

# Impacts of Globalization on the Developing Countries

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# Structure of the Course

## 1) Definitions of the Main Concepts

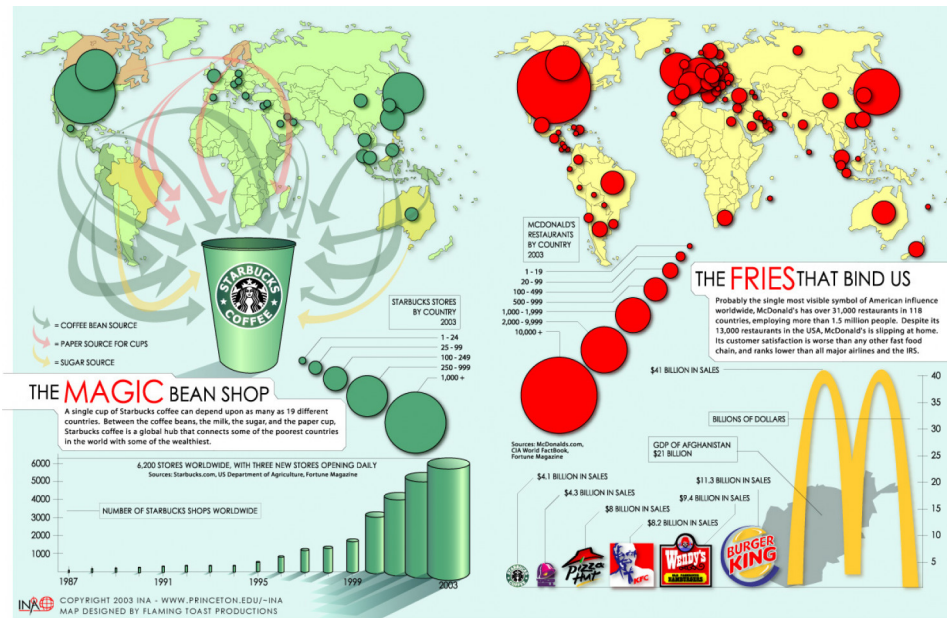
- Developing Countries vs. Developed Market Economies
- Theories of Economic Development

## 2) Globalization

- Causes and Outcomes of Globalization
- Global Issues

## 3) Impacts of Globalization on the Developing Countries

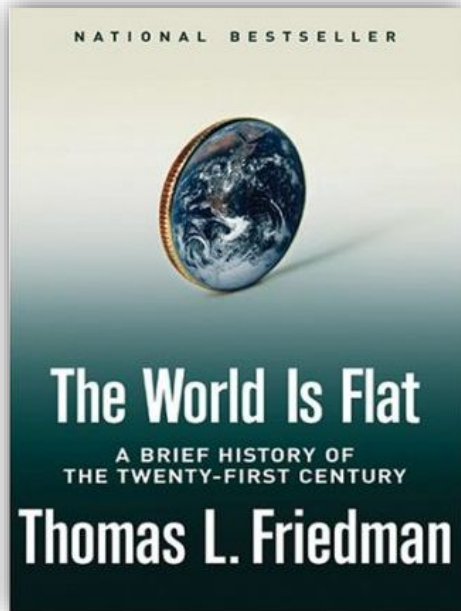
- Case Studies



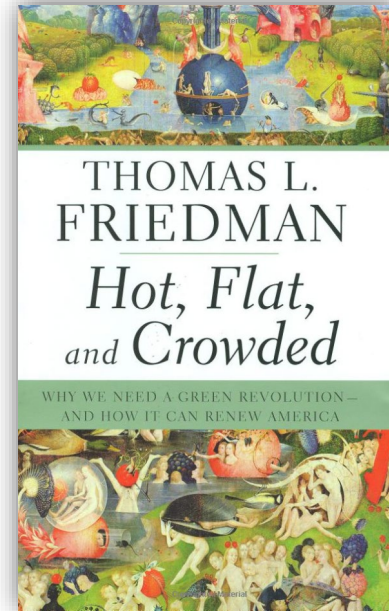


# Literature

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FRIEDMAN, Thomas L. 2007. *The World Is Flat: A Brief History of the Twenty-first Century*. New York, USA. ISBN 978-0374292782.



FRIEDMAN, Thomas L. 2008. *Hot, Flat, and Crowded: Why We Need a Green Revolution. New York, USA.* ISBN 978-0374166854.

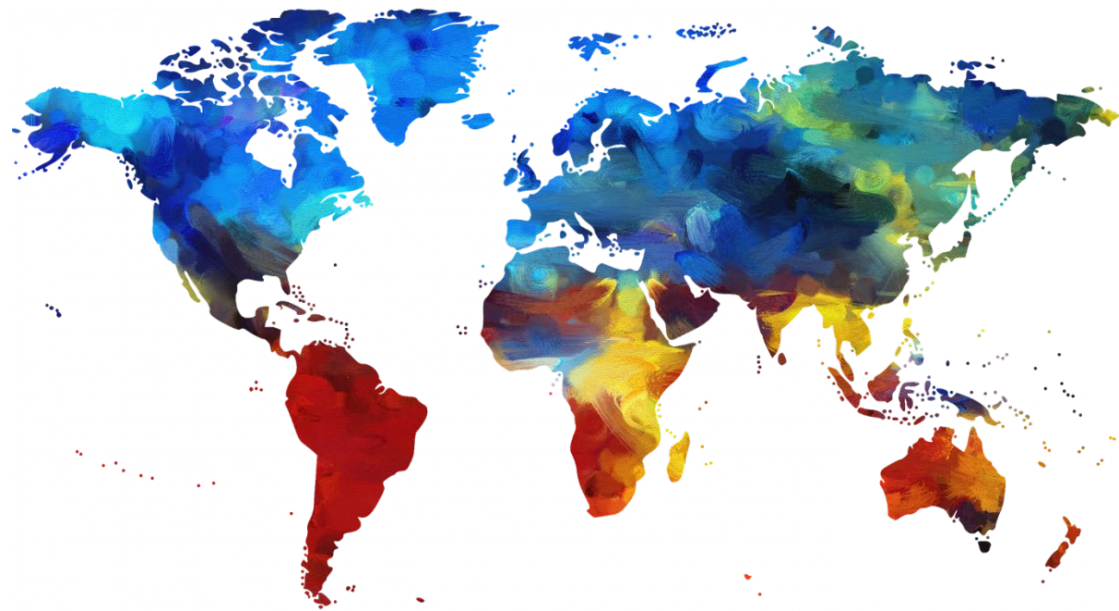
# Definition

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# Global Issues

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- They arise with the consolidation of the world economy.
- They affect the whole of human civilization.
- They can only be addressed through global efforts, not through the efforts of individuals or separate national economies.
- **Not to be mistaken with environmental issues**, they are just a small group of global issues.



# Global Issues Classification

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- Elementary
- Basic
- Ultimate
- Subglobal
- Global = Universal

# Global Issues Classification

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- **Elementary**

- food and nutrition, energy and raw resources, drug abuse and trafficking, etc.

- **Basic**

- loss of diversity, deforestation, desertification, economic differentiation, etc.

- **Ultimate**

- nuclear conflict, mass extinction

- **Subglobal**

- access to education, access to health care, potable water and safe sanitation, etc.

- **Global = Universal**

- HIV/AIDS pandemic, cancer, global climate change, etc.

# Global Issues Classification

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- **Environment-Society Conflict**
- **Society-Society Conflict**
- **Individual-Society Conflict**

# Global Issues Classification

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## ■ Environment-Society Conflict

- Population Issue
- Food and nutrition
- Water resources, sanitation
- Deforestation, desertification, loss of biodiversity
- Energy and raw resources
- Global climate change

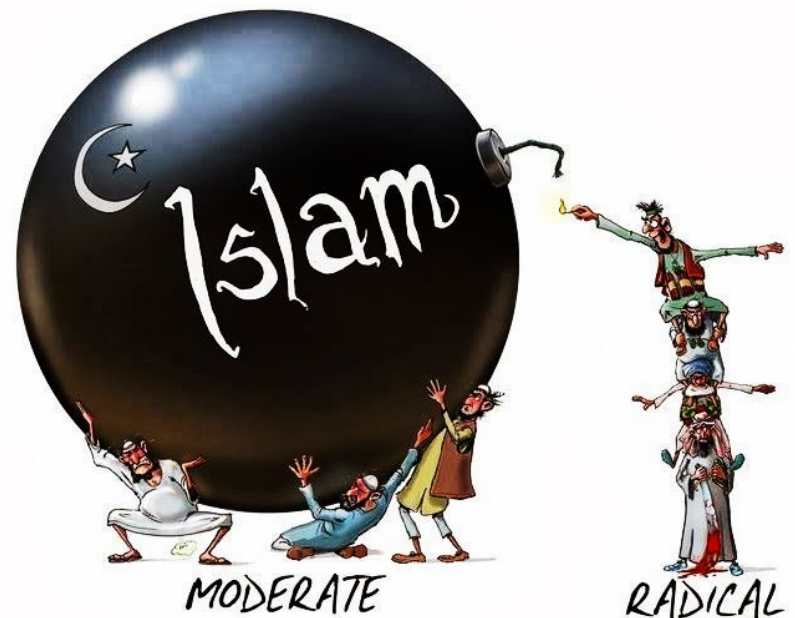


# Global Issues Classification

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## ■ Society-Society Conflict

- Differentiation of the world economy
- Unequal position of countries in the system of international relations
- Indebtedness
- Digital divide
- War and terrorism
- Drug production and trafficking





# Global Issues Classification

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## ■ Individual-Society Conflict

- Poverty and social inequality
- Epidemics and pandemics
- Access to education
- Access to healthcare
- Uncontrollable migration



# Environment-Society Conflict

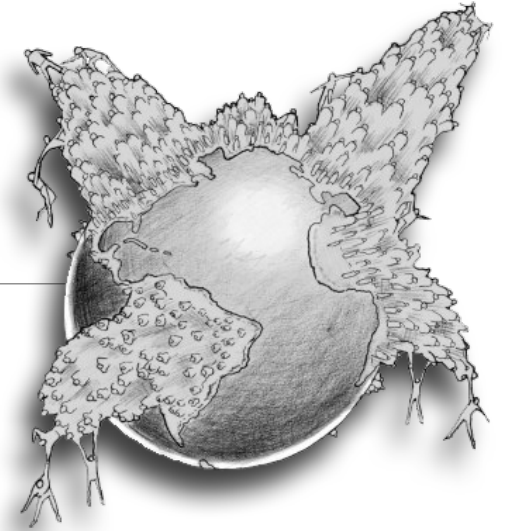
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# Population Issue

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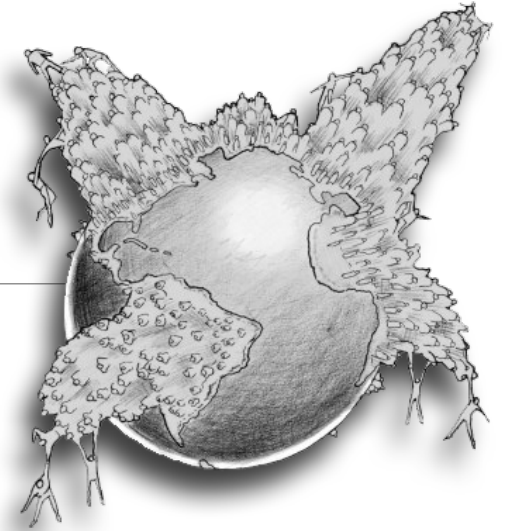
- 1804 1 bil. people
- 1927 2 bil. people
- 1960 3 bil. people
- 1974 4 bil. people
- 1987 5 bil. people
- 1999 6 bil. people
- 2011 7 bil. people
- 2023 8 bil. people
- 2037 9 bil. people
- 2056 10 bil. people



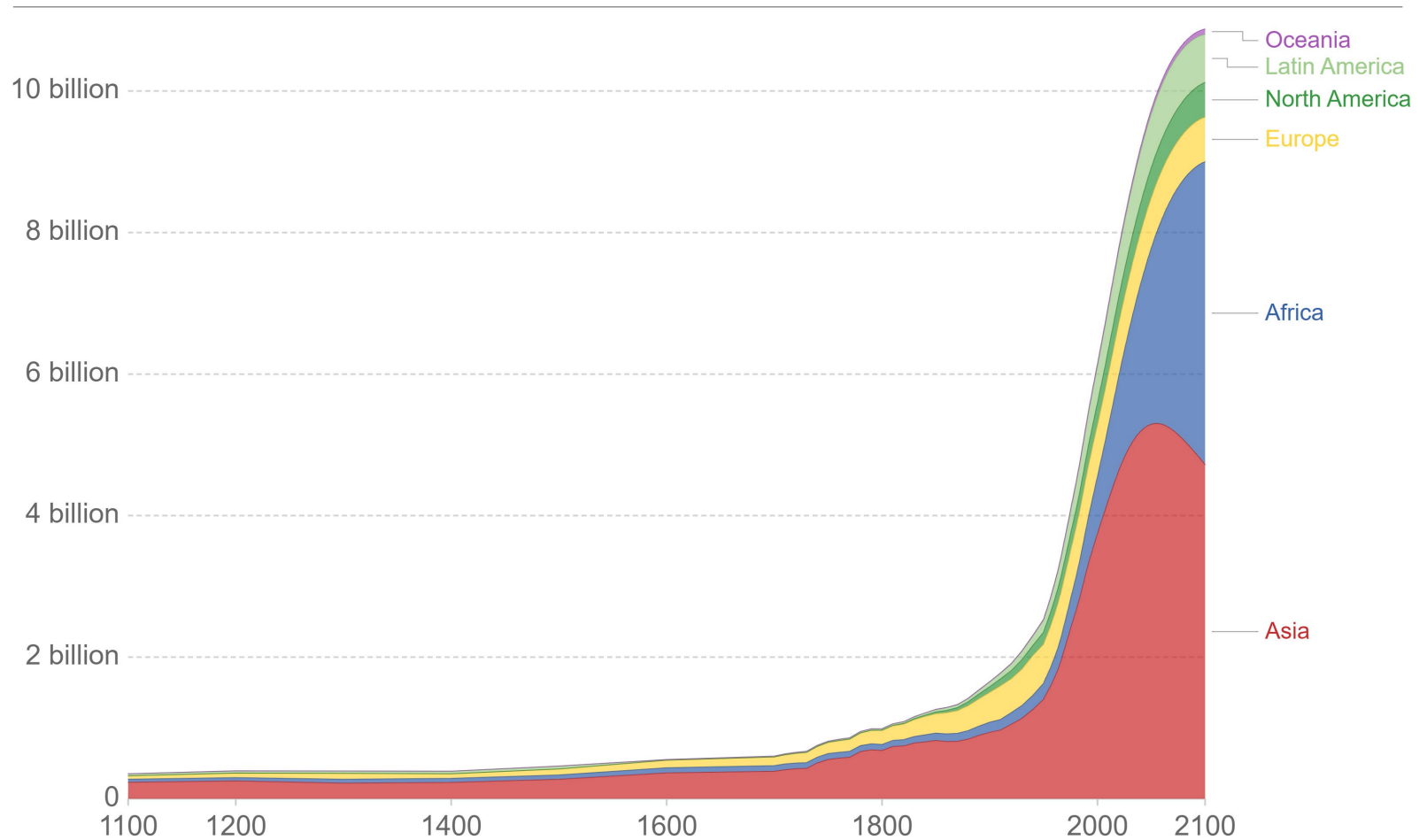
# Population Issue

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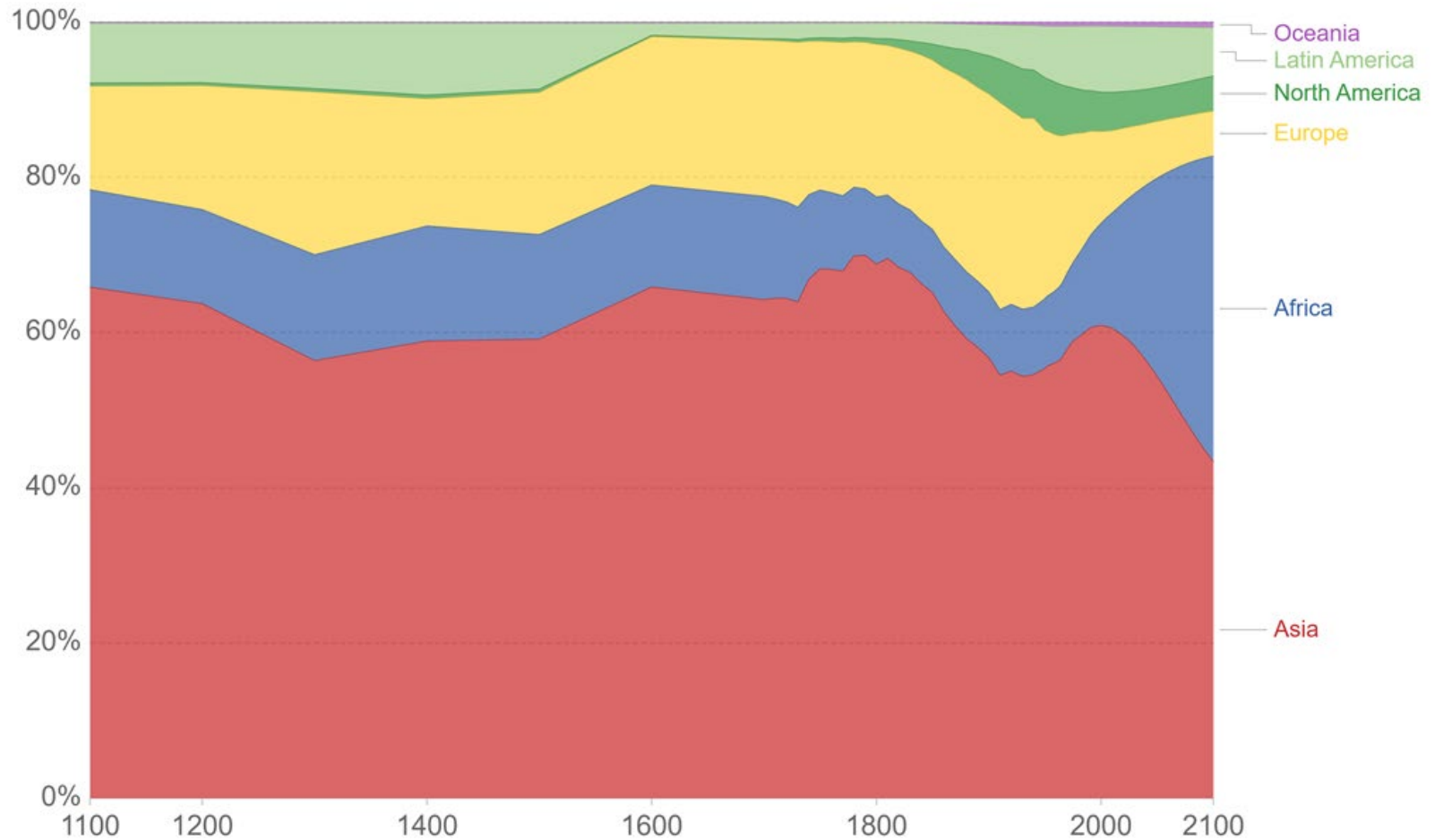
- 1804 1 bil. people
- 1927 2 bil. people (**123** years)
- 1960 3 bil. people (**33** years)
- 1974 4 bil. people (**14** years)
- 1987 5 bil. people (**13** years)
- 1999 6 bil. people (**12** years)
- 2011 7 bil. people (**12** years)
- 2023 8 bil. people (**12** years)
- 2037 9 bil. people (**14** years)
- 2056 10 bil. people (**19** years)



# Population Issue

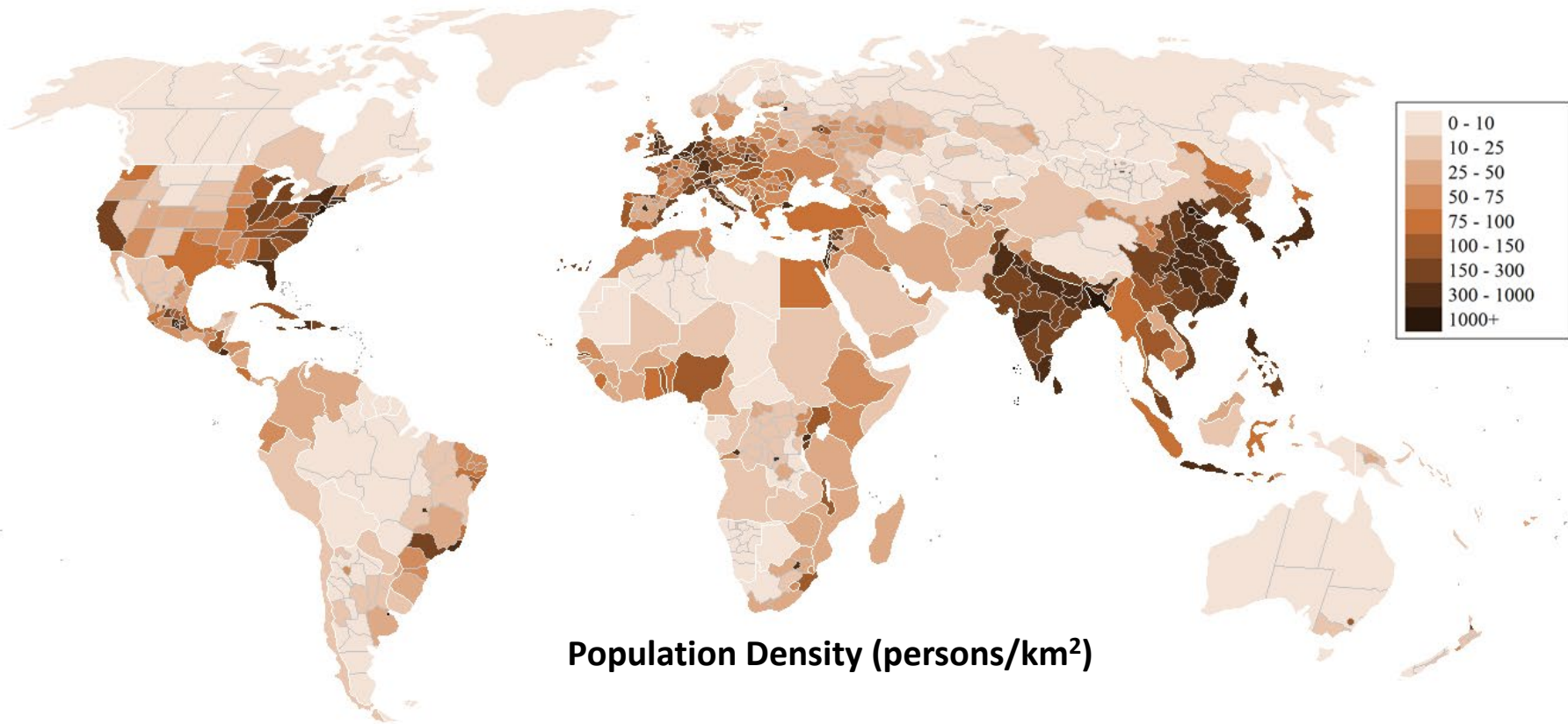


# Population Issue



# Population Issue

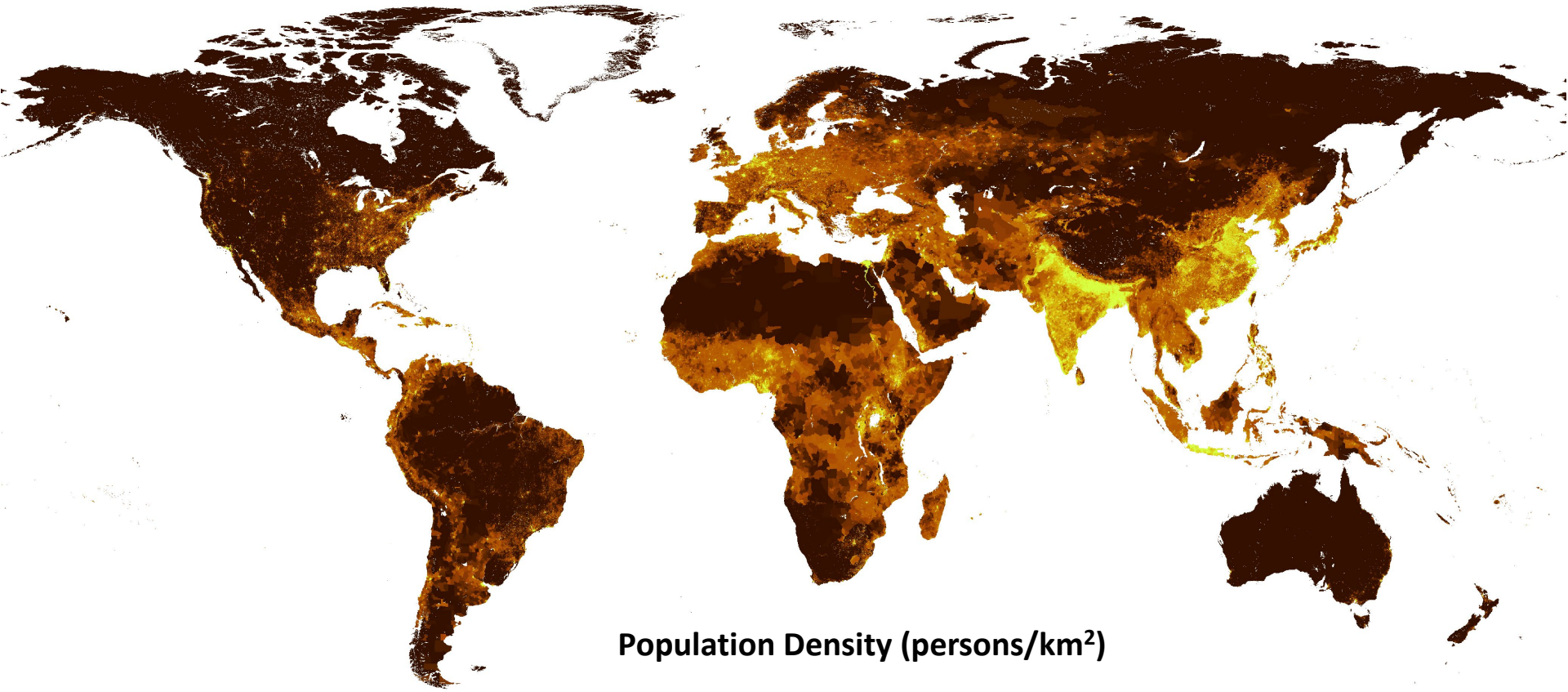
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# Population Issue

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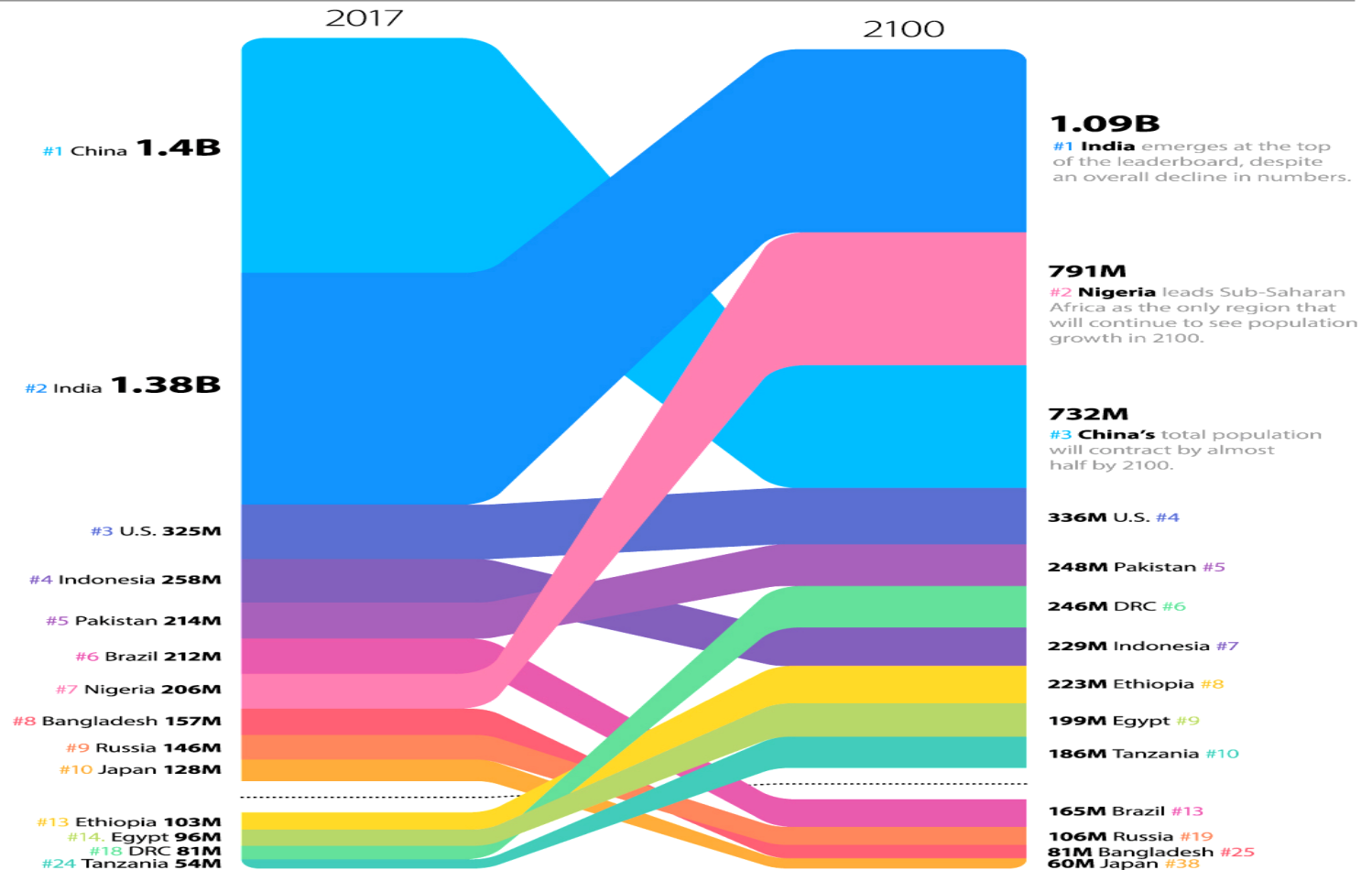


Population Density (persons/km<sup>2</sup>)



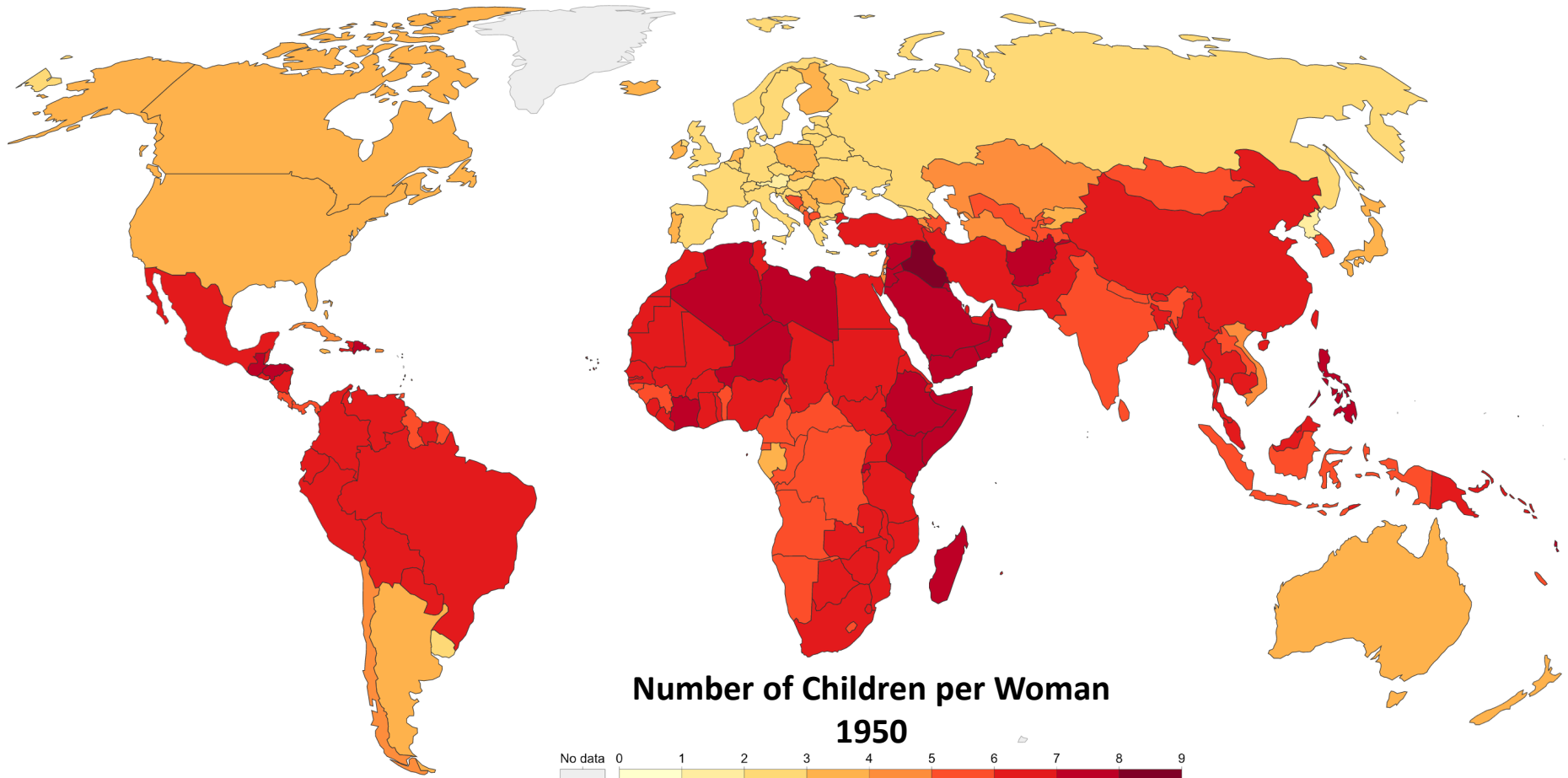


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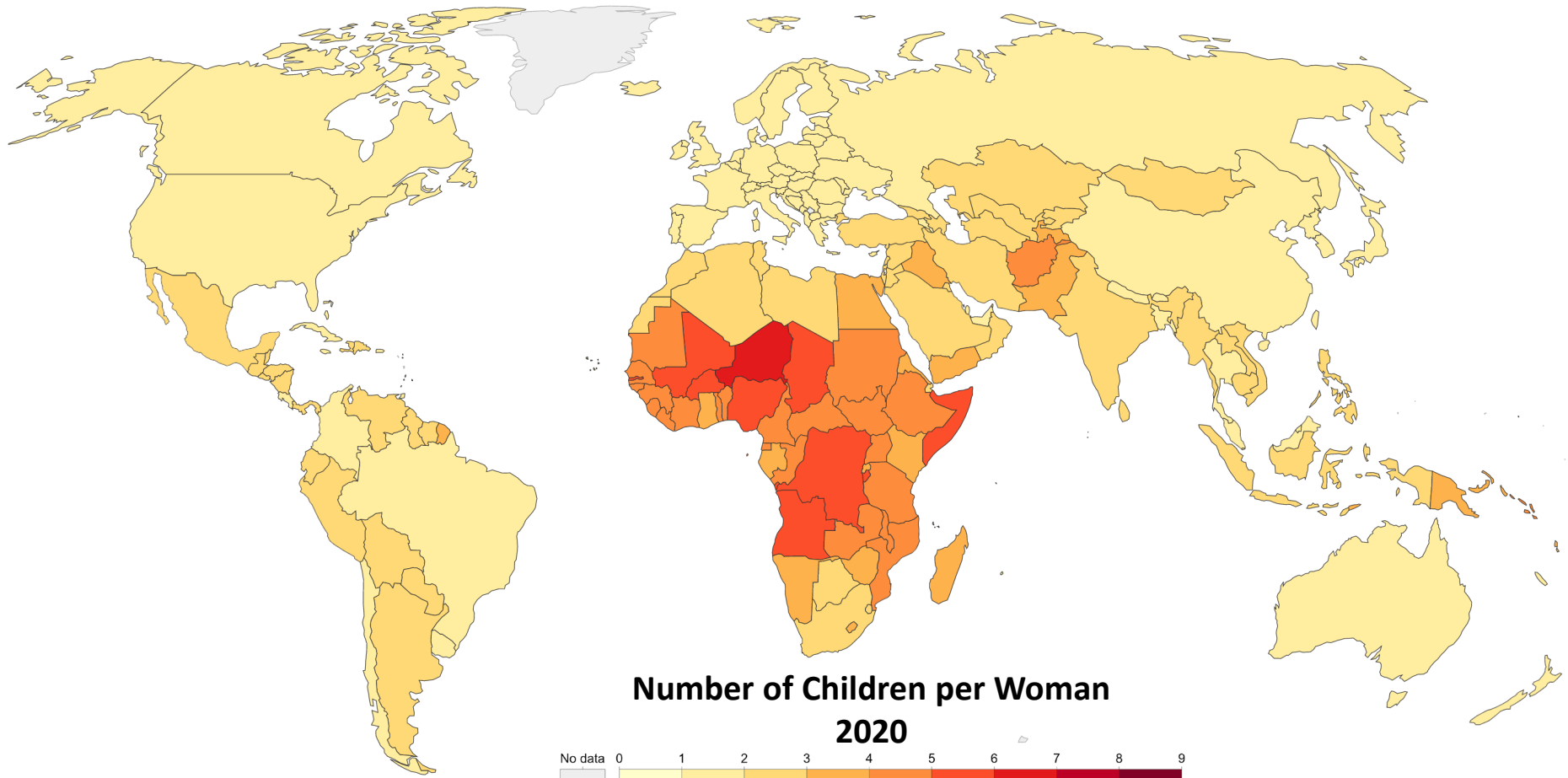
# Population Issue

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# Population Issue

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# Population Issue

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- **The rate of population growth is decreasing:**
  - ...thanks to the fight against an extreme poverty.
  - ...due to education and better health care.
  - ...due to the improving position of women in society.
  - ...with education, available contraception and family planning programs.



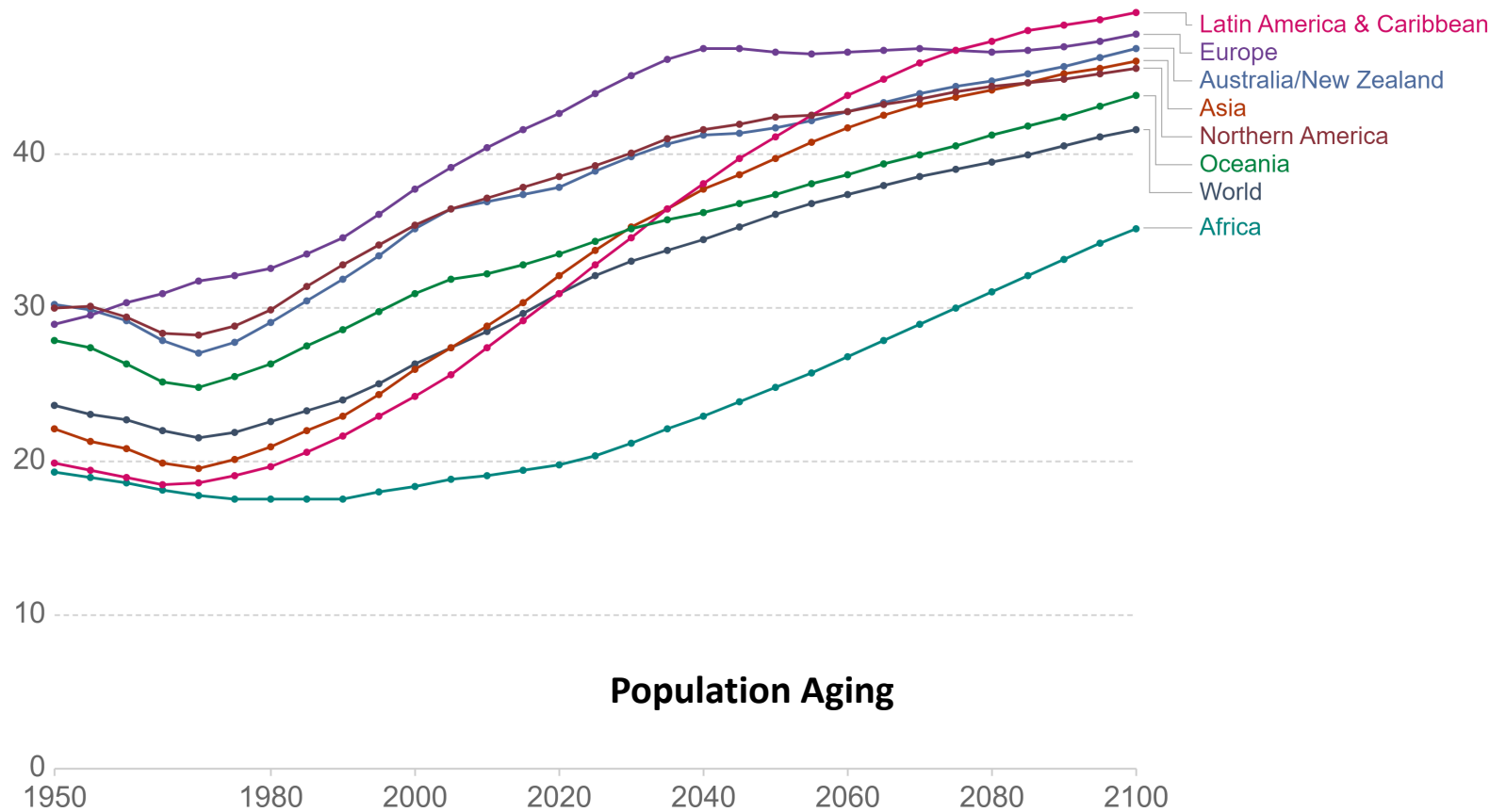
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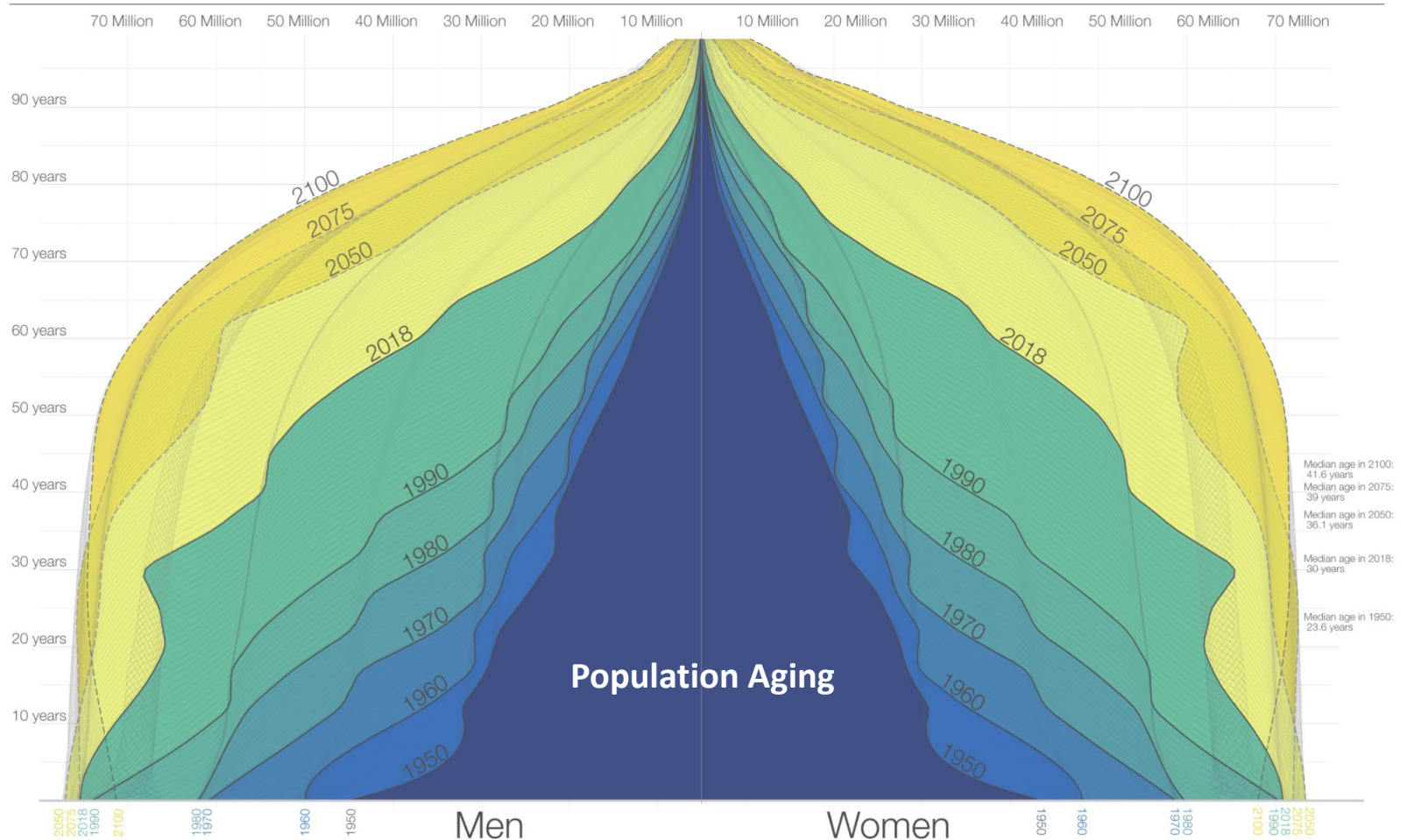
## ■ Population Aging:

- In 1950
  - 2,5 bil. population
  - 2,3 bil. under 65 years old
  - 0,2 bil. older than 65 years (8 %)
- In 2000
  - 6,1 bil. population
  - 5,5 bil. under 65 years old
  - 0,6 bil. older than 65 years (10 %)
- In 2050
  - 9,7 bil. population
  - 7,8 bil. under 65 years old
  - 1,9 bil. older than 65 years (21 %)

# Population Issue



# Population Issue

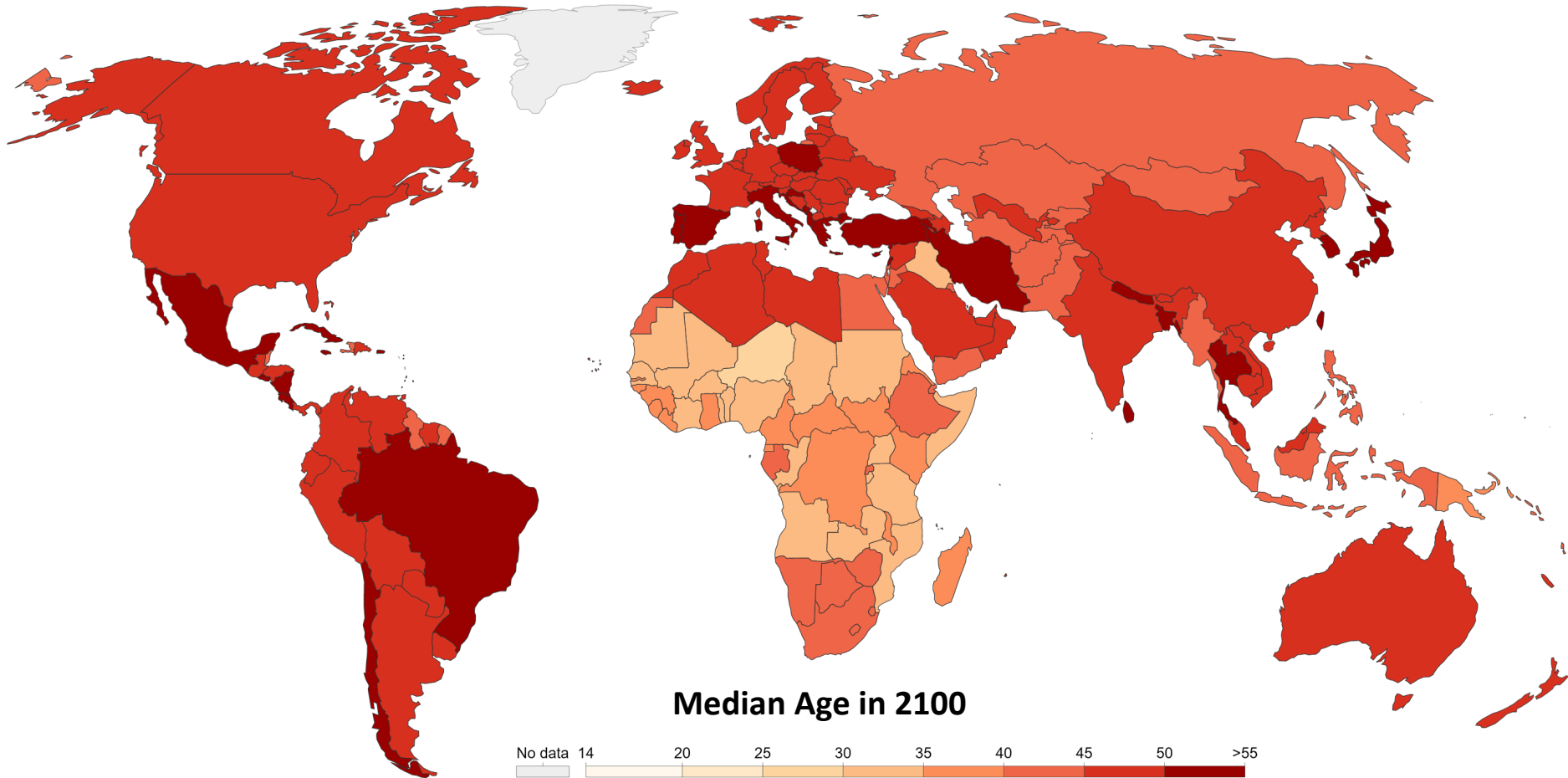






# Population Issue

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# Food and Nutrition

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- **Global food production could feed 1.5× higher global population.**
- **But because of...**
  - limited access to land and water
  - armed conflicts
  - unilateral land use
  - discrimination by race or sex

...there are regions, where undernourishment is prevalent, while at the same time, there are countries, where obesity and malnutrition is a disease.



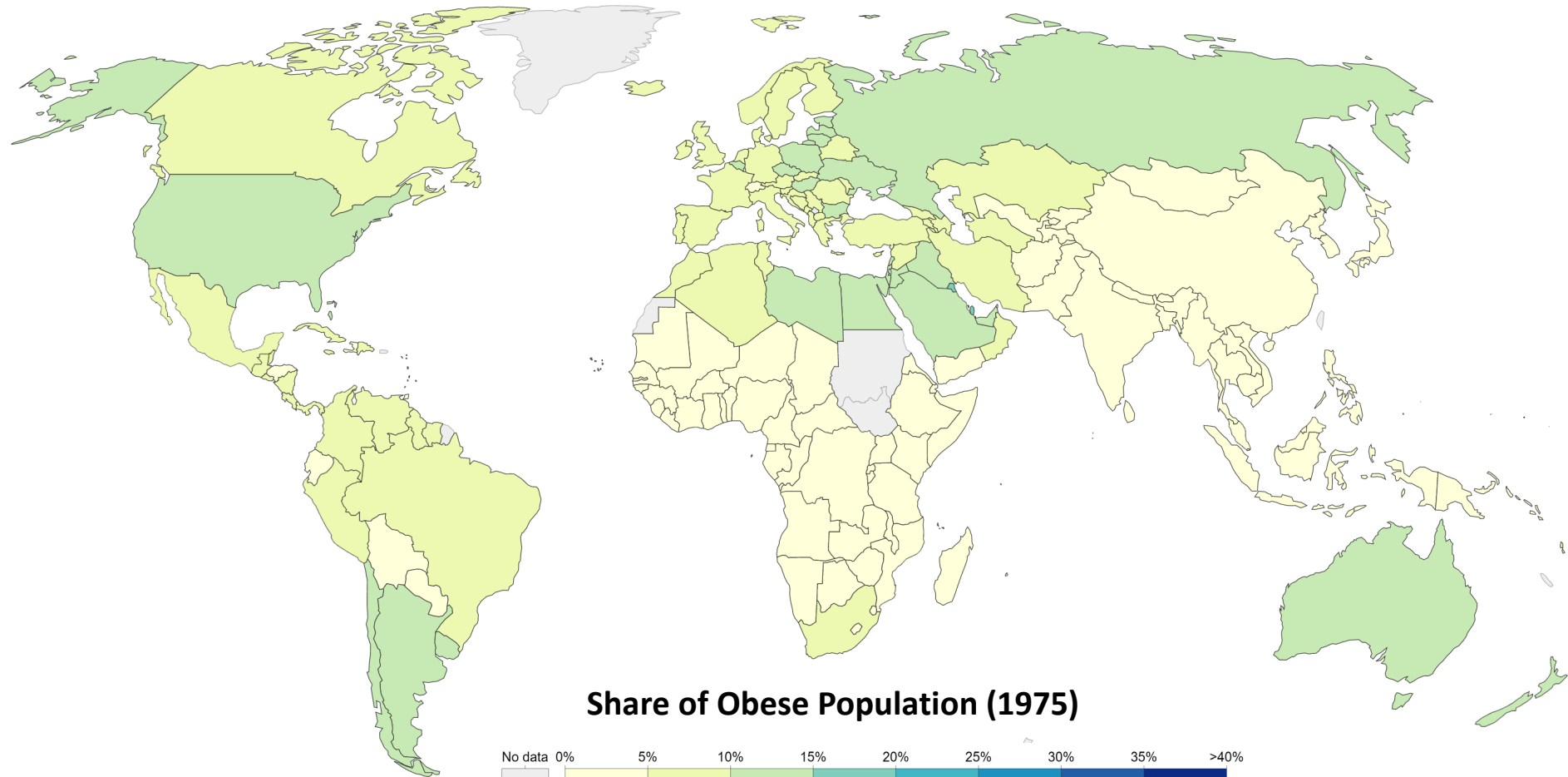
# Food and Nutrition

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- **Global food production could feed 1.5× higher global population.**
- Food production depends on **croplands** and **water supply**. Pressure on limited land resources, driven in part by population growth, can mean expansion of cropland. This often involves destruction of vital forest resources or overexploitation of arable land.
- Developed market economies with about 15 % share on population consume 50 % of global food production.

