowerment
Natural Resources
•Food & Agriculture
•Energy & Climate
•Water & Sanitation
Corporate Governance & Enabling Environment
•Infrastructure
•Technology
•Human Rights
•Anti-Corruption
SDGs
Social Investment
Foundations
Mandates
Asset Owners
Investment Managers
Institutional Investors
Portfolio Investment
Companies
Finance, Insurance, Guarantee, Market Making
Banks, Insurance & Exchanges
Corporate Investment & FDI
People
FINANCIAL ECONOMY
REAL ECONOMY
• Private Finance for Public Investment (ie. Sovereign and Municipal Debt, Infrastructure)
• Taxes
• Pension Funds
Governments
• Good Governance & Rule of Law
• Enabling Environment
• Sustainable Financial Regulation
• Incentives & Catalytic Finance
• Sovereign Wealth Funds
• Public Private Partnership
INVESTMENT CHAIN

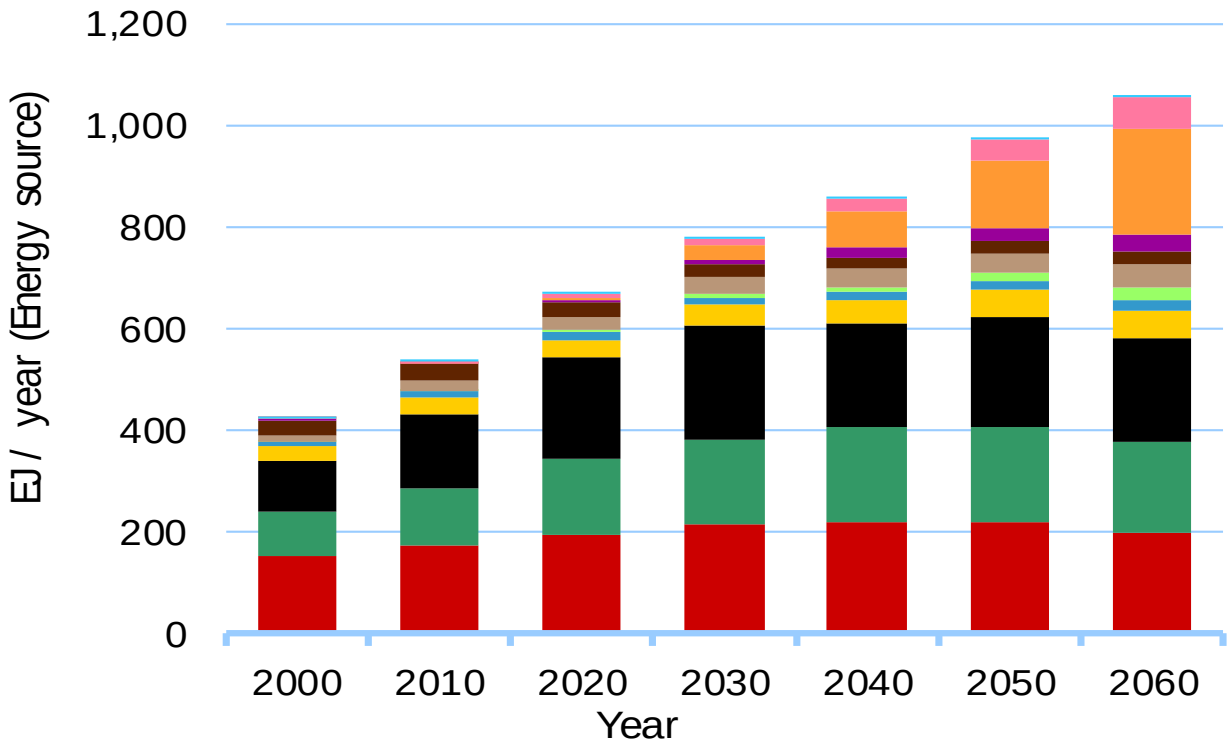

13 billion
11
9
7
3
projections
1950
2012
2050
2100
New U.N. world population estimate
Estimate range
80% likelihood
95% likelihood

World - Total Primary Energy - By Source



Oil
Natural Gas
Coal
Nuclear
Hydro-electricity
Biofuels
Biomass & Waste
Biomass - Traditional
Geothermal
Solar
Wind
Other Renewables