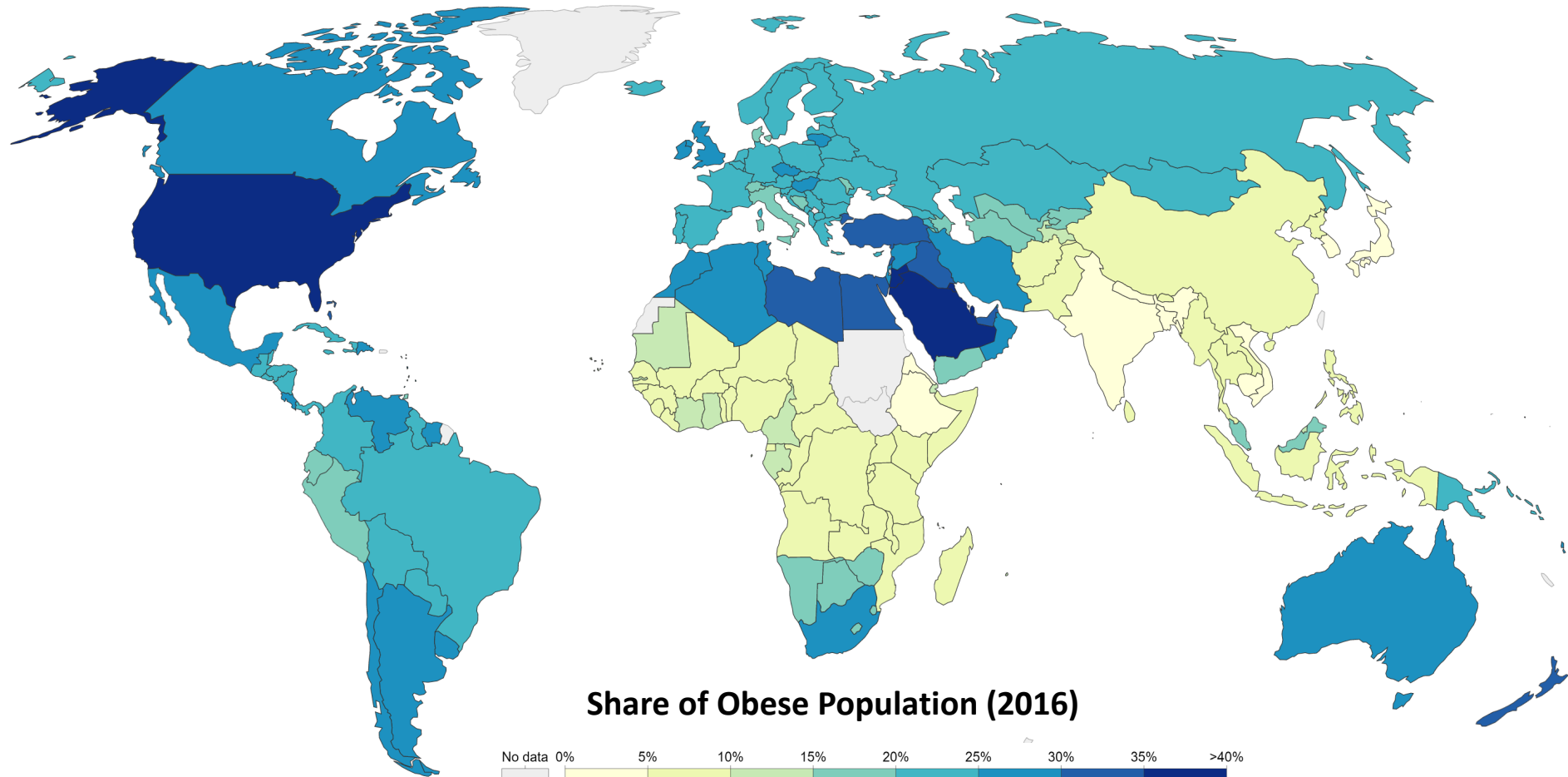
# Food and Nutrition

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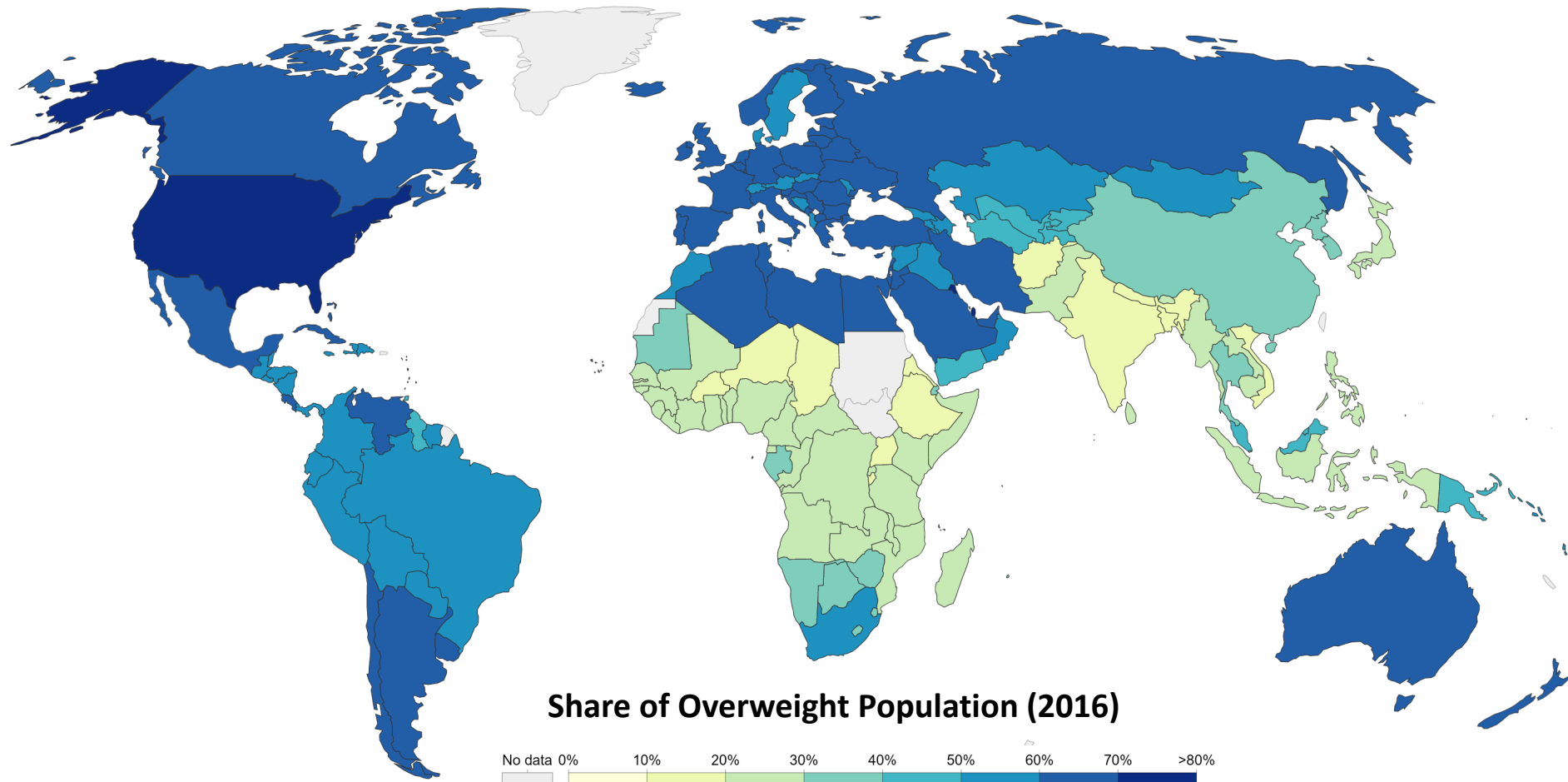
# Food and Nutrition

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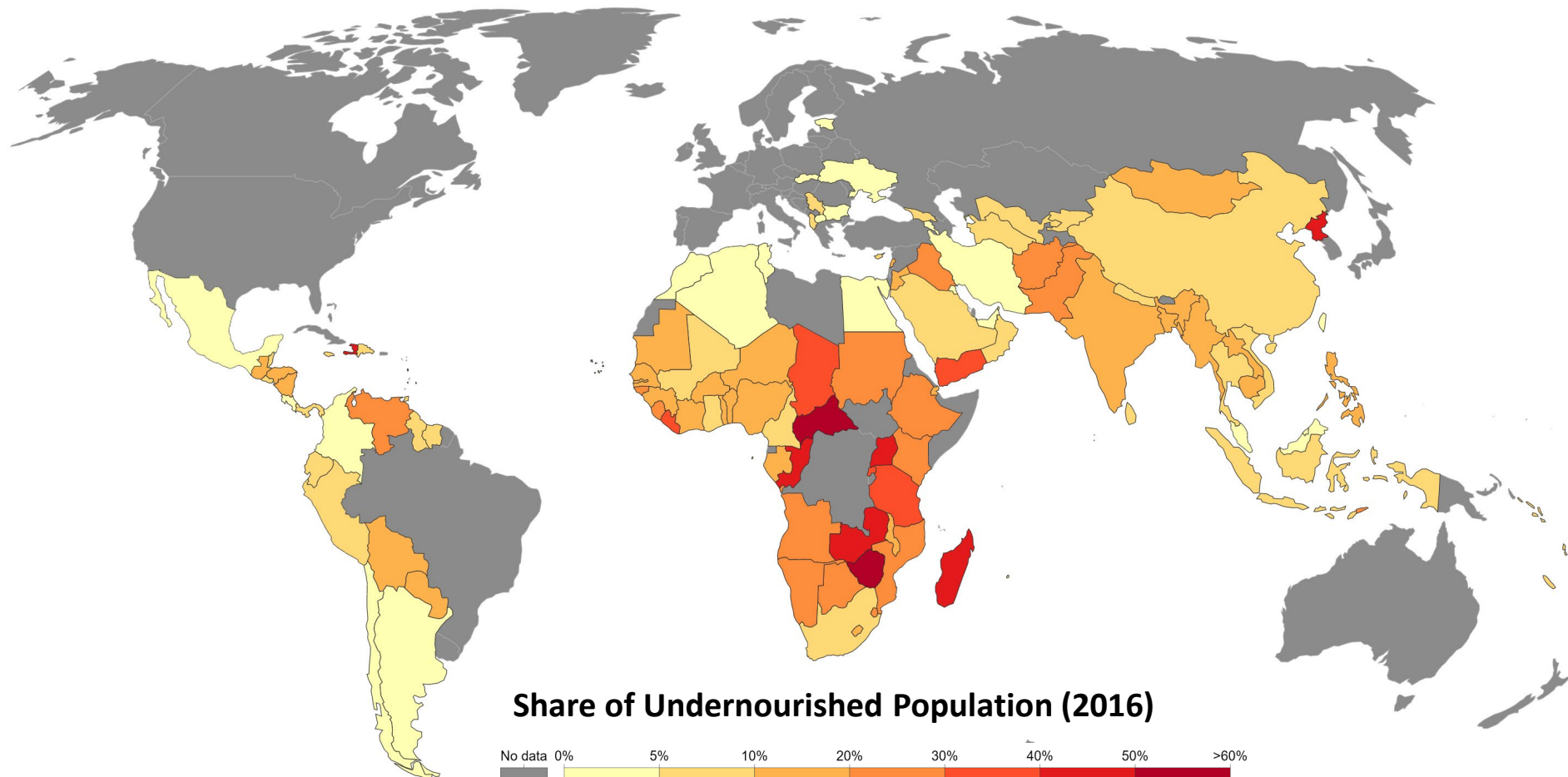
# Food and Nutrition

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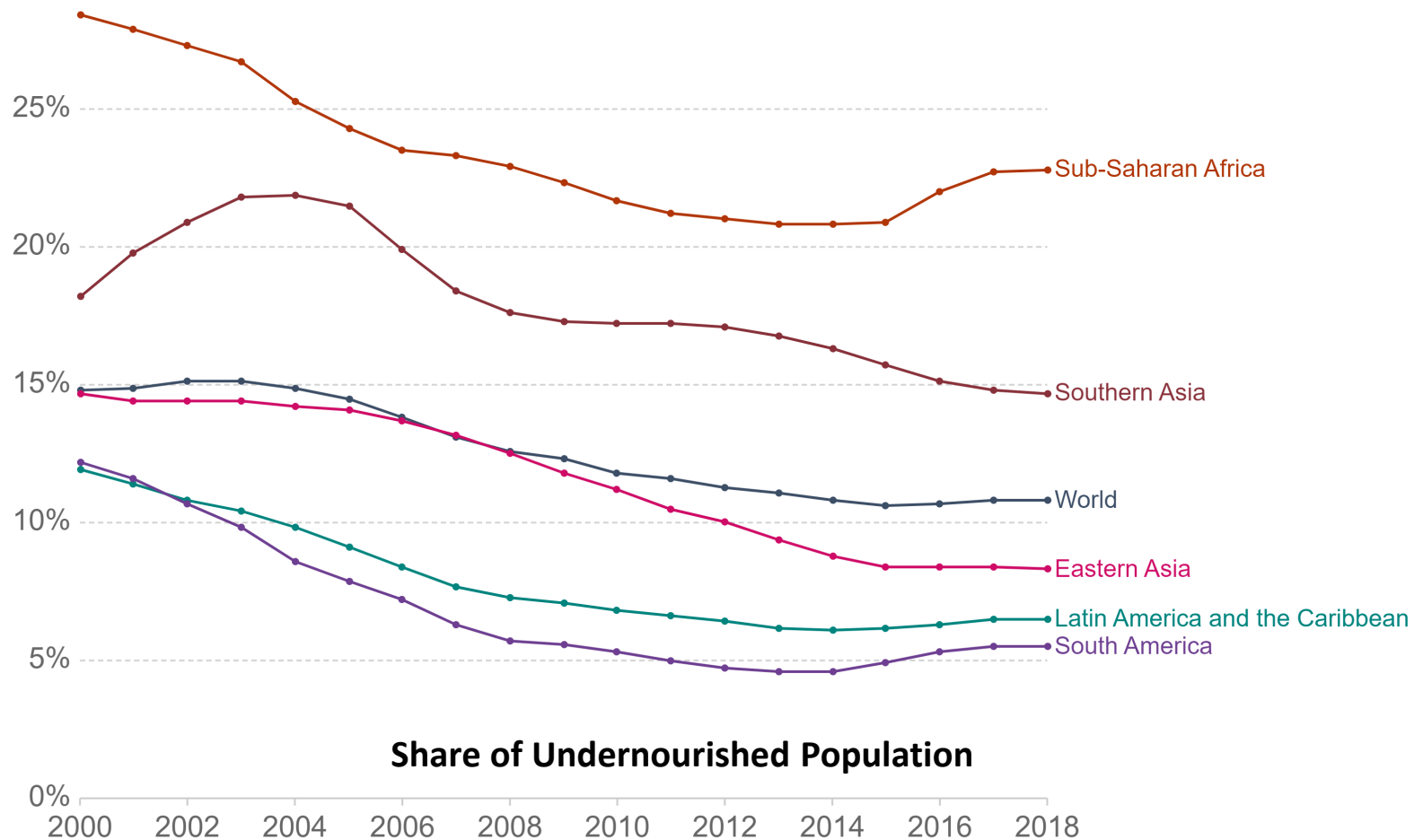


# Food and Nutrition

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# Food and Nutrition





# Food and Nutrition

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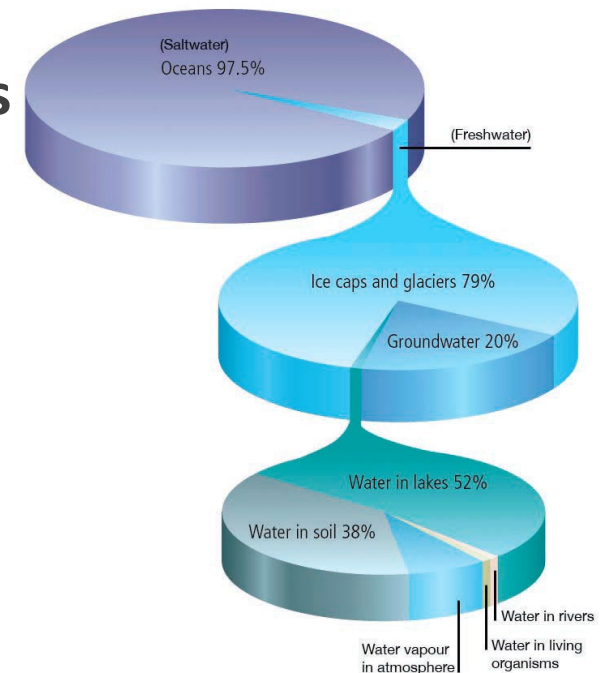
- **Undernourishment is a situation when a person for a long-term (chronically) eats food with an energy value lower than 8,800 kJ (2,100 kCal) per day.**
- **About 821 million people currently suffer from hunger and undernourishment.**
  - Haiti – 2,285 kJ (546 kCal) below
  - Zambia – 1,695 kJ (405 kCal) below
  - North Korea – 1,435 kJ (343 kCal) below
- **Every year, about 12 million children under the age of 5 die of hunger or undernourishment.**

# Water Resources, Sanitation

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On Earth, there are a total of  $1.46 \times 10^{21}$  liters of water

- 97.5 % is ocean salt water (71 % of the surface)
- 2.5 % fresh water
  - 1.80 % frozen in ice caps and glaciers
  - 0.61 % groundwater (subsurface)
  - 0.0825 % surface fresh water



# Water Resources, Sanitation

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71%  
of Earth's surface  
is covered in water



The droplet is  
1,385 km  
in diameter

2.5%  
of this water is suitable  
for human consumption



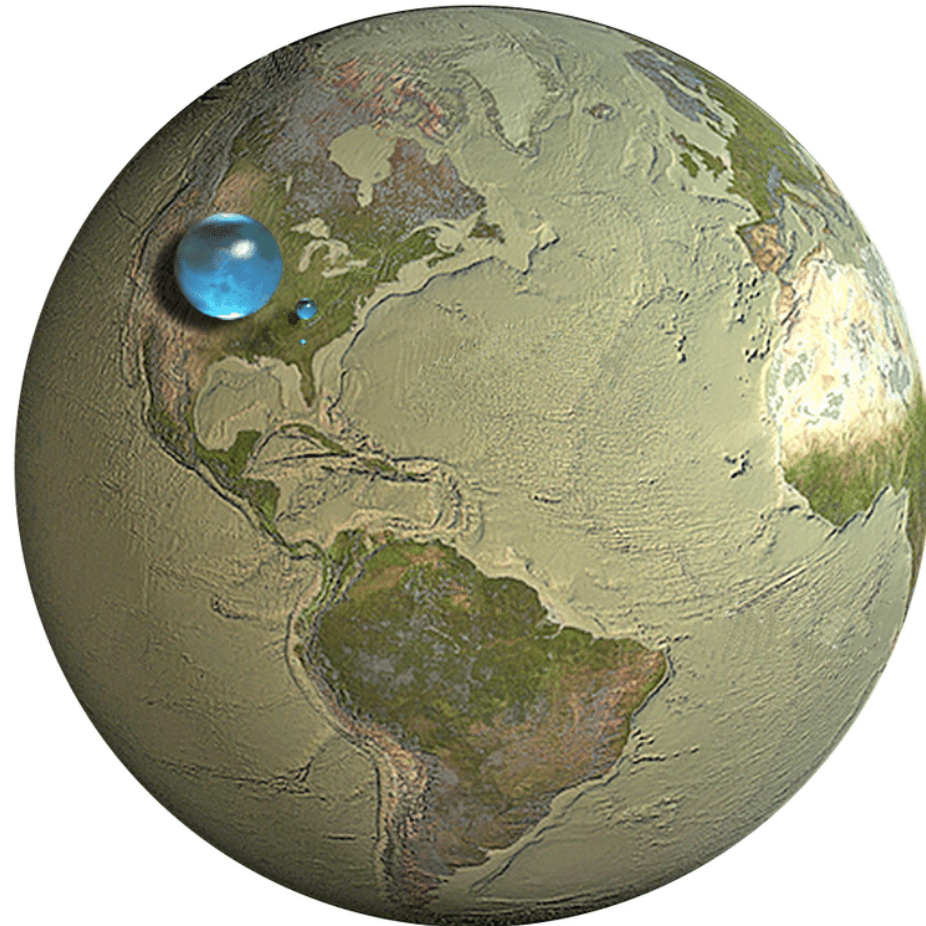
The droplet is  
272.8 km  
in diameter

<1%  
of this fresh water  
is accessible to us



'Our' droplet is just  
56 km  
in diameter\*

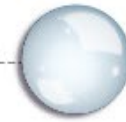
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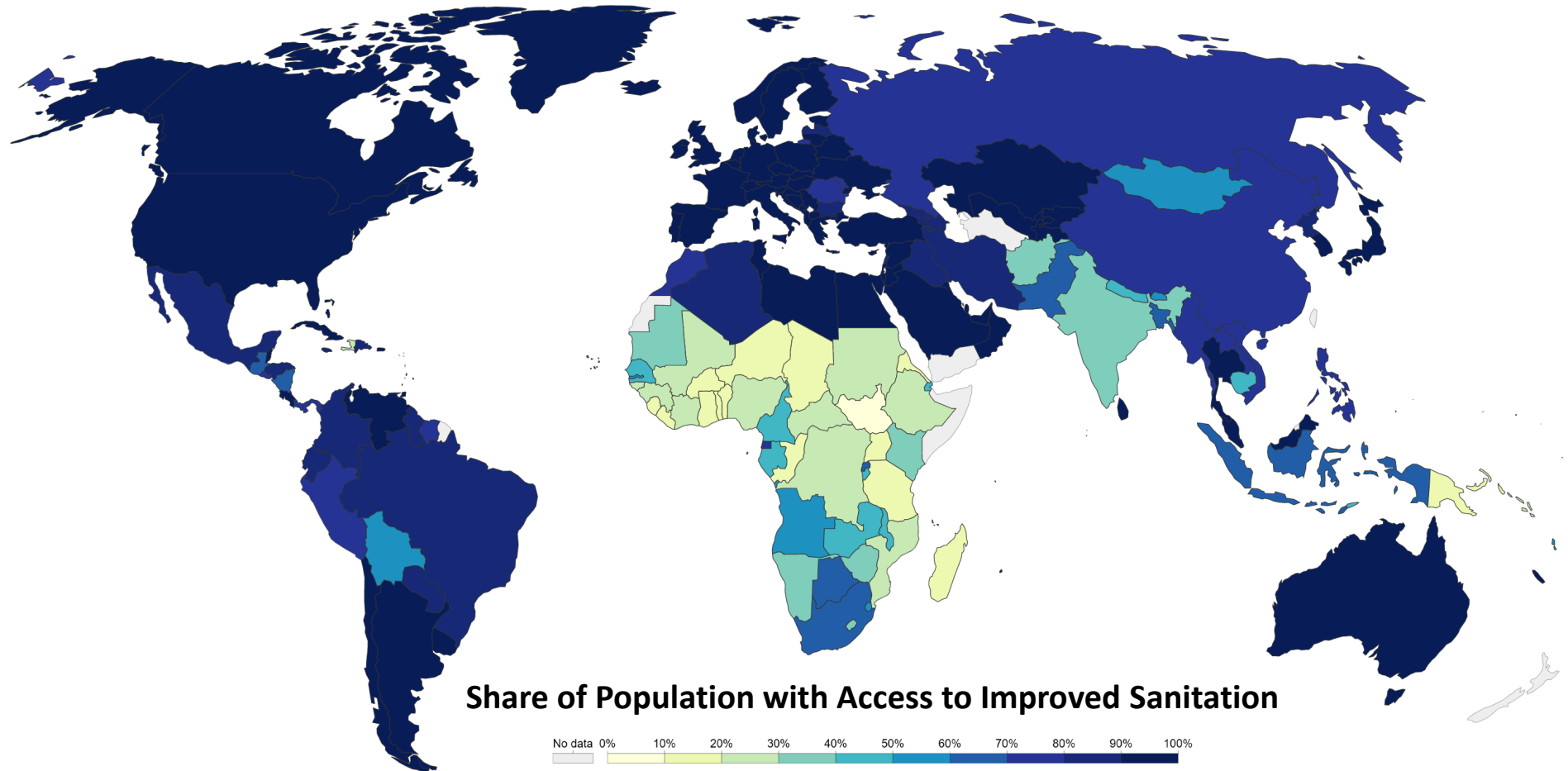
# Water Resources, Sanitation

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- 666 million people do not have access to an **improved water** source, that is 9 % of global population (in 1990, it was 1.26 bil. people, which respresented 24 % of global population).
- 2.1 billion people do not have access to **drinking water** (29 % of population).
- 2.39 billion people do not have access to at least **basic sanitation** (33 % of global population).
- 20,000 people die every day from water shortages
- 2,000 people die every or from ingesting spoiled water.

# Water Resources, Sanitation

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# Water Resources, Sanitation

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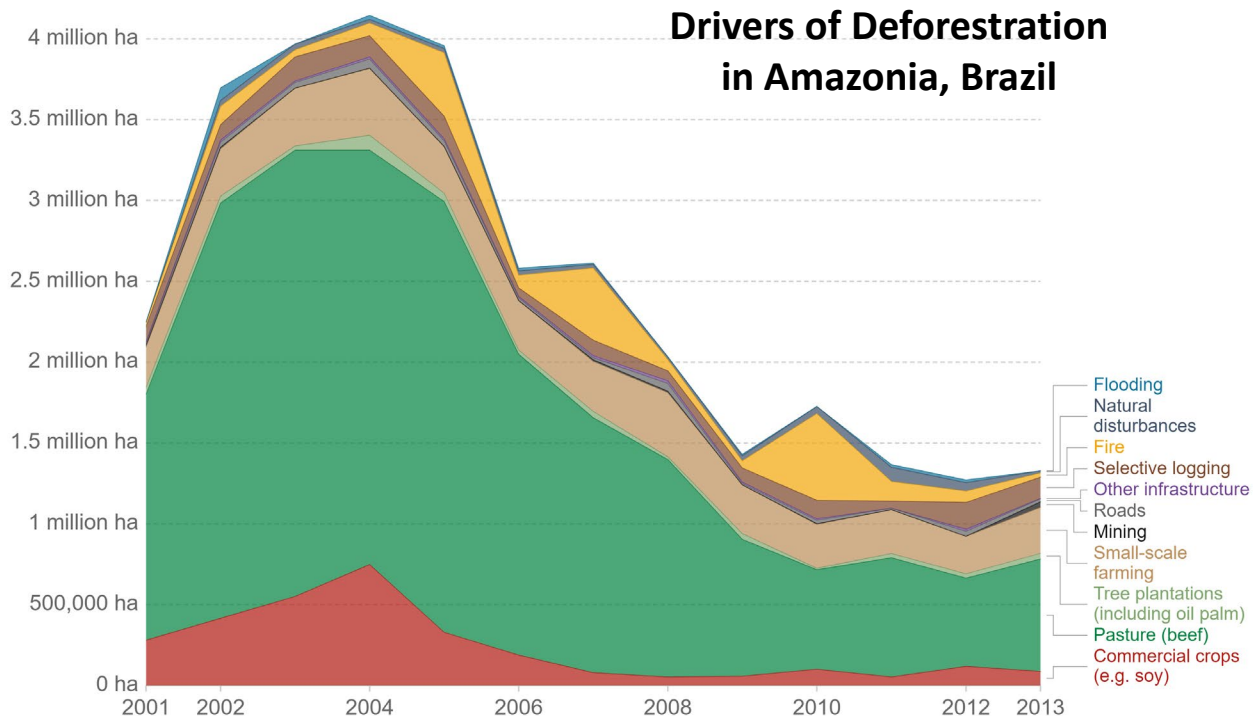
- Until today, in developing countries, 98 % of wastewater runs directly (untreated) to the sea/ocean.
- About 60 tons of plastic waste have been dumped into the ocean each day.
- The global seas and oceans host 60 % of the global biodiversity.





# Deforestation

= the long-term or permanent loss of forest cover and transformation into another land use.

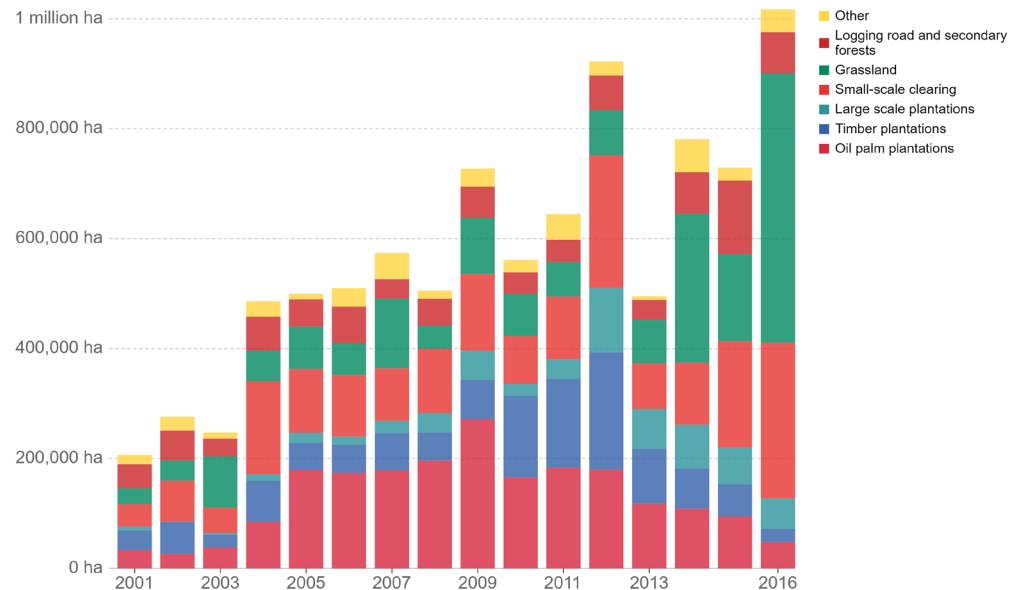


# Deforestation

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= the long-term or permanent loss of forest cover and transformation into another land use.

**Drivers of Deforestation  
in Indonesia**



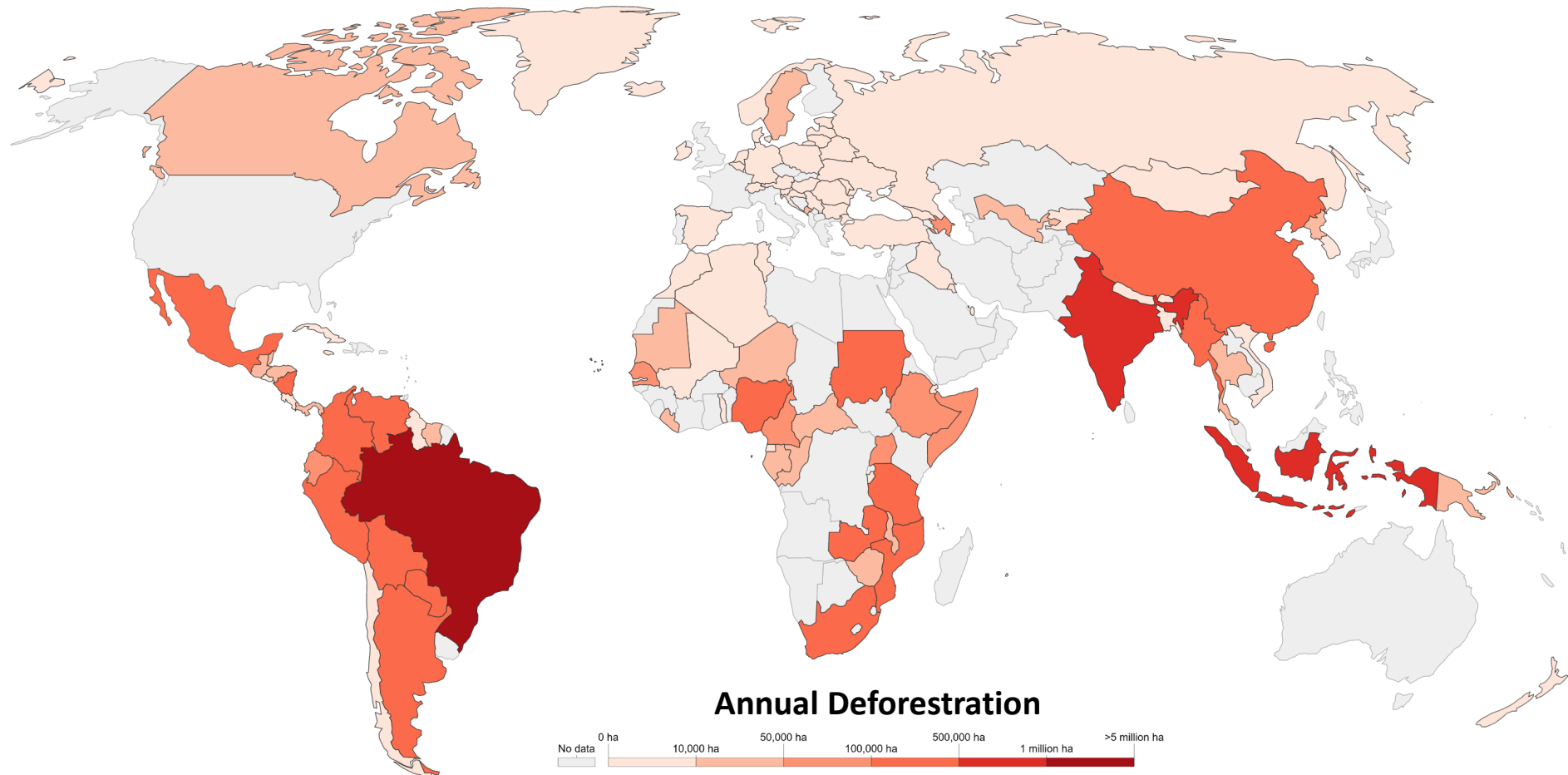
# Deforestation

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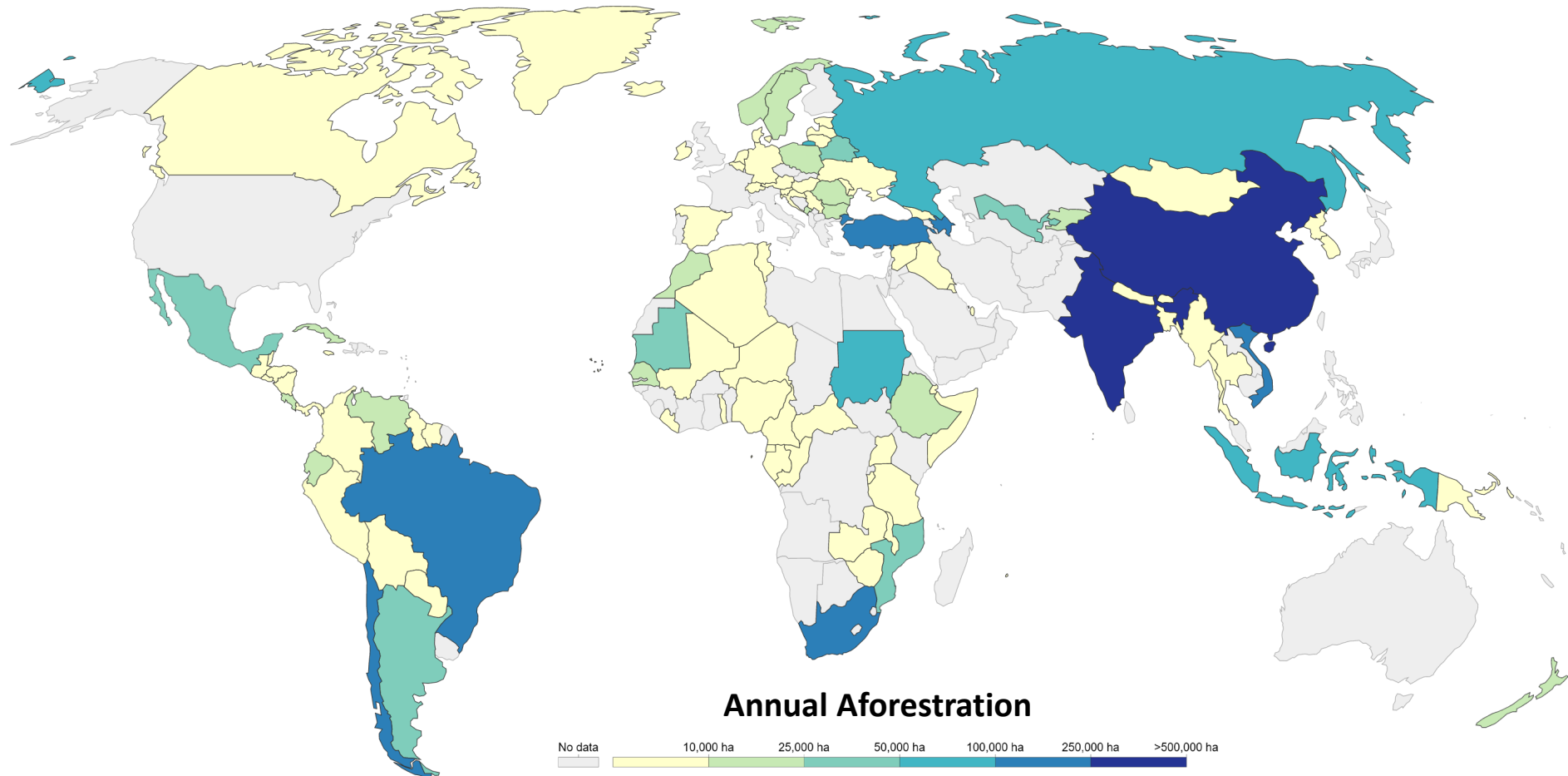
# Deforestation

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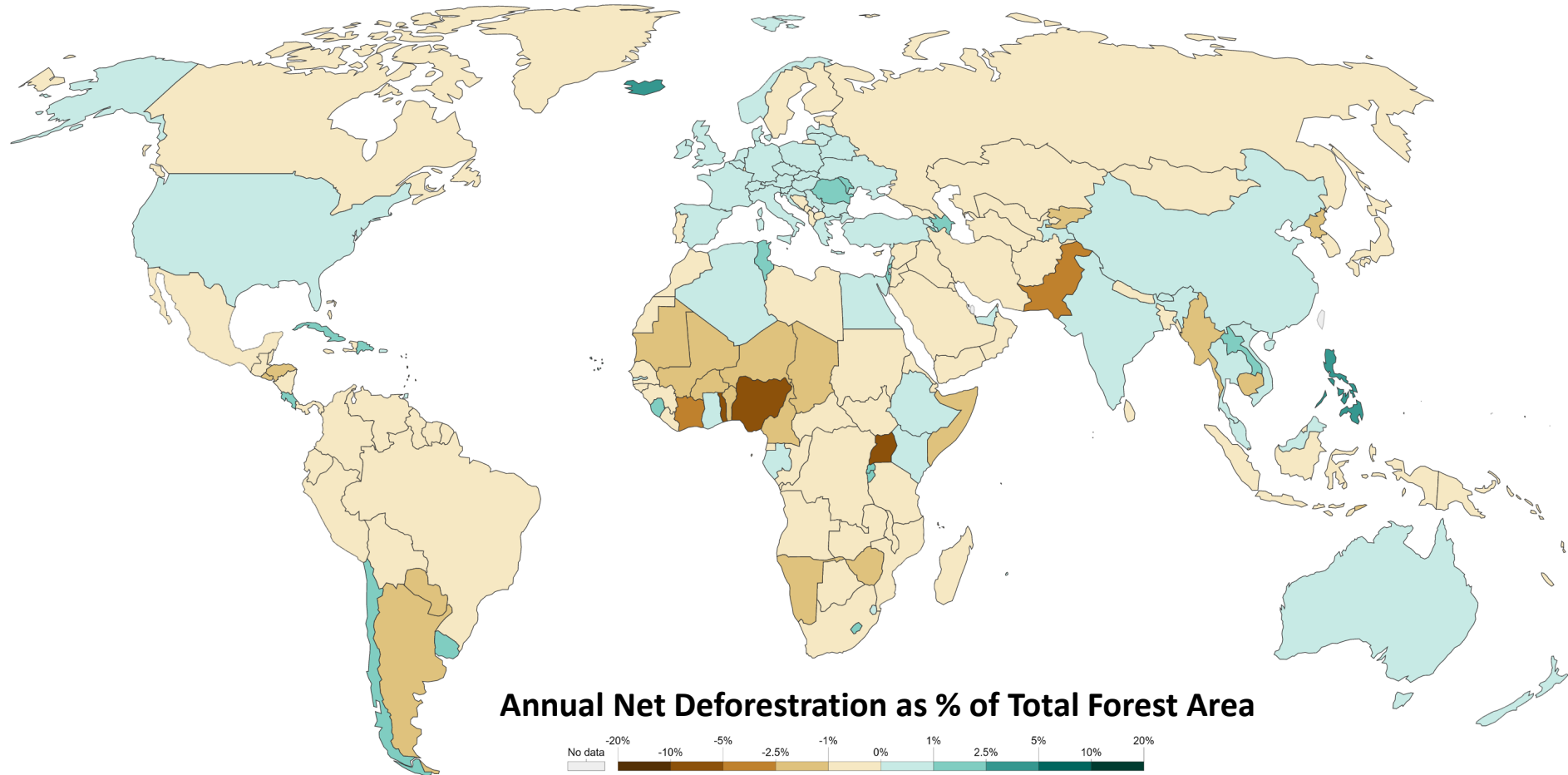
# Deforestation

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# Deforestation

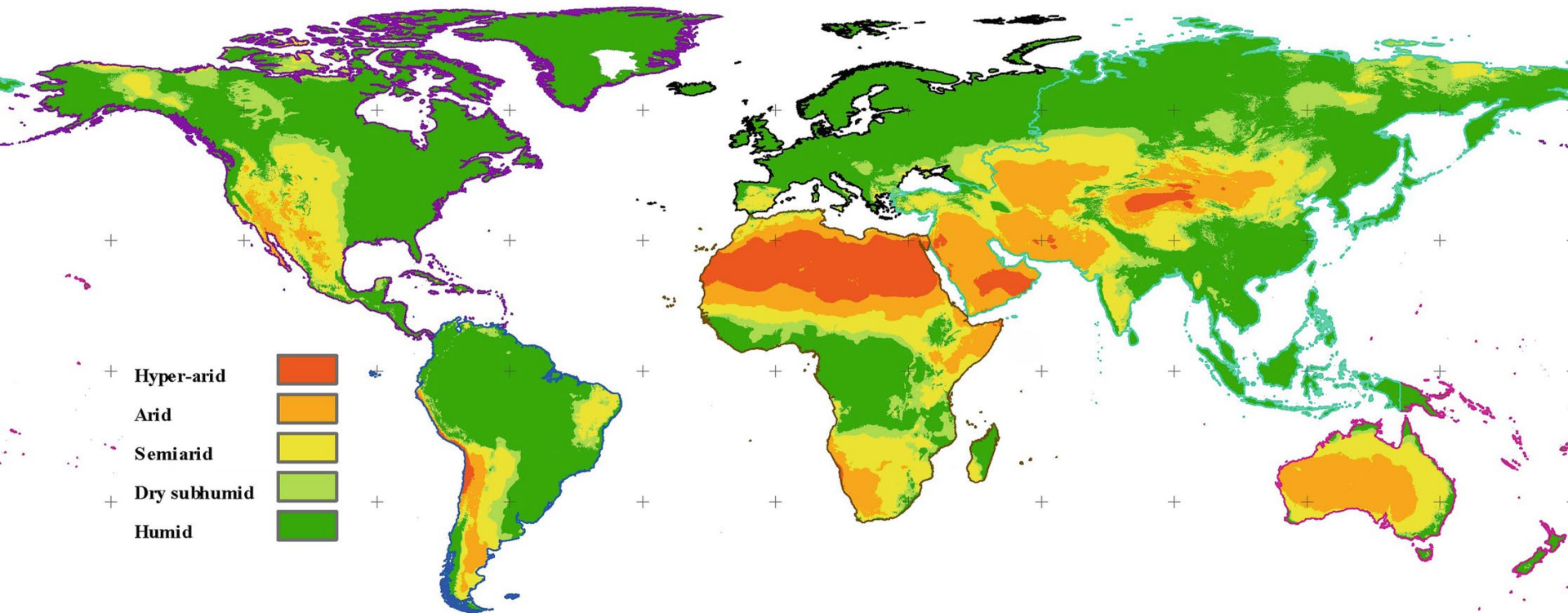
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# Desertification

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= land degradation in arid, semiarid, and subhumid areas, resulting from various factors including climatic variations and human activities

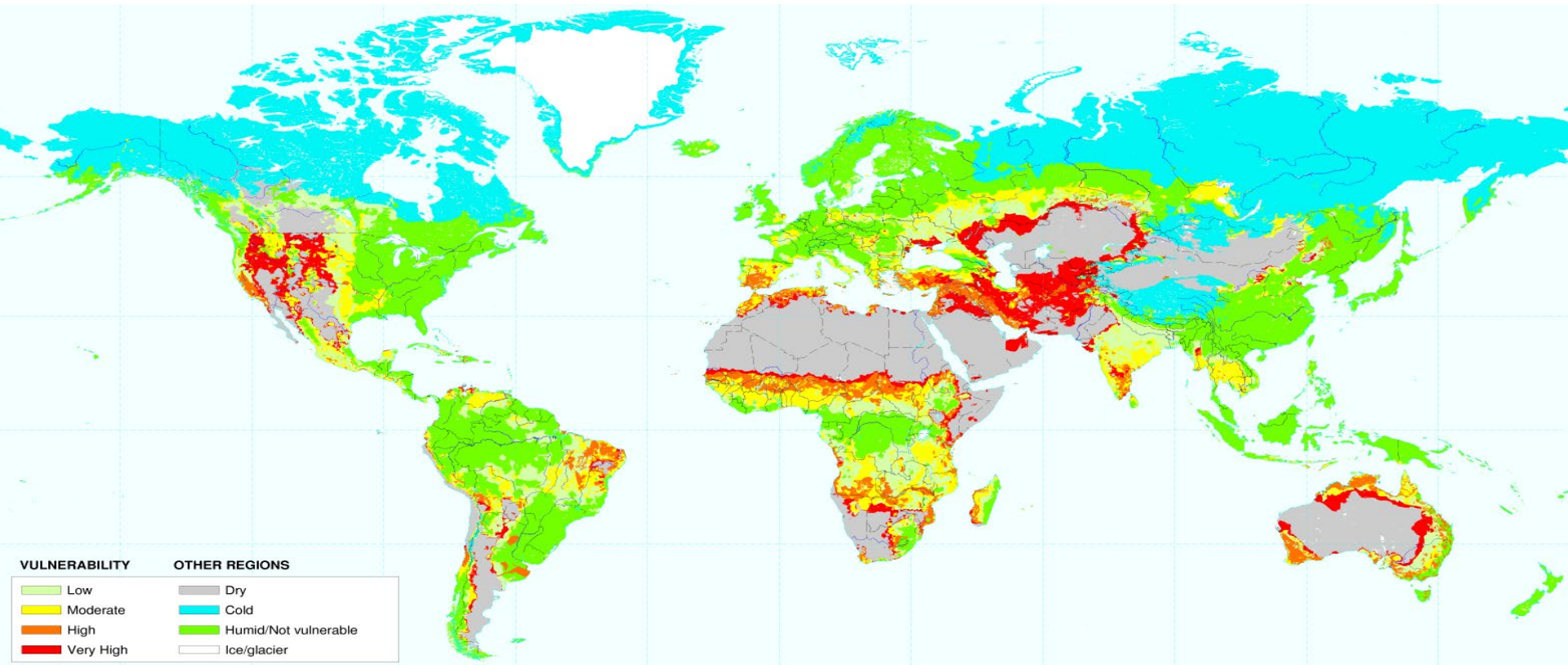




# Desertification

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## Areas Endangered or Vulnerable to Desertification

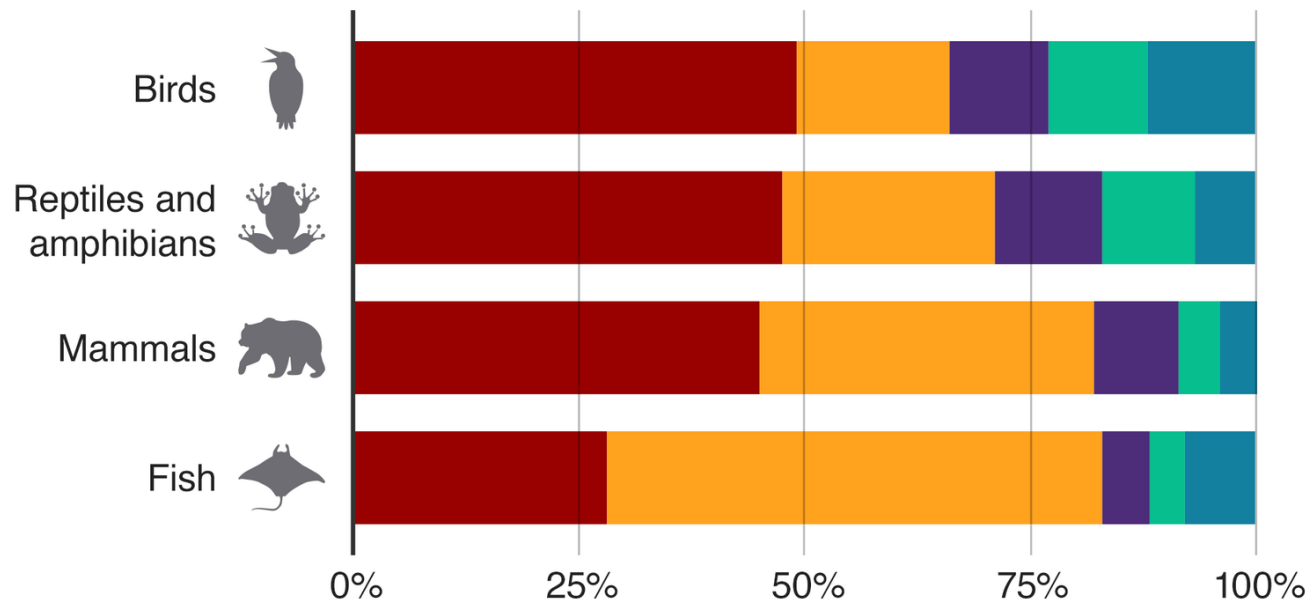
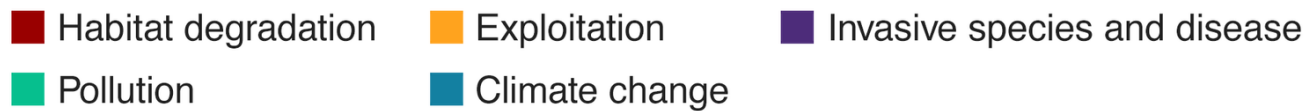




# Loss of Biodiversity

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= species population decline / extinction is caused by:



# Loss of Biodiversity

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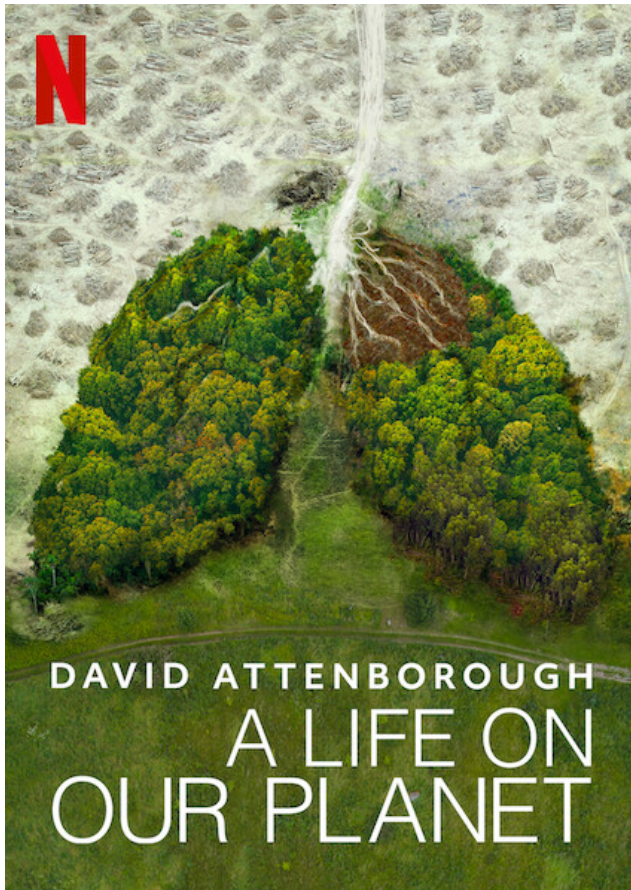
"You know, when we first set up World Wide Fund for Nature, our objective was to save endangered species from extinction. But we have failed completely; we haven't managed to save a single one. If only we had put all that money into condoms, we might have done some good."

→ *Peter Scott*



# Loss of Biodiversity

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**"Nature is our biggest ally and greatest inspiration."**

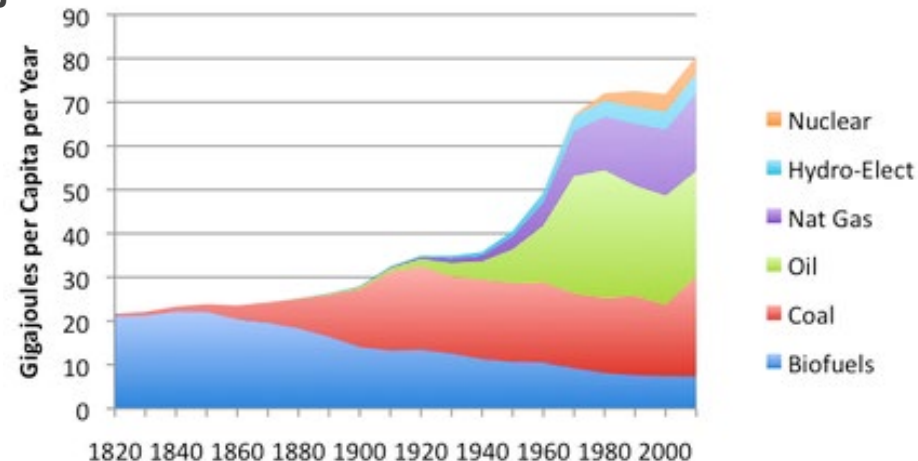
"We now have the opportunity to create the perfect home for ourselves and restore the rich, healthy, and wonderful world that we inherited."



# Energy and Raw Resources

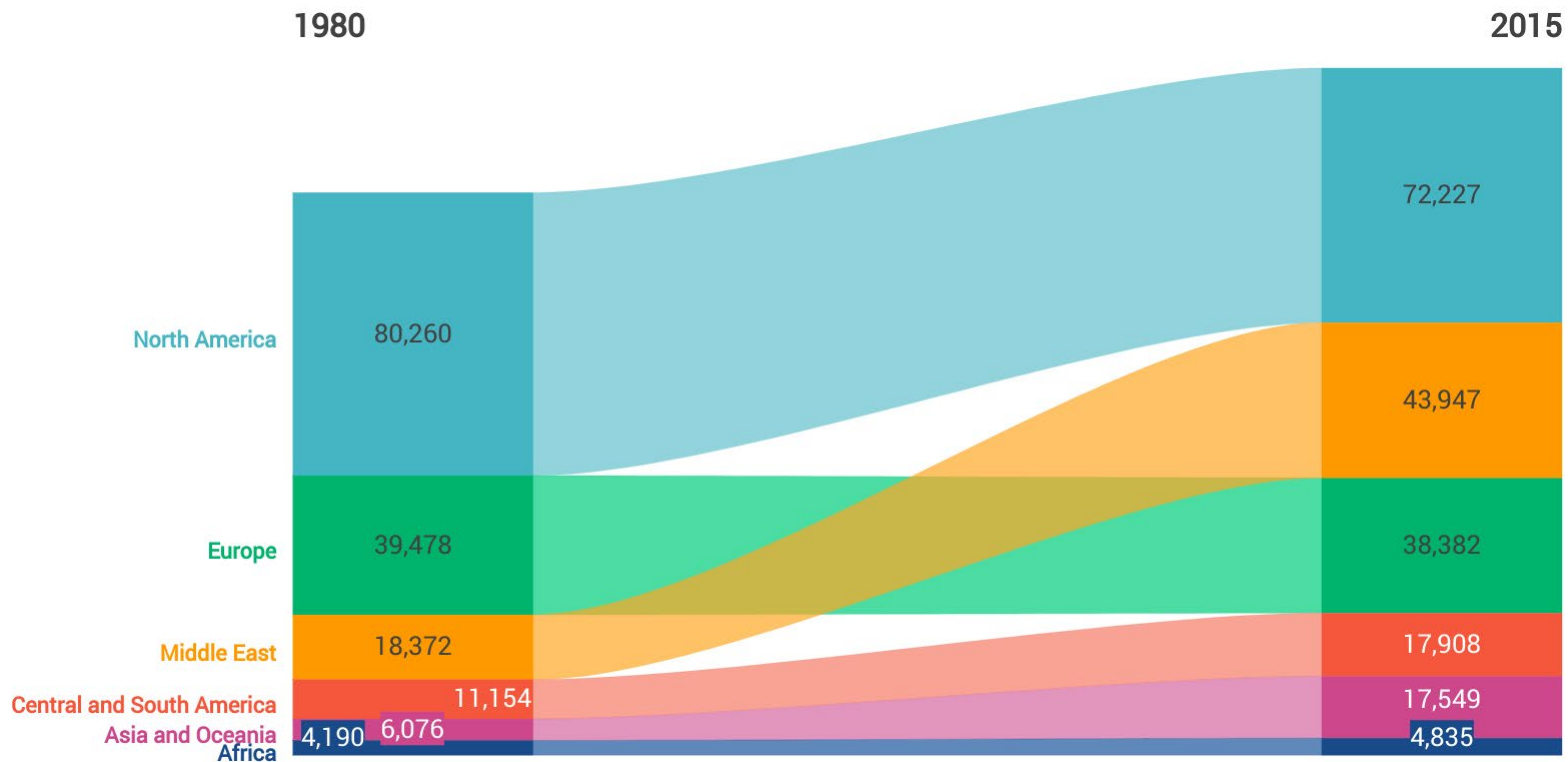
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- **Energy Use per Capita per Day**
  - 1 million years BC consumption 1,600 kJ
  - 100,000 years BC consumption 4,000 kJ
  - 500 years BC consumption 10,000 kJ
  - around 1400 consumption 22,000 kJ
  - around 1900 consumption 60,000 kJ
  - around 2000 consumption 200,000 kJ





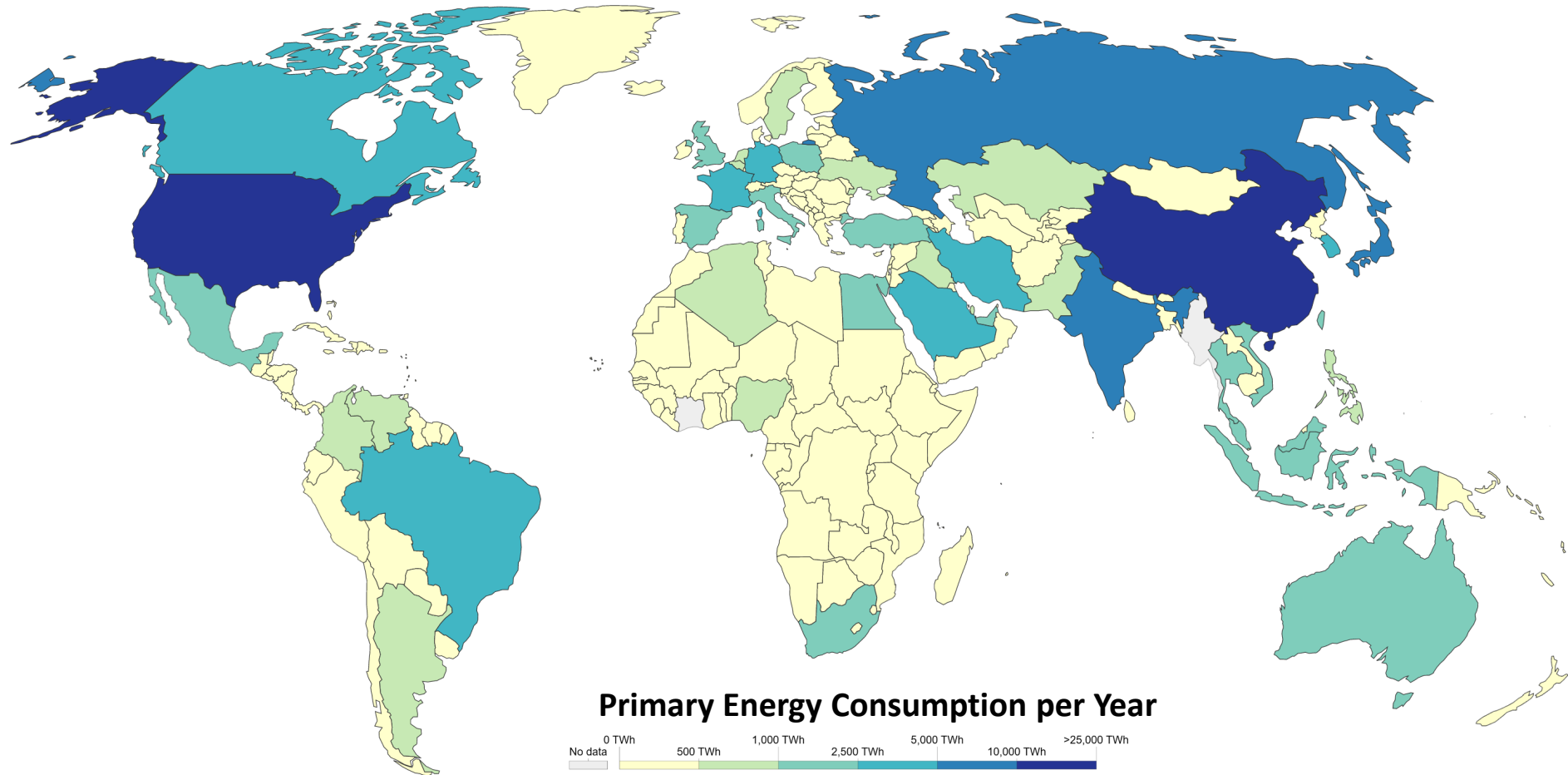
# Energy and Raw Resources



Primary Energy Consumption in kWh per Capita per Year

# Energy and Raw Resources

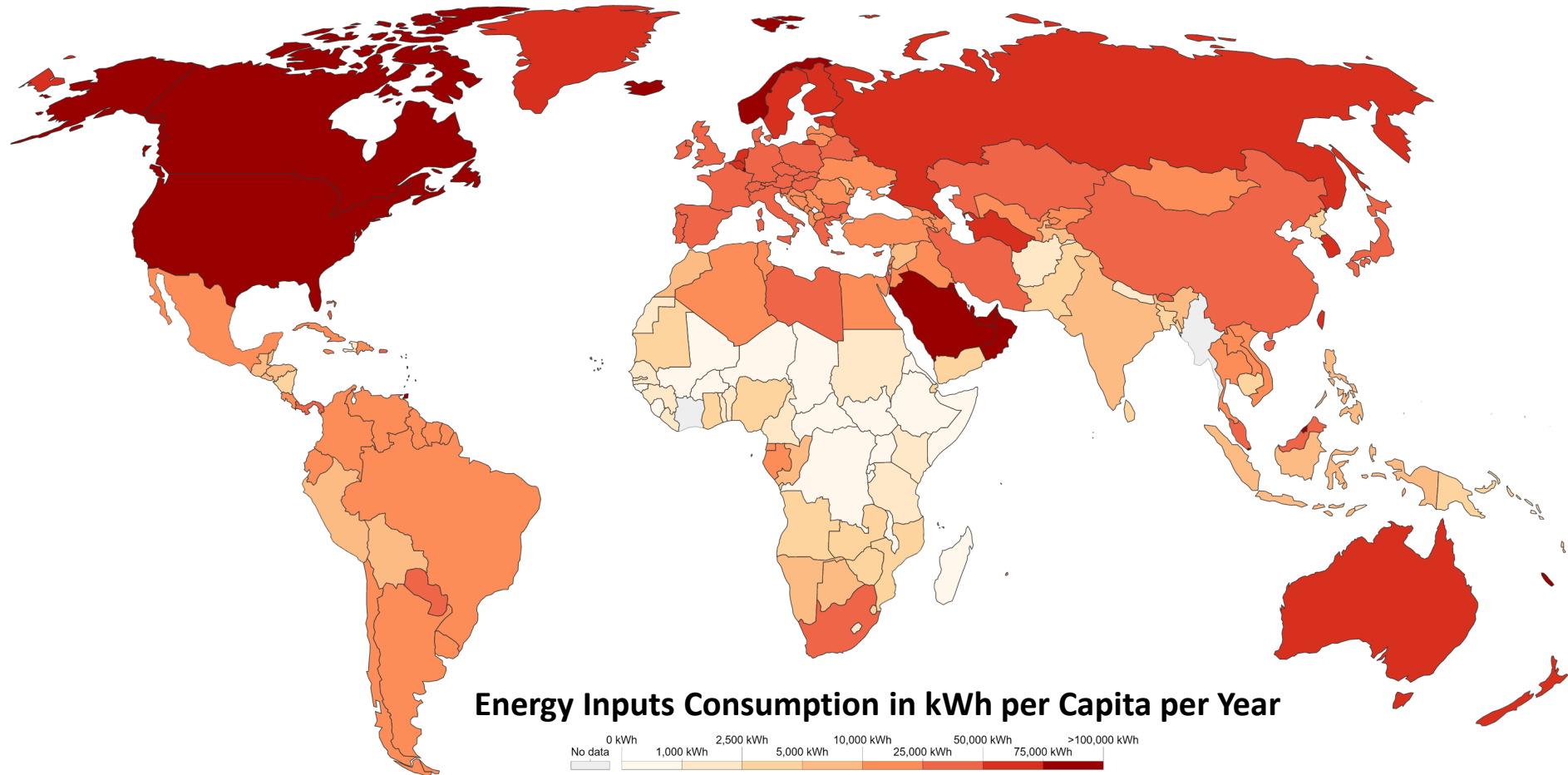
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# Energy and Raw Resources

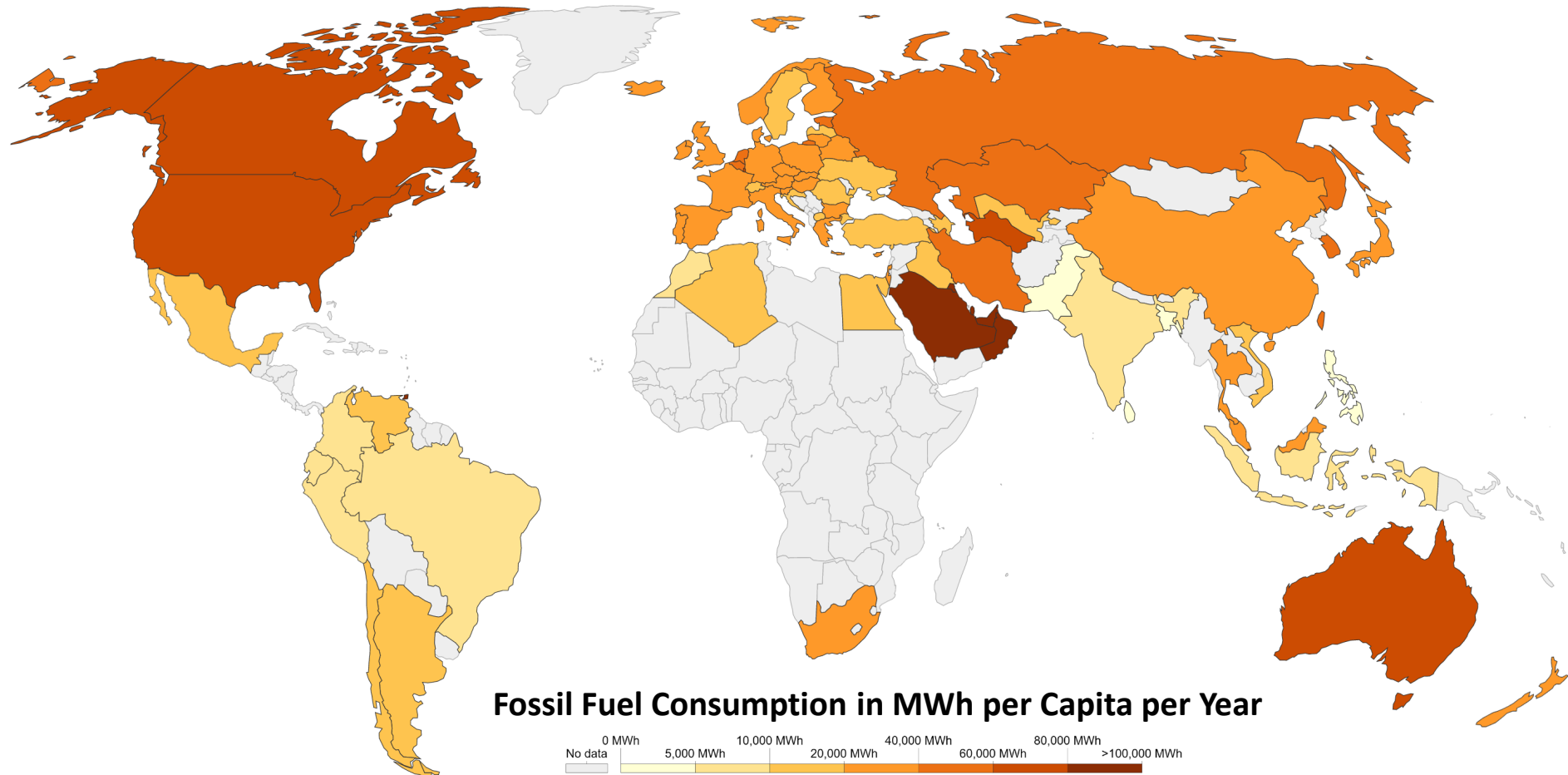
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# Energy and Raw Resources

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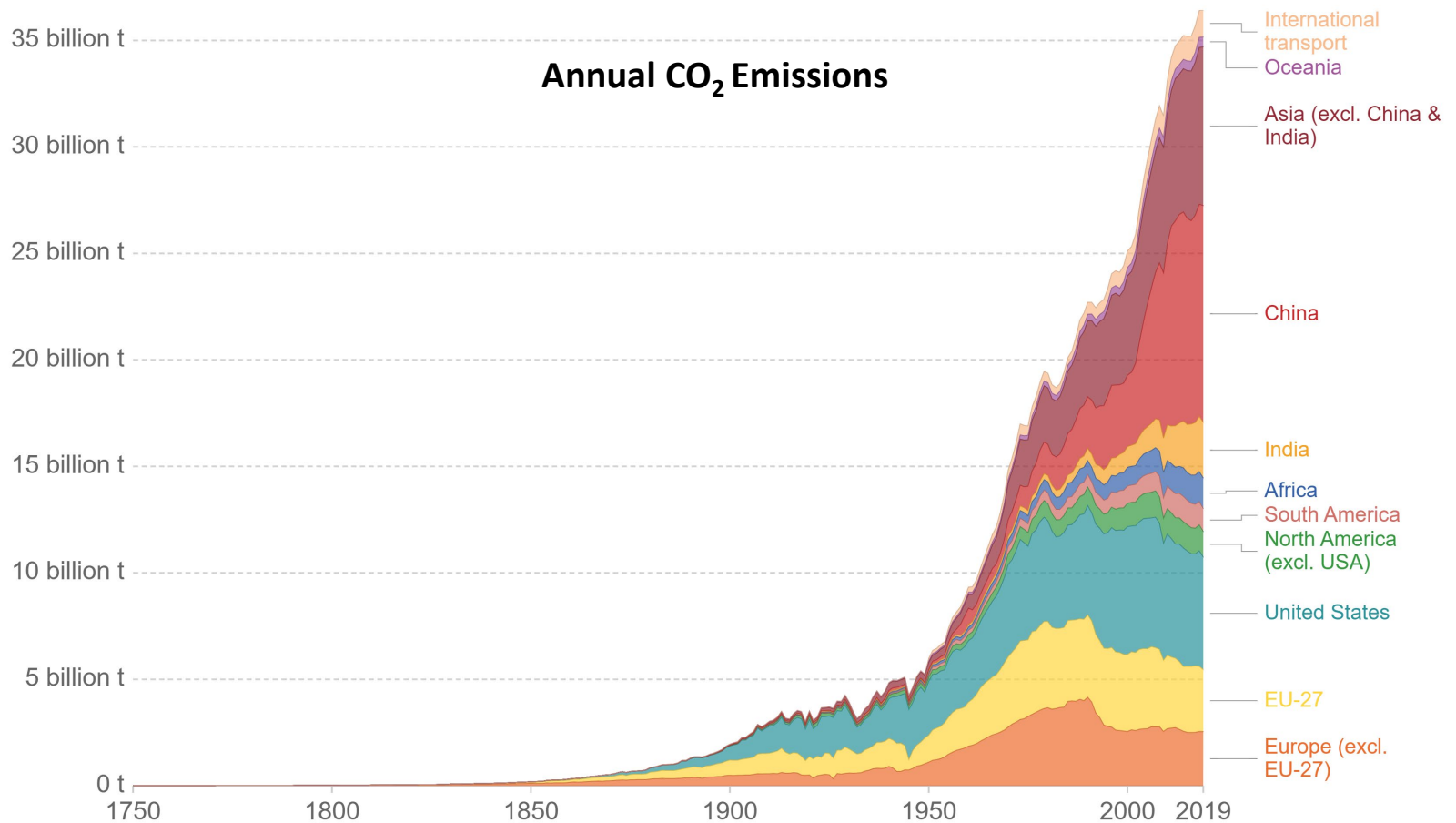


# Energy and Raw Resources

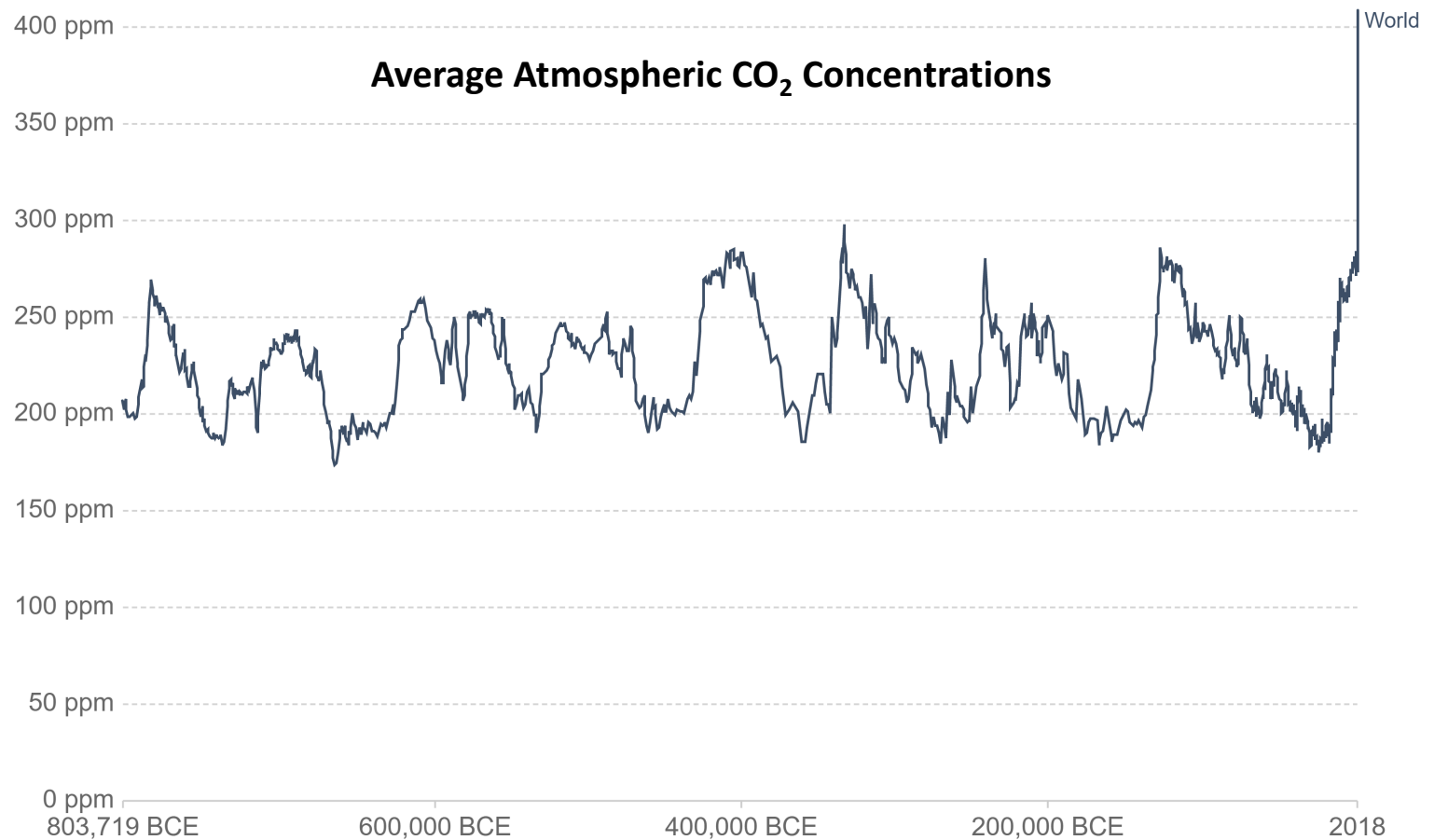
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- **Today:**
  - 4 million liters of diesel every minute
  - every minute 20,000 tons of CO<sub>2</sub>
  - 8,000,000 tonnes of NO<sub>x</sub> and 2,000,000 tonnes of dust each year
- **In 1992, the ozone hole at the south pole reached the size of the North American continent.**
- **15 % of population in developed economies consume 75 % of natural resources.**
  - At this pace of growth, oil reserves last until about 2050.
  - At this pace of growth, natural gas reserves last until about 2070.

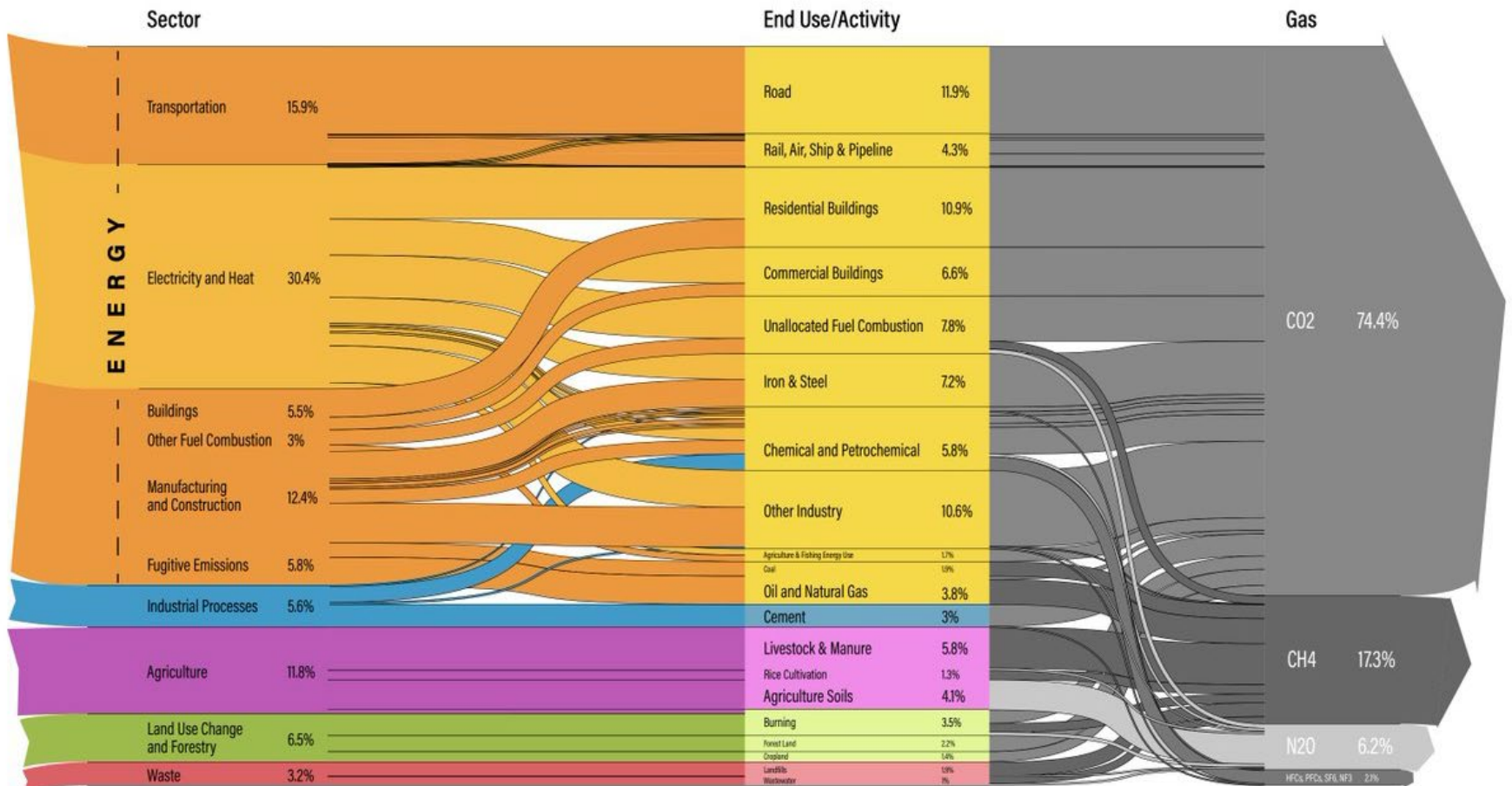
# Global Climate Change



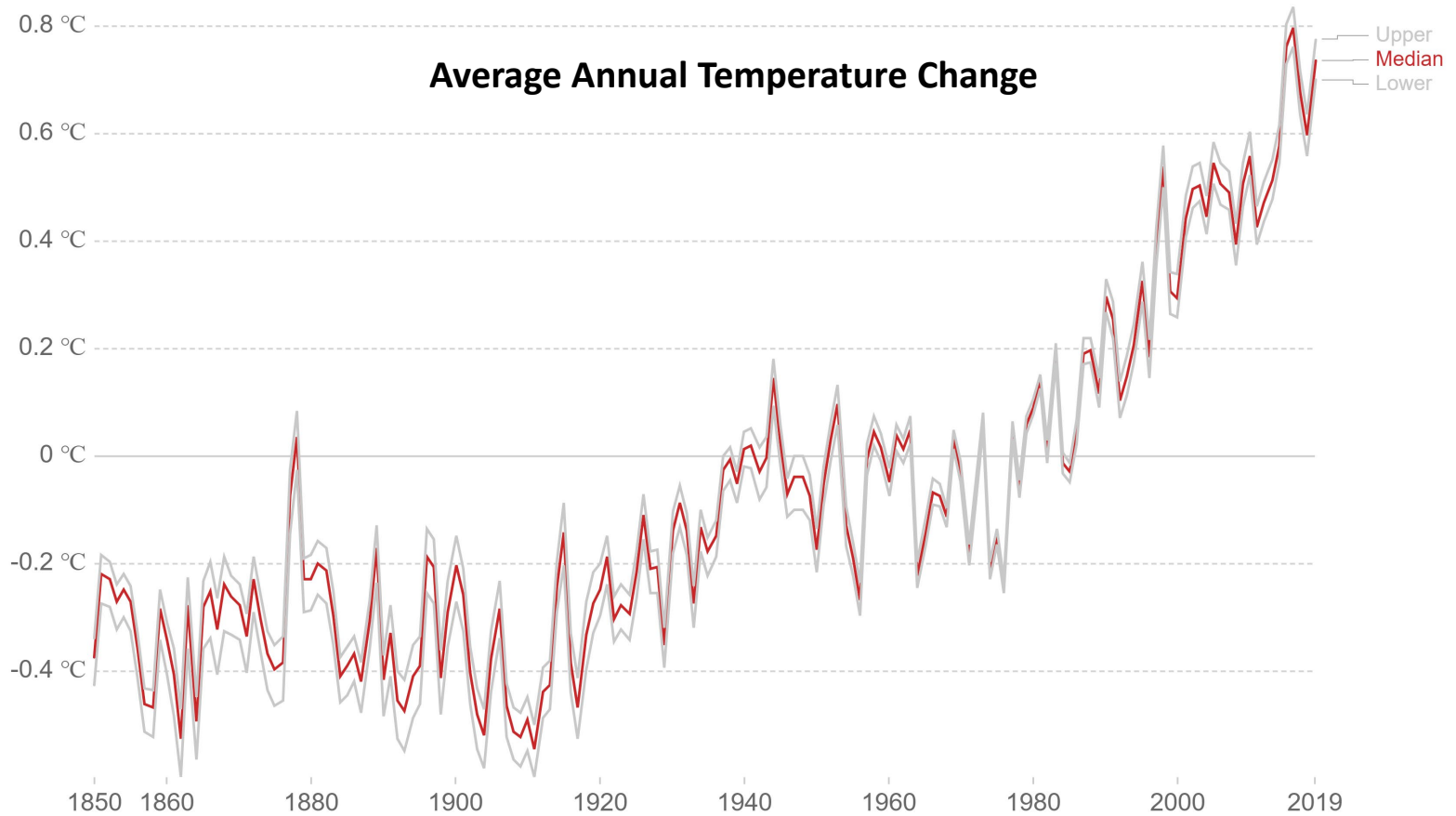
# Global Climate Change



# Global Climate Change

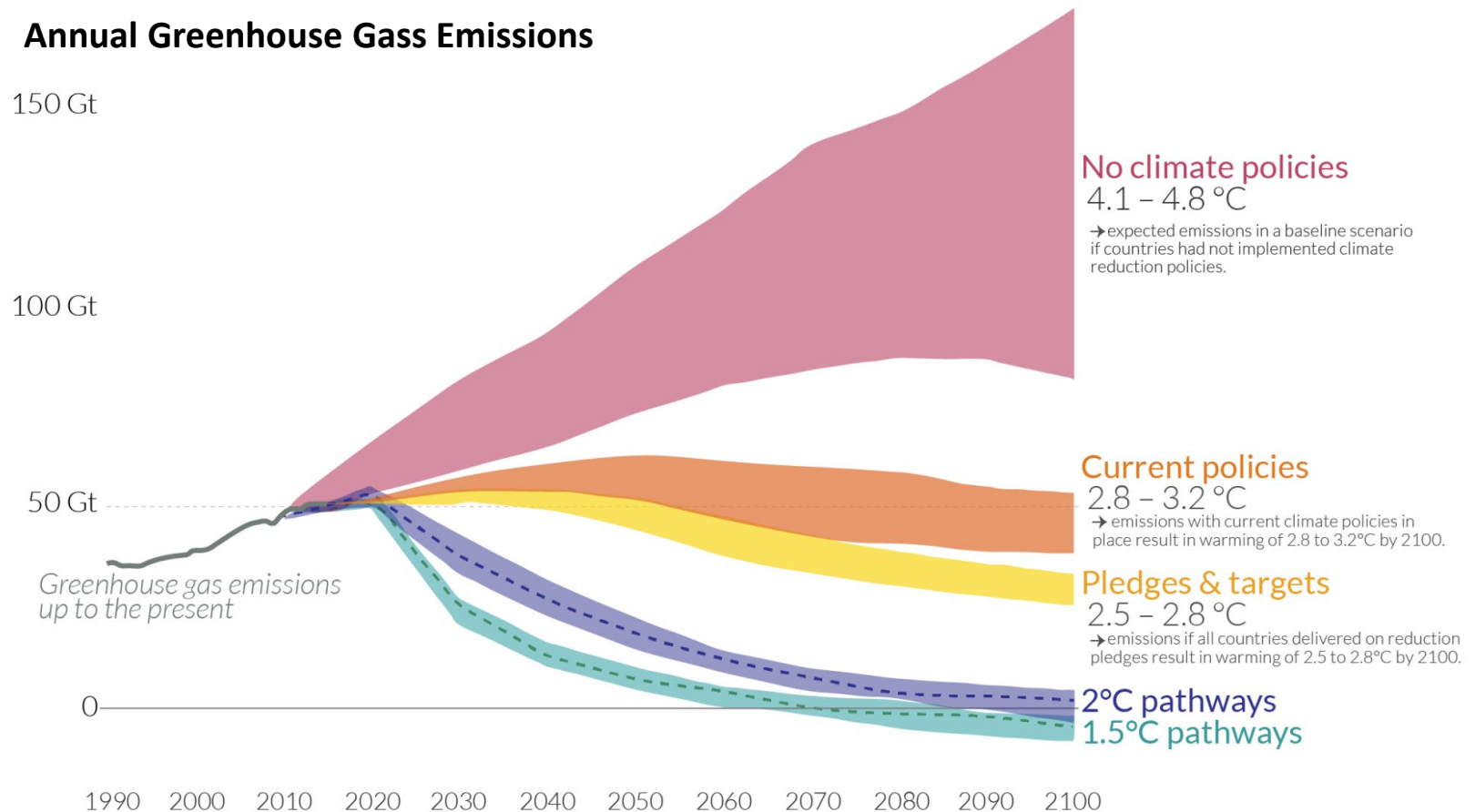


# Global Climate Change



# Global Climate Change

## Annual Greenhouse Gas Emissions



# Global Climate Change

40 billion t

**...to keep the temperature rise below +2°C**

30 billion t

20 billion t

10 billion t

0 t

1850

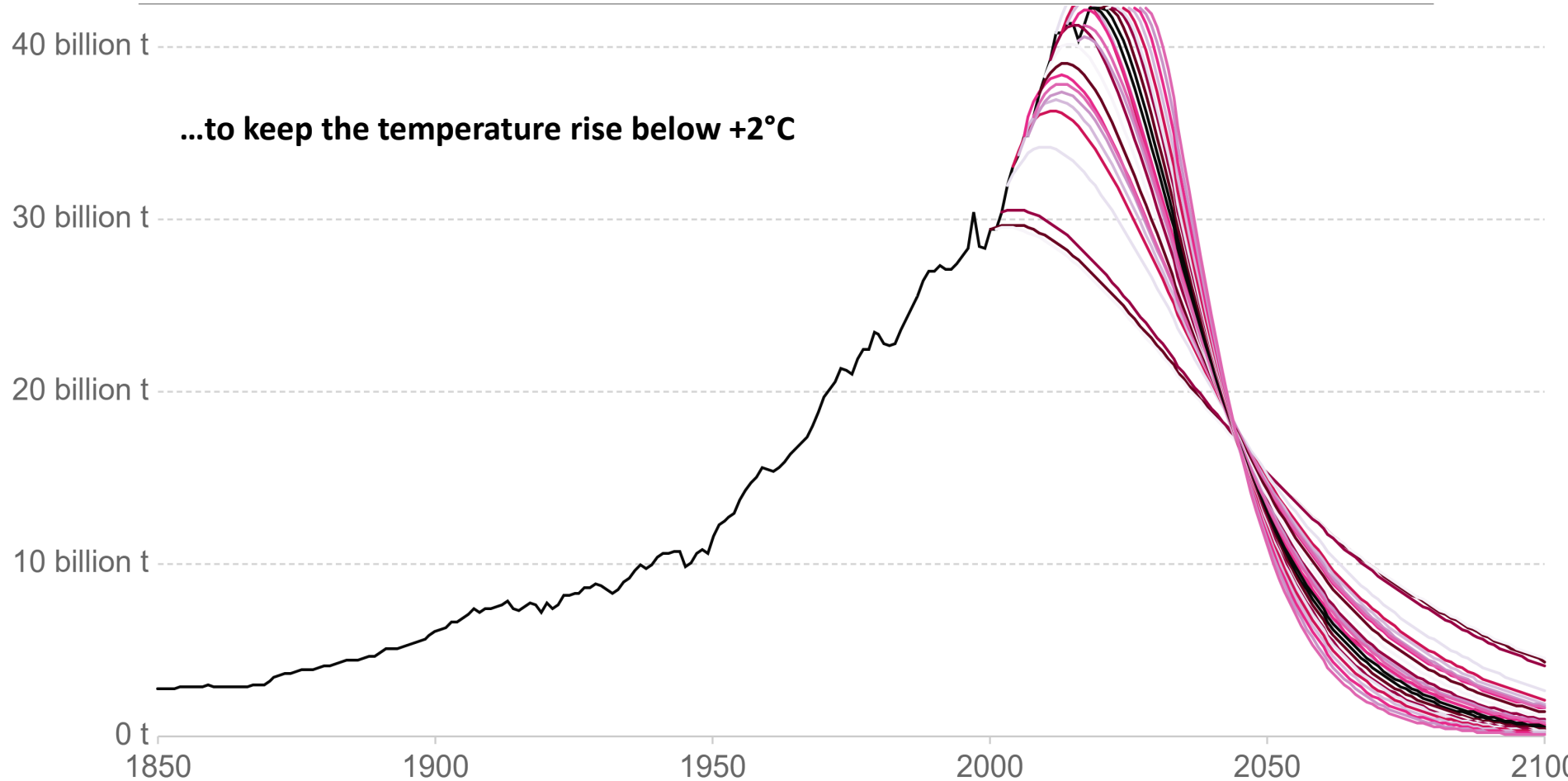
1900

1950

2000

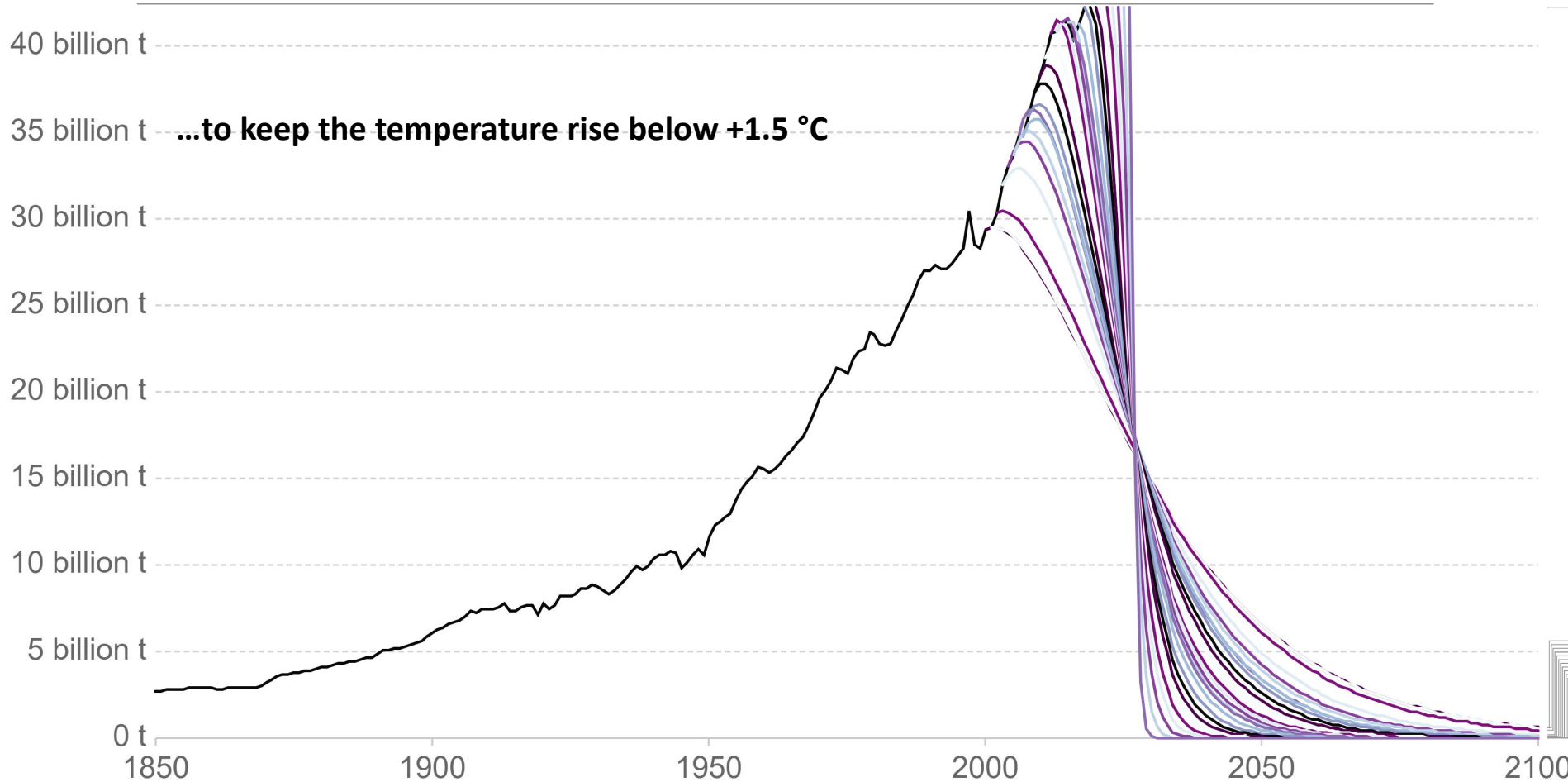
2050

2100



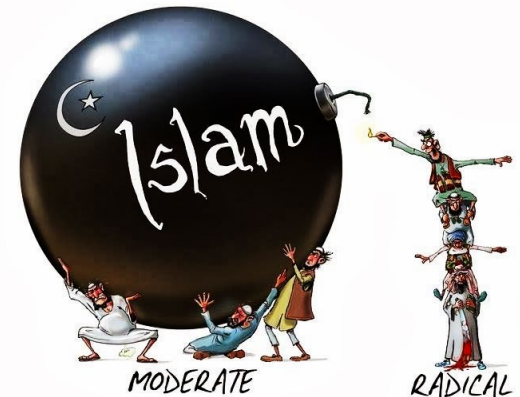


# Global Climate Change



# Society-Society Conflict

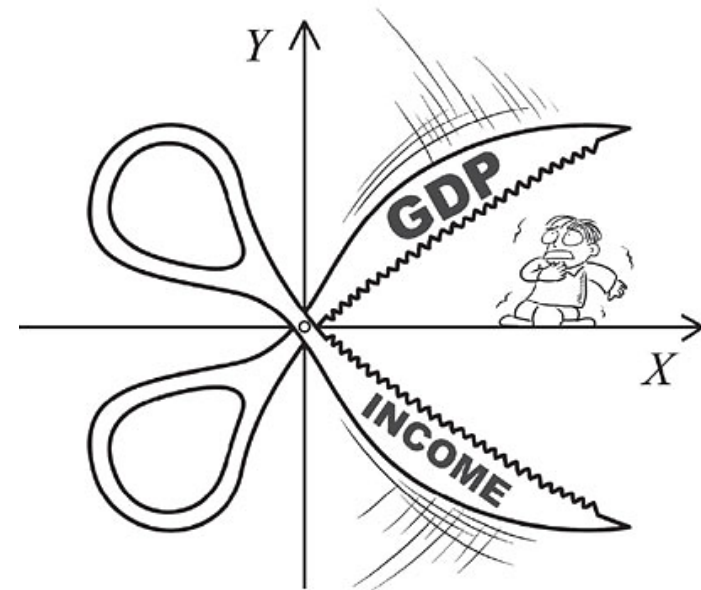
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# Differentiation of the World

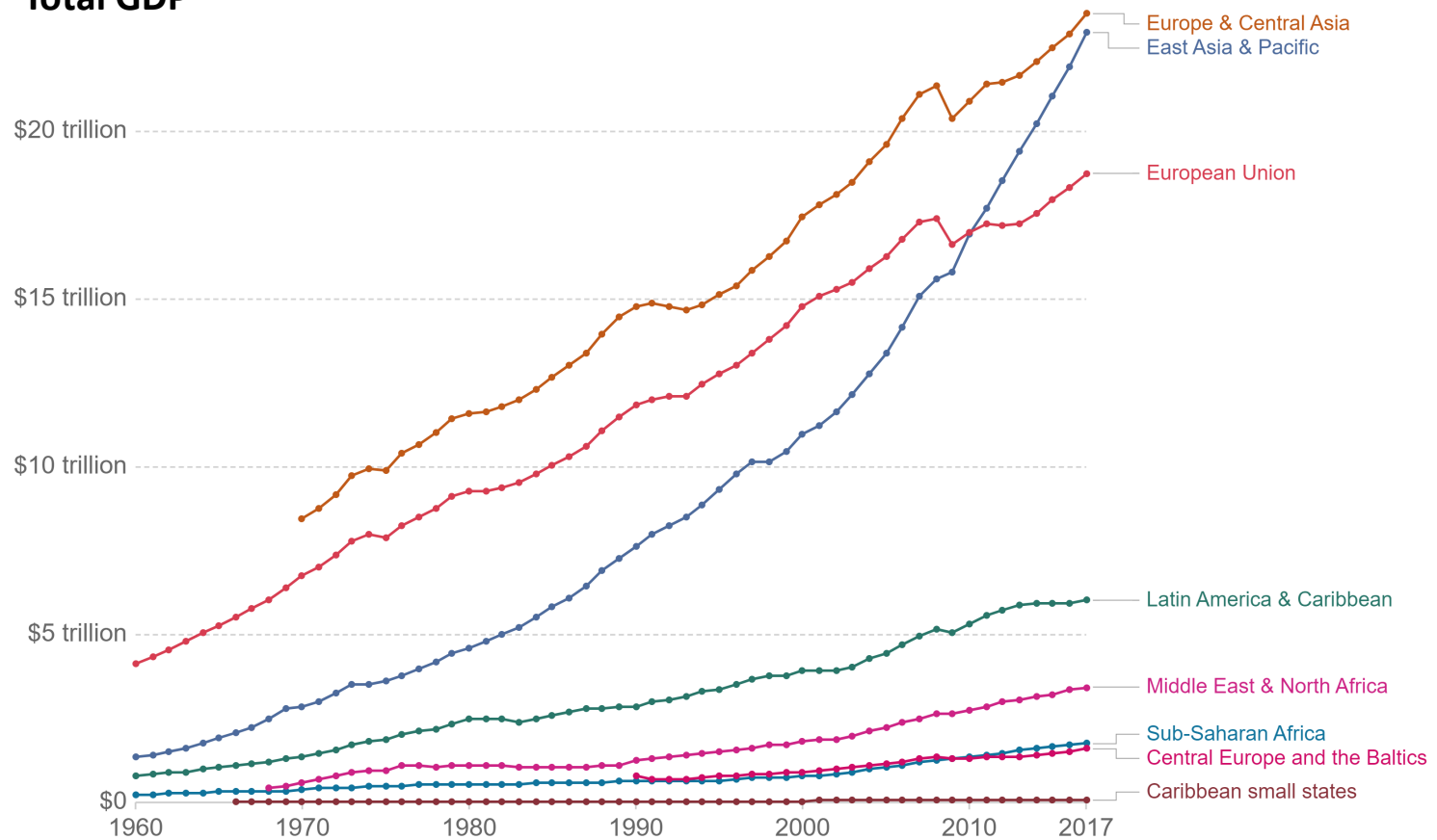
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- Differentiation = increasing differences
- Differentiation
  - Economic
  - Social
  - Political
- Differentiation
  - among groups of countries,
  - among countries within these groups,
  - among people within these countries
- Convergence vs. Differentiation