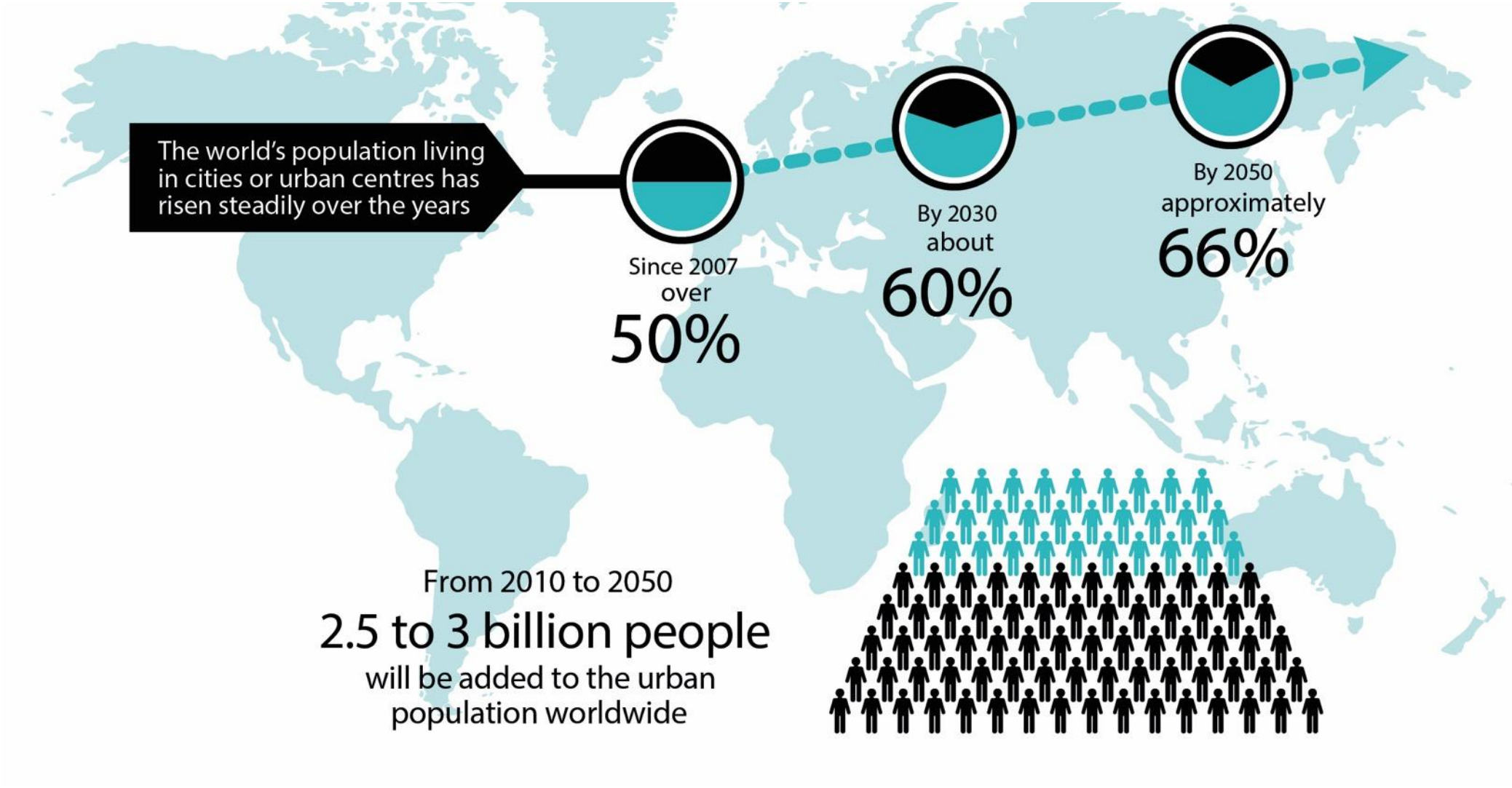
World - Total Primary Energy - By Source



Oil
Natural Gas
Coal
Nuclear
Hydro-electricity
Biofuels
Biomass & Waste
Biomass - Traditional
Geothermal
Solar
Wind
Other Renewables