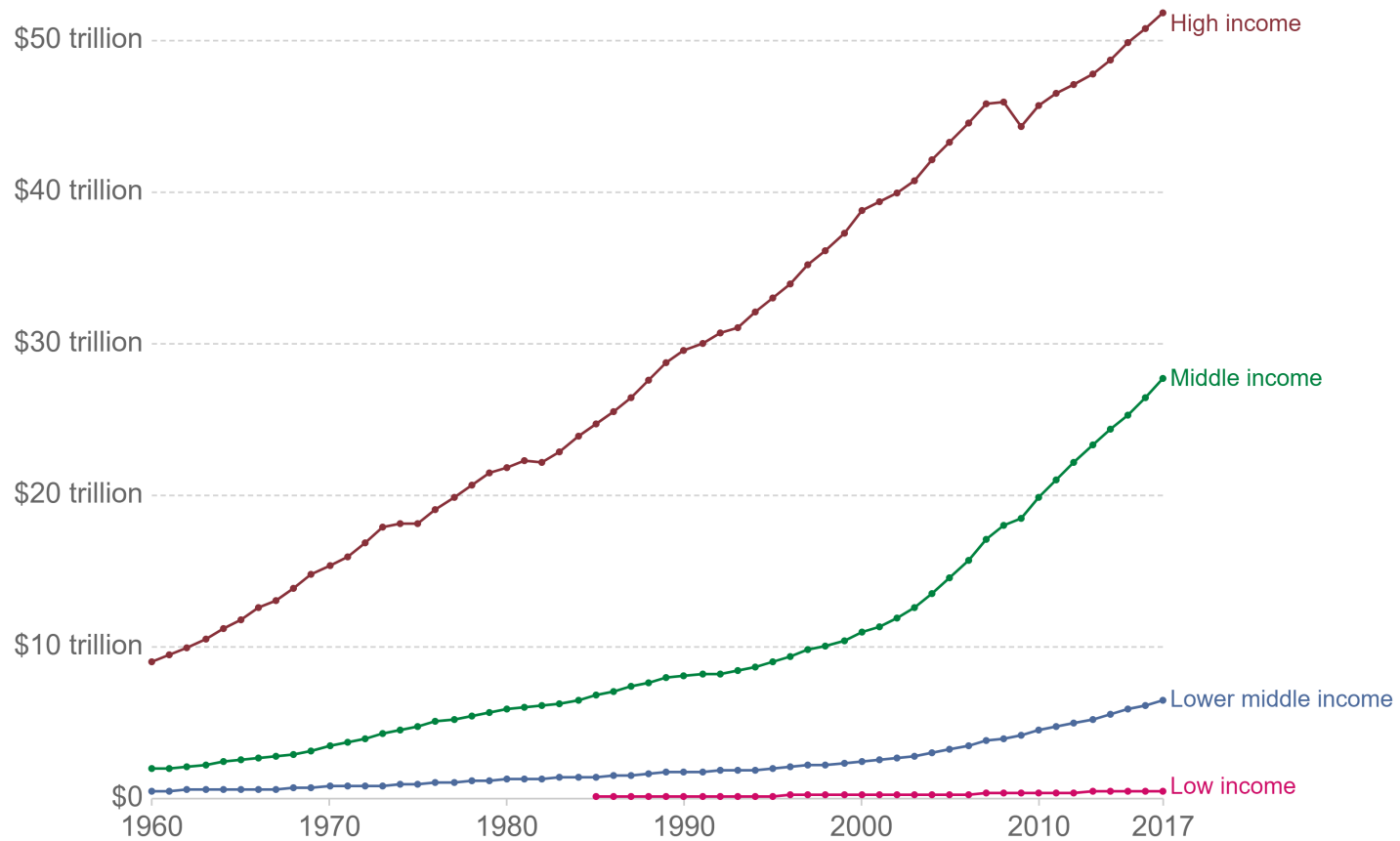
# Economic Differentiation

## Total GDP



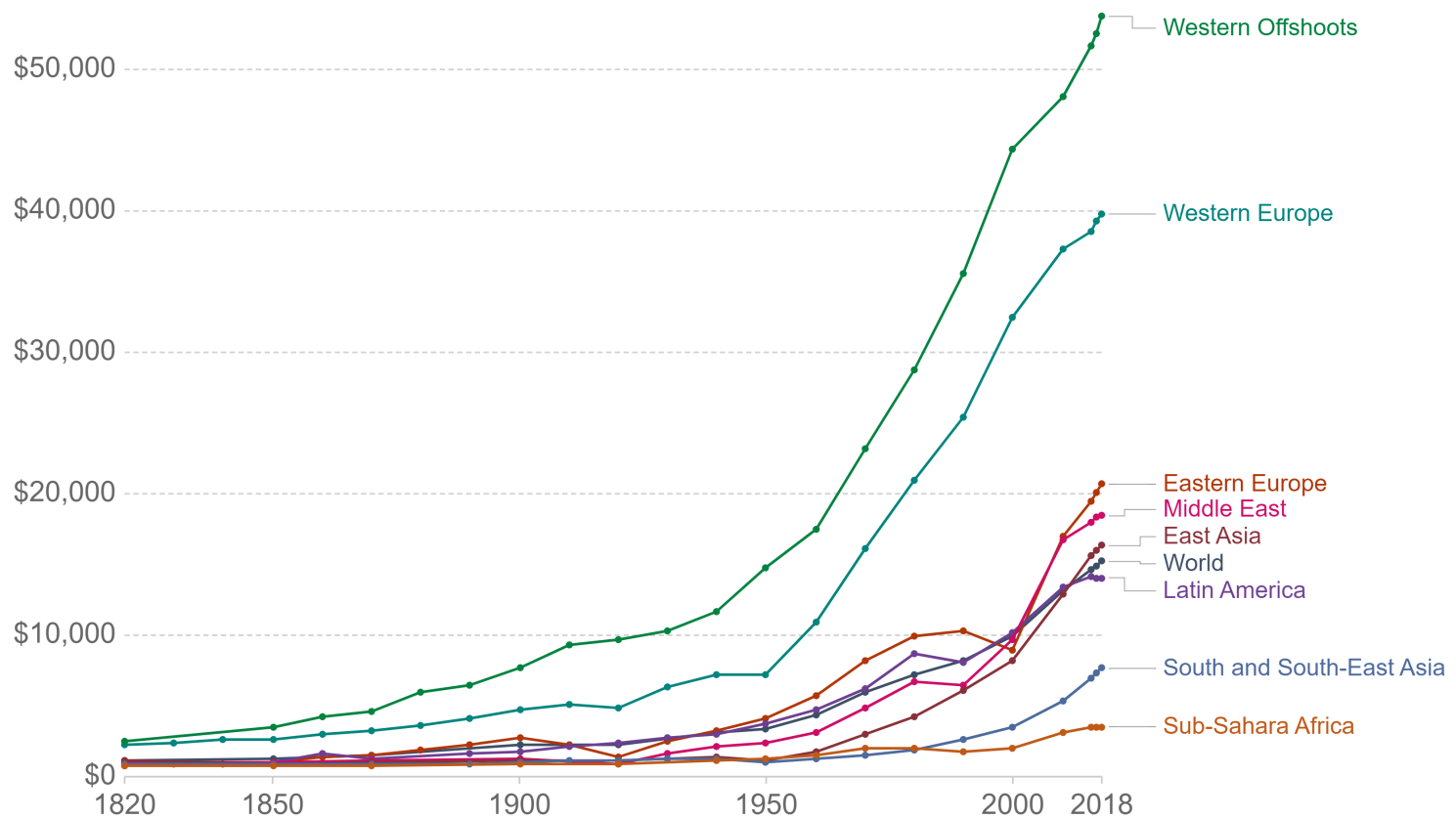
# Economic Differentiation

## Total GDP



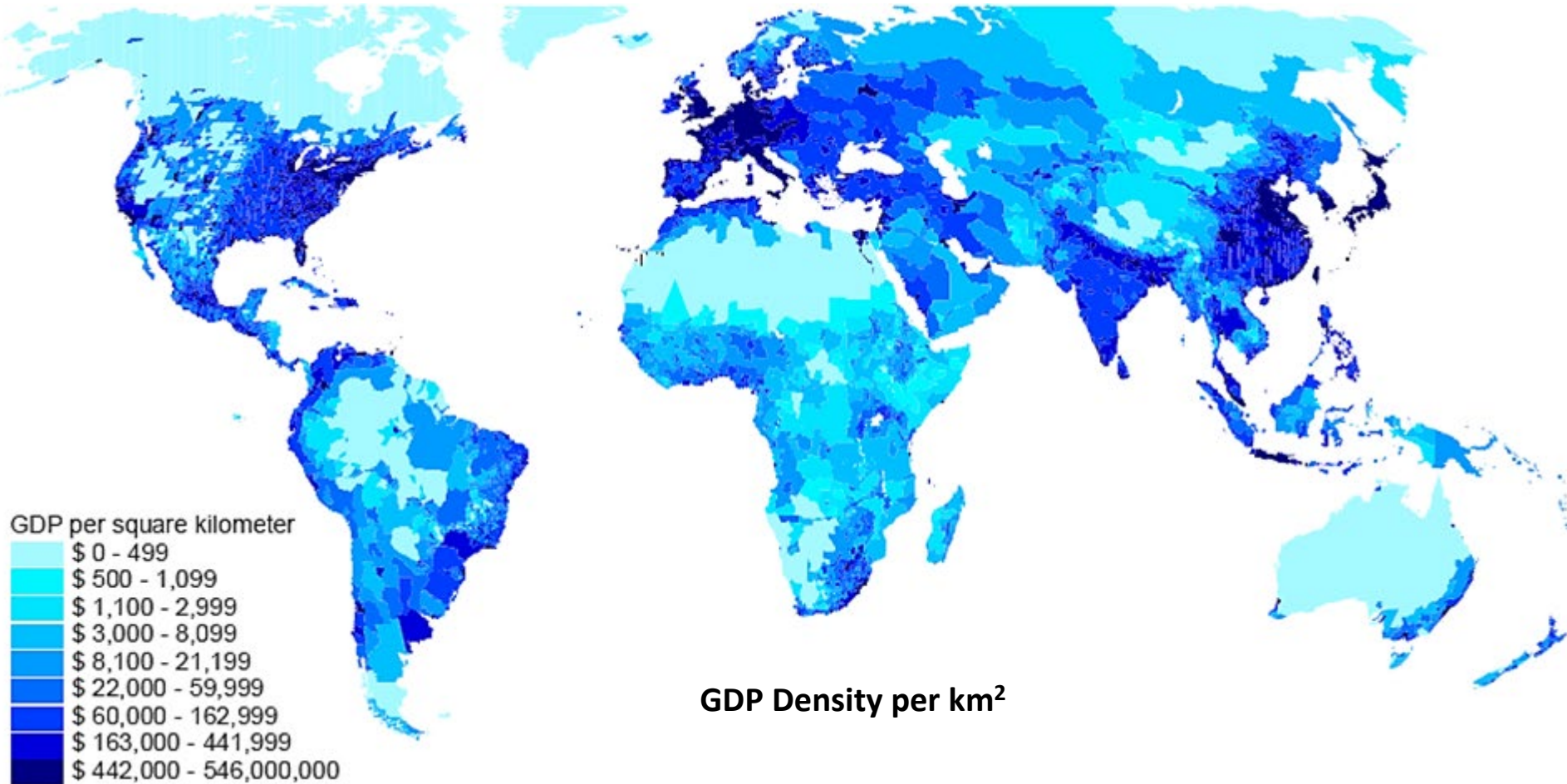
# Economic Differentiation

## GDP per Capita



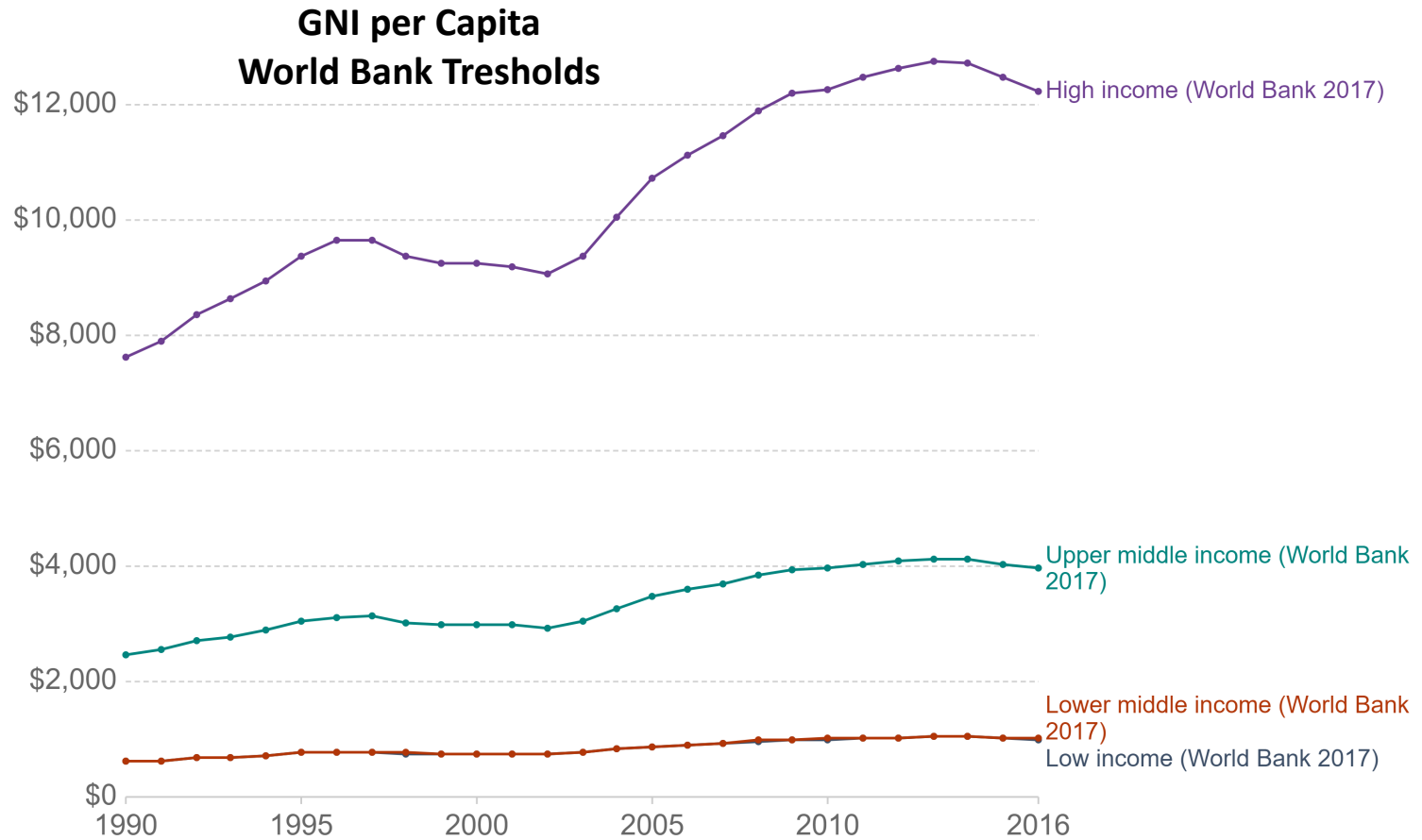
# Economic Differentiation

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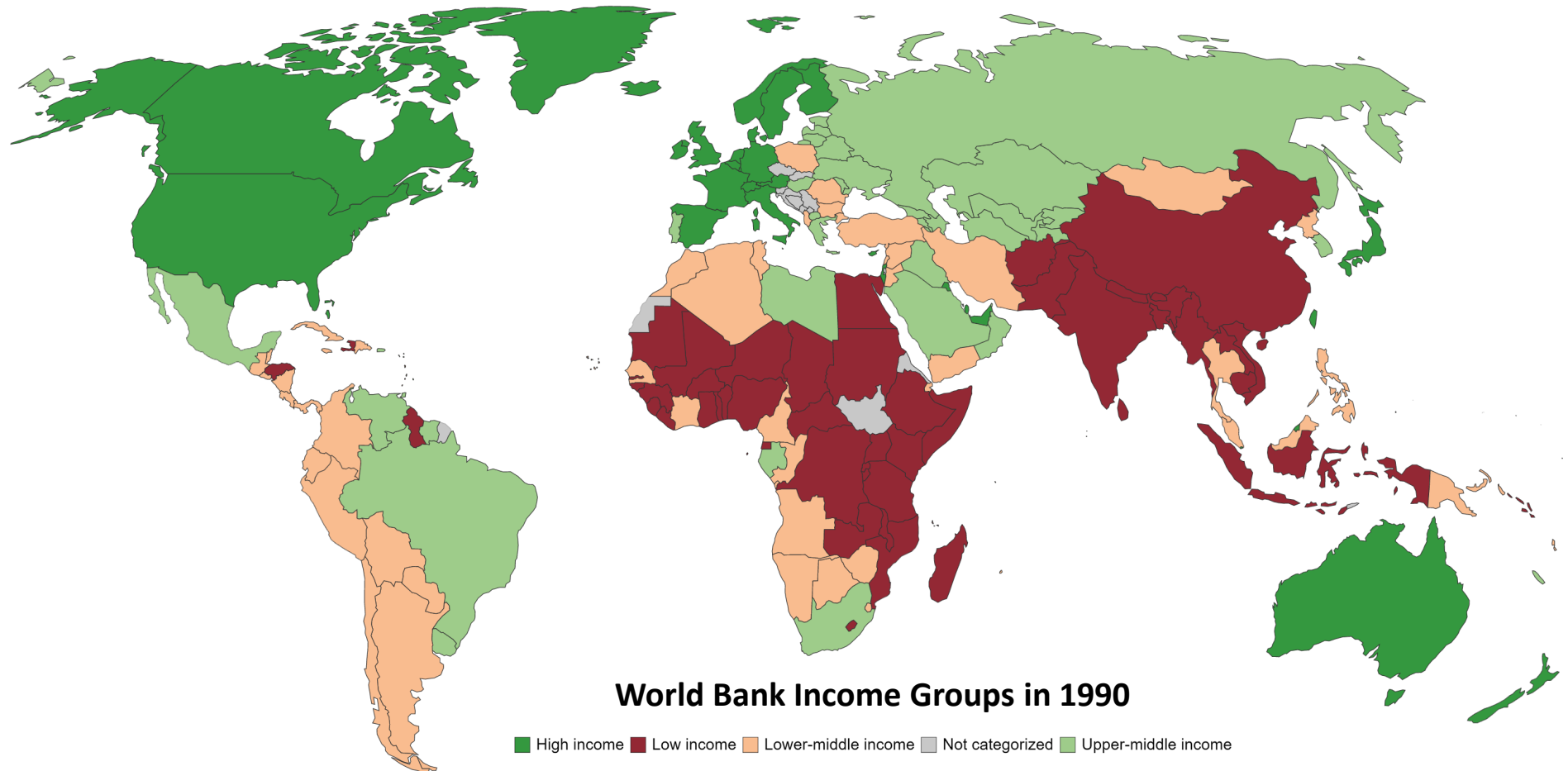


# Economic Differentiation



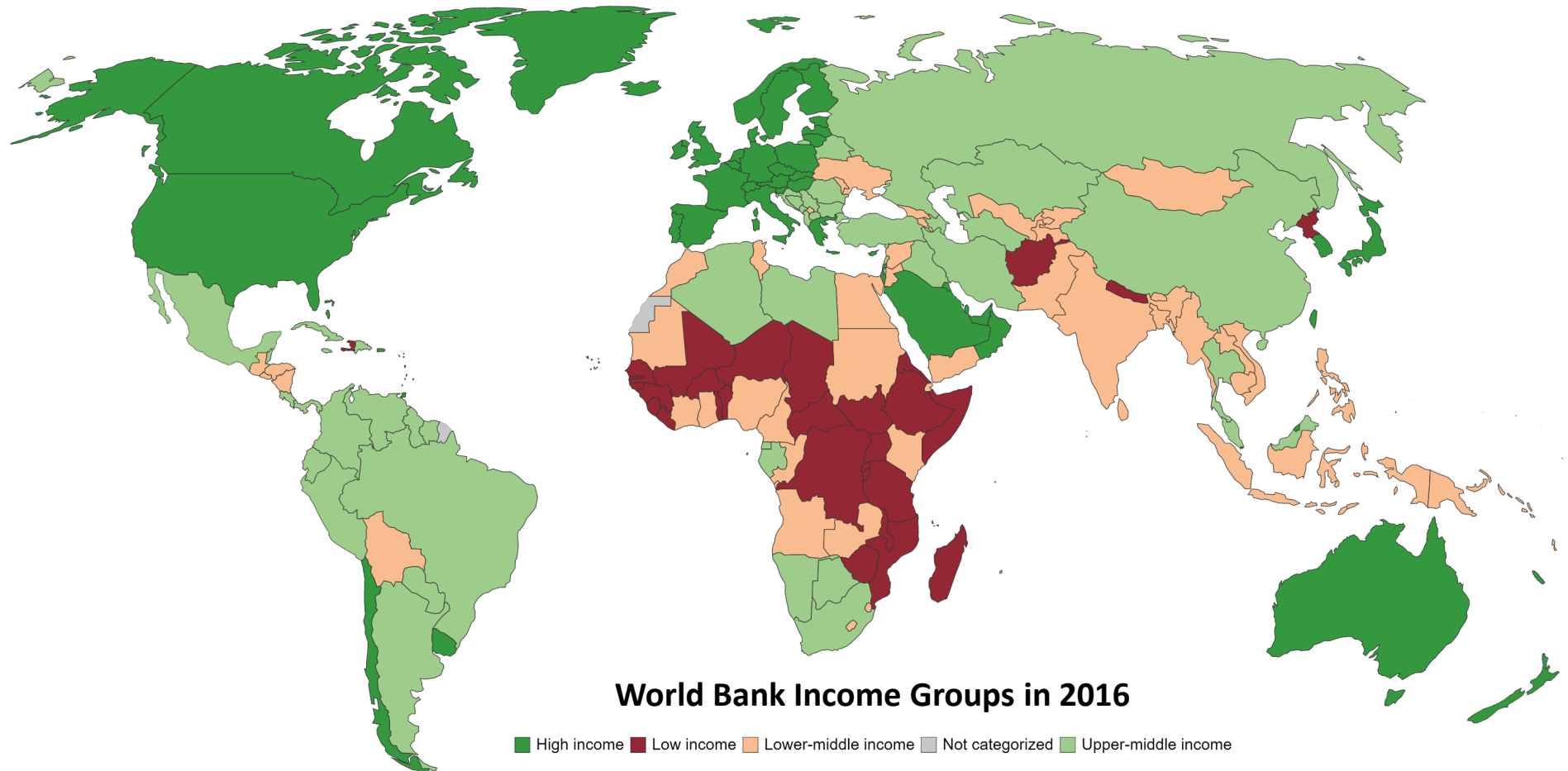
# Economic Differentiation

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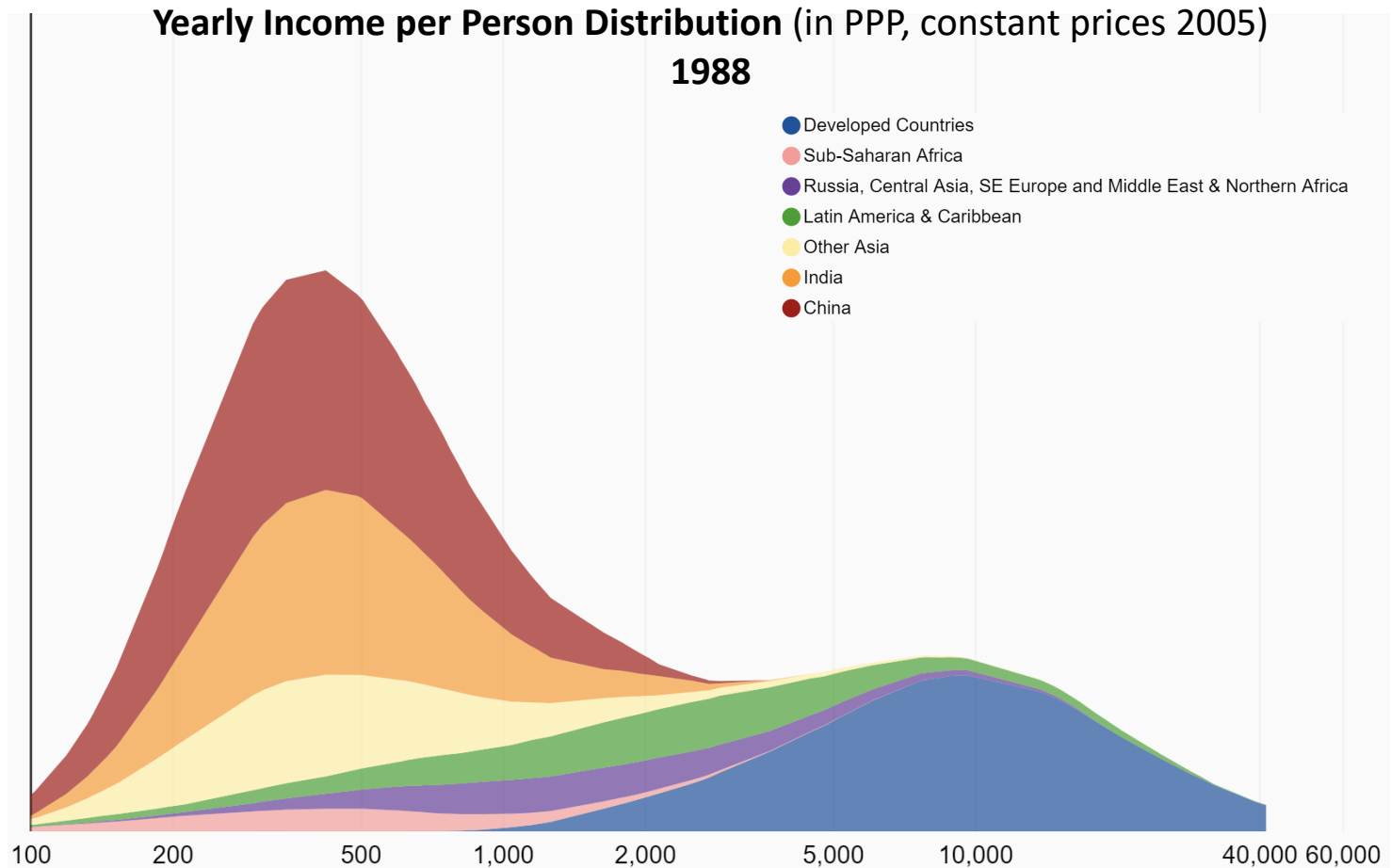


# Economic Differentiation

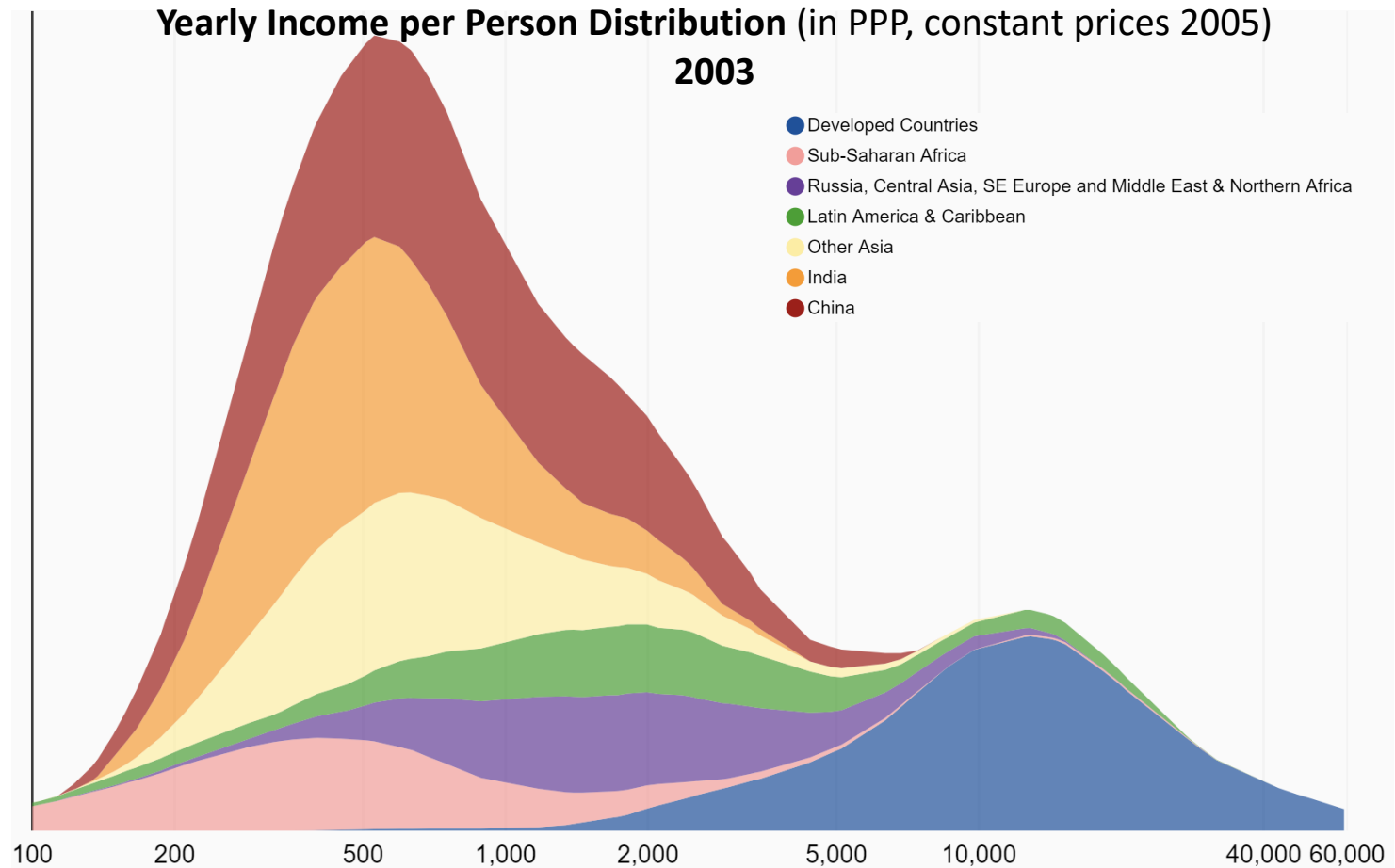
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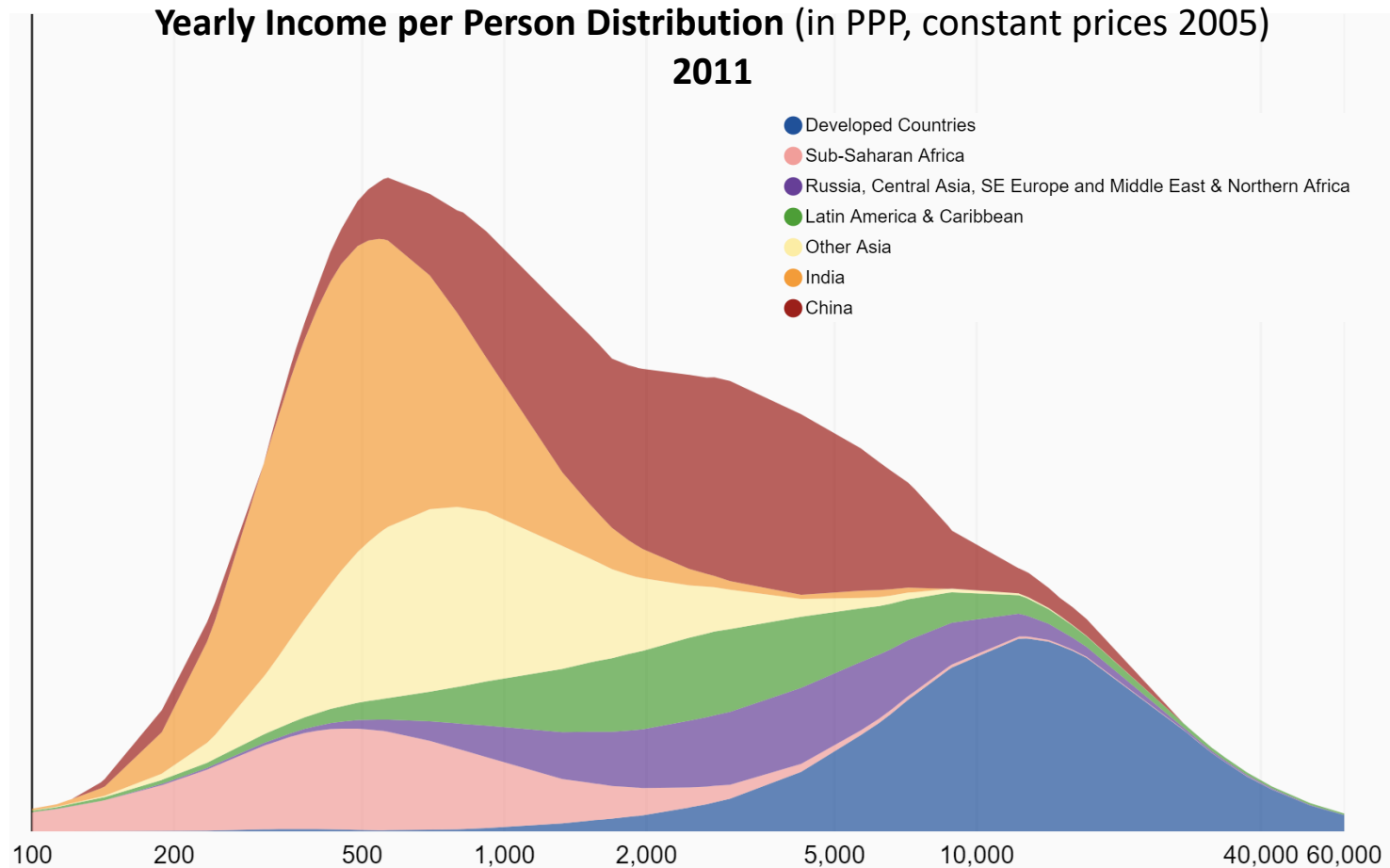
# Economic Differentiation



# Economic Differentiation

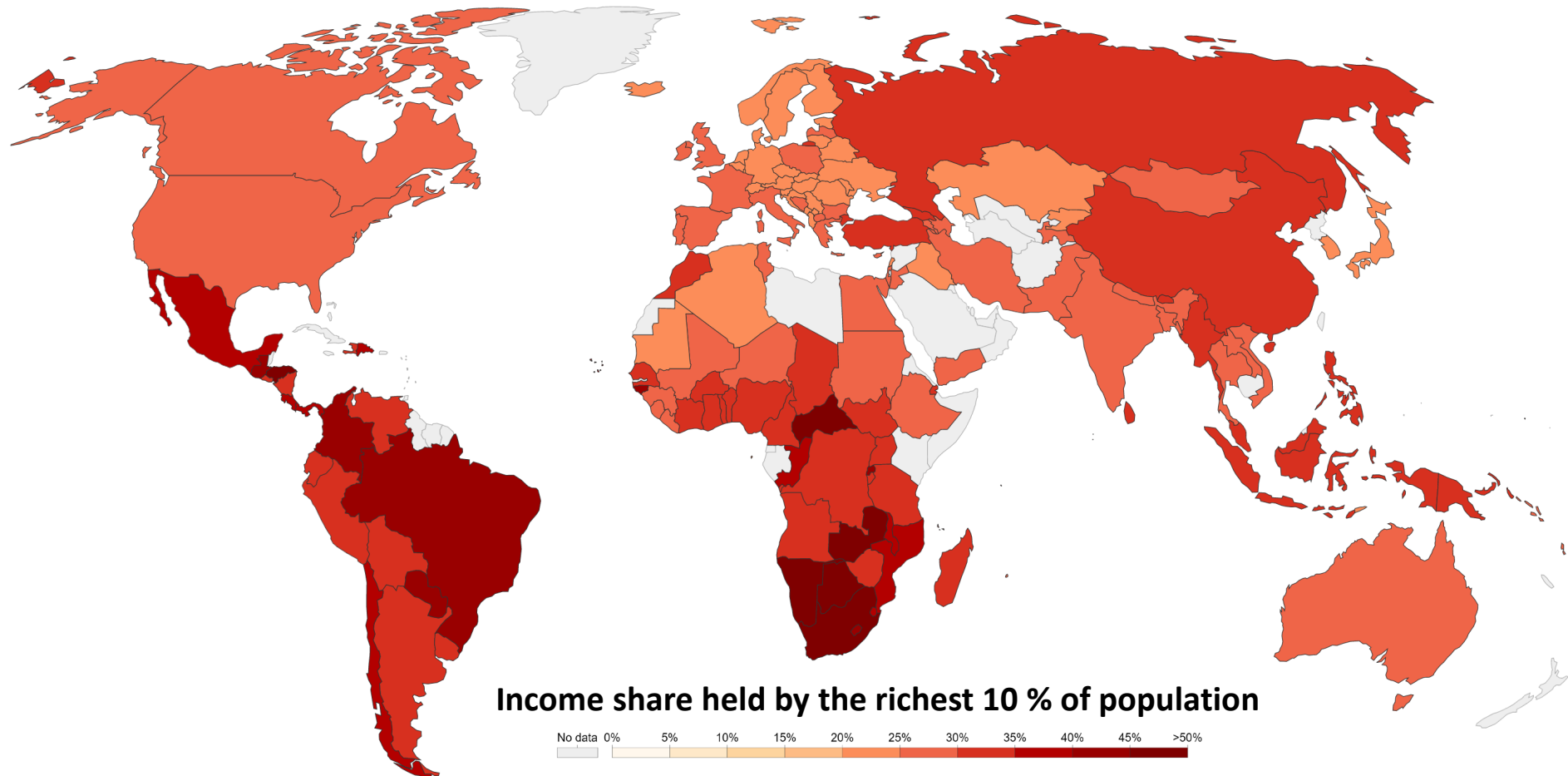


# Economic Differentiation



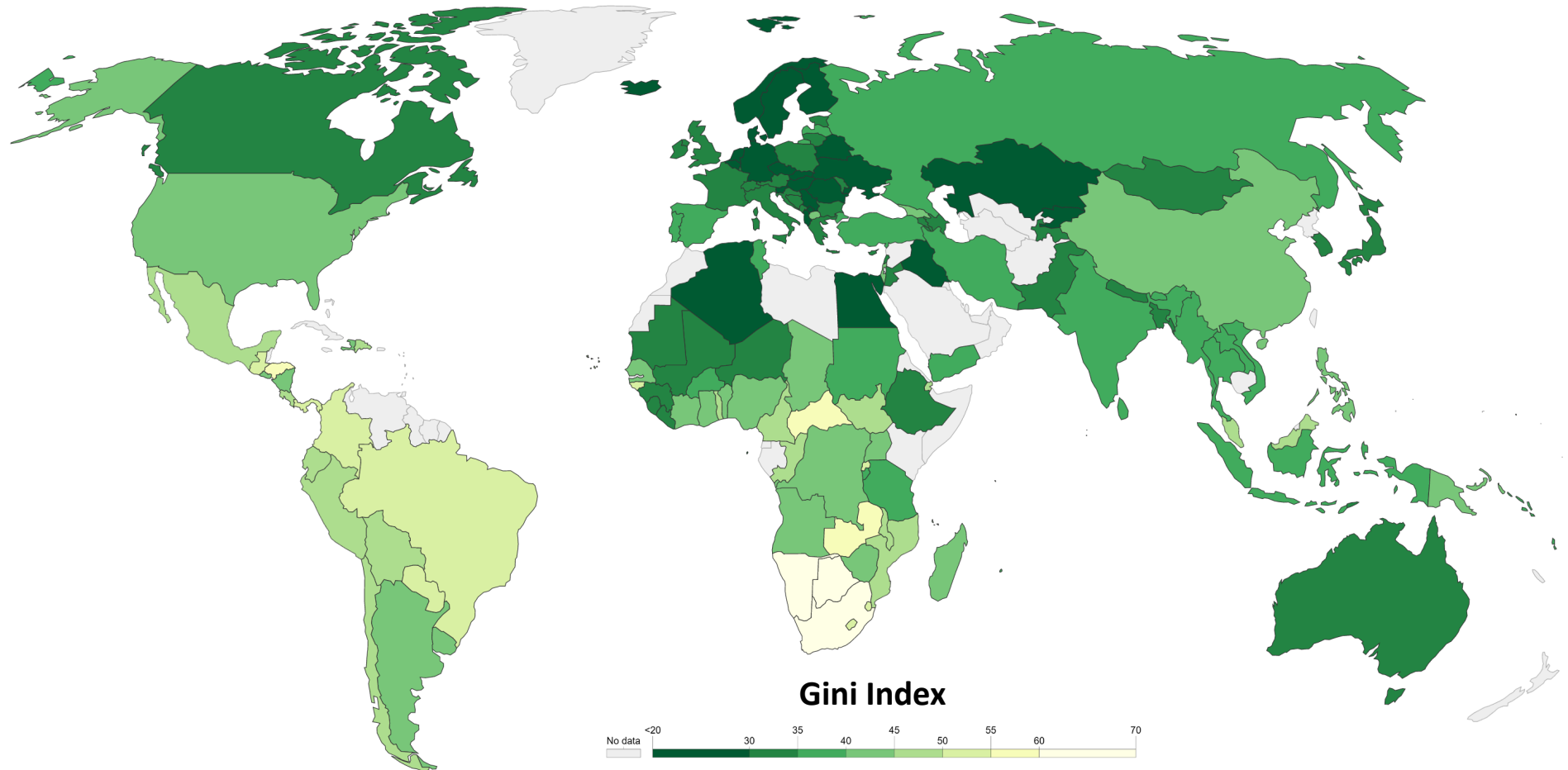
# Economic Differentiation

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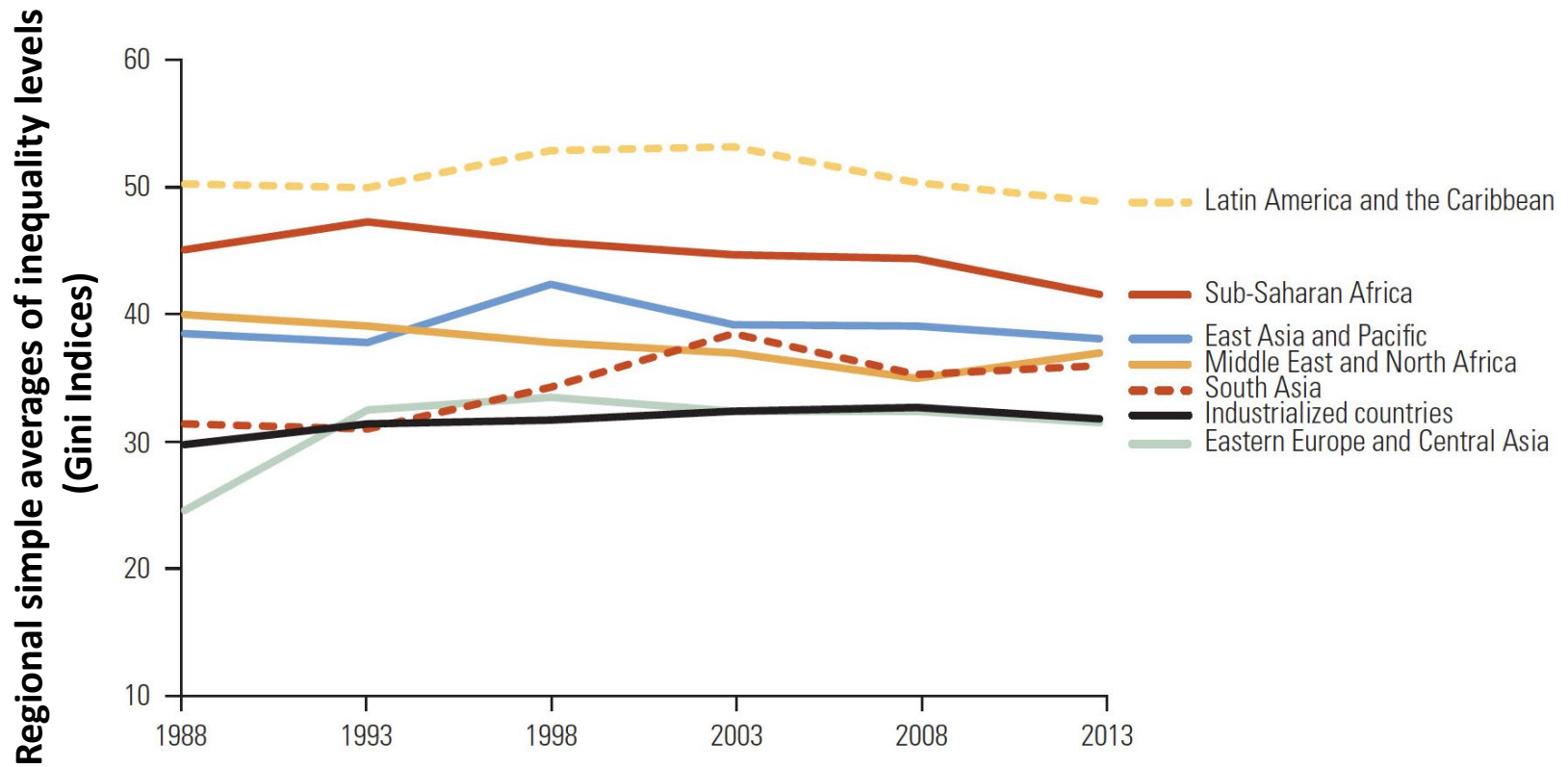
# Economic Differentiation

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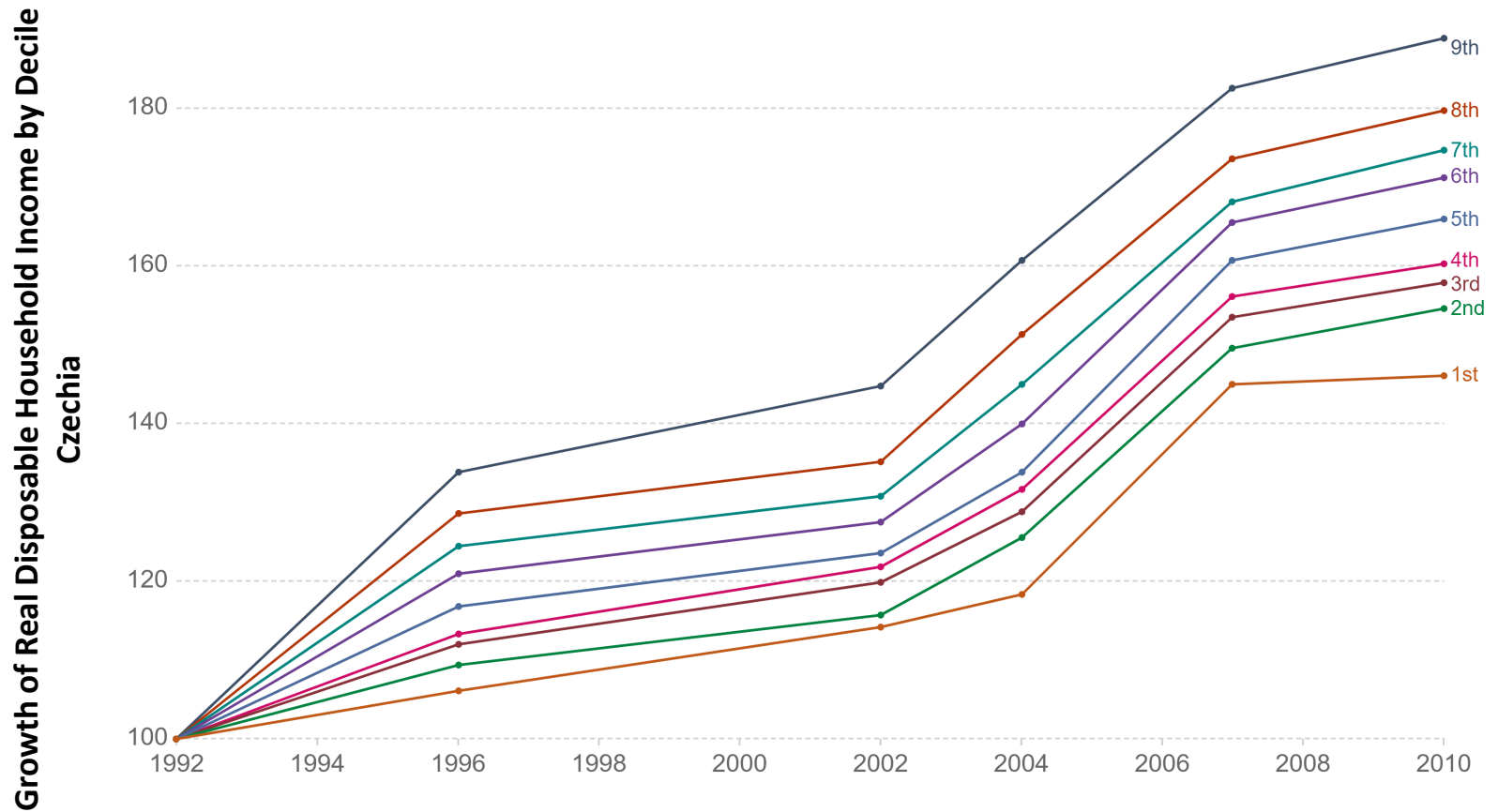




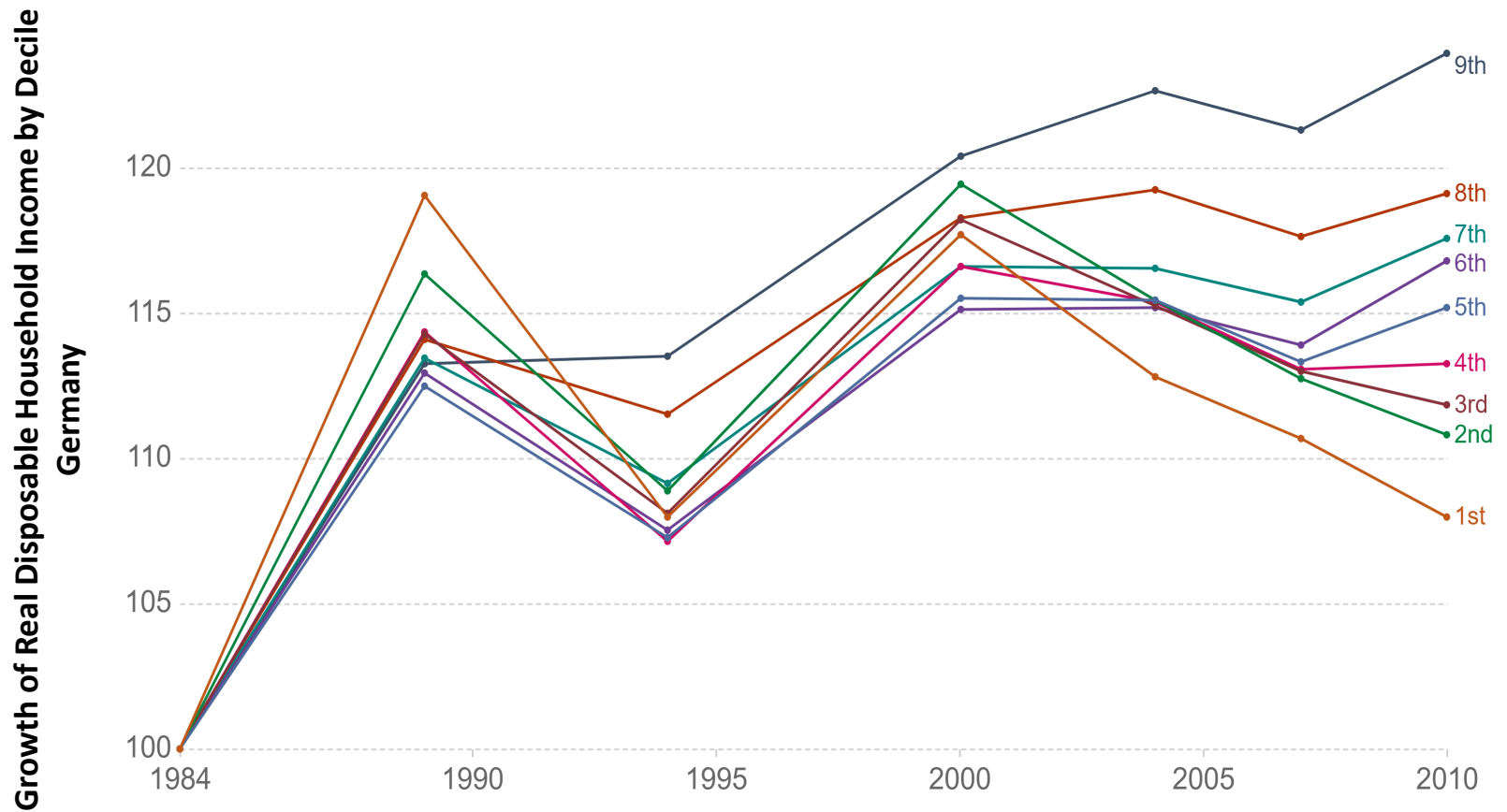
# Economic Differentiation



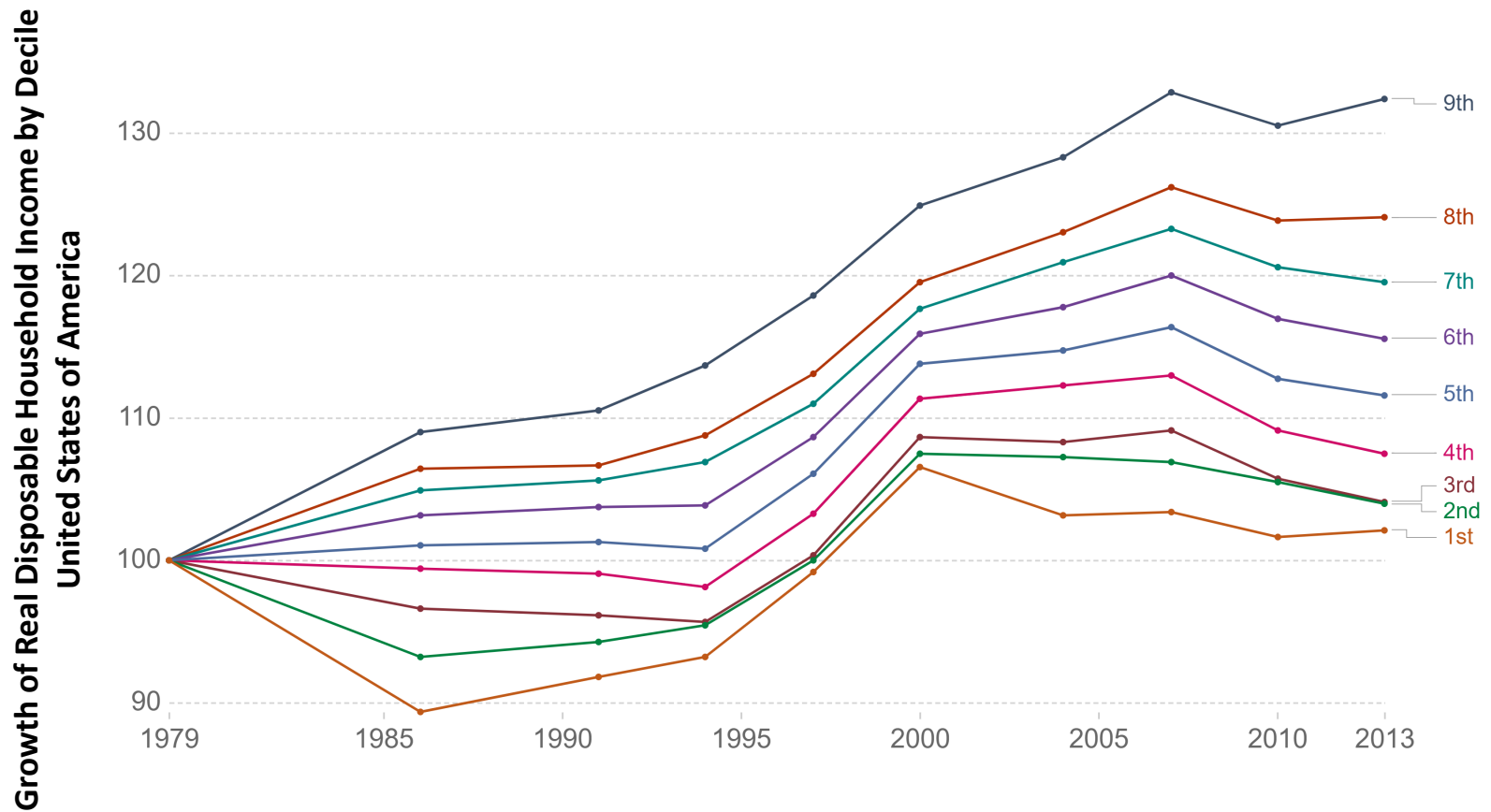
# Economic Differentiation



# Economic Differentiation

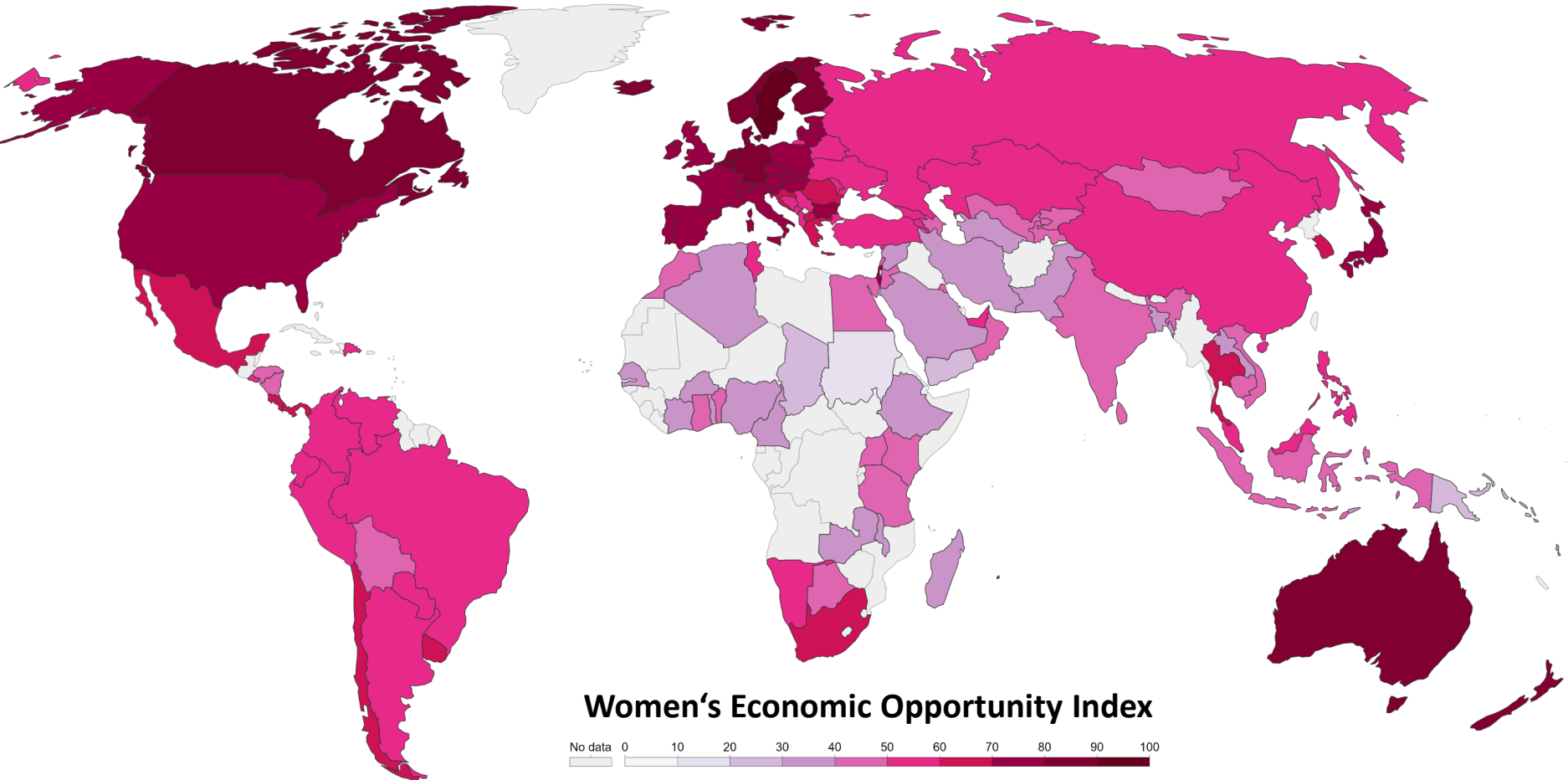


# Economic Differentiation



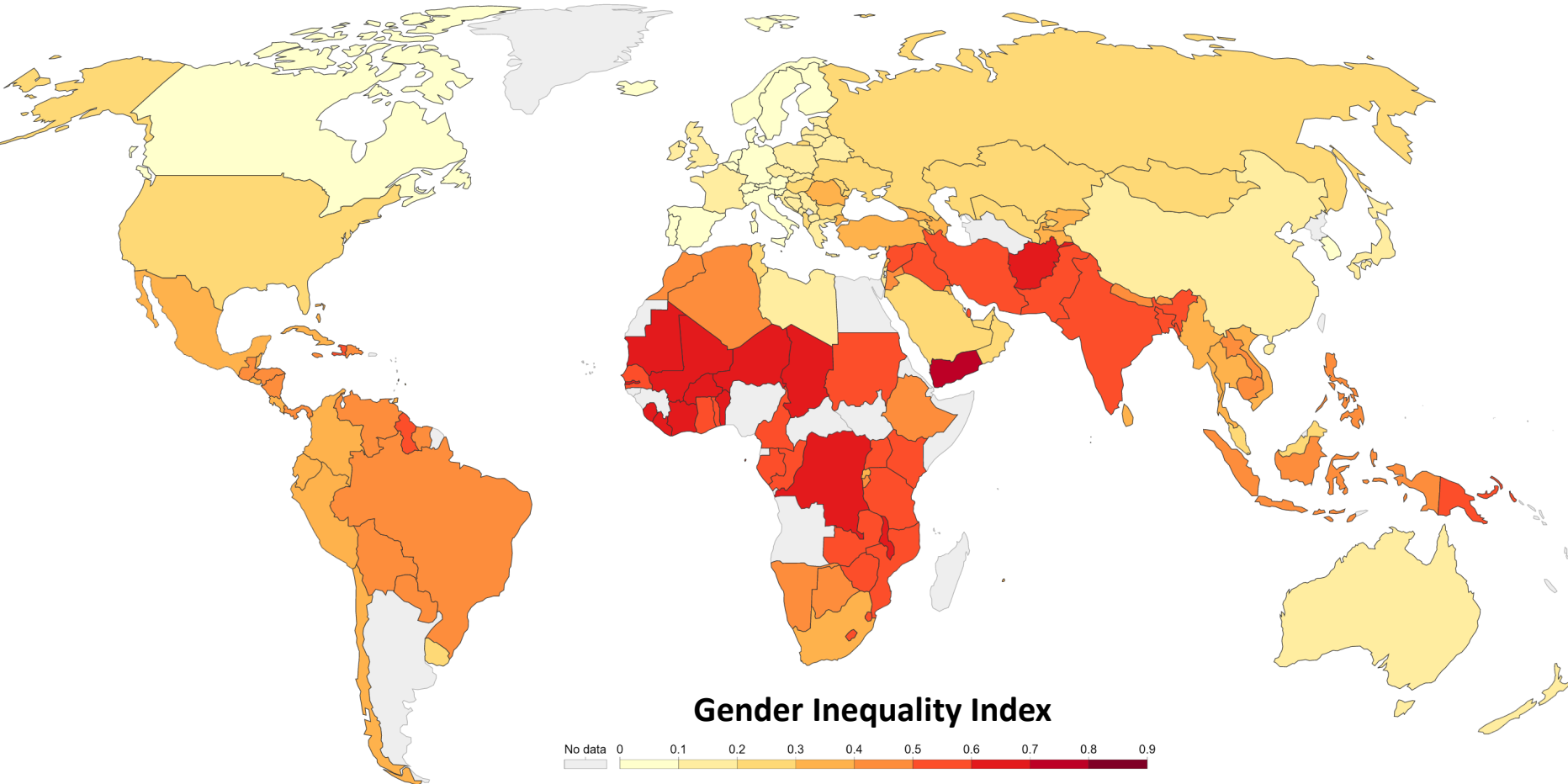
# Social Differentiation

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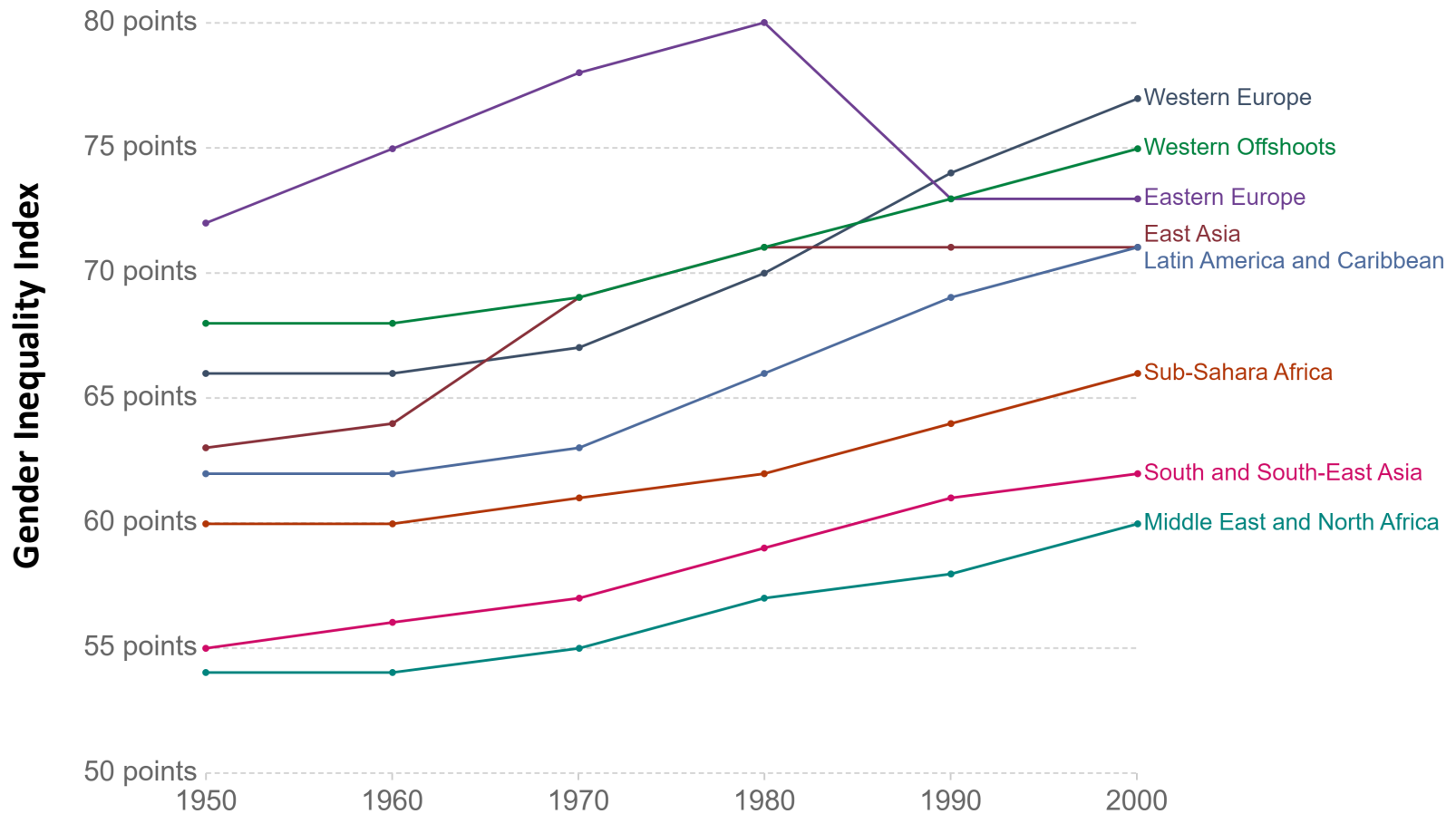


# Social Differentiation

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# Social Differentiation



# Unequal Global Position

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- **Developing countries represent:**
  - 75 % of global land area
  - more than 70 % of global population
  - less than 20 % of global GNI
  - less than 25 % of global FDI stock
  - less than 30 % of global international trade
  - about 15 % of global movement of goods, services and labour
  - only 2 % of global value of securities traded on a stock exchange





# Unequal Global Position

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- **Developing countries are still dependent on exports of raw materials, agricultural product and low value-added goods.**
- **Developed market economies protect their markets through agricultural subsidies (around 1 mil. USD/day).**
- **It makes it difficult for the developing countries to enter the rich markets with their production.**
- **It deteriorates the terms-of-trade for the developing countries.**

# Indebtedness

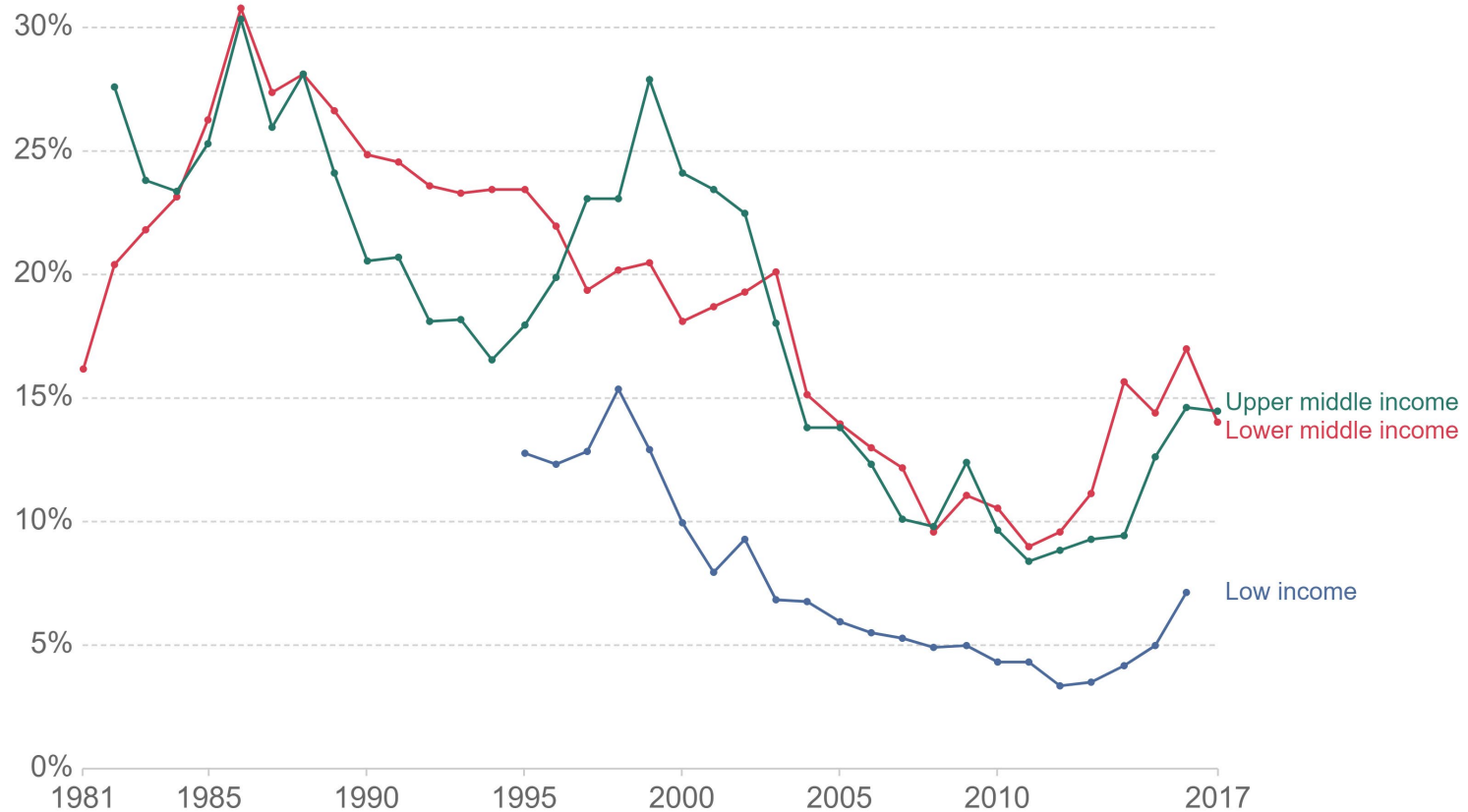
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- **State Debt** = debt of the central government
- **Public Debt** = debt of all the public administration institutions
- **External Debt** = debt borrowed abroad by all economic subjects
- In many developing countries, indebtedness is a by-product of development aid in many developing countries. In some African countries, debt repayments to the World Bank represent more than 40 % of the state budget.
- Developing countries were financing the operations of the World Bank and the IMF in the 1990s.



# Indebtedness

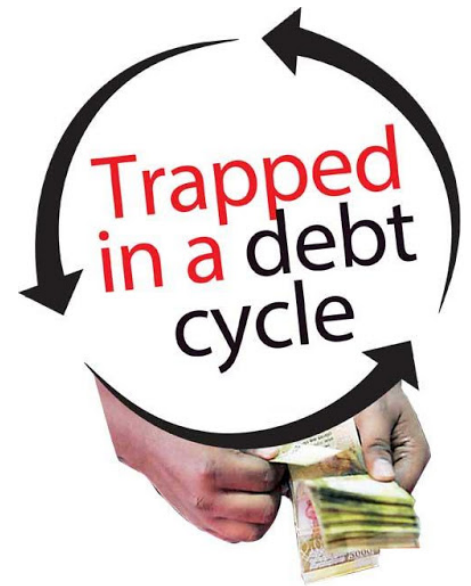
Total debt service (% of exports of goods, services) to IMF



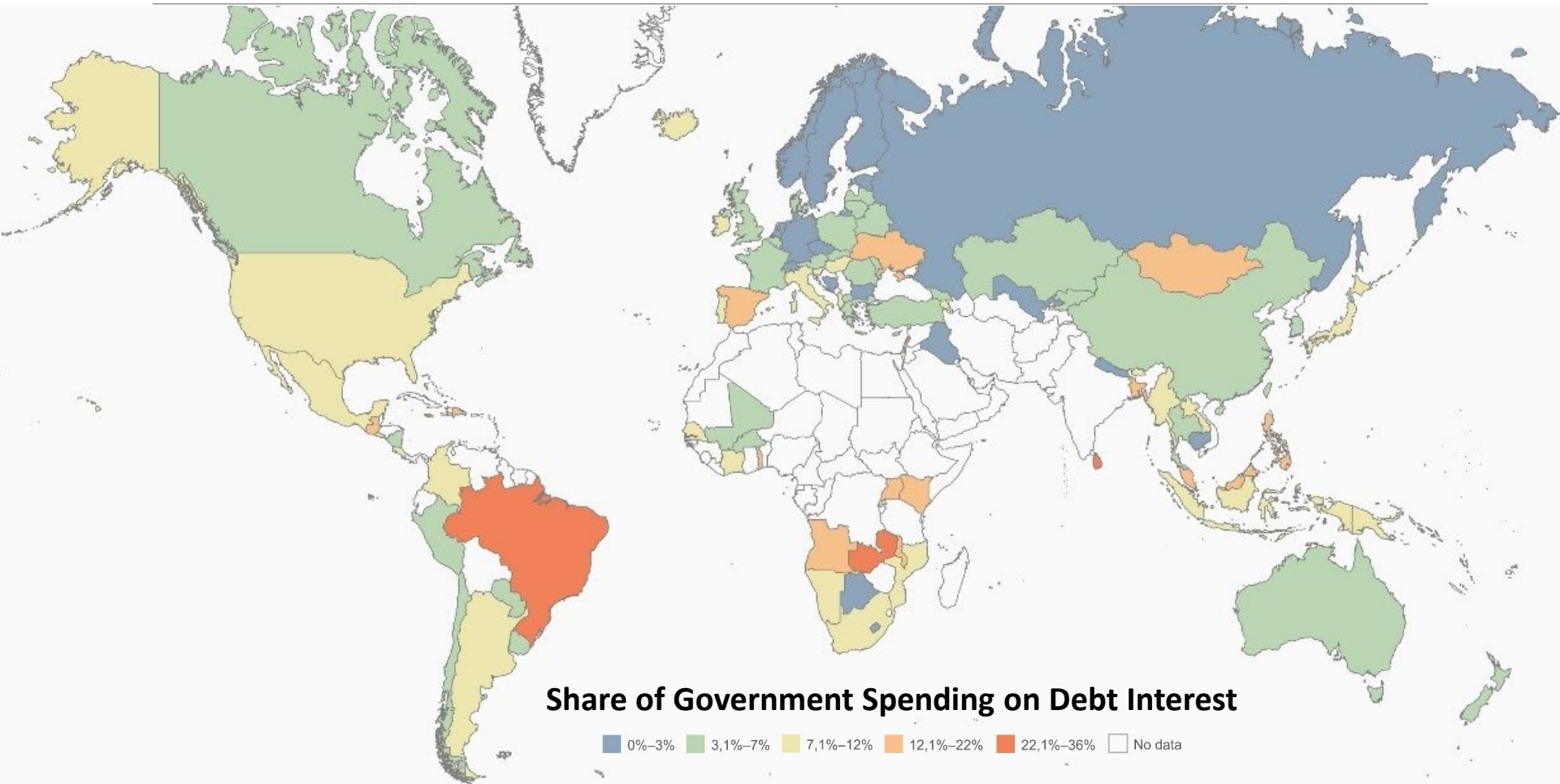
# Vicious Circle of Debt

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- **High indebtedness**
  - Worse country rating for foreign agencies
  - Smaller volumes of foreign investment
  - Slow development of production capacities
  - Lower economic growth rates
  - Difficult debt repayment
- **High indebtedness**



# Indebtedness



**Share of Government Spending on Debt Interest**

0%–3% 3,1%–7% 7,1%–12% 12,1%–22% 22,1%–36% No data

# Indebtedness

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**258 trillion USD  
globally in 2020**

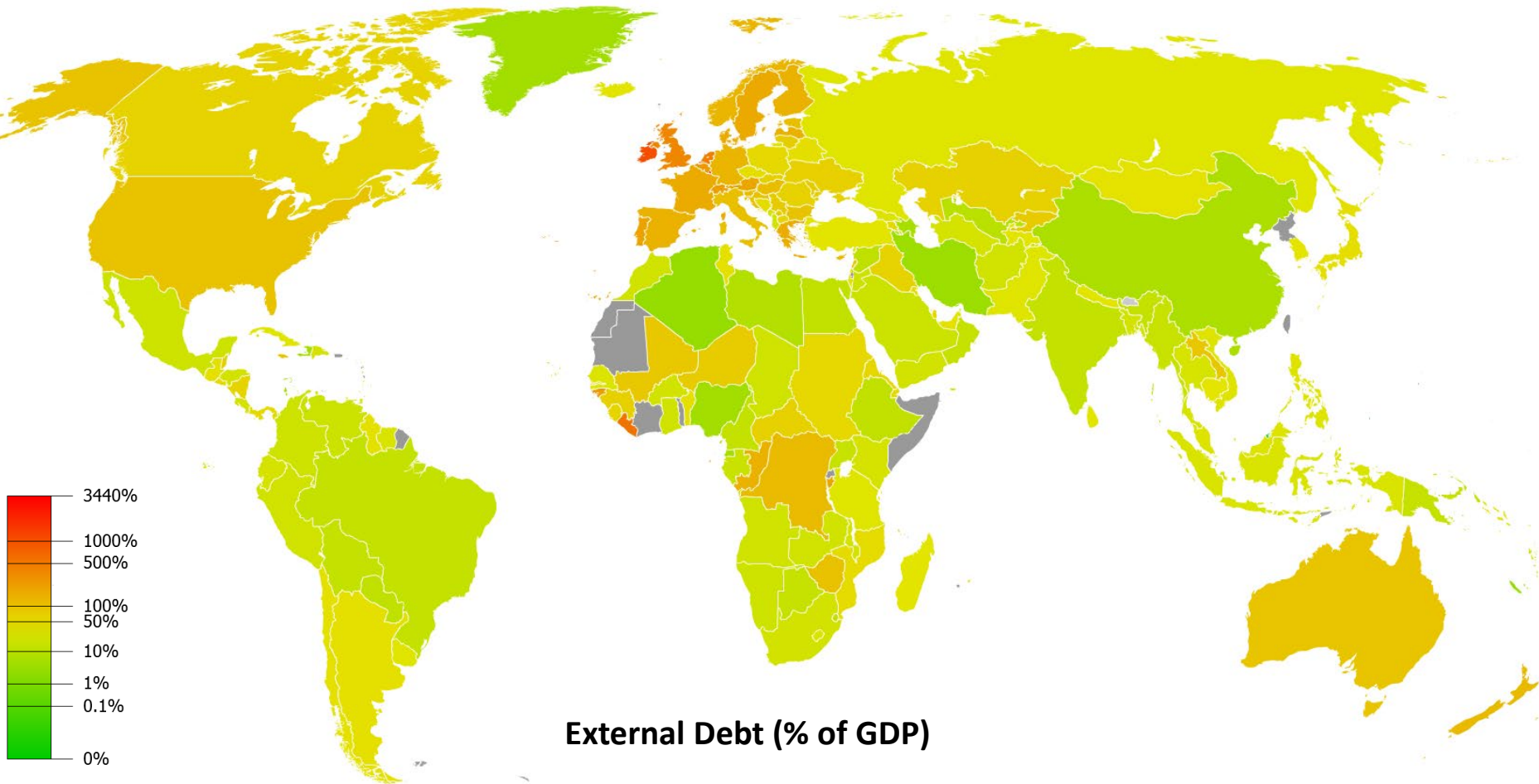


External Debt (millions USD)



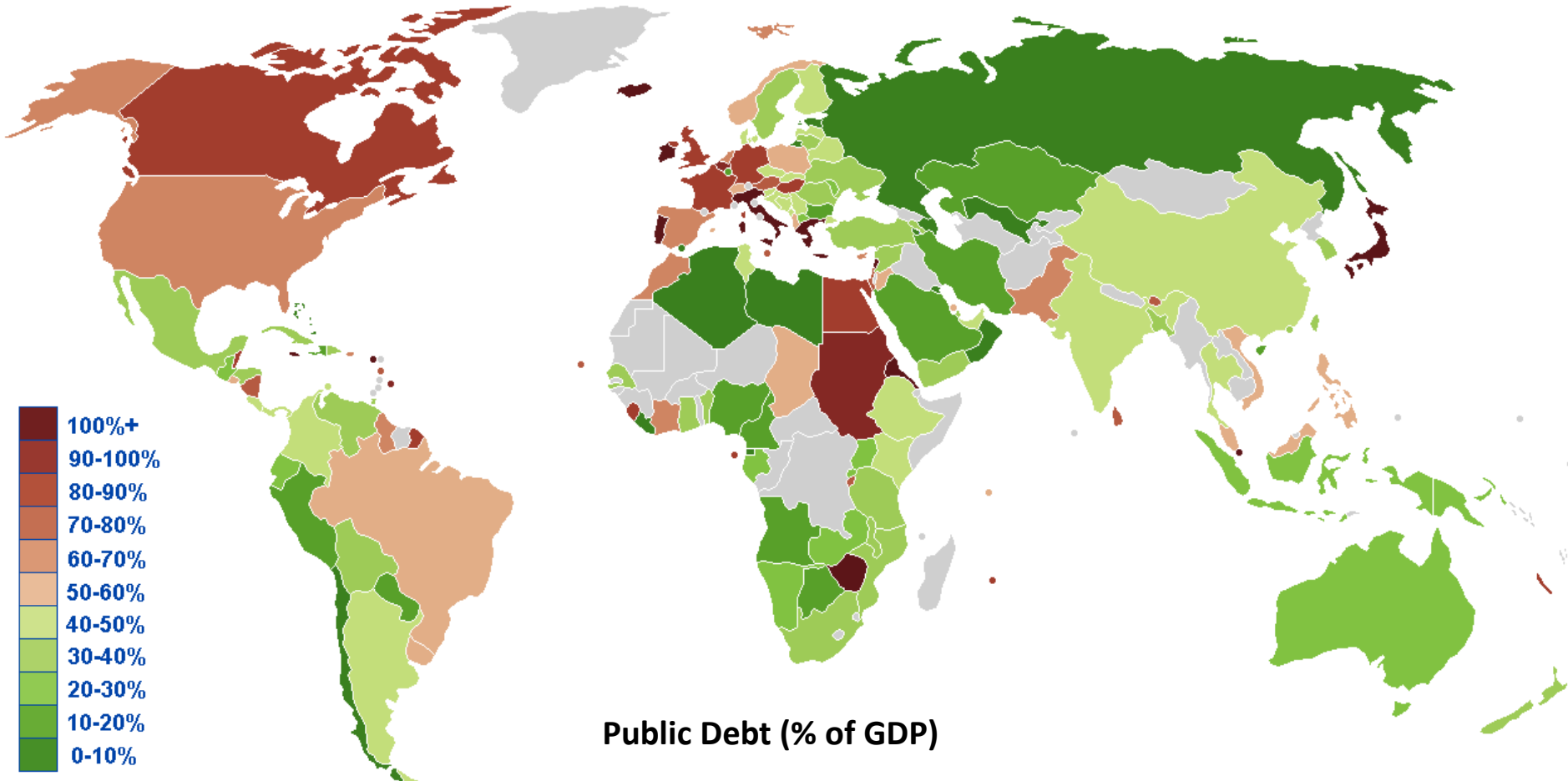
# Indebtedness

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# Indebtedness

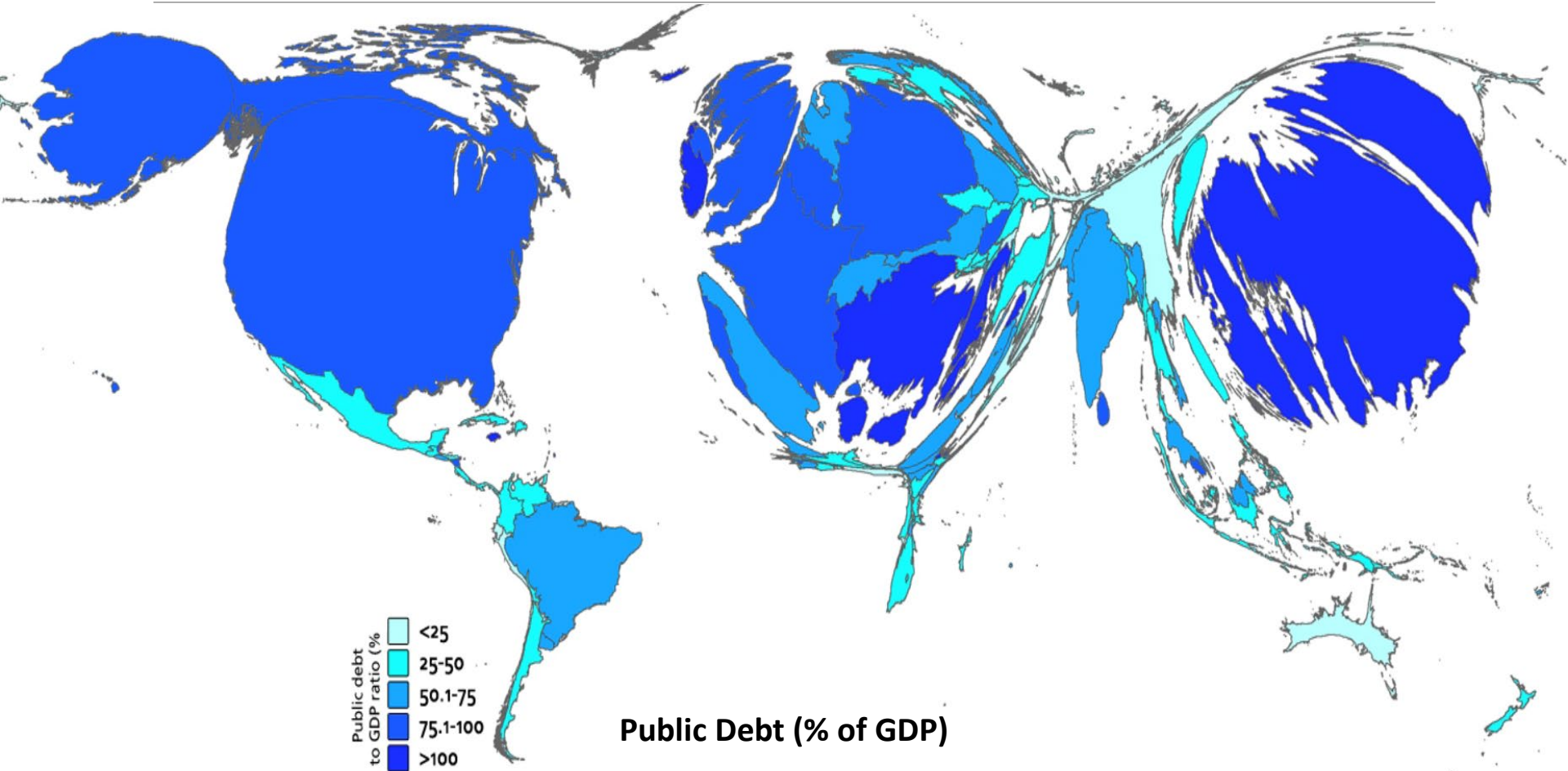
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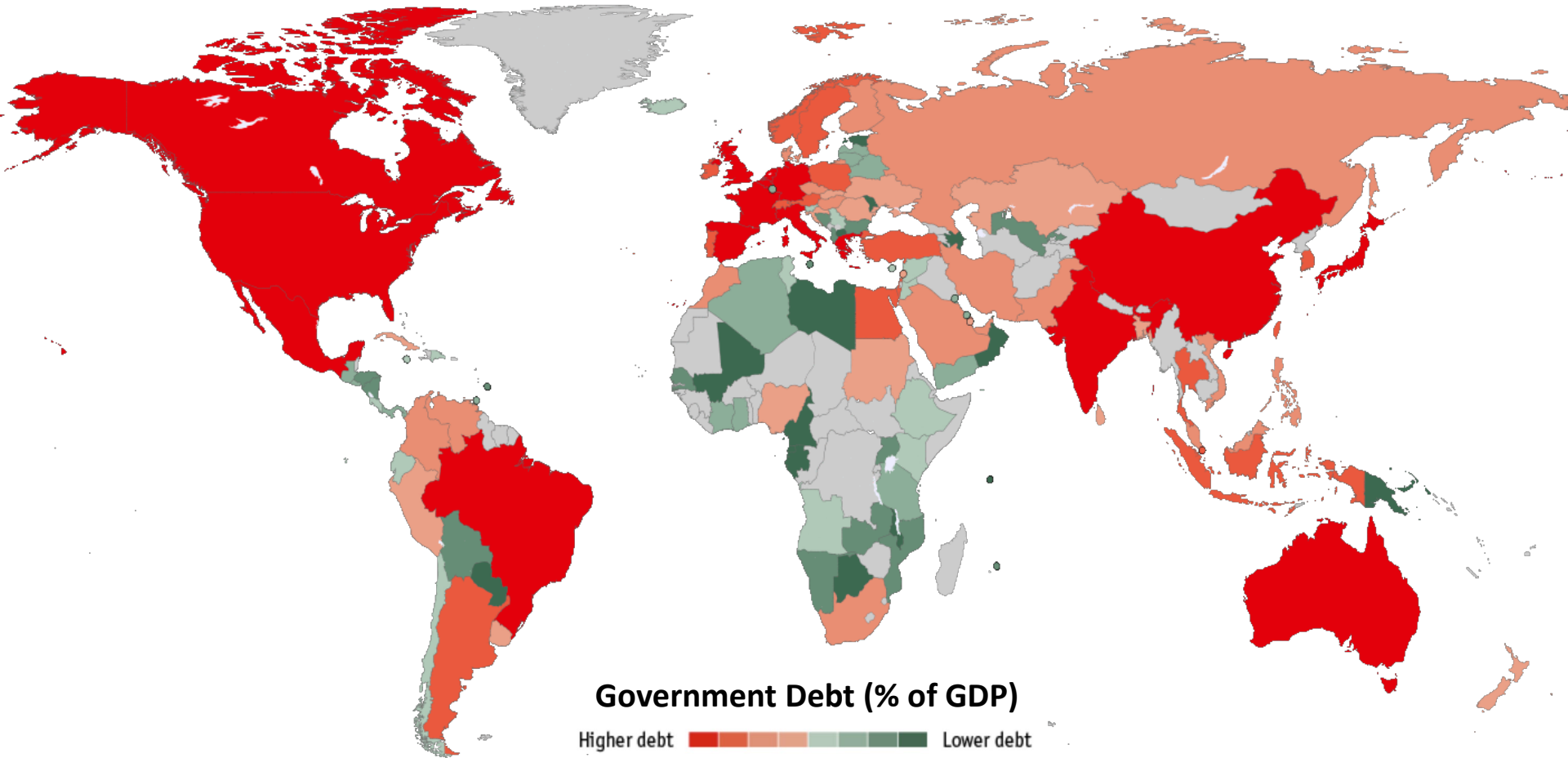
# Indebtedness

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# Indebtedness

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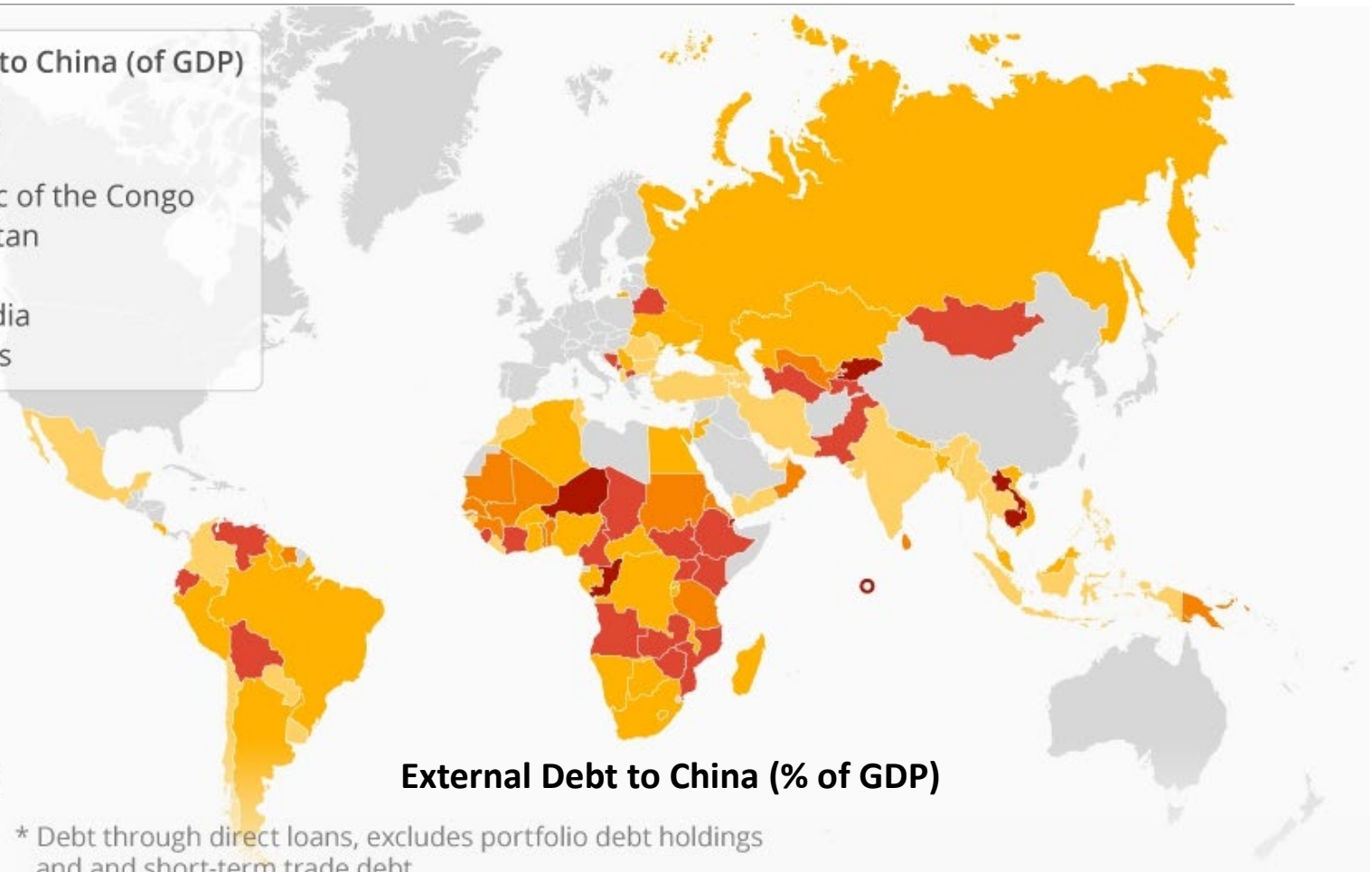




# Indebtedness

- >25% debt to China (of GDP)
- Djibouti
  - Niger
  - Republic of the Congo
  - Kyrgyzstan
  - Laos
  - Cambodia
  - Maldives

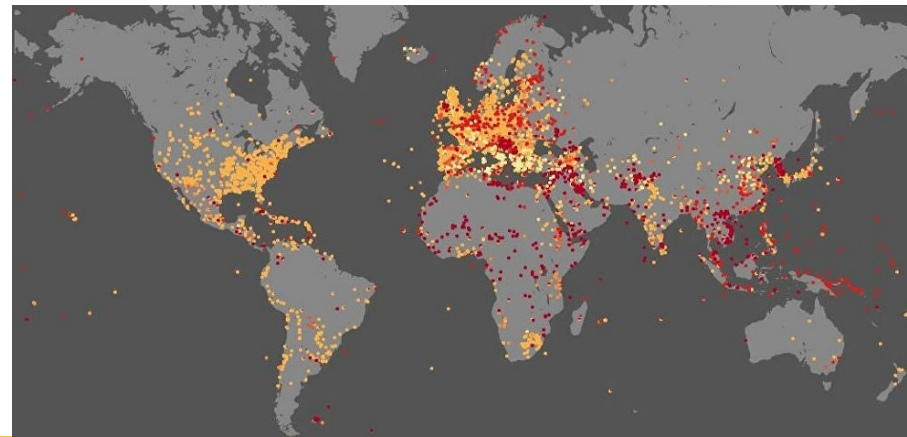
- >25%
- 10-25%
- 5-10%
- 1-5%
- <1%
- No data



# War and Terrorism

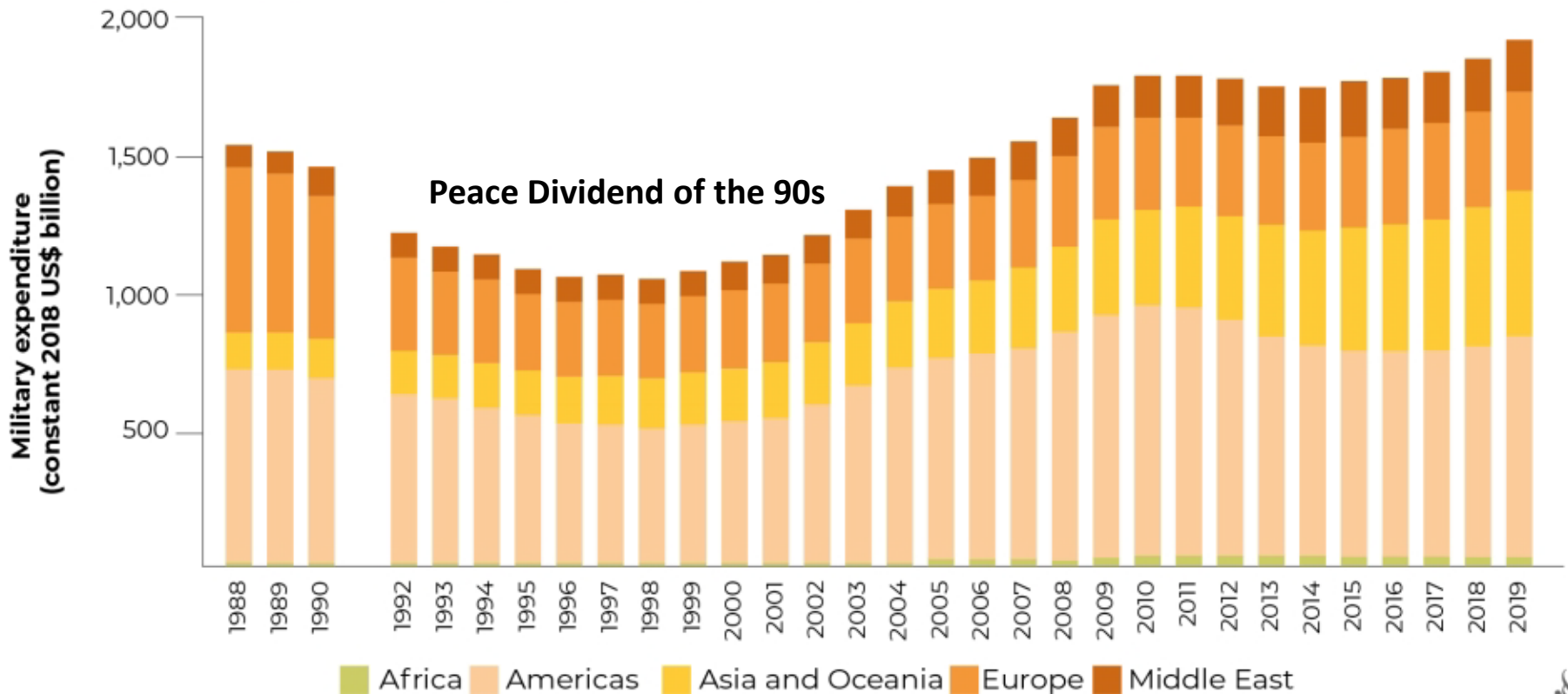
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- Global defense spending = 2.08 % of GDP (1.83 trillion USD)
- Civil wars and terrorism predominate.
- In Africa, more than 30 *coups d'état* have taken place in the last decade.
- Among the victims, civilians prevail (90 %) over soldiers.
- Globally, about 26 million refugees and 41.3 million internally displaced persons (IDPs).