Urbanization is an unstoppable phenomenon

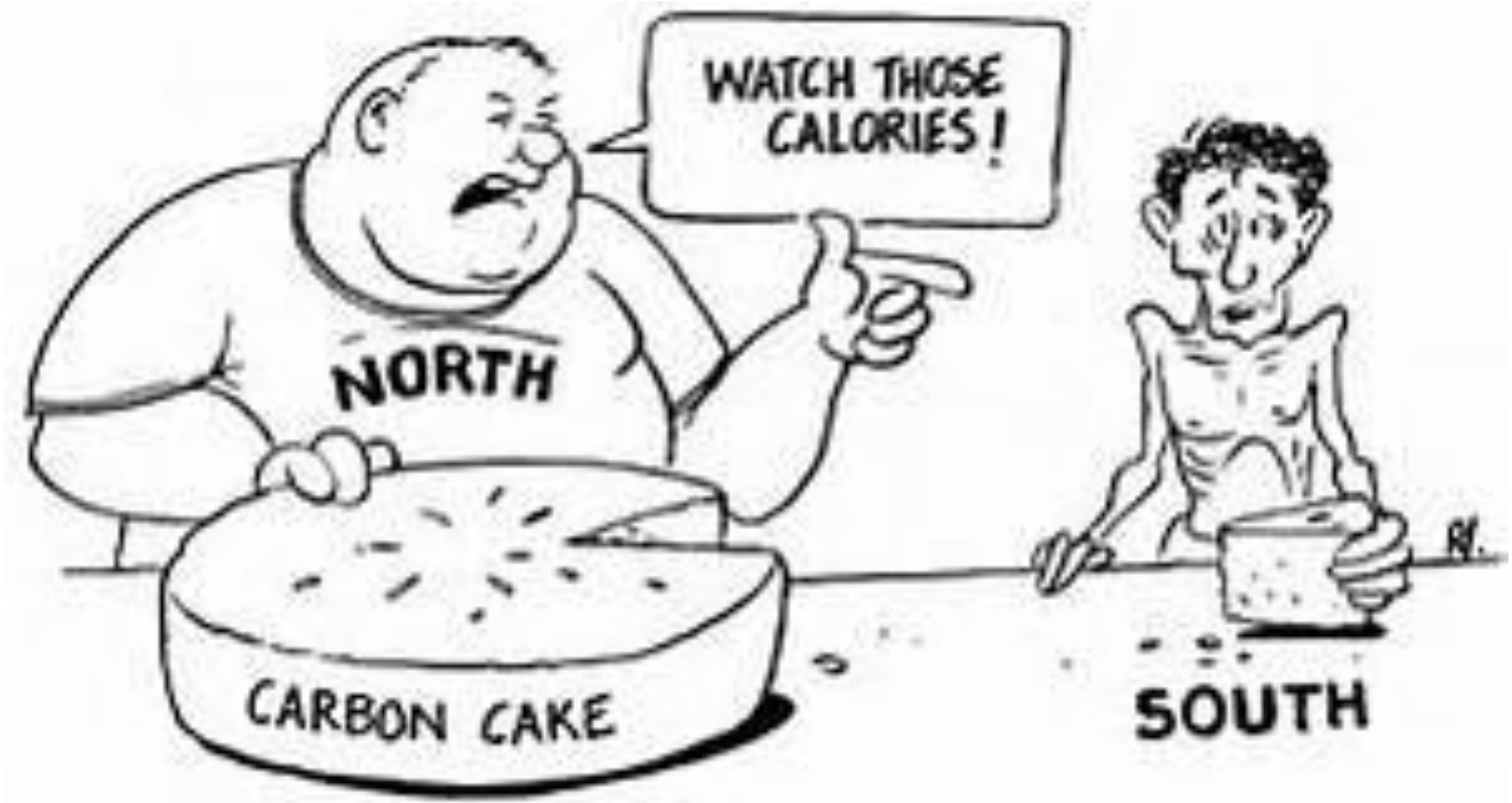
The World is Rapidly Urbanizing, 3% of land, 60-80% of energy consumption



Human settlements are highly relevant to THE sdg's

Interlinkages between SDG 11 and other SDGs

Source: UN-Habitat, 2017, A National Urban Policy for Liberia: Discussion Paper


WATCH THOSE CALORIES!
NORTH
CARBON CAKE
SOUTH

SUSTAINABLE DEVELOPMENT GOALS

13 CLIMATE ACTION

TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

GLOBALLY

WITHOUT ACTION, THE WORLD'S AVERAGE SURFACE TEMPERATURE IS LIKELY TO SURPASS **3 DEGREES CELSIUS THIS CENTURY**

IN INDIA

NEARLY

300

MILLION

RURAL PEOPLE DEPEND ON FORESTS FOR A PART OF THEIR SUBSISTENCE AND LIVELIHOOD

60%

LAND IS USED FOR AGRICULTURE AND

24.1%

IS UNDER FOREST COVER

3RD LARGEST GREENHOUSE GAS EMITTER, RESPONSIBLE FOR

6.9%

OF GLOBAL EMISSIONS

HIGHEST EVER ALTERNATE ENERGY CAPACITY INSTALLATION IN INDIA

SOLAR ENERGY CAPACITY INSTALLATION IN 2018

6550 MW

WIND ENERGY CAPACITY INSTALLATION IN 2018

1572 MW

COMMITTED TO REDUCE EMISSIONS INTENSITY OF ITS GDP BY

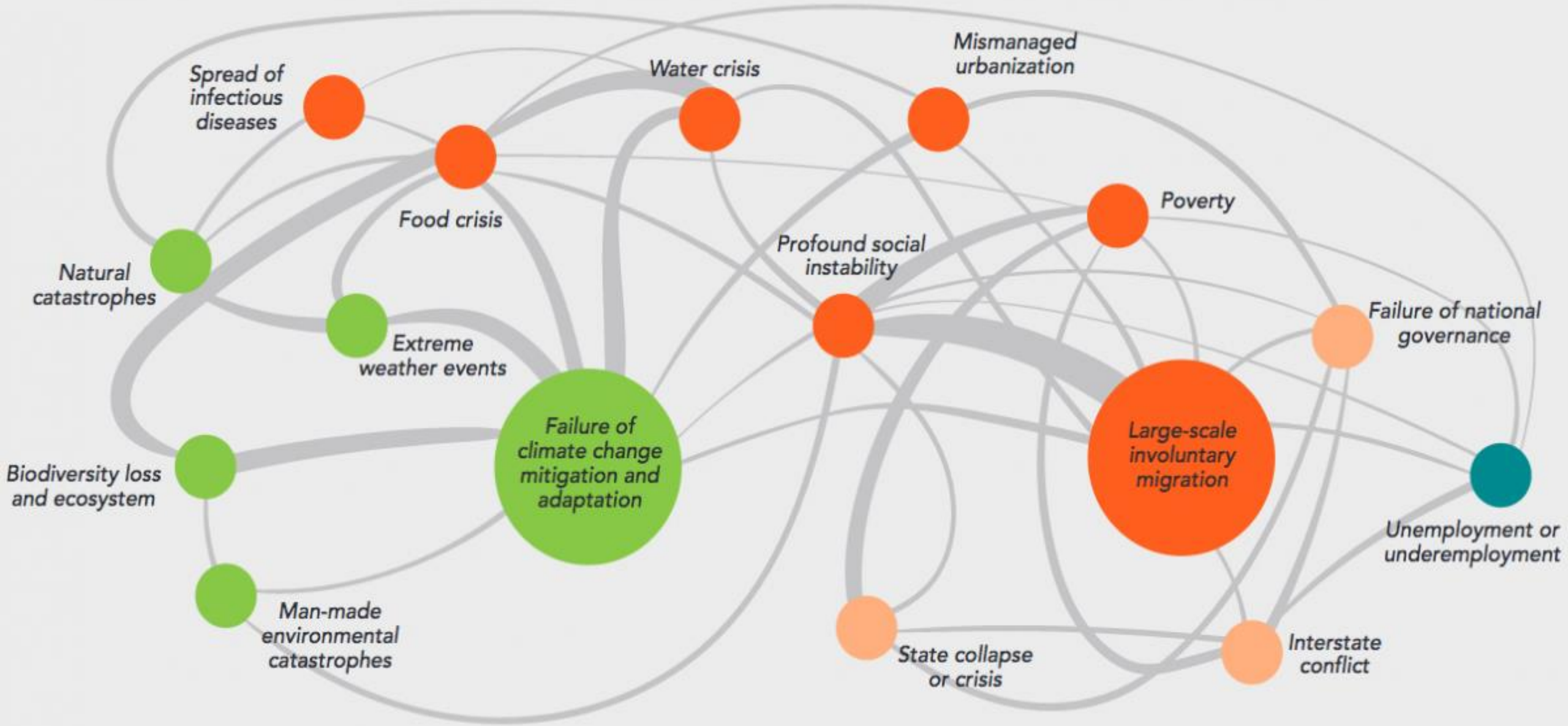
33-35%

BY 2030

COMMITTED TO REDUCE EMISSIONS INTENSITY OF ITS GDP BY