# War and Terrorism

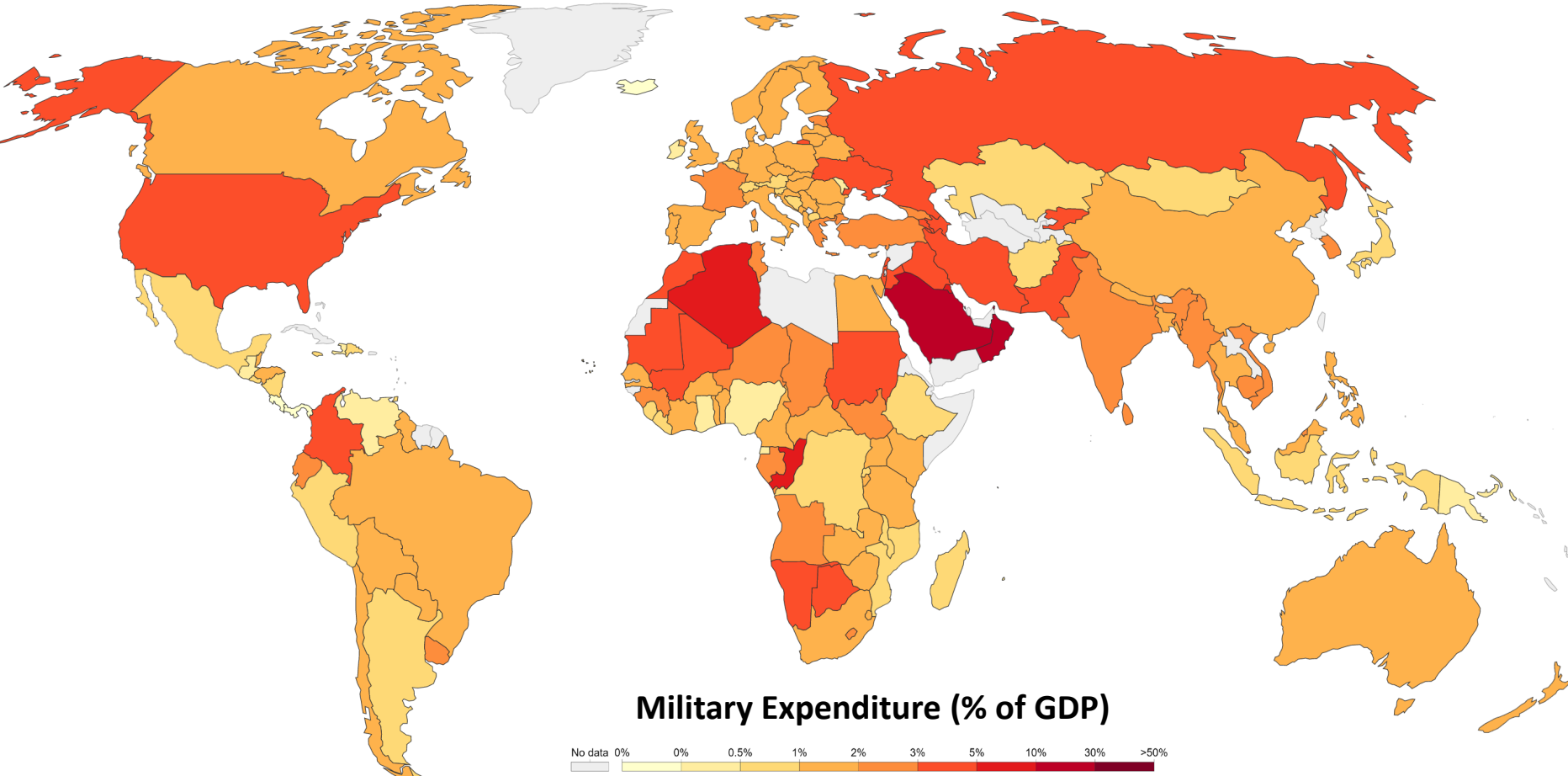
■ Global defense spending = 2.08 % of GDP (1.83 trillion USD)





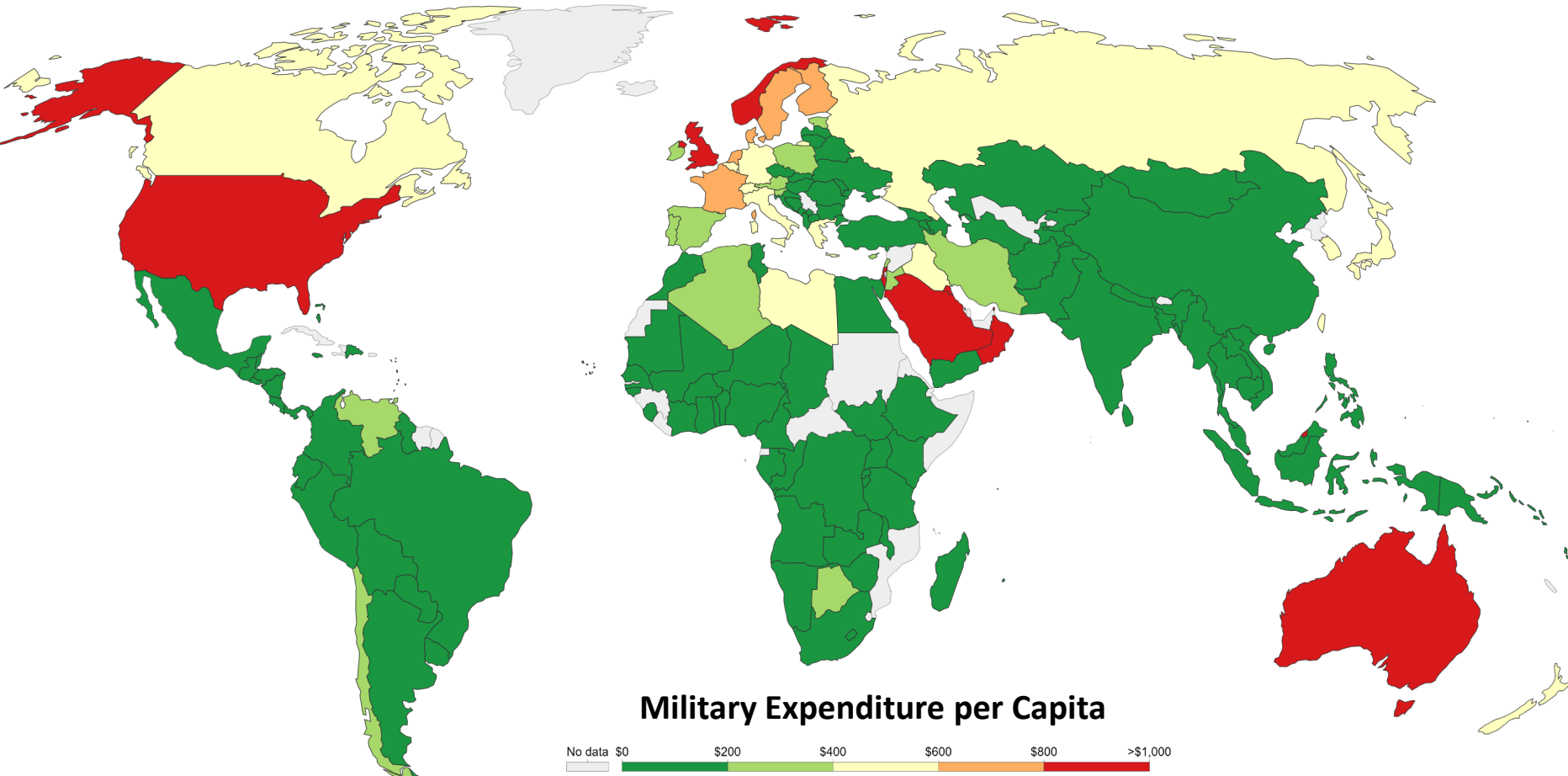
# Social Differentiation

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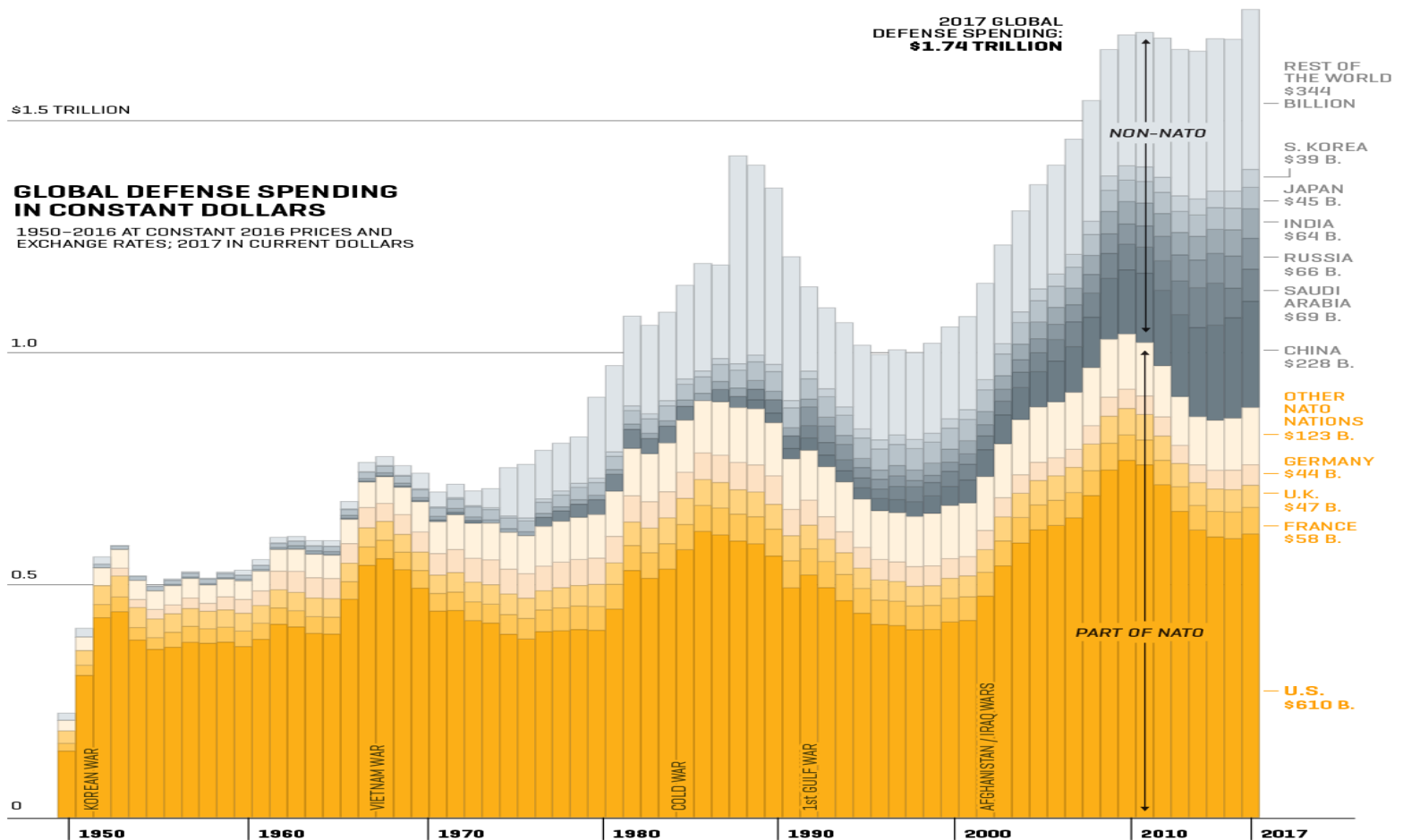
# Social Differentiation

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# War and Terrorism



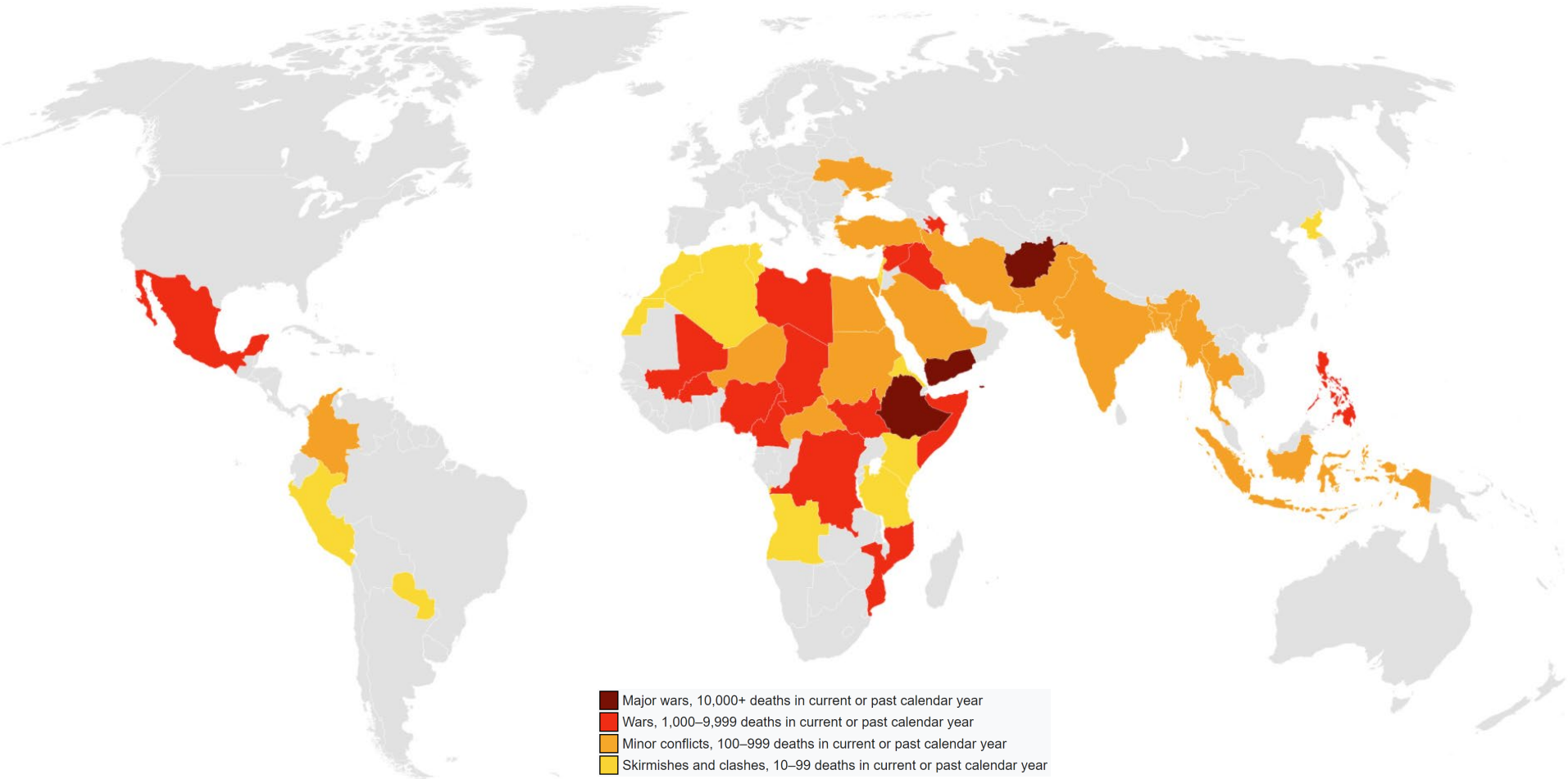
# War and Terrorism

- The military conflicts lead to:
  - a loss of up to 60% of GDP
  - arms races between neighboring economies
  - increase in poverty rates
  - spread of diseases
  - a long-term loss of control over large areas of land



# War and Terrorism

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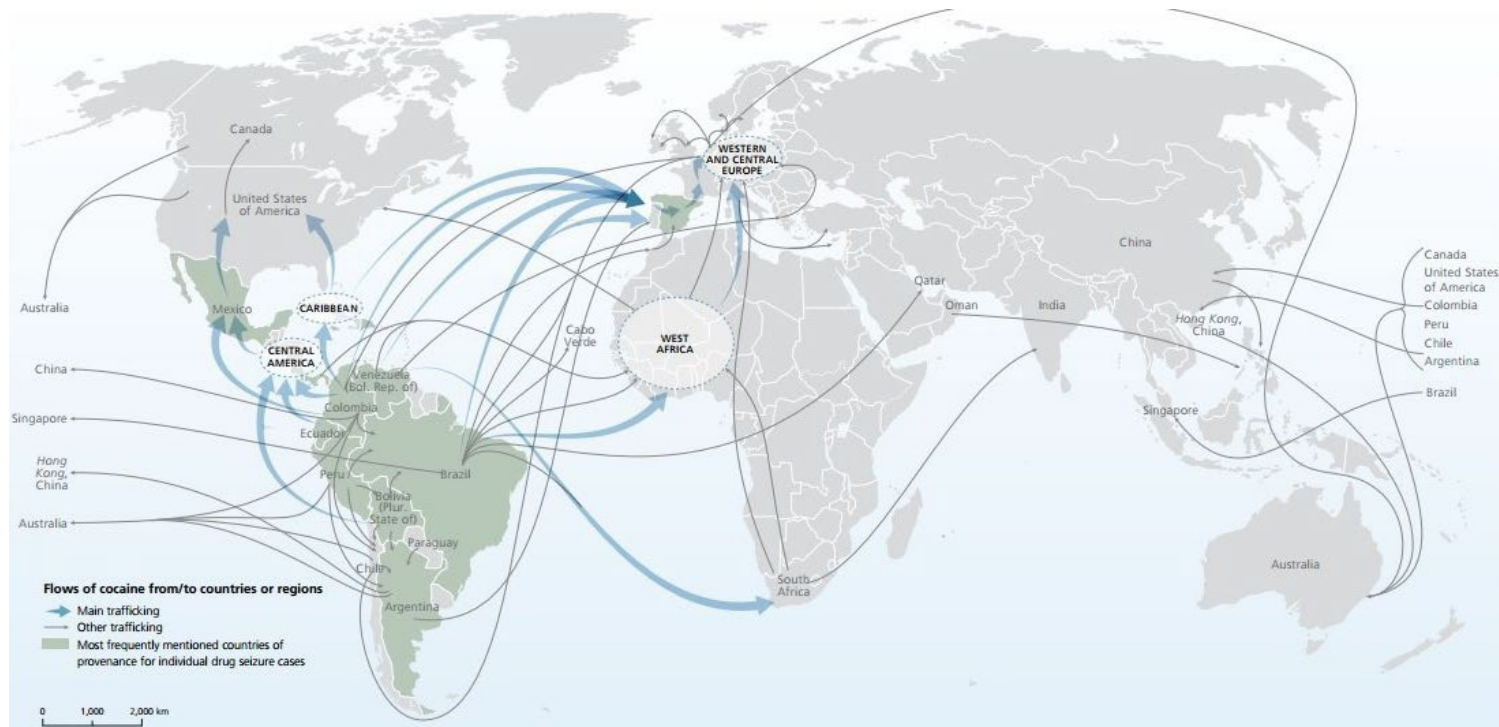
# Drug Production and Trafficking

---

- **95 % of the world's drug production comes from countries hit by civil wars or other military conflicts.**
- **Cocaine:**
  - **Today, coca is grown at about 220.000 ha**
  - **Annual cocaine production exceeds 900 tonnes (60% in Colombia, the rest in Peru and Bolivia)**
  - **The market for cocaine is mainly the USA (about 50%)**

# Drug Production and Trafficking

- 95 % of the world's drug production comes from countries hit by civil wars or other military conflicts.
- Cocaine:



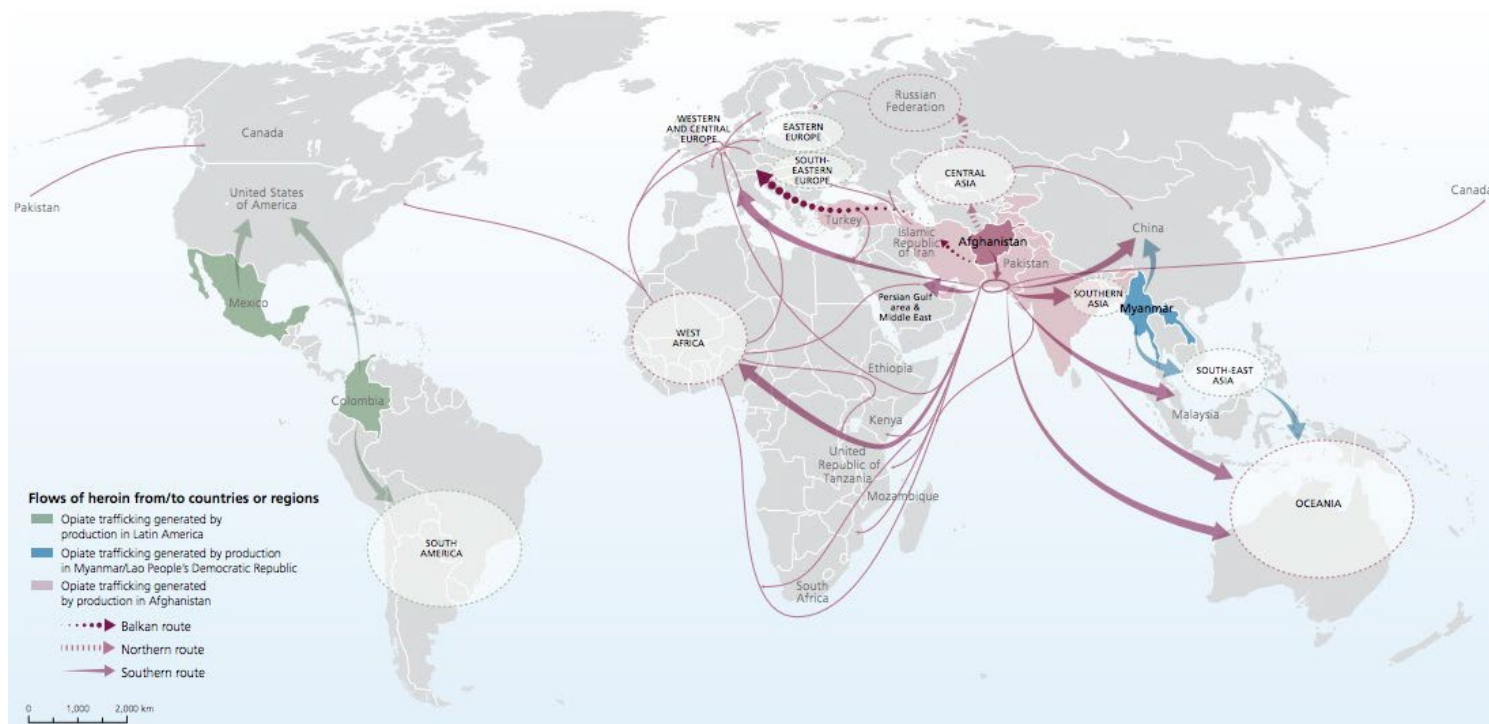
# Drug Production and Trafficking

---

- **95 % of the world's drug production comes from countries hit by civil wars or other military conflicts.**
- **Heroin:**
  - **Today, opium is grown at about 200.000 ha**
  - **Annual opium production exceeds 5.000 tonnes (more than 400 tonnes of heroine)**
  - **90 % of the world's opium comes from Afghanistan.**
- **Annual drug spending exceeds 1 trillion USD.**

# Drug Production and Trafficking

- 95 % of the world's drug production comes from countries hit by civil wars or other military conflicts.
- Heroin:





# Digital Divide

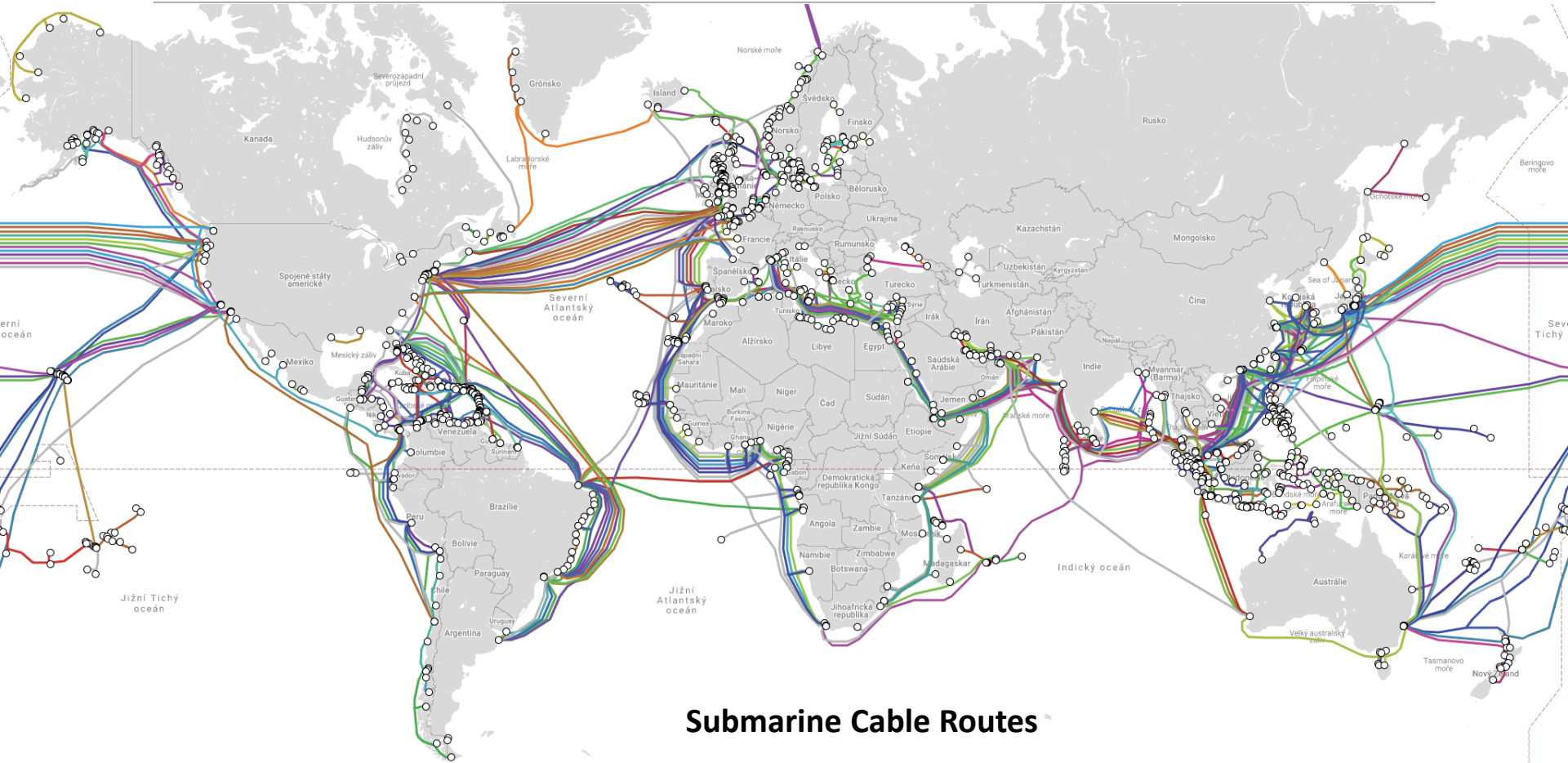
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- = unequal access of individuals, countries or groups of countries to technology and information
- Causes:
  - Physical unavailability of modern technologies
  - Lack of knowledge or skills





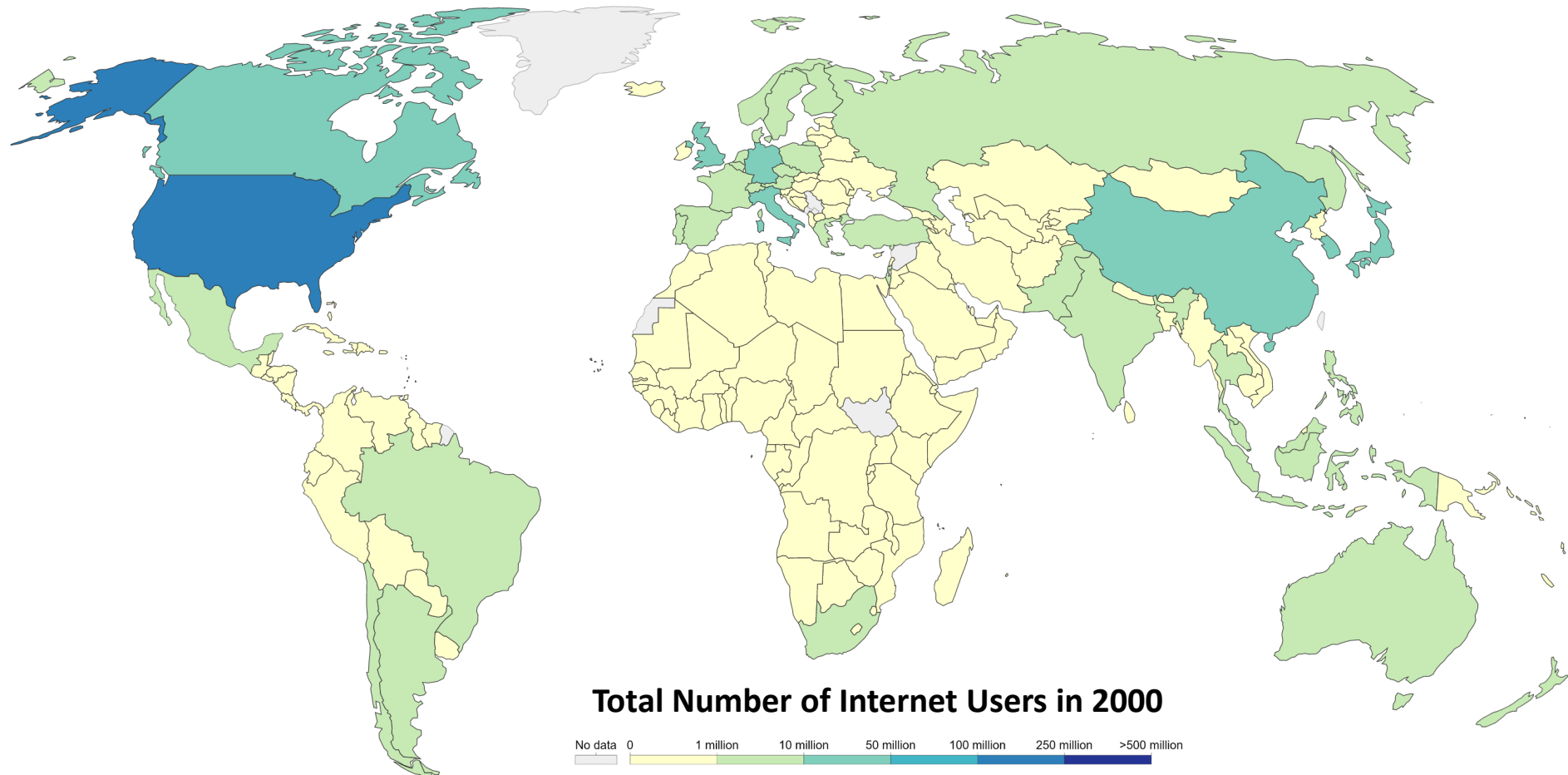
# Digital Divide



**Submarine Cable Routes**

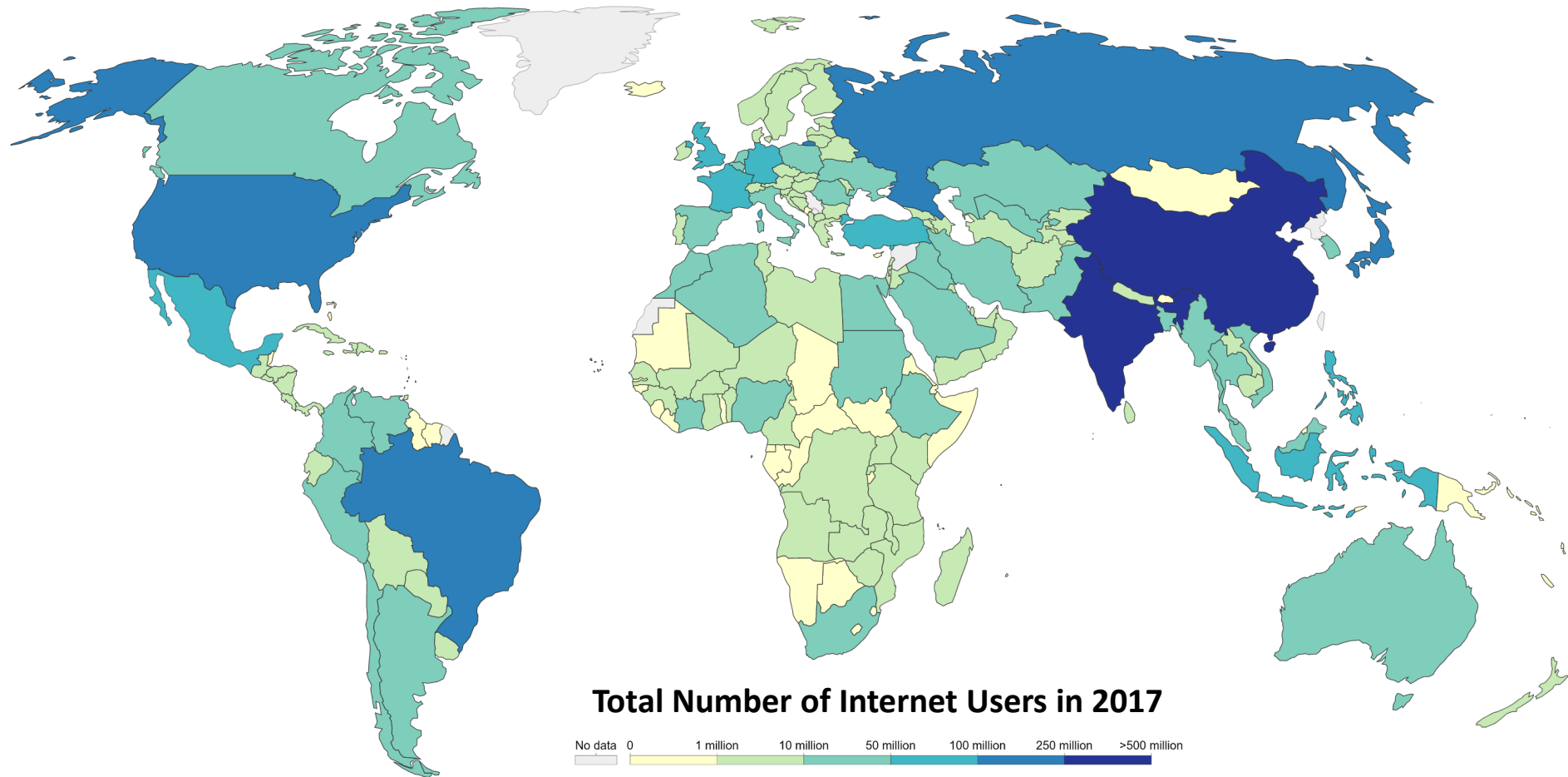
# Digital Divide

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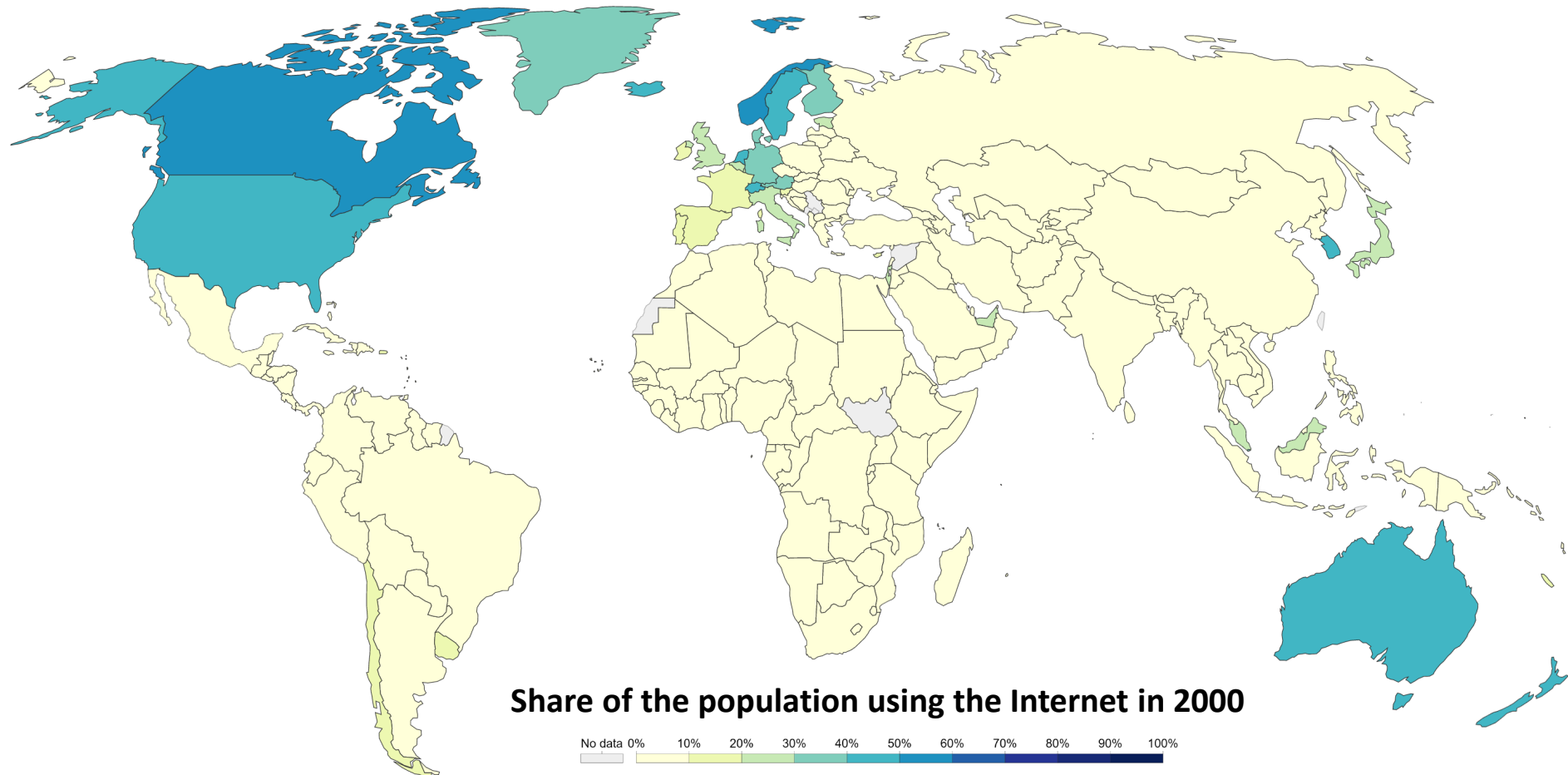
# Digital Divide

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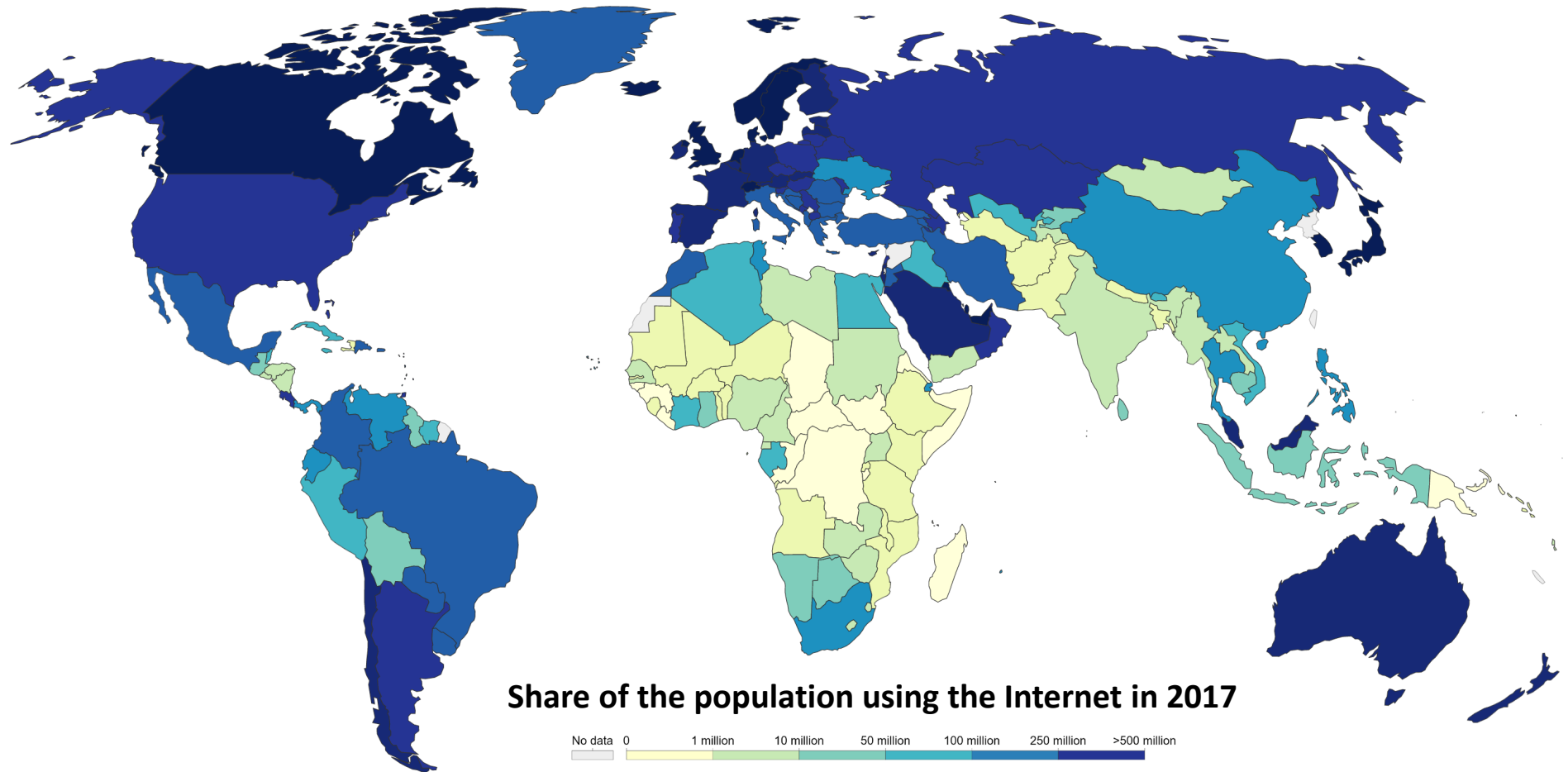
# Digital Divide

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# Digital Divide

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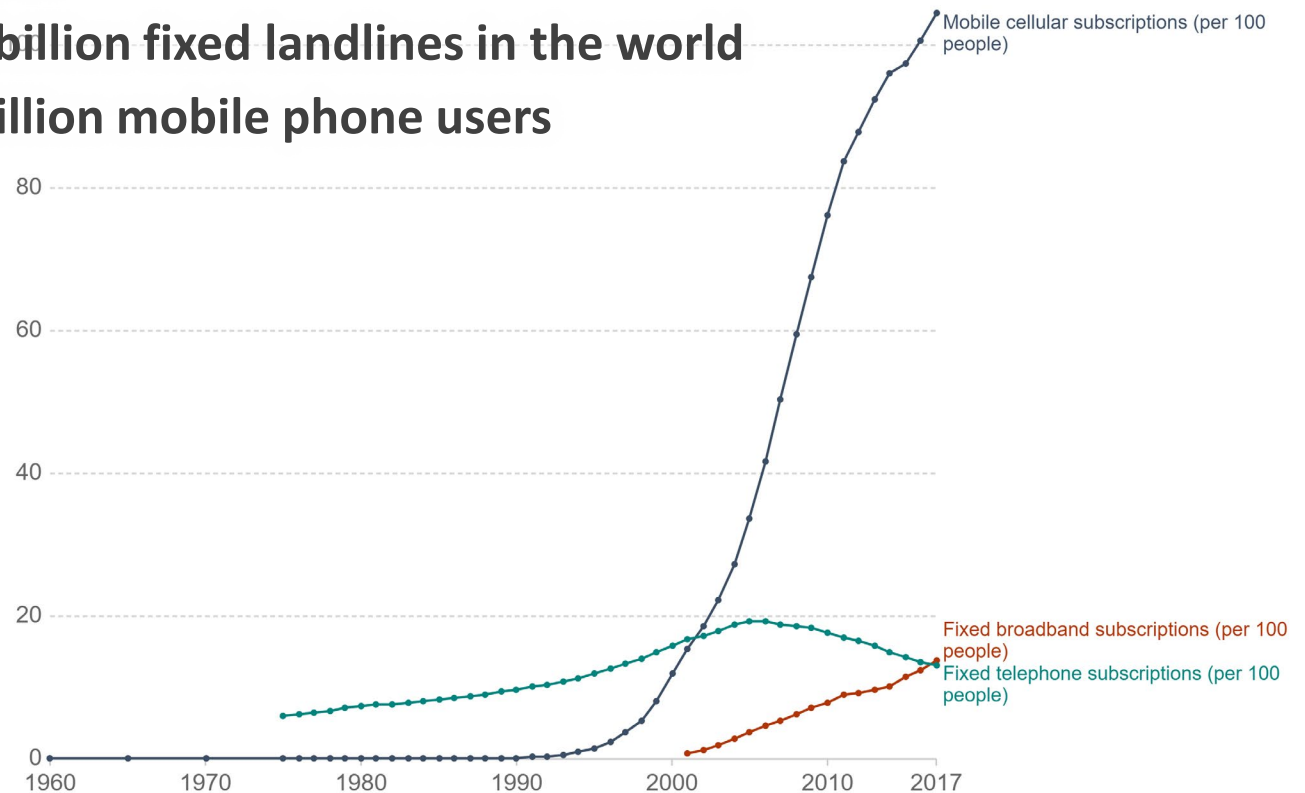


# Digital Divide

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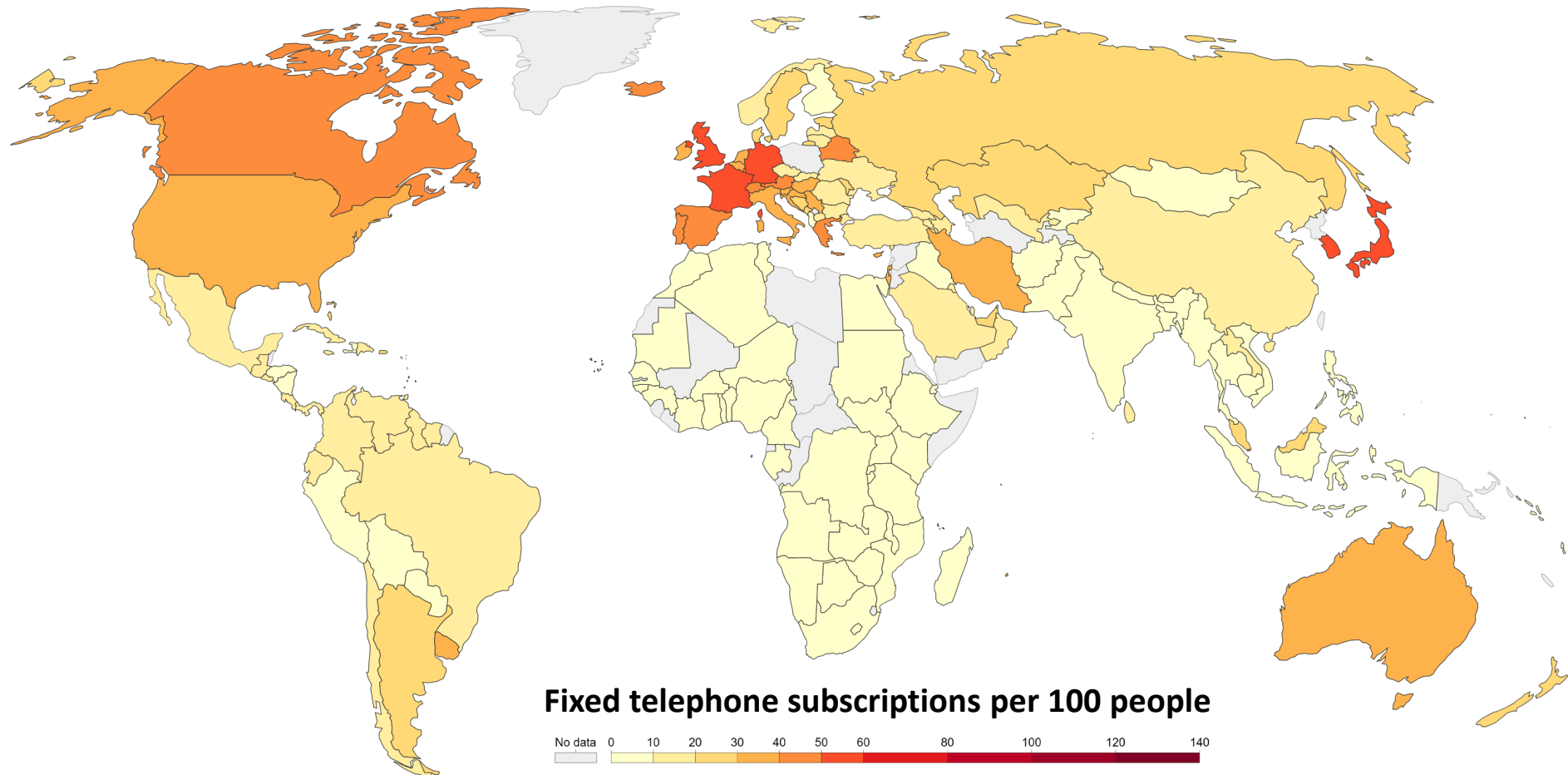
- Today, there are:

- about 1.025 billion fixed landlines in the world
- about 6.95 billion mobile phone users



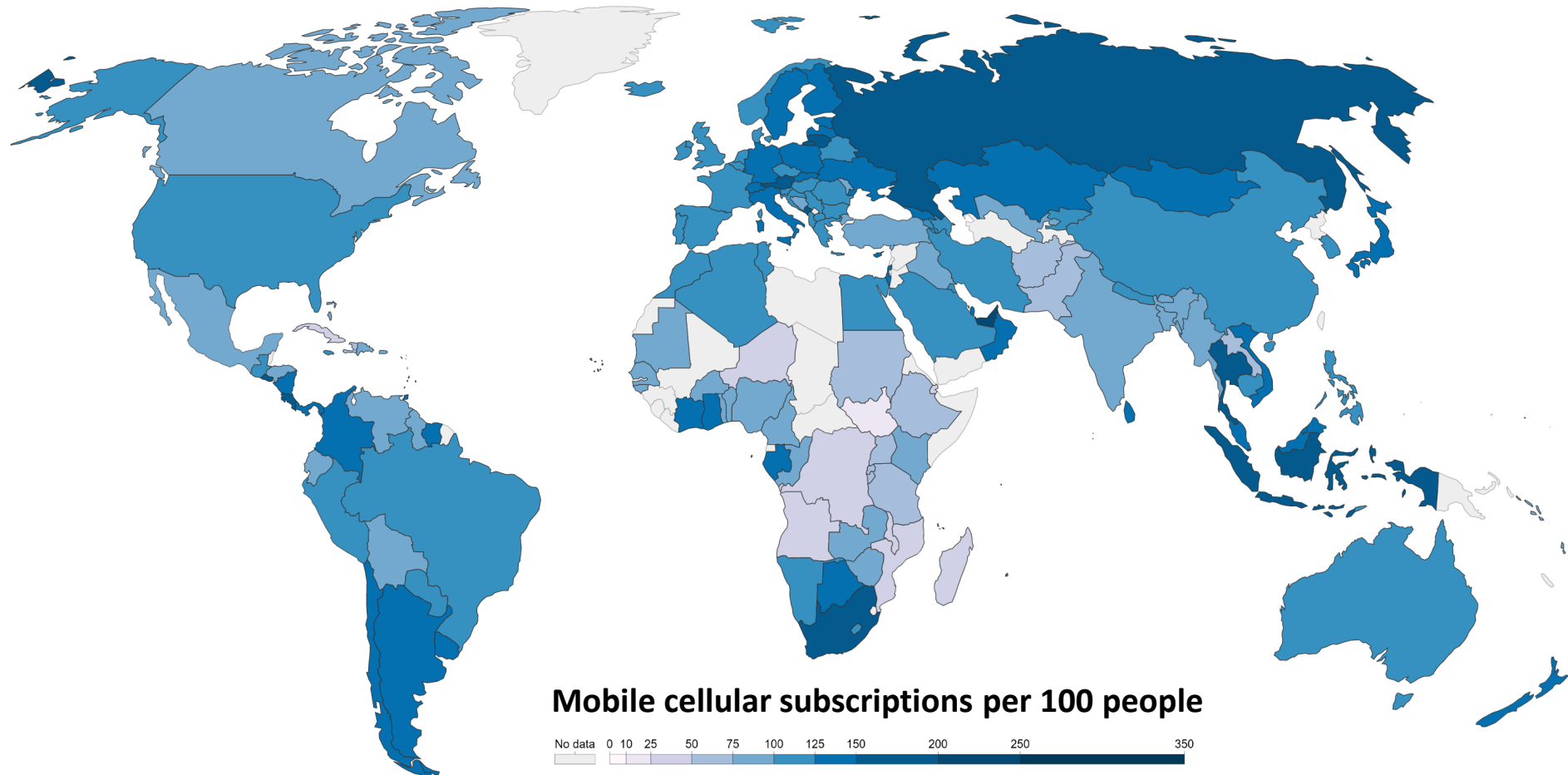
# Digital Divide

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# Digital Divide

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# Society-Society Conflict

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# Poverty & Social Inequality

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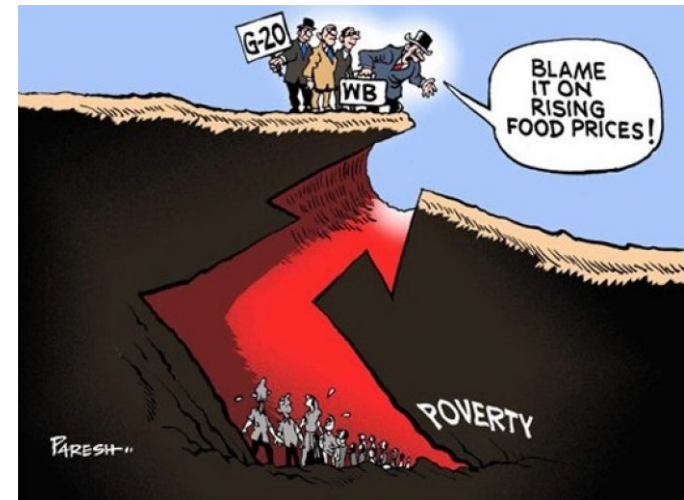
- **Poverty** = lack of financial means to provide basic needs, poverty has also a social, health, and education dimension
- Poverty → undernourishment → child mortality, health issues
- Poverty → absenteeing during education → illiteracy
- Poverty → lack of the private sector → unemployment
- Poverty → economic migration → urbanization & slums



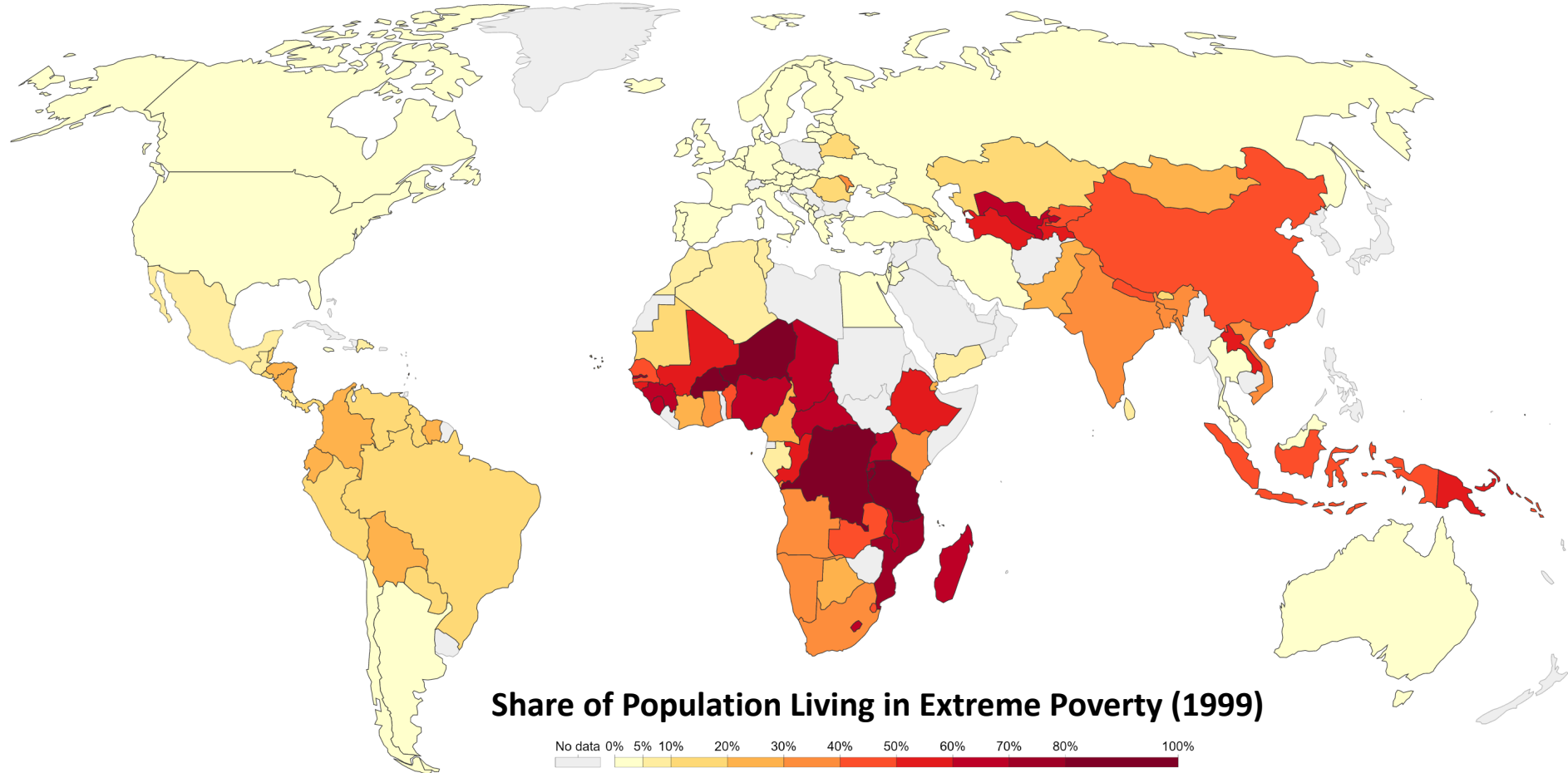
# Defining the Poverty

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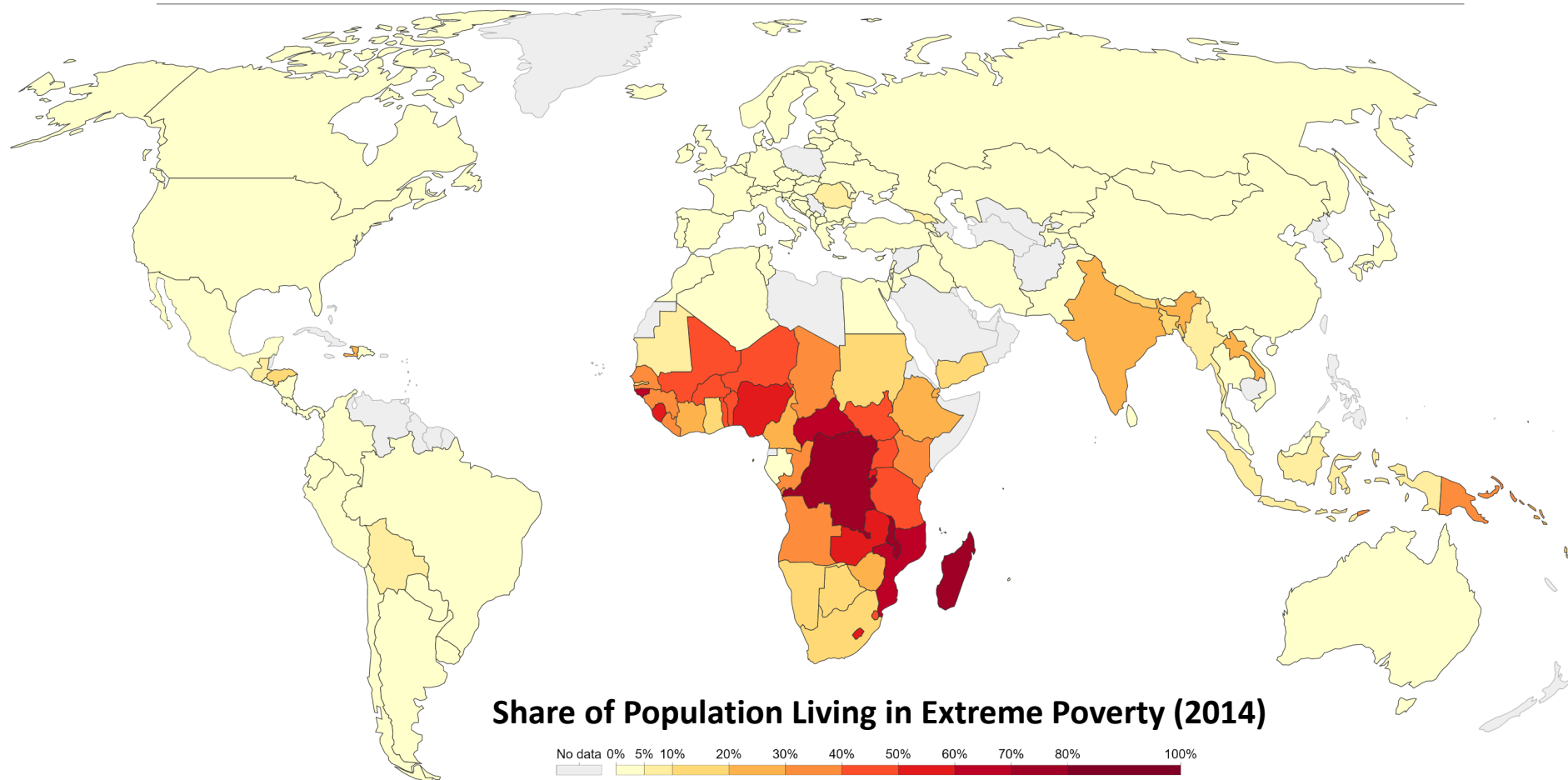
- In 2017, the World Bank updated the **international extreme poverty line**, a global absolute minimum, to **\$1.90 a day** (in constant prices of 2011 = \$2.20 in current prices of 2021), which is the equivalent of \$1.00 a day in 1996 US prices ("living on less than a dollar a day").
- The international poverty line was at the same time set to **\$3.20 a day** (in constant prices of 2011 = \$2.20 in current prices of 2021 = \$3.70 in current prices of 2021).