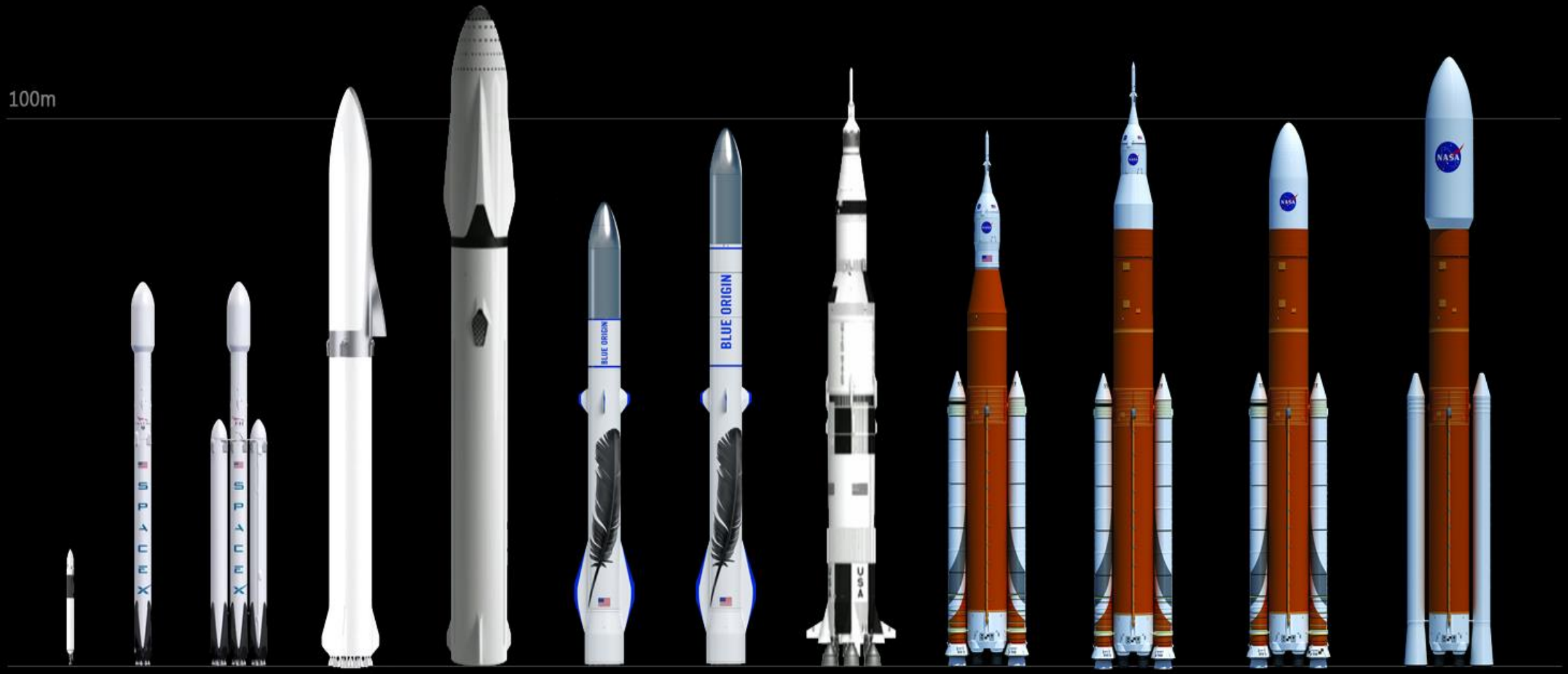
20-25%

BY 2020

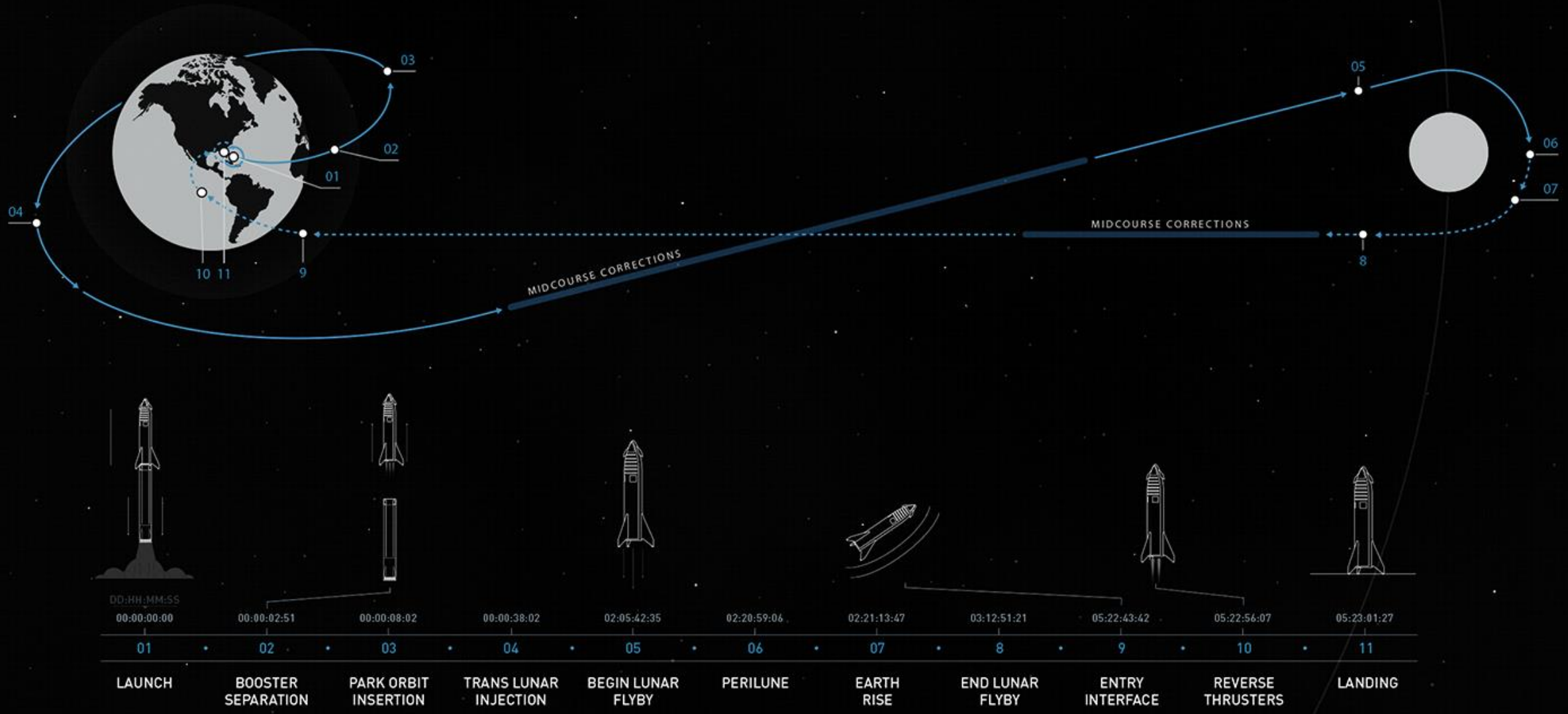

Spread of infectious diseases
Water crisis
Mismanaged urbanization
Food crisis
Poverty
Natural catastrophes
Profound social instability
Failure of national governance
Extreme weather events
Failure of climate change mitigation and adaptation
Large-scale involuntary migration
Biodiversity loss and ecosystem
Unemployment or underemployment
Man-made environmental catastrophes
State collapse or crisis
Interstate conflict