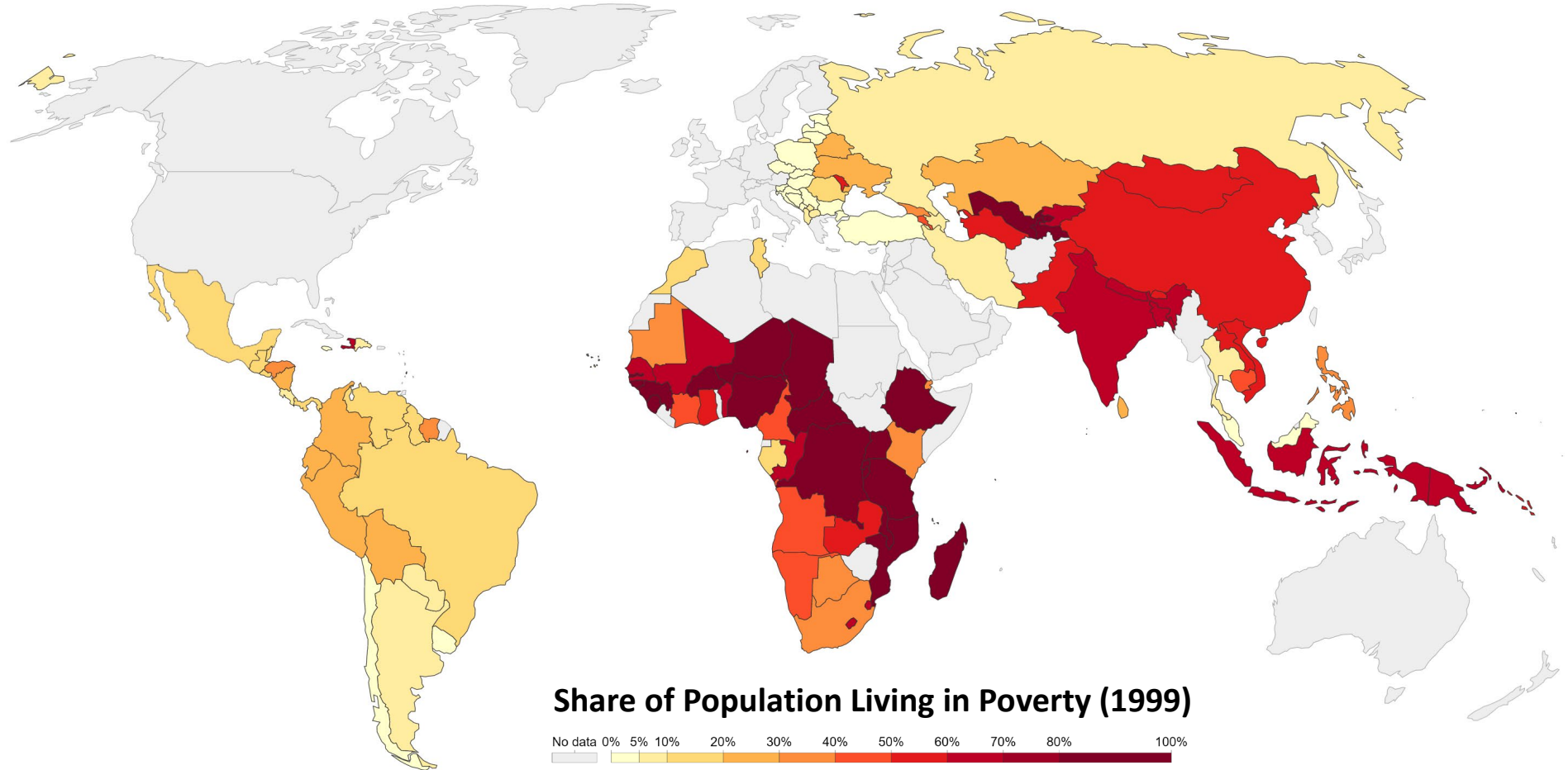
# Extreme Poverty (< \$1.90)



# Extreme Poverty (< \$1.90)

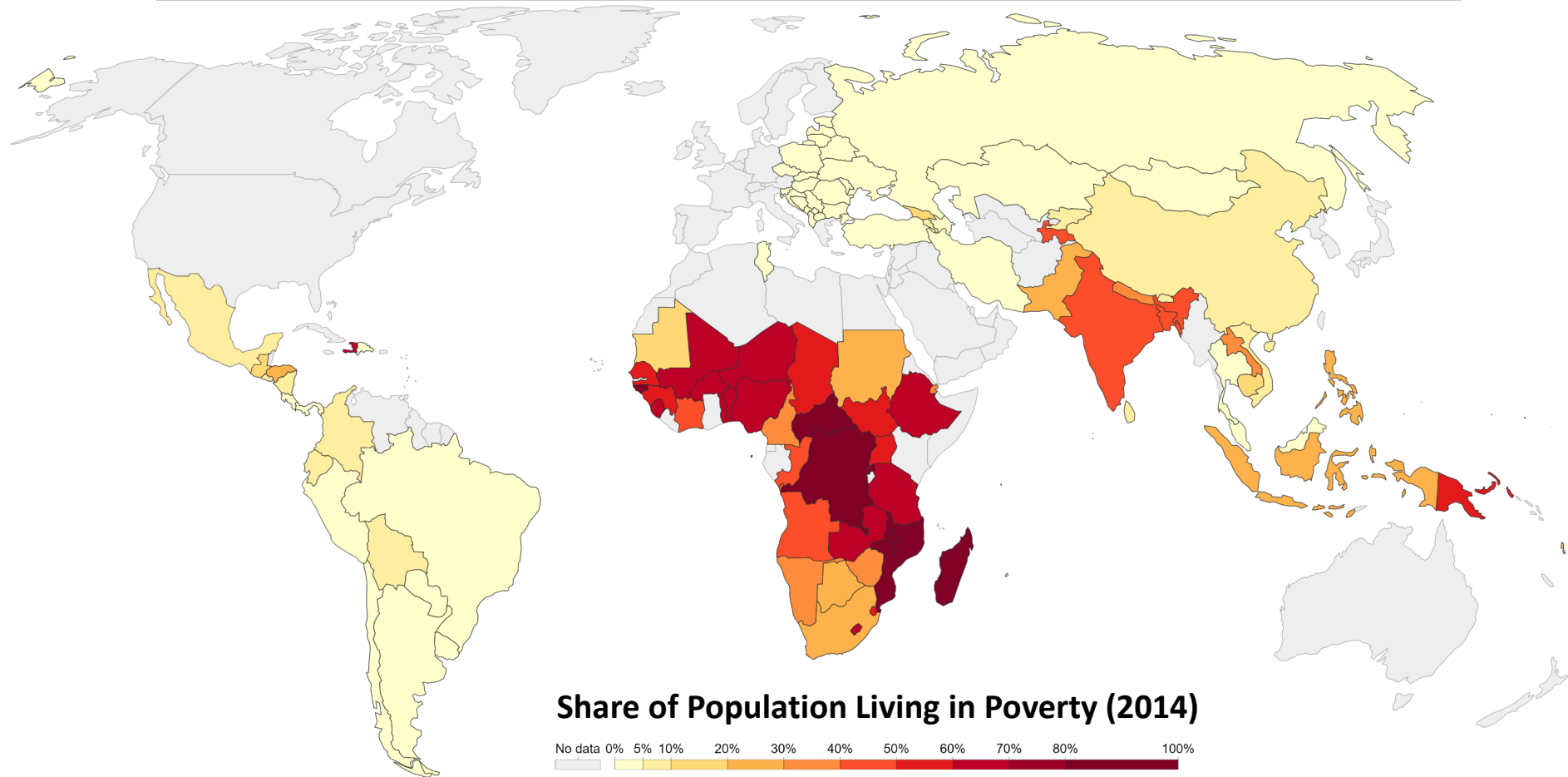


# Poverty (< \$3.20)



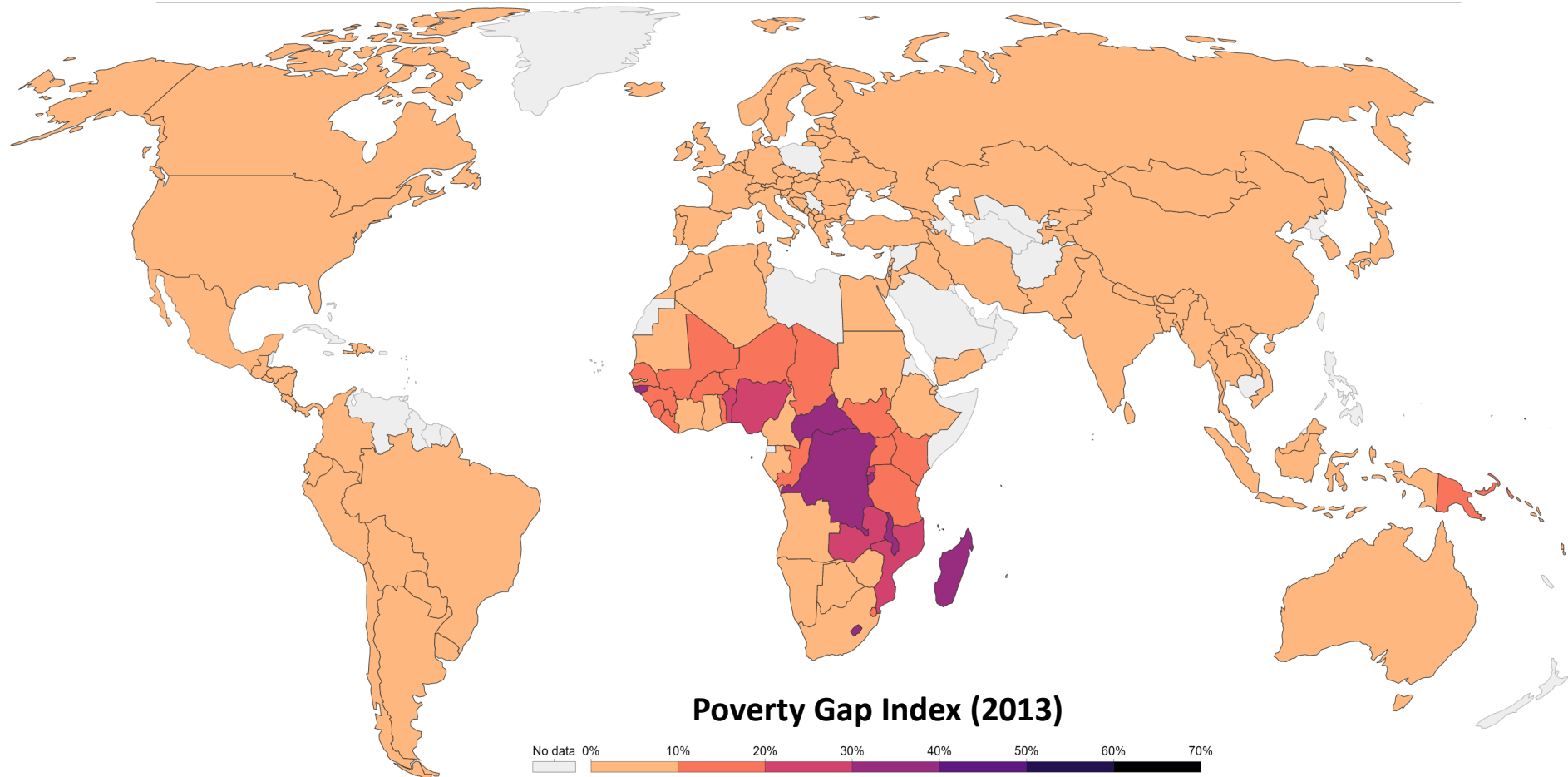


# Poverty (< \$3.20)



# Poverty Gap

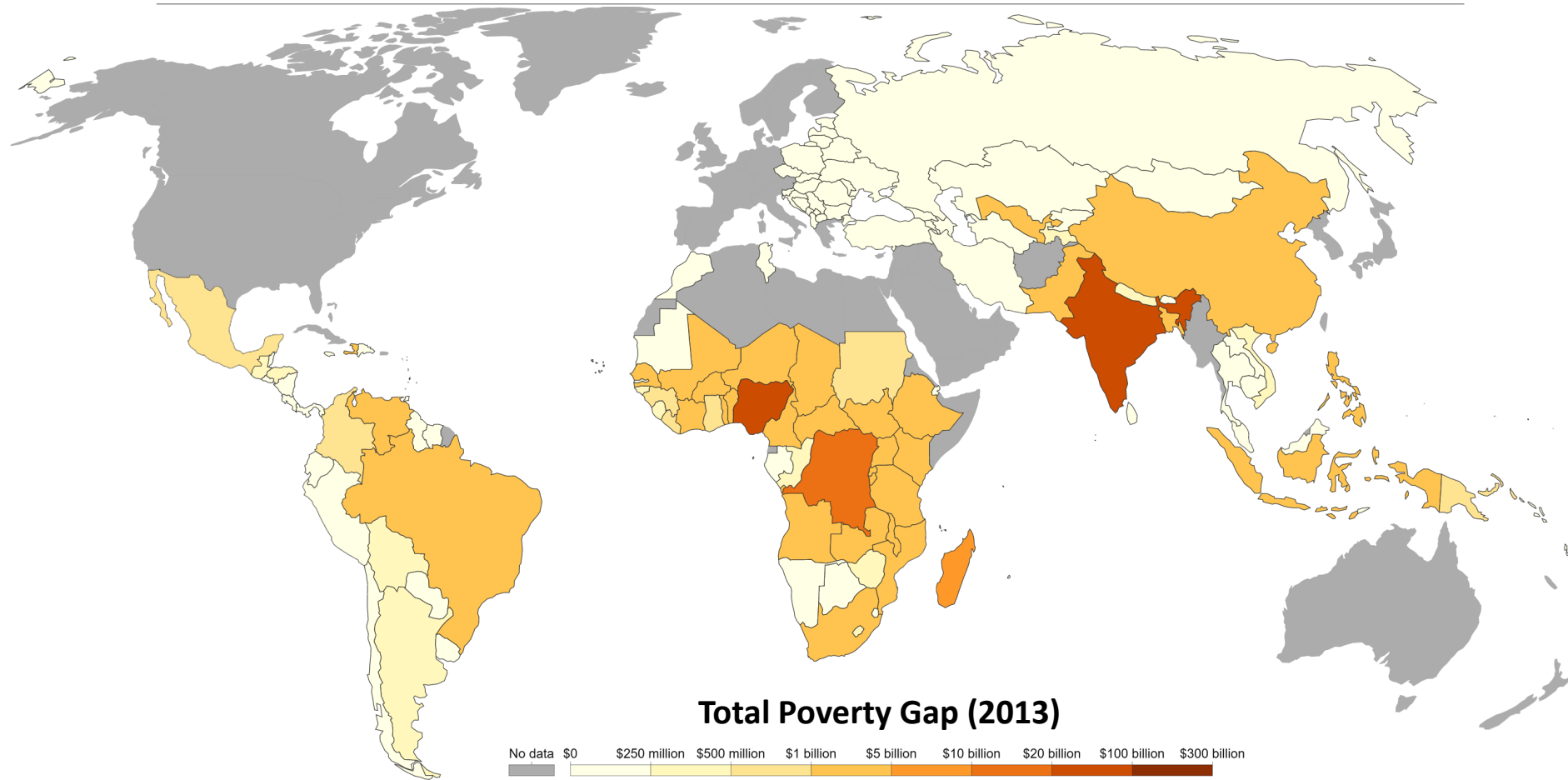
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# Poverty Gap

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# Poverty Trap

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= Vicious Circle of Poverty

- **Low GNI**

- ⇒ Low level of savings

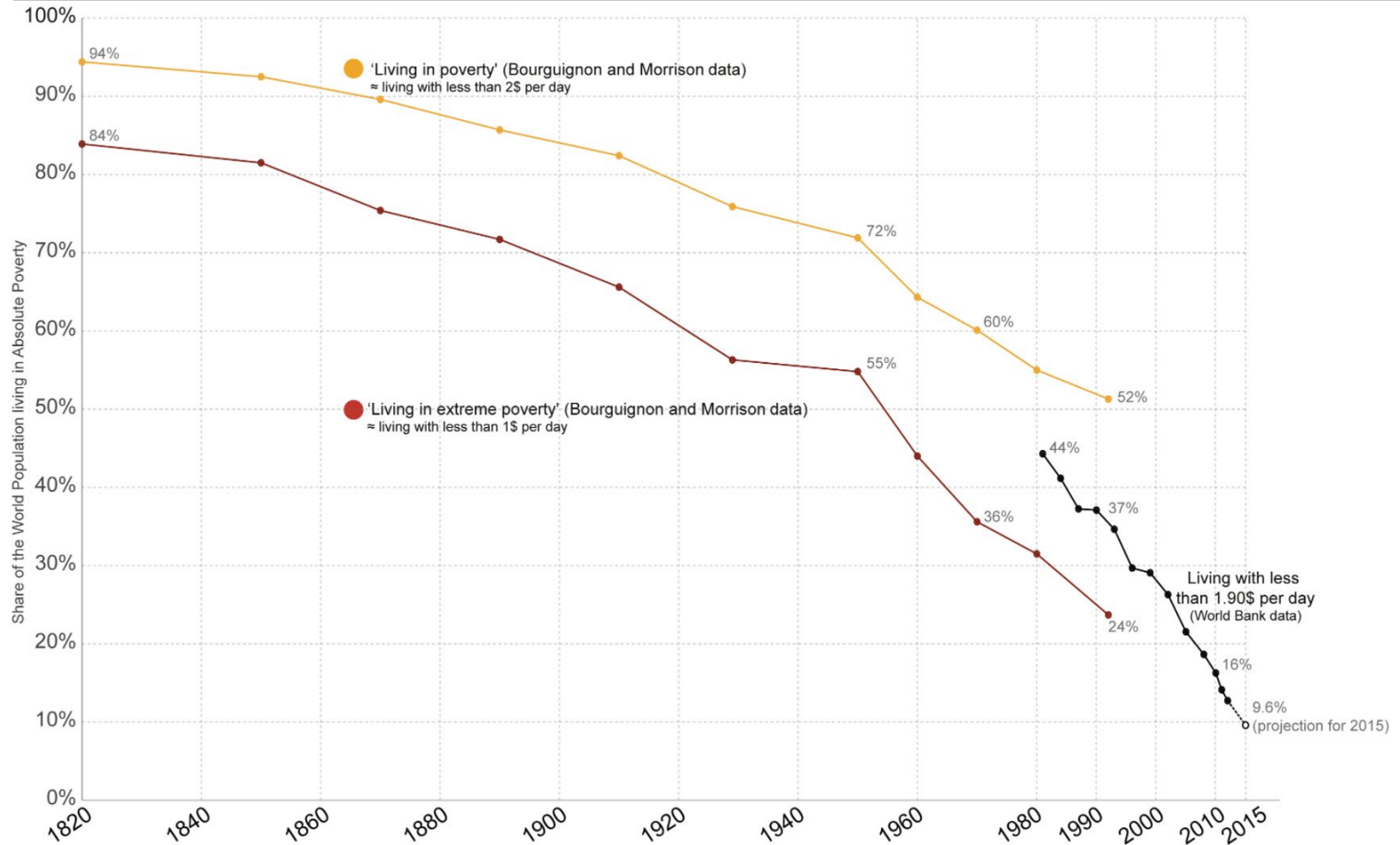
- ⇒ Low gross capital formation

- ⇒ Low labour productivity

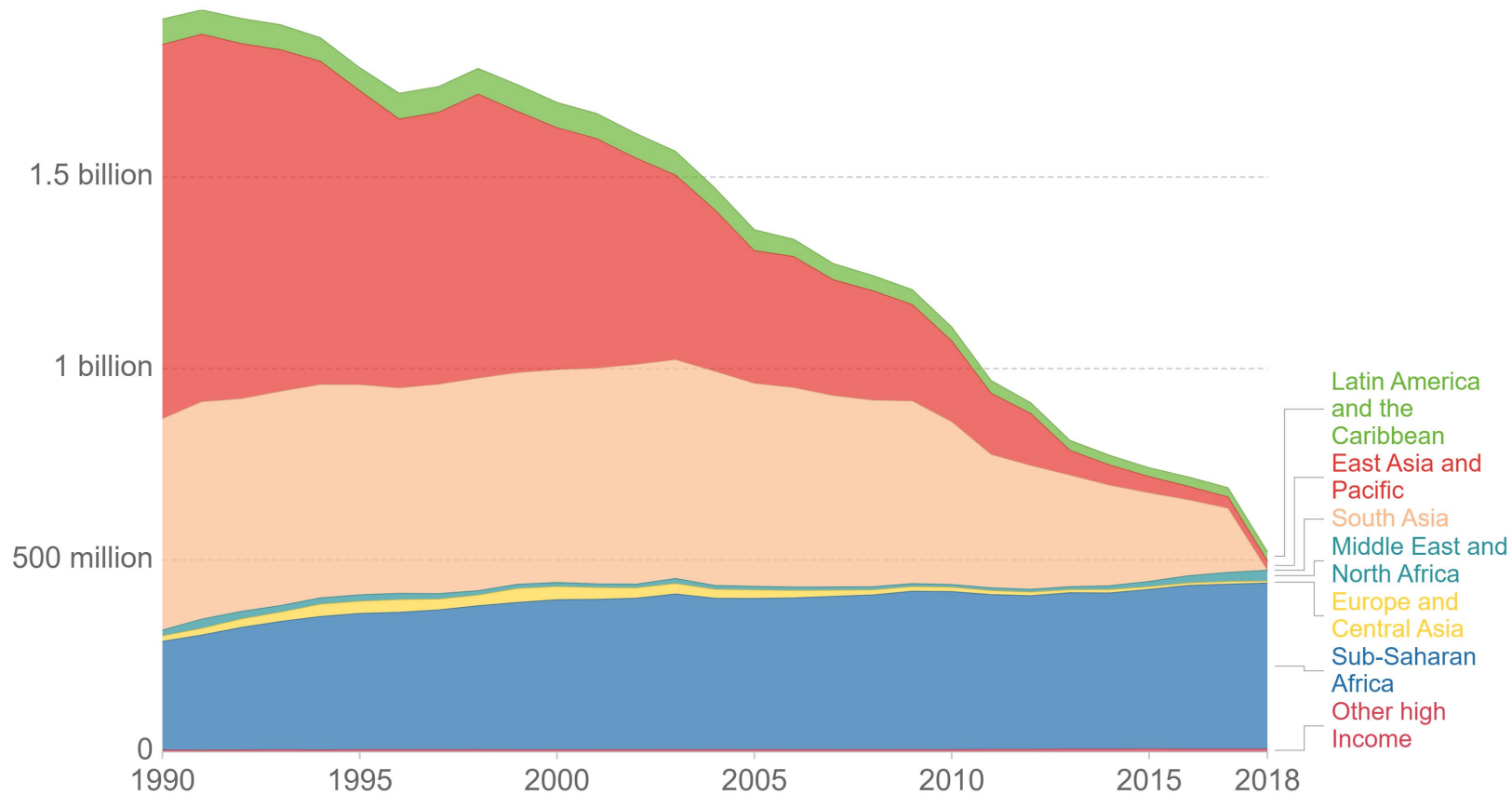
- **Low GNI**



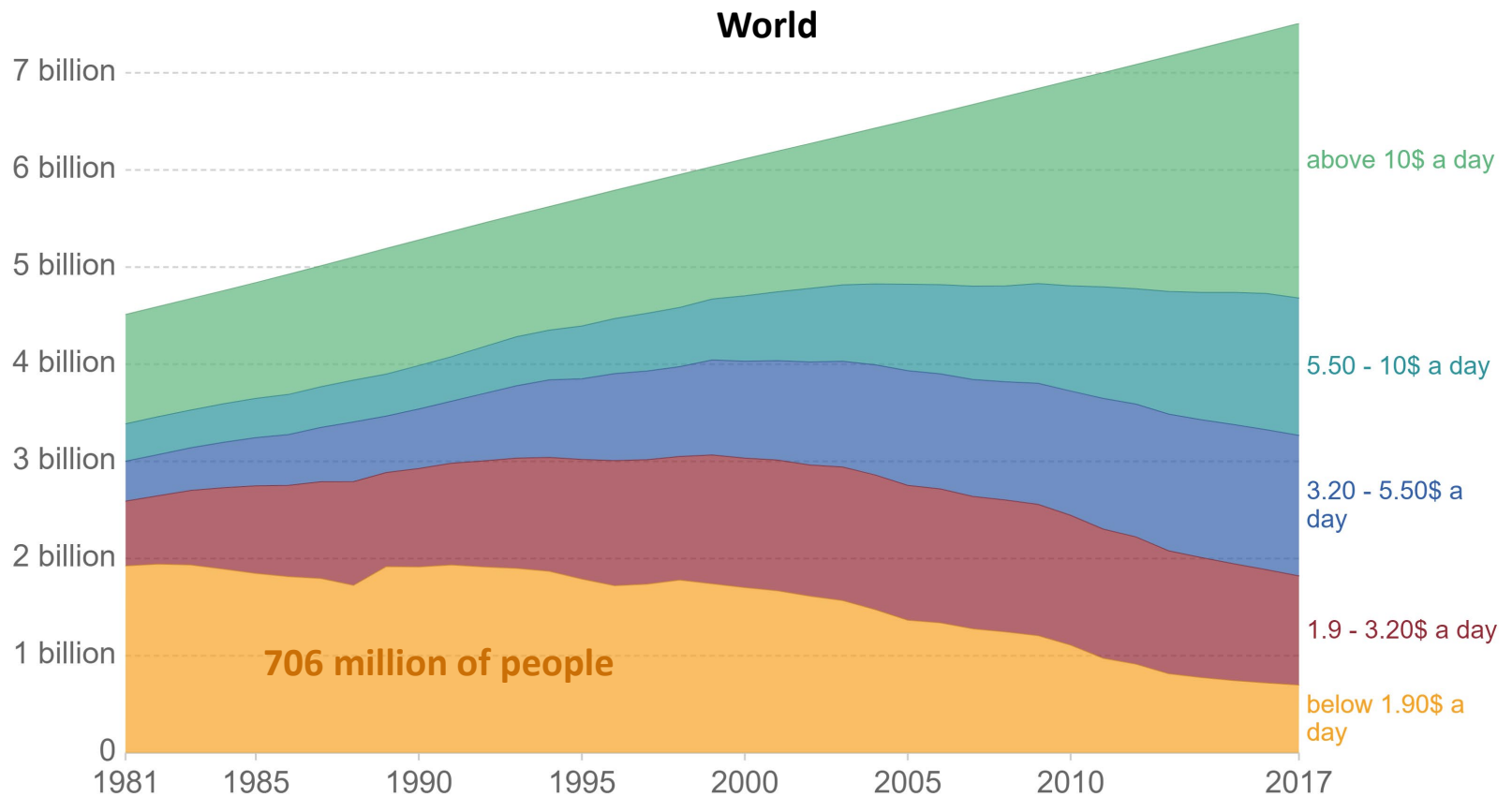
# Extreme Poverty



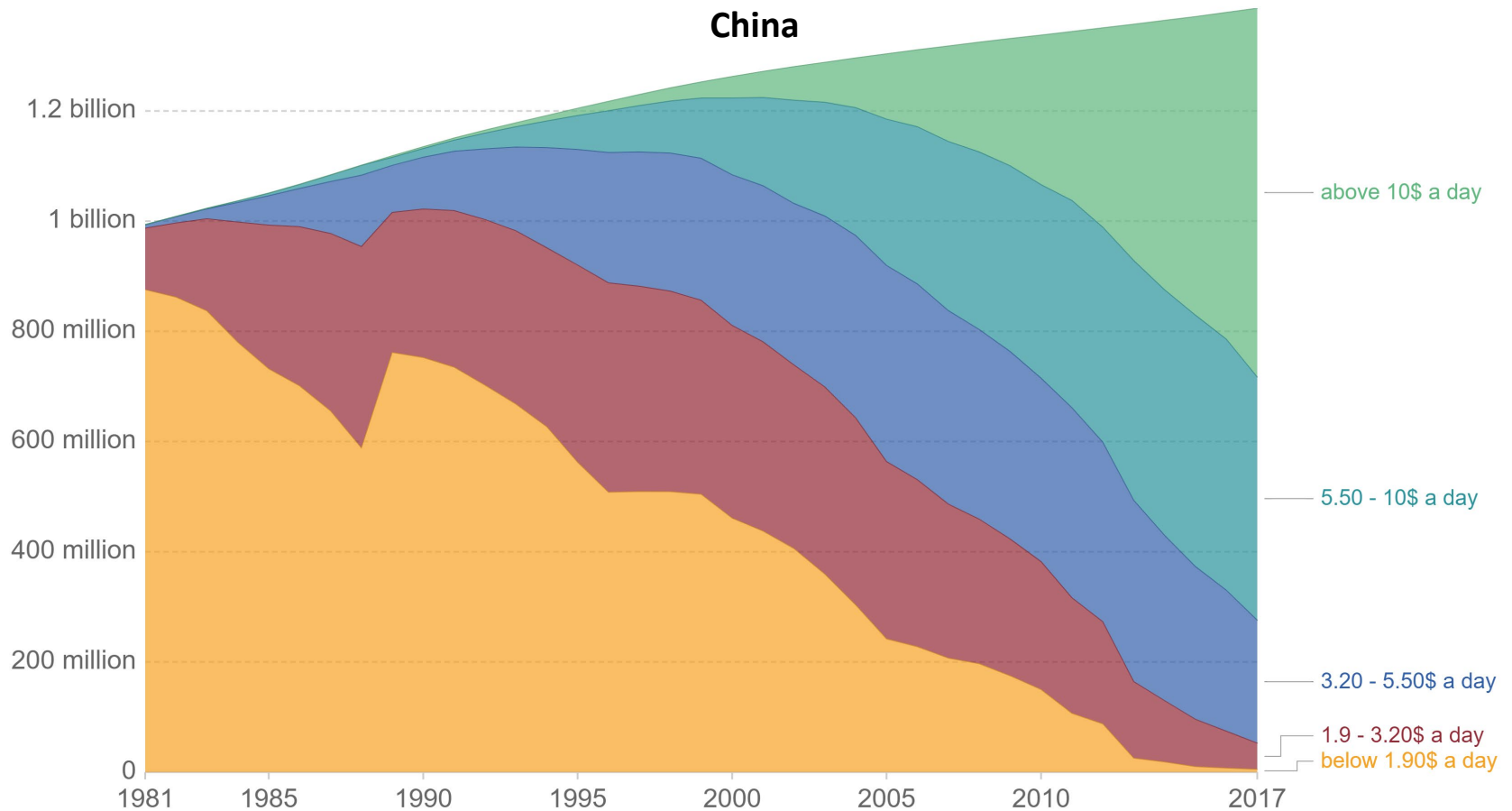
# Extreme Poverty



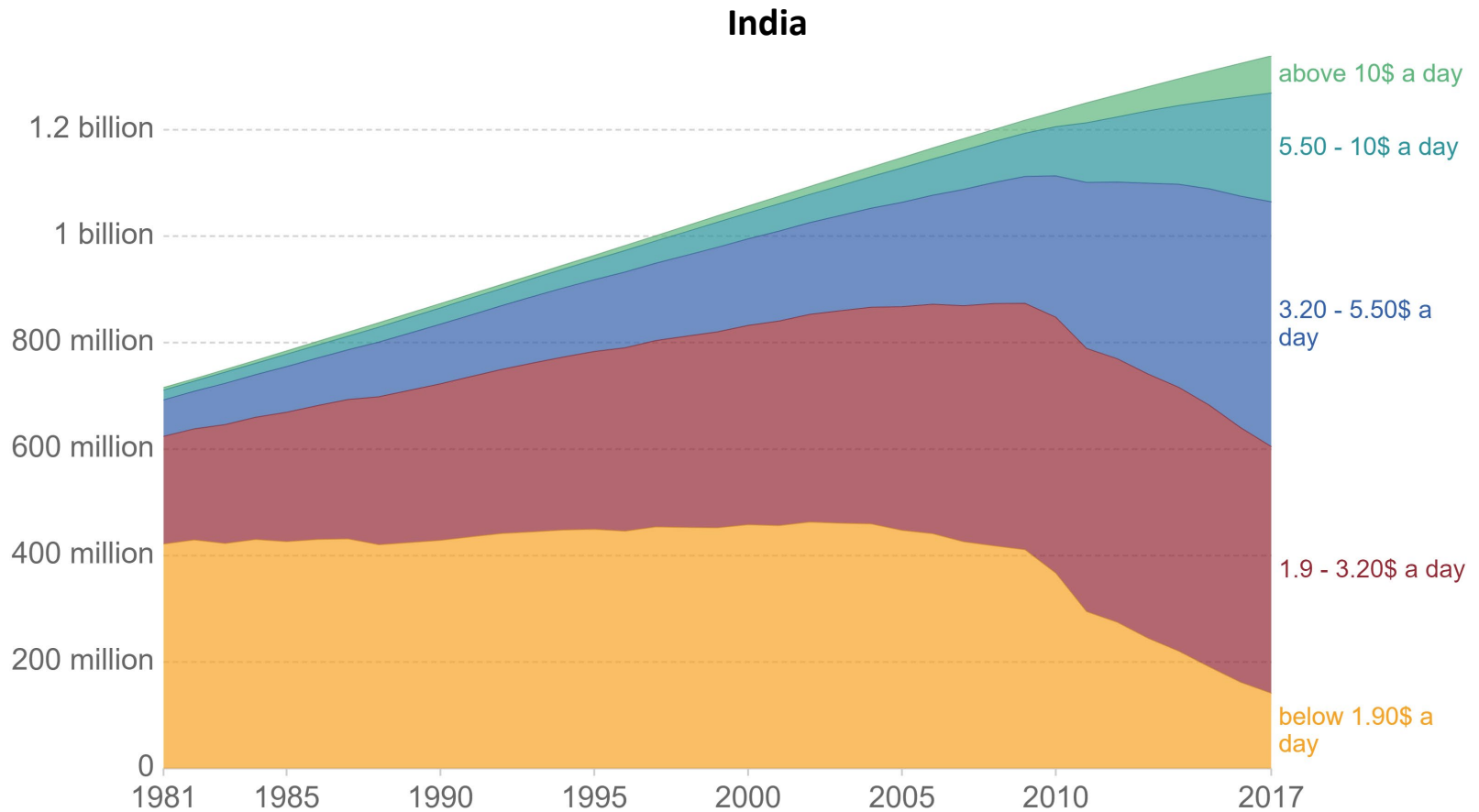
# Different Poverty Thresholds



# Different Poverty Thresholds



# Different Poverty Thresholds



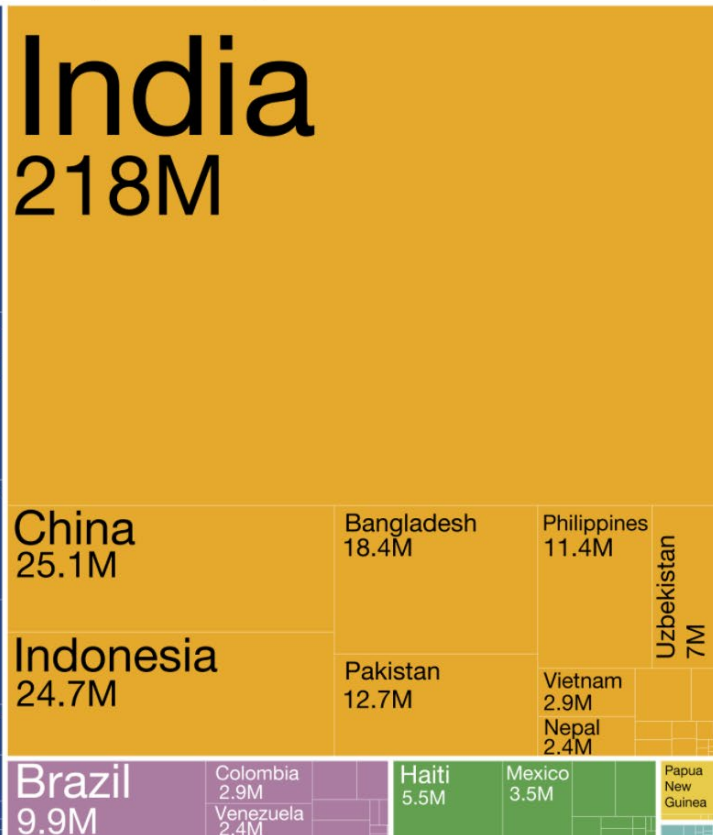


# Distribution of Extreme Poverty

Africa (383 million)

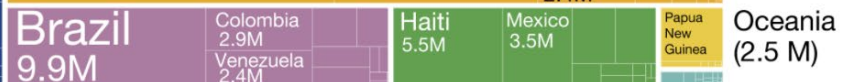


Asia (327 million)



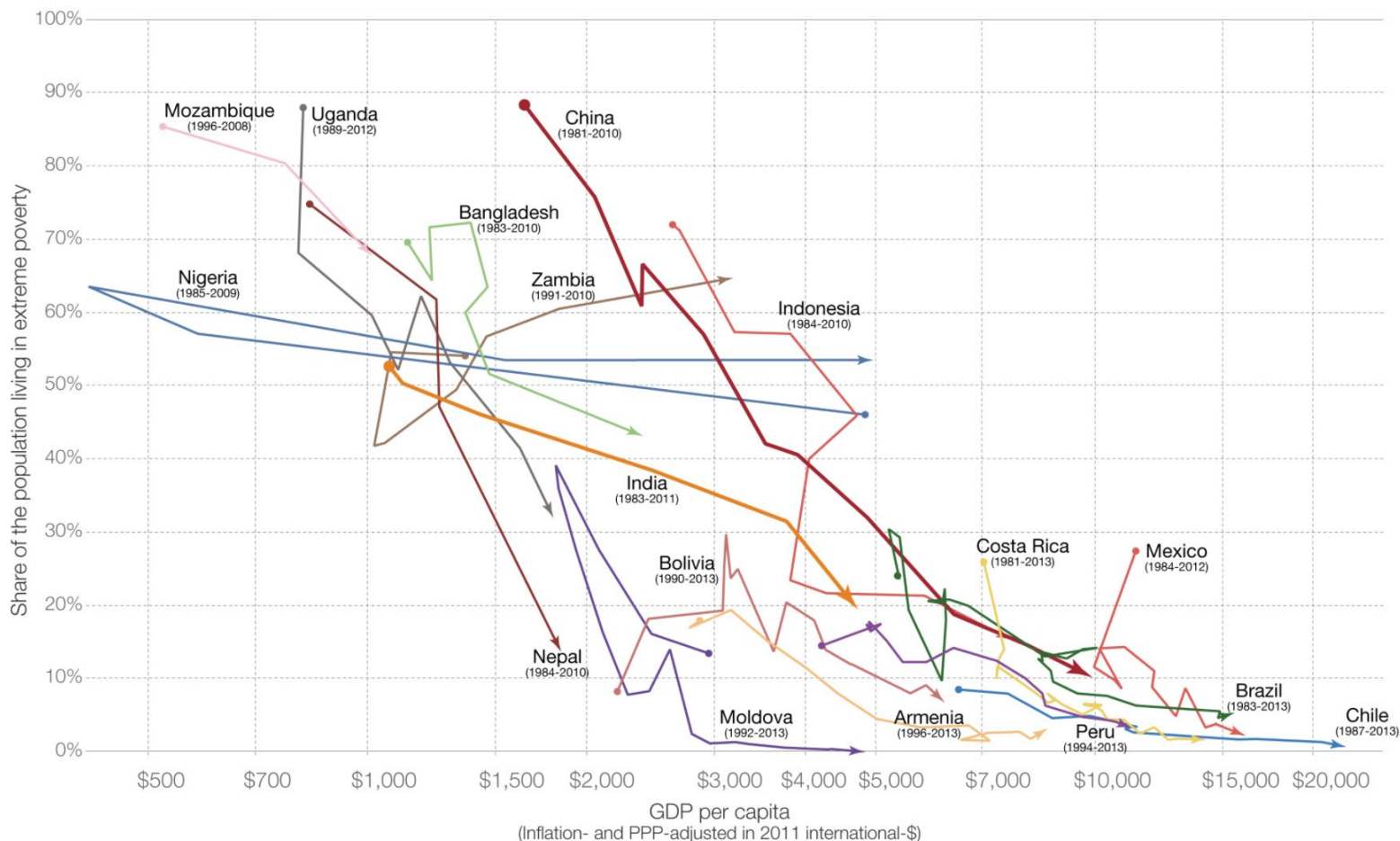
South America (19M)

North America (13M) Europe (0.7M)

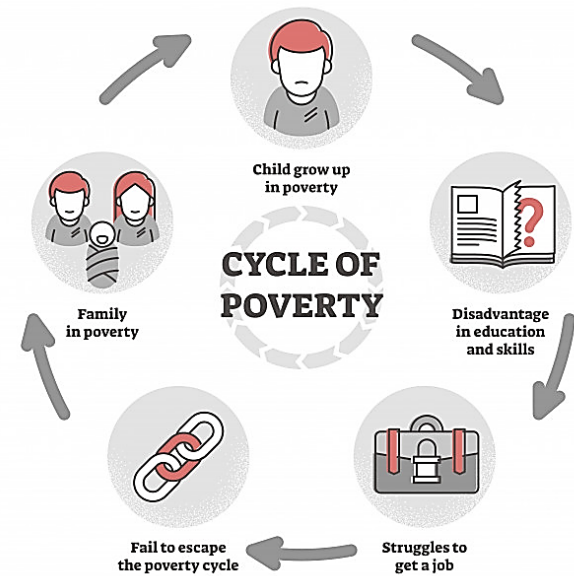
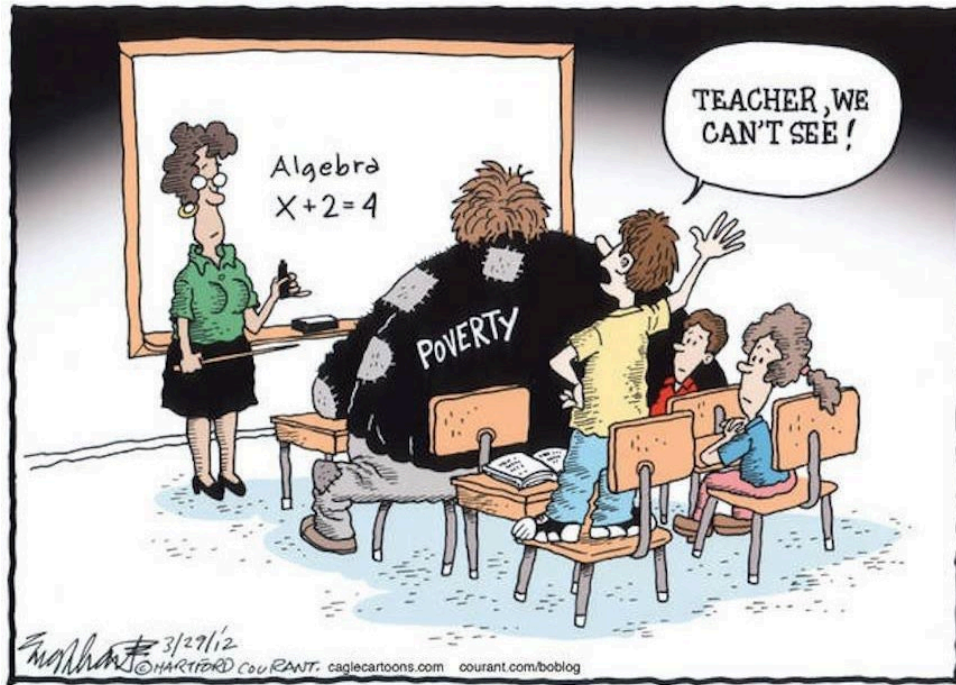