Yo!
SPACEX
Elon Musk
Founder of SpaceX


SPACEX
BRADY KENNISTON
NASA
SPACEFLIGHT.COM



Source: SpaceX, Blue Origin, NASA


03
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MIDCOURSE CORRECTIONS
MIDCOURSE CORRECTIONS
DD:HH:MM:SS
00:00:00:00
00:00:02:51
00:00:08:02
00:00:38:02
02:05:42:35
02:20:59:06
02:21:13:47
03:12:51:21
05:22:43:42
05:22:56:07
05:23:01:27
01
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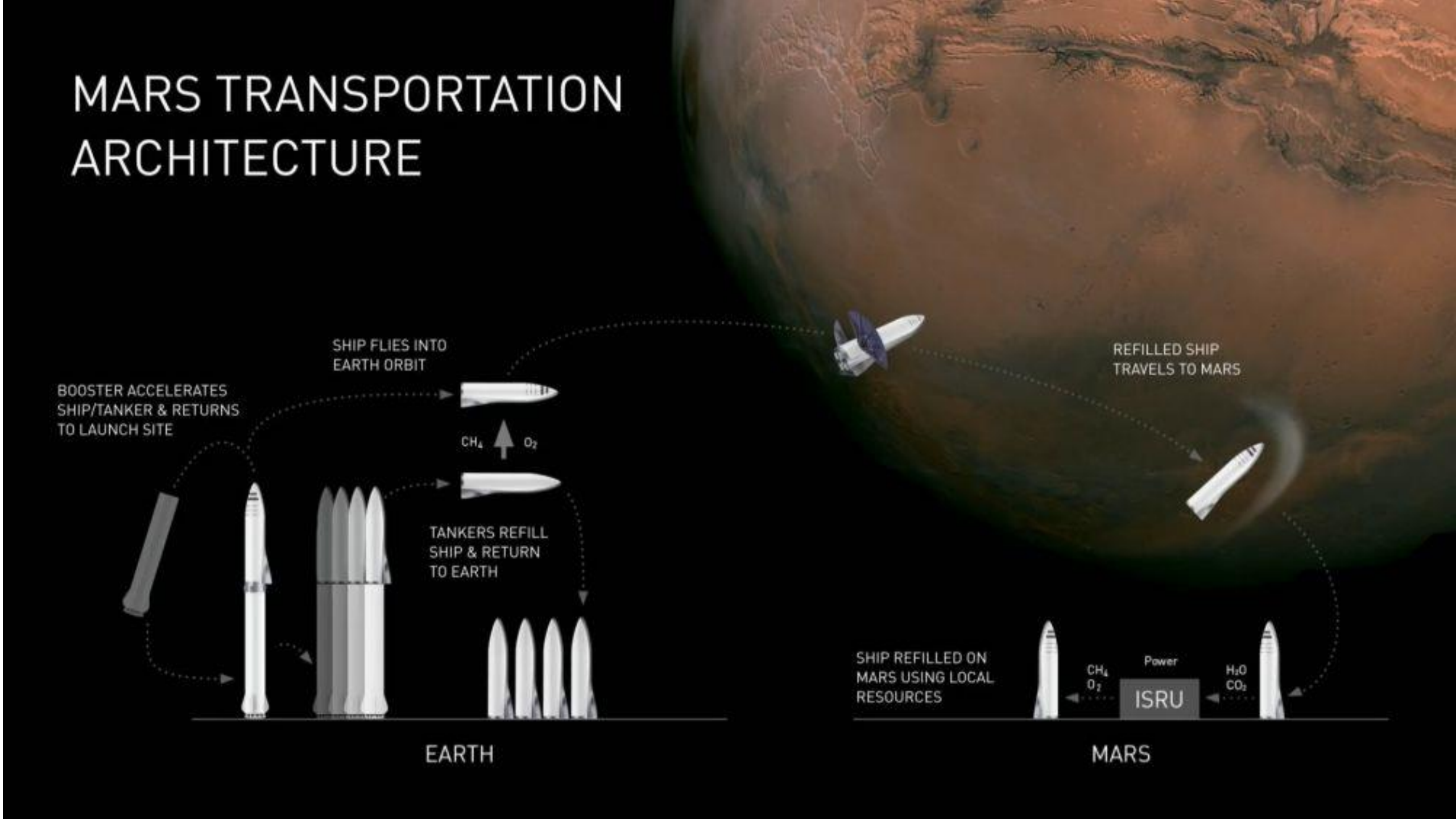
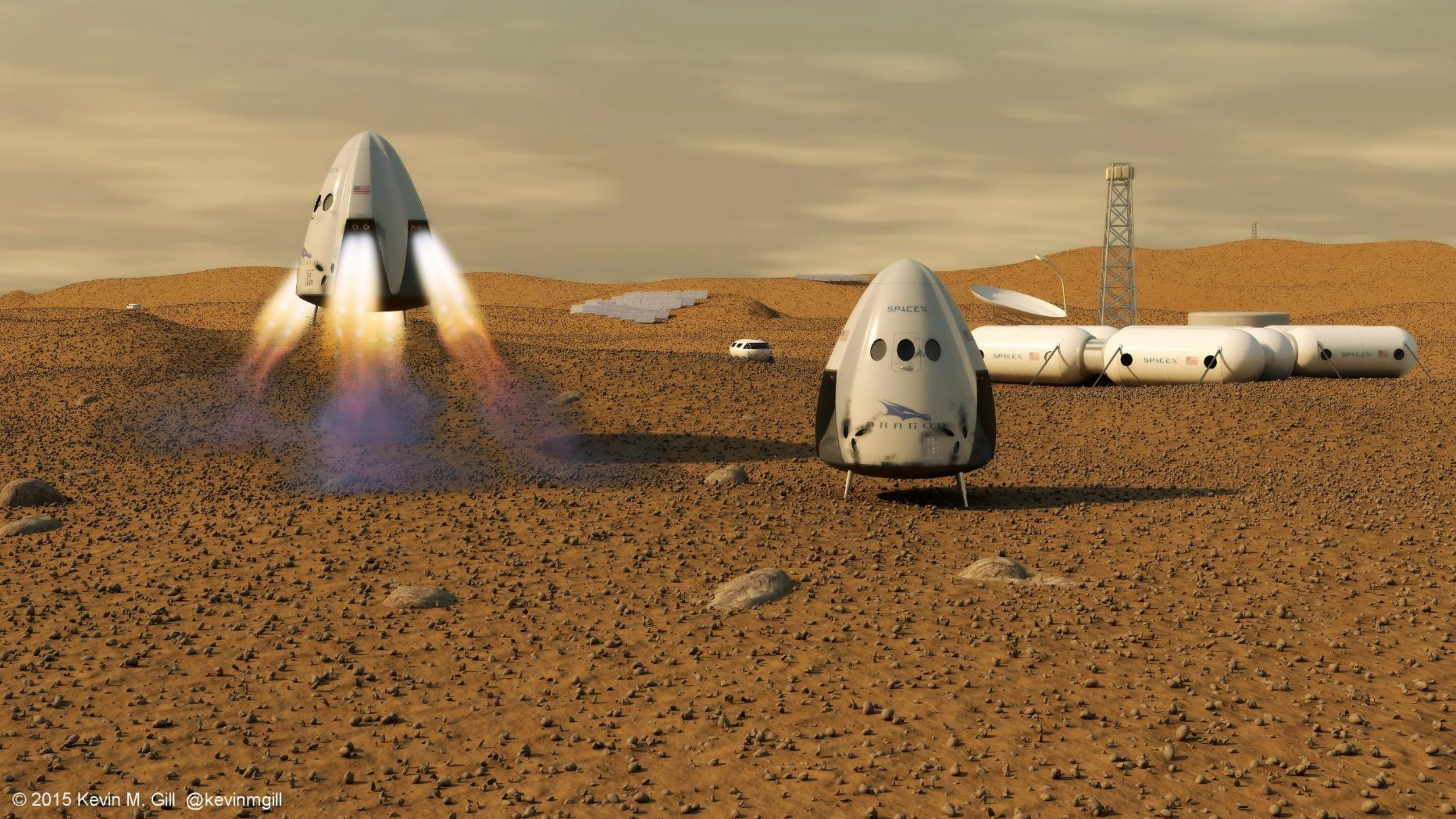
LAUNCH
BOOSTER SEPARATION
PARK ORBIT INSERTION
TRANS LUNAR INJECTION
BEGIN LUNAR FLYBY
PERILUNE
EARTH RISE
END LUNAR FLYBY
ENTRY INTERFACE
REVERSE THRUSTERS
LANDING

MARS TRANSPORTATION ARCHITECTURE



NASA


NASA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DRAGON
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Earth