# Extreme Poverty vs. GDP

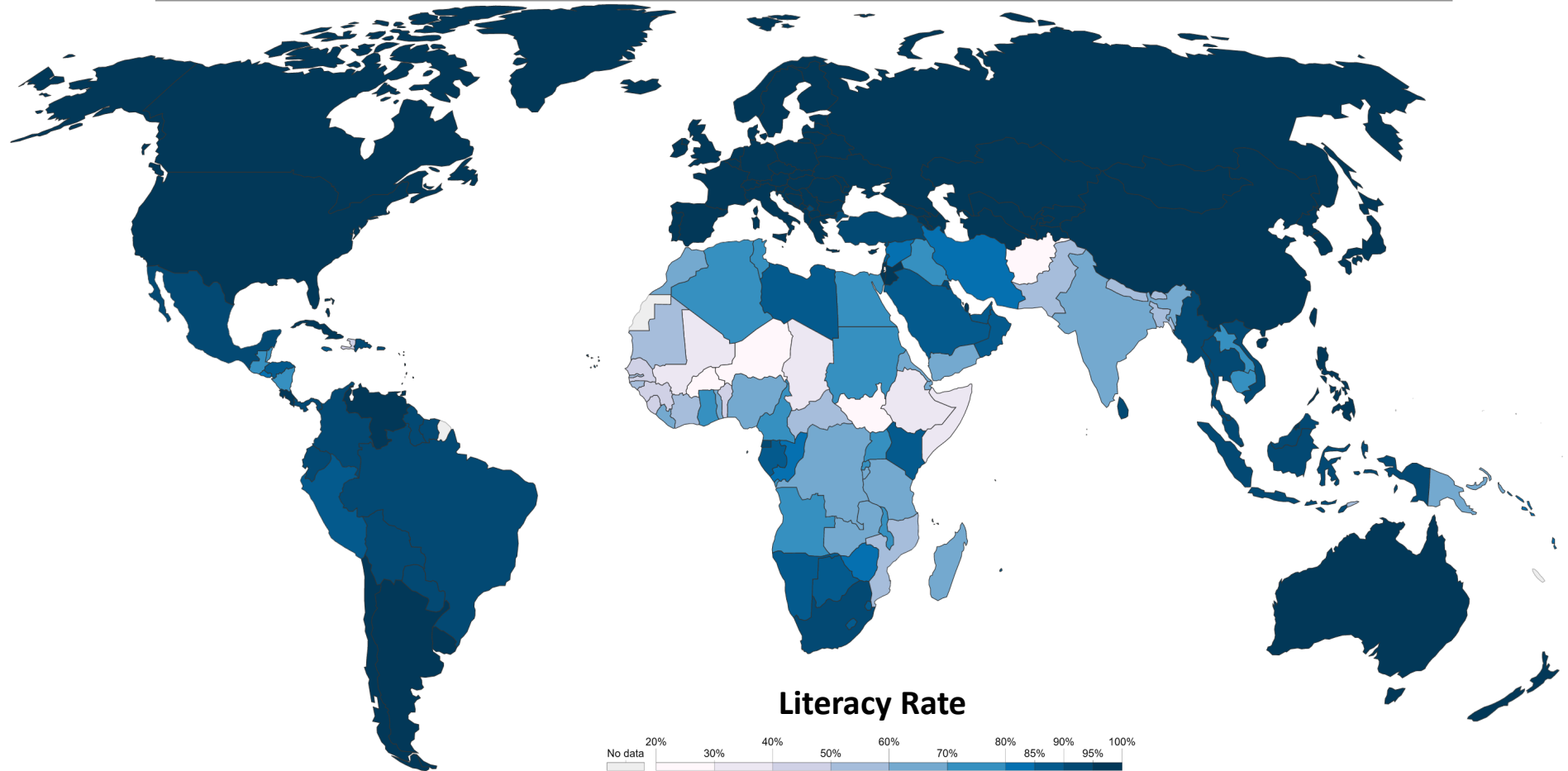


# Access to Education

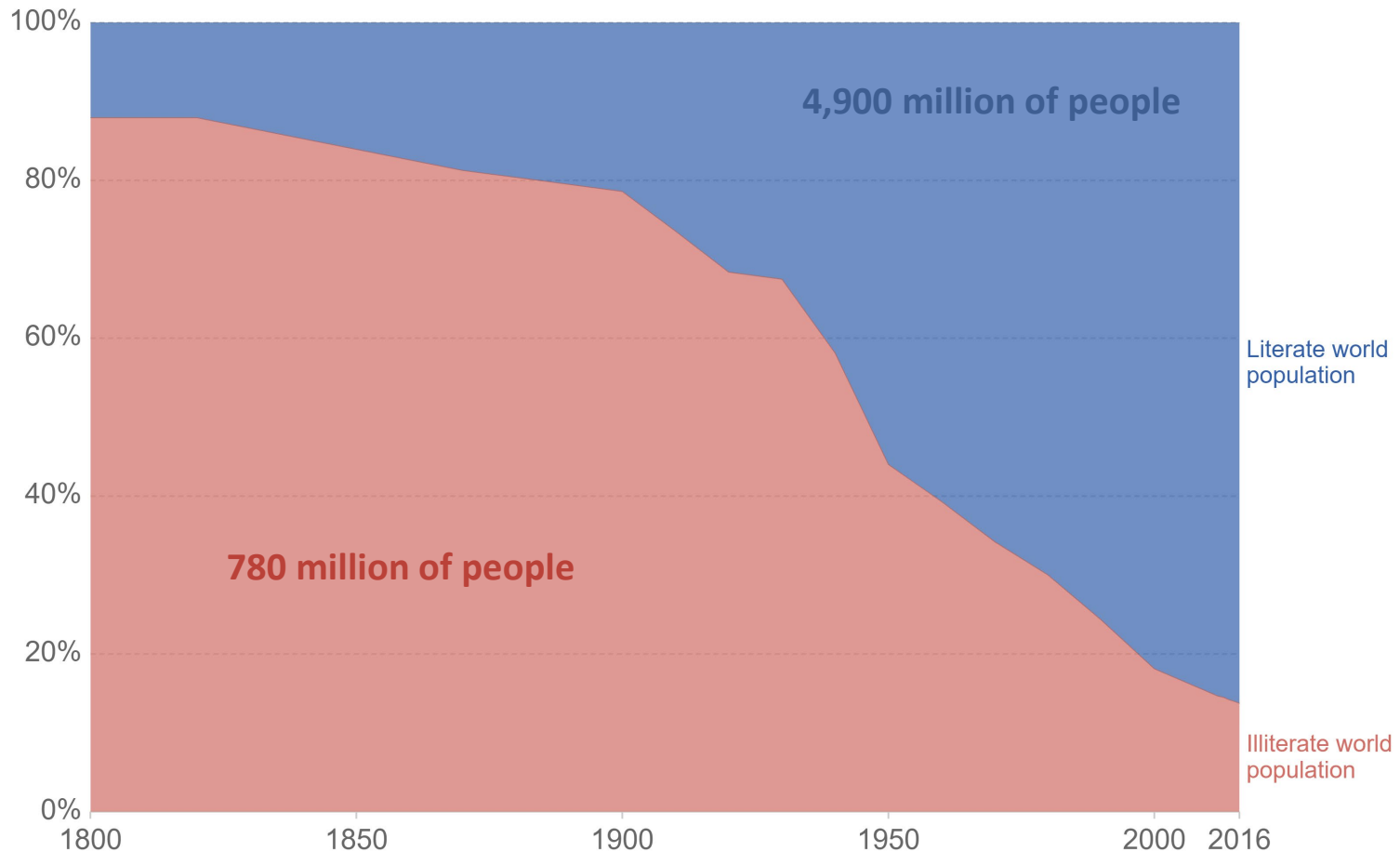


# Literacy Rate

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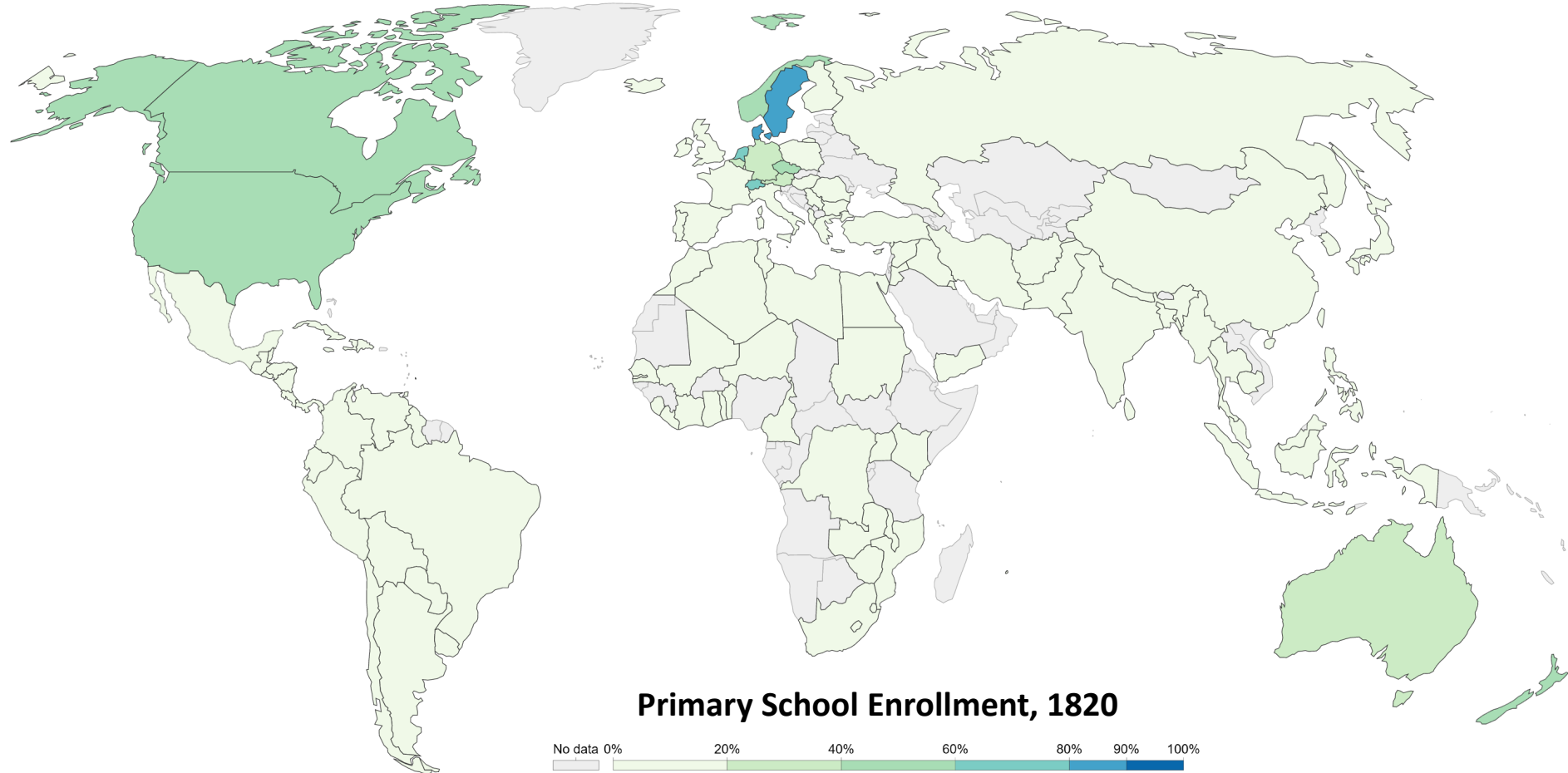


# Literacy vs. Illiteracy



# Primary School Enrollment

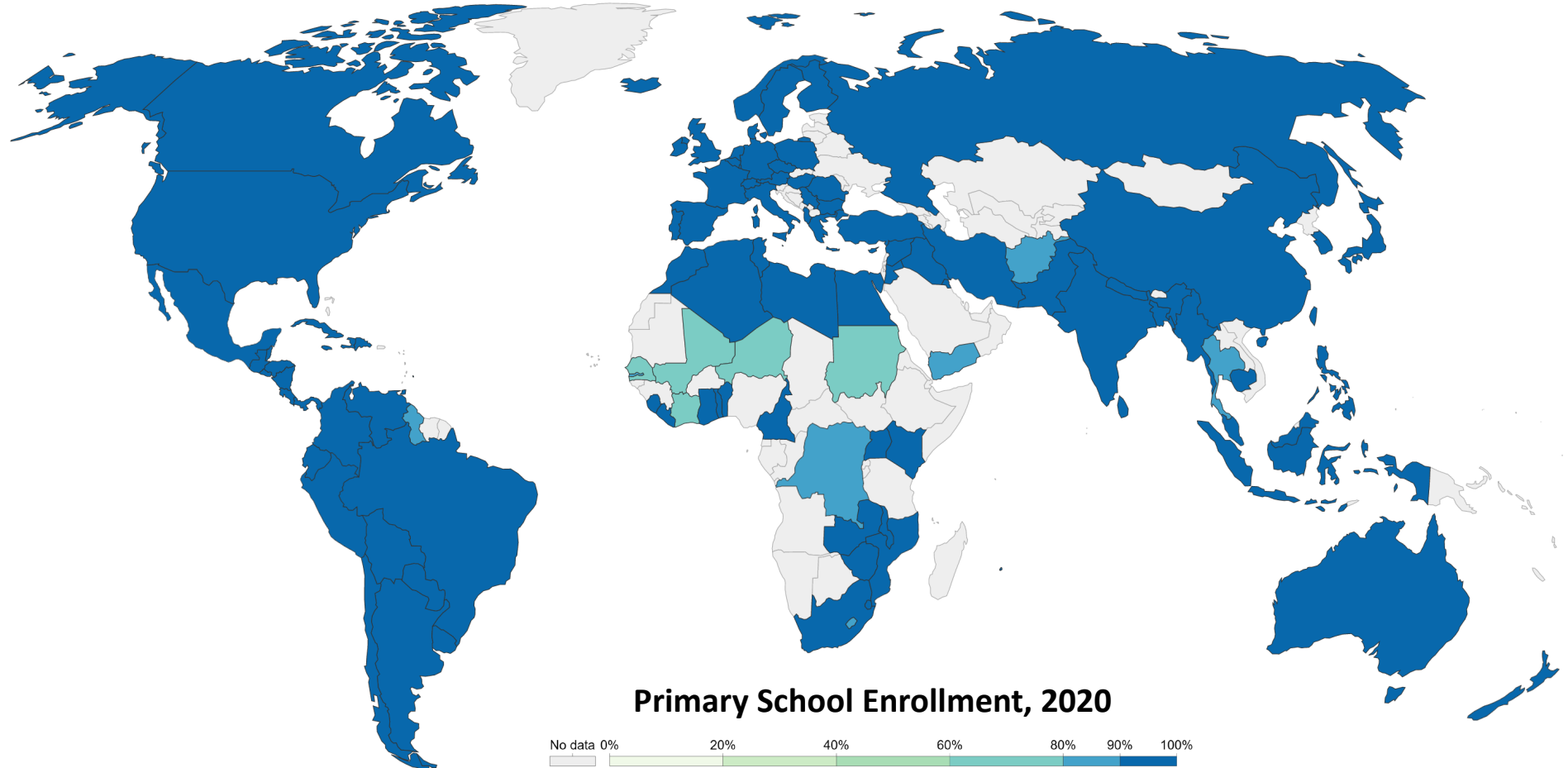
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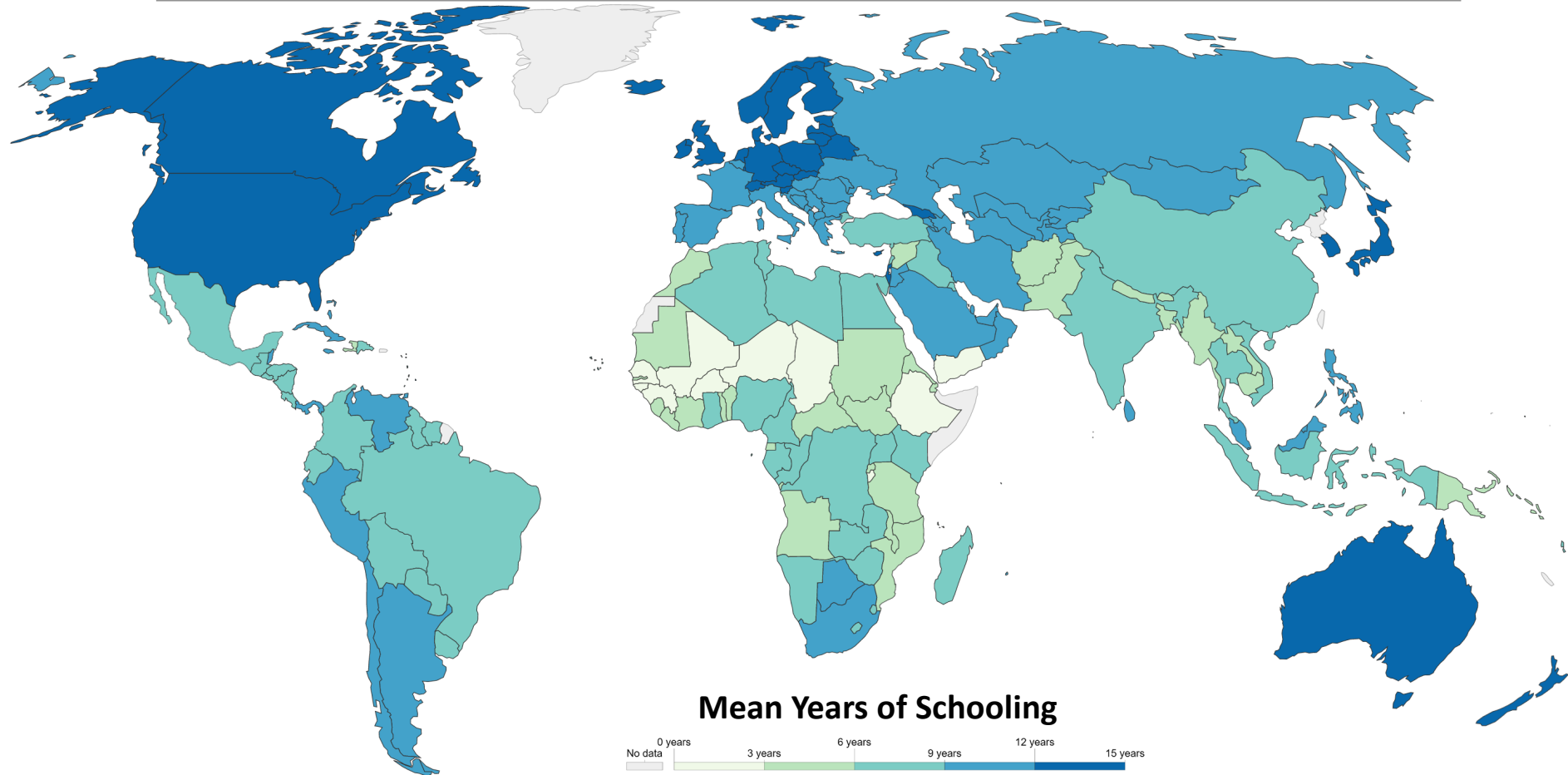
# Primary School Enrollment

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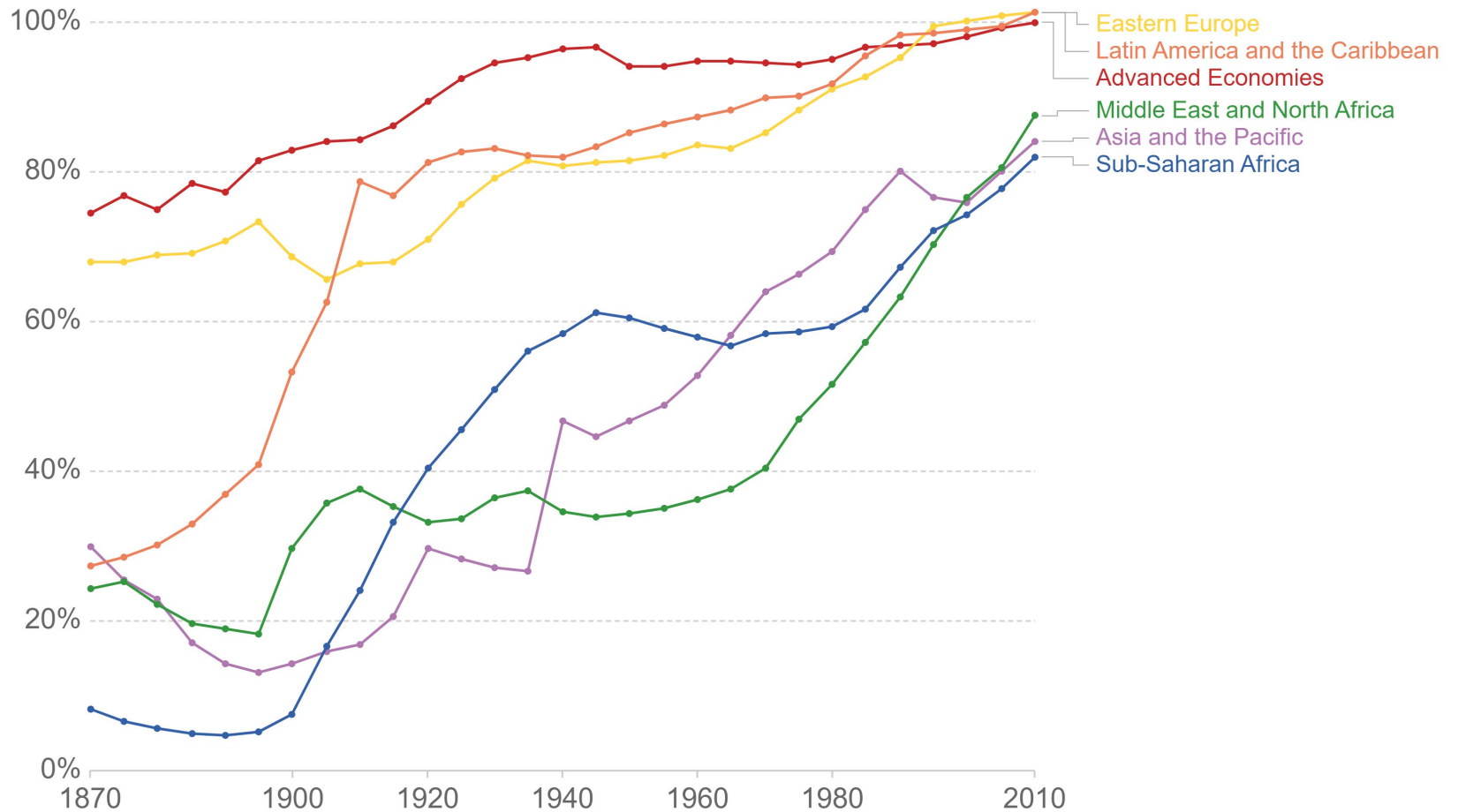
# Mean Years of Schooling

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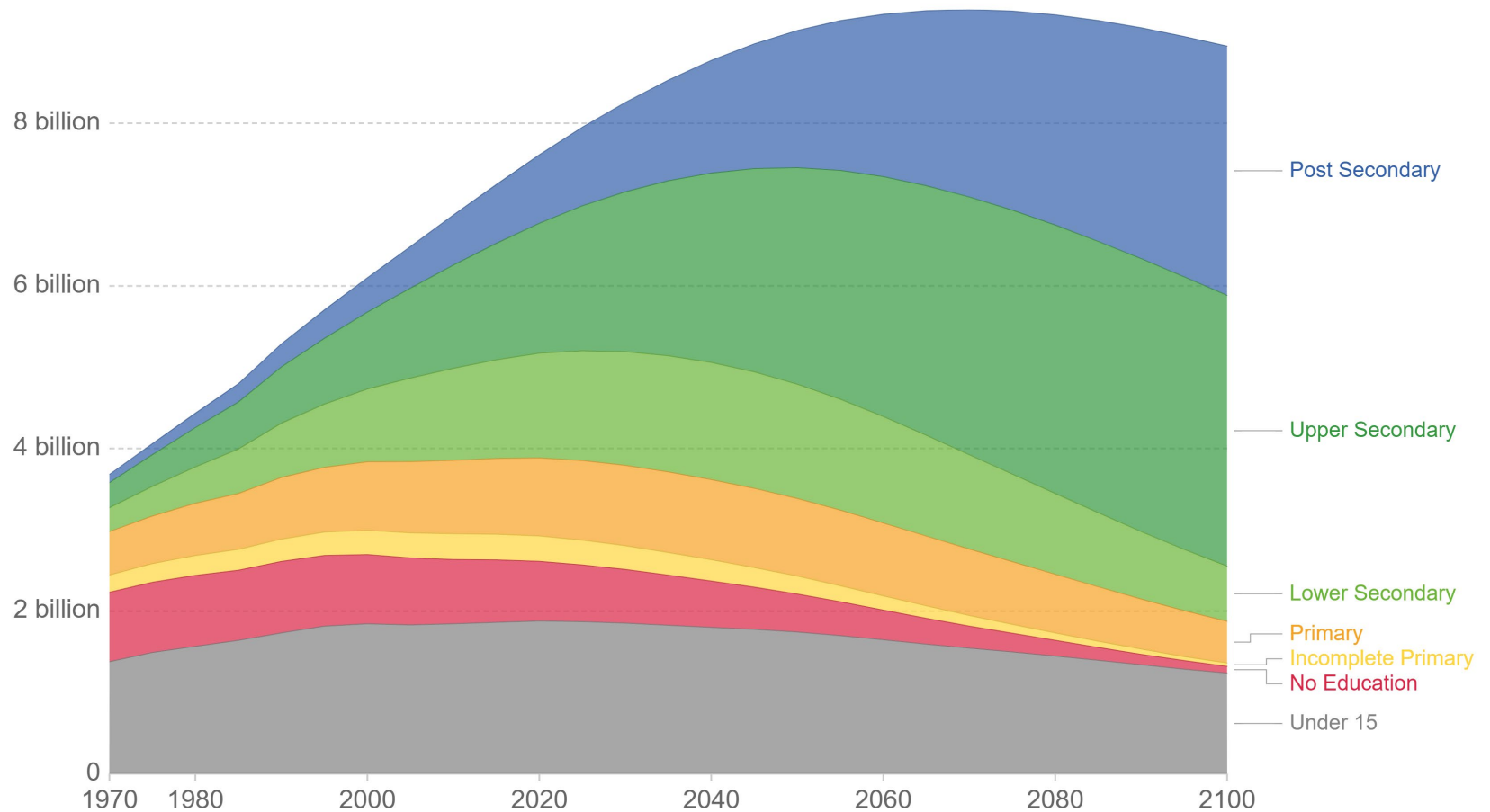




# Gender Ratios

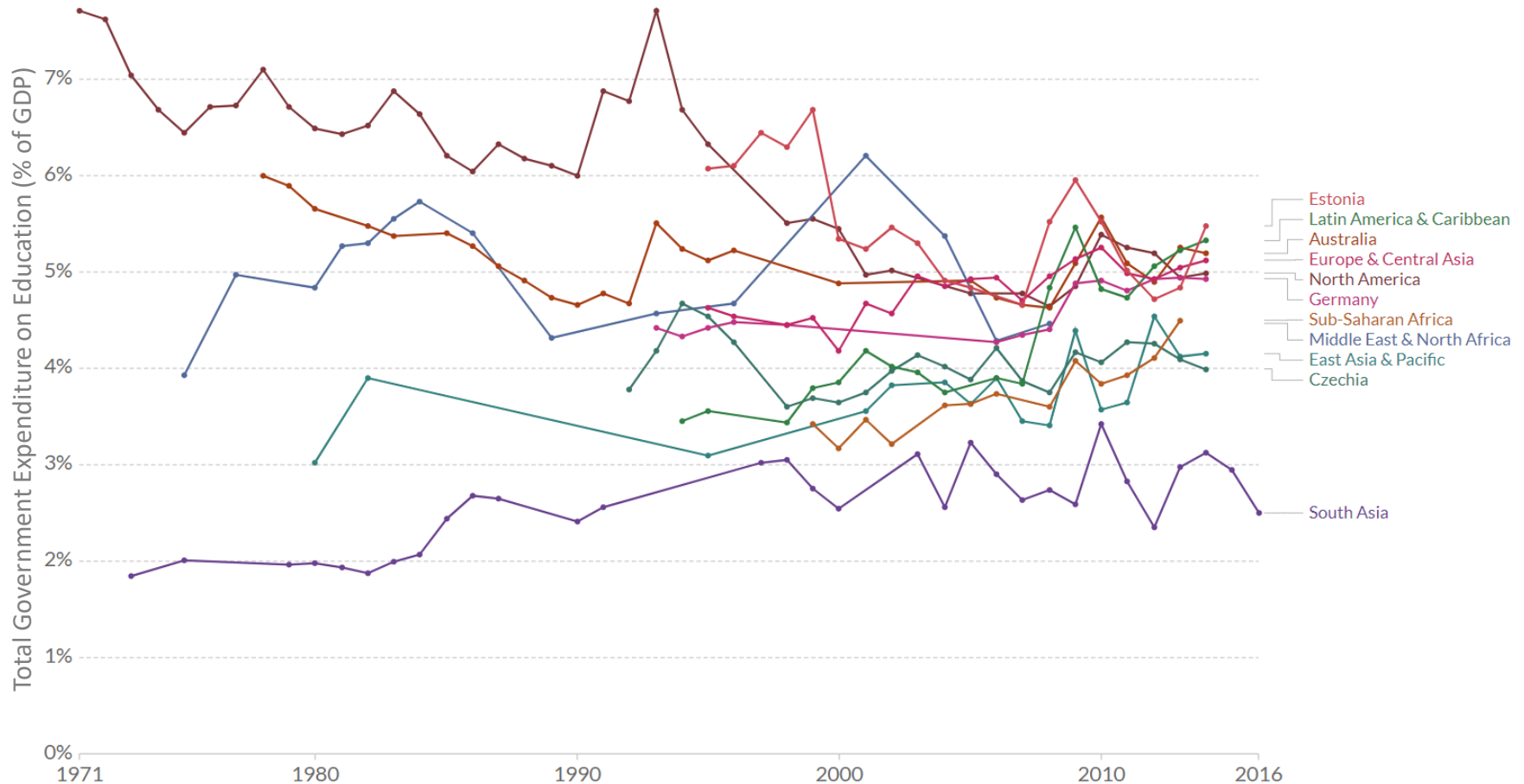


# Level of Education

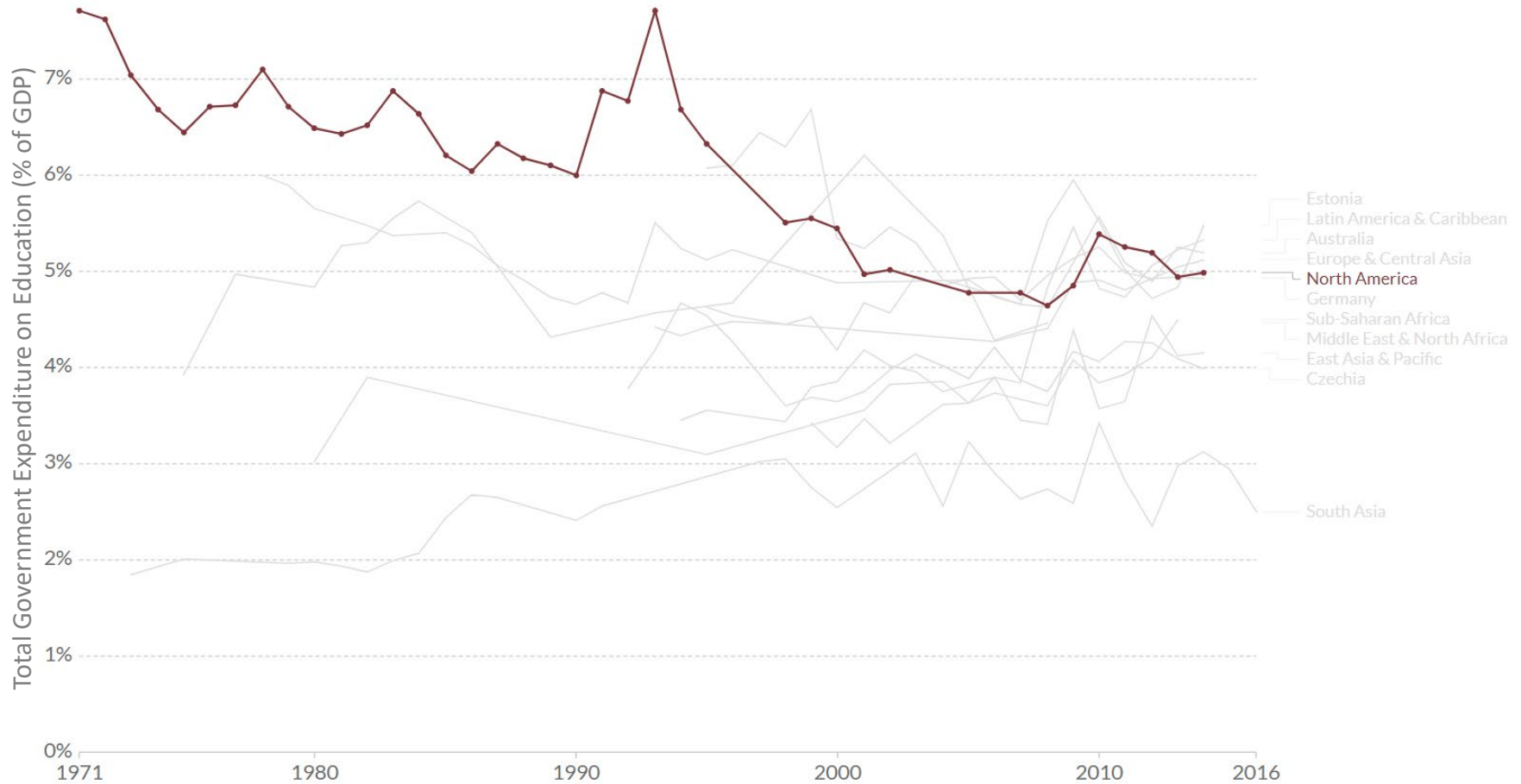




# Expenditure on Education

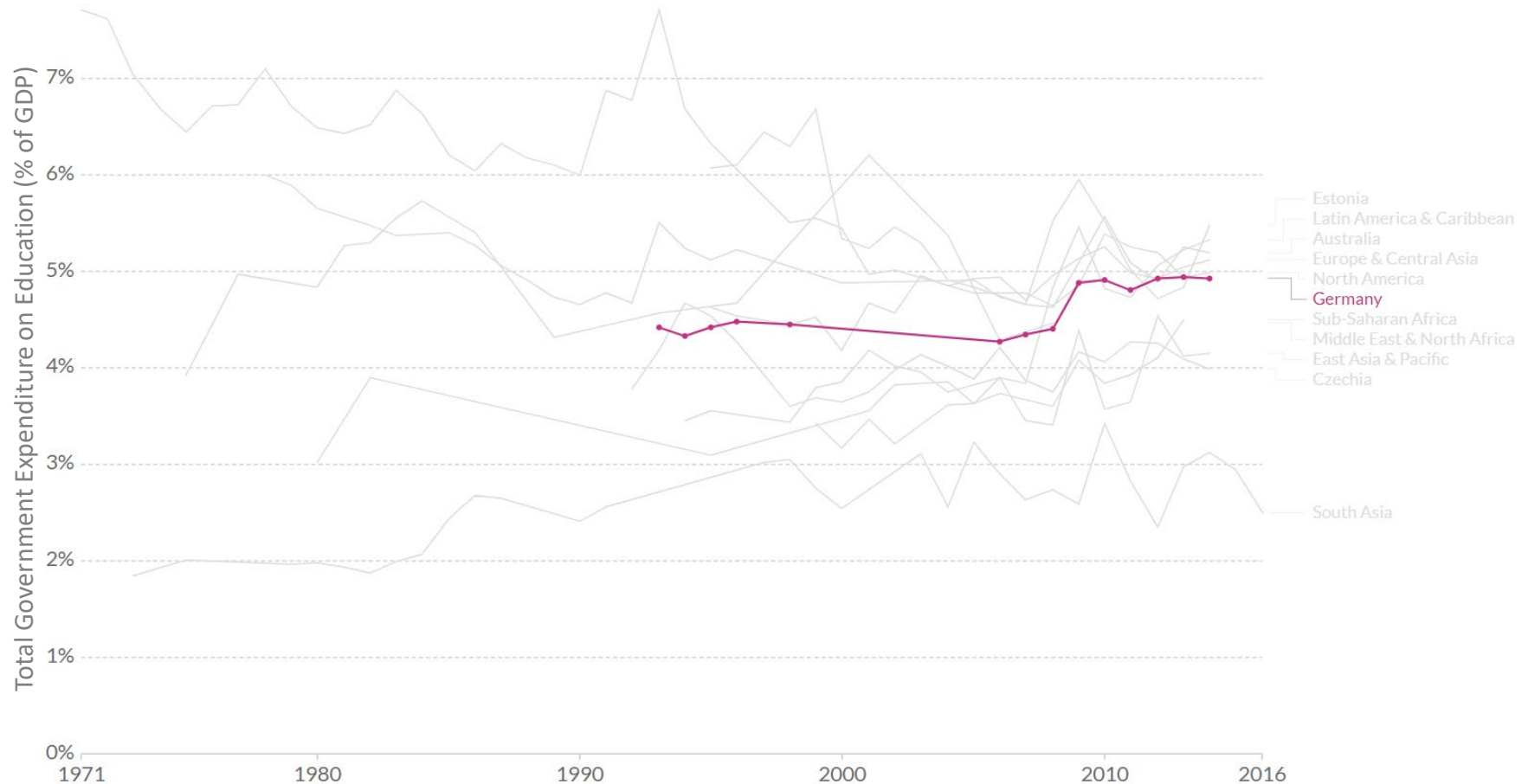


# Expenditure on Education

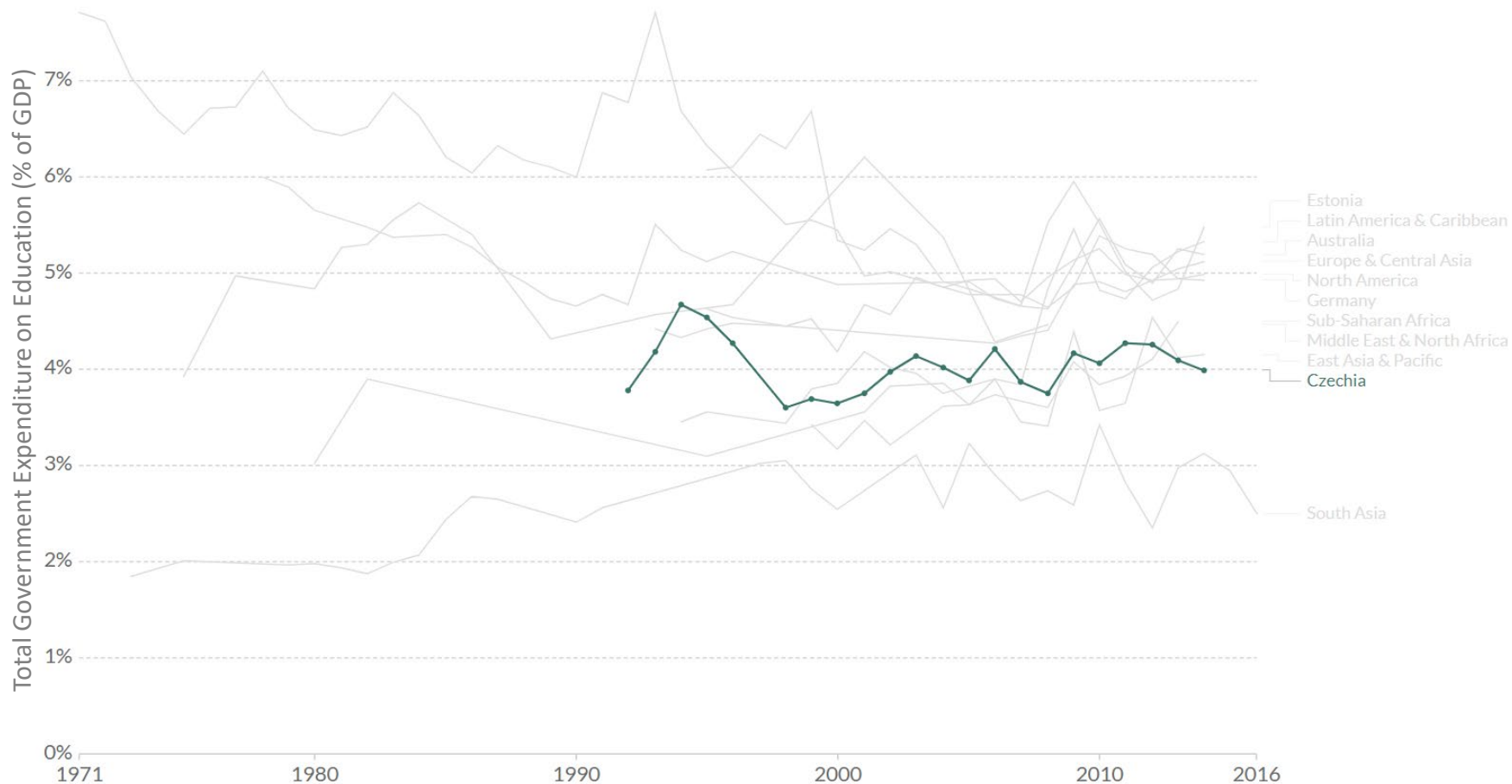




# Expenditure on Education

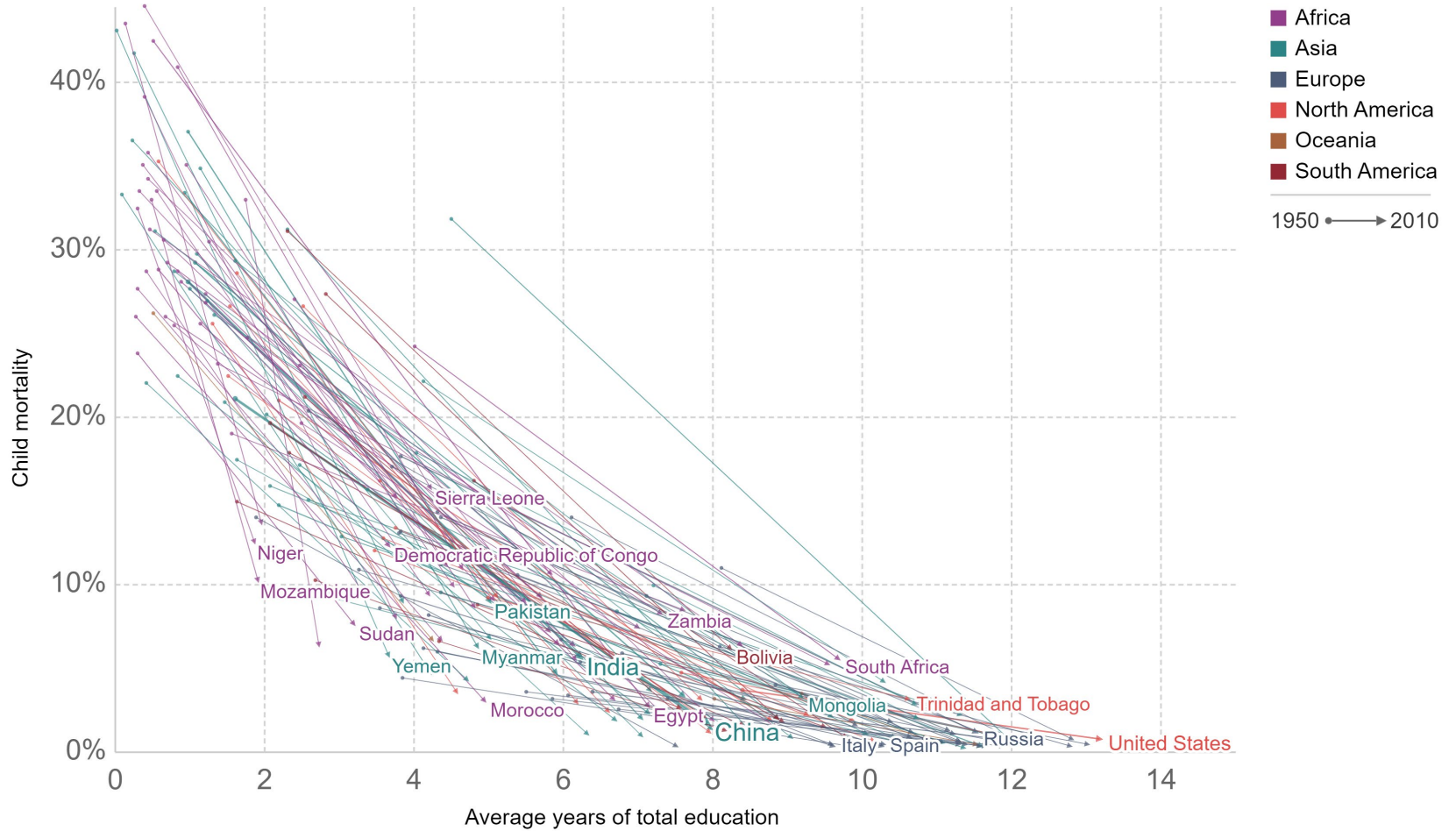


# Expenditure on Education





# Access to Education



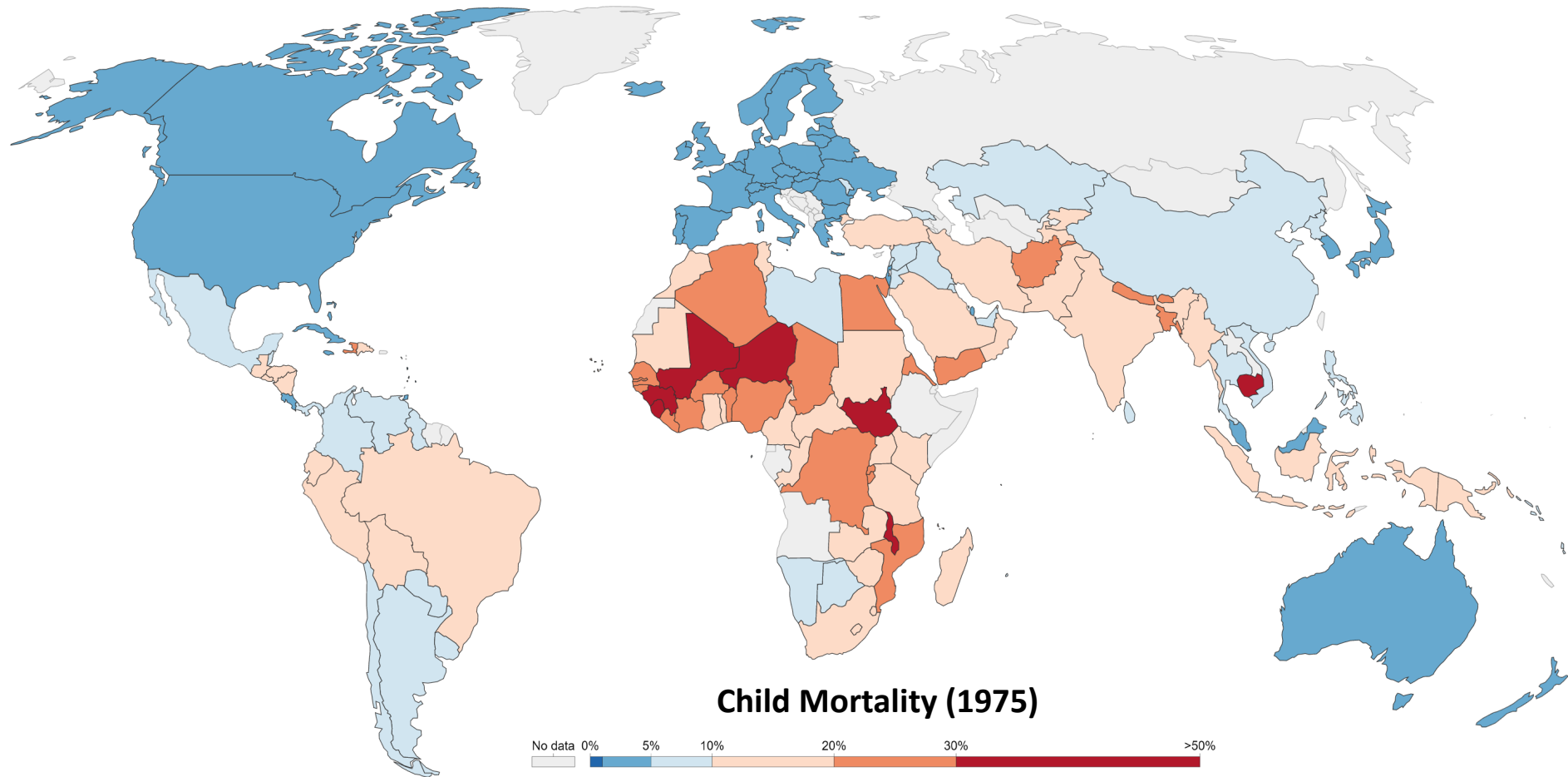
# Access to Health Care

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- **On average, there are 1.566 physicians per 1,000 inhabitants in the world...**
  - in Germany it is about 4.3 physicians
  - in the Czech Republic it is about 4.1 physicians
  - in Africa it is about 0.234 physicians
- **On average, there are 2.89 hospital beds per 1,000 inhabitants in the world...**
  - in Germany it is about 8.0 hospital beds
  - in the Czech Republic it is about 6.6 hospital beds
  - in Africa it is about 1.21 hospital beds

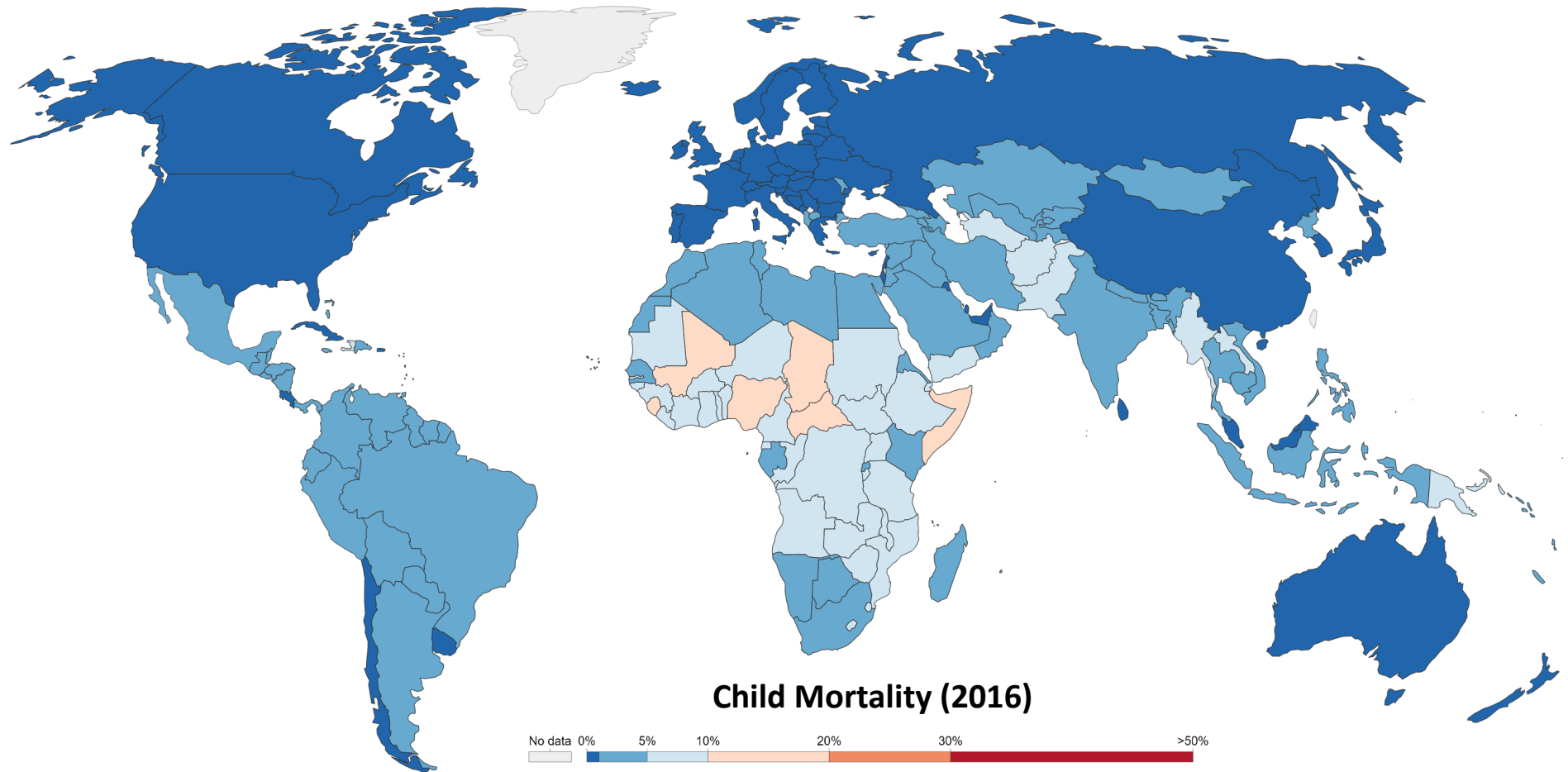
# Child Mortality

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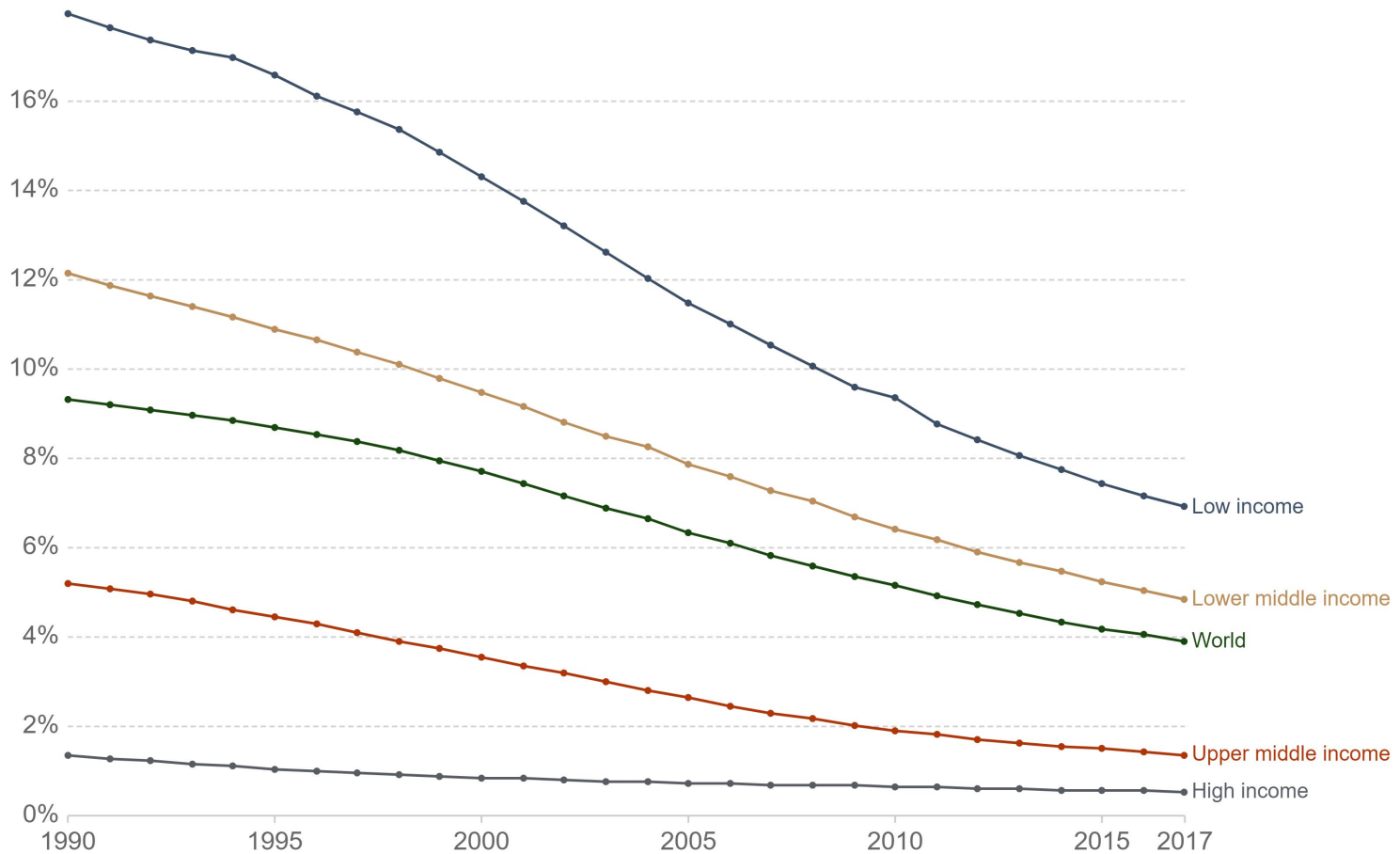


# Child Mortality

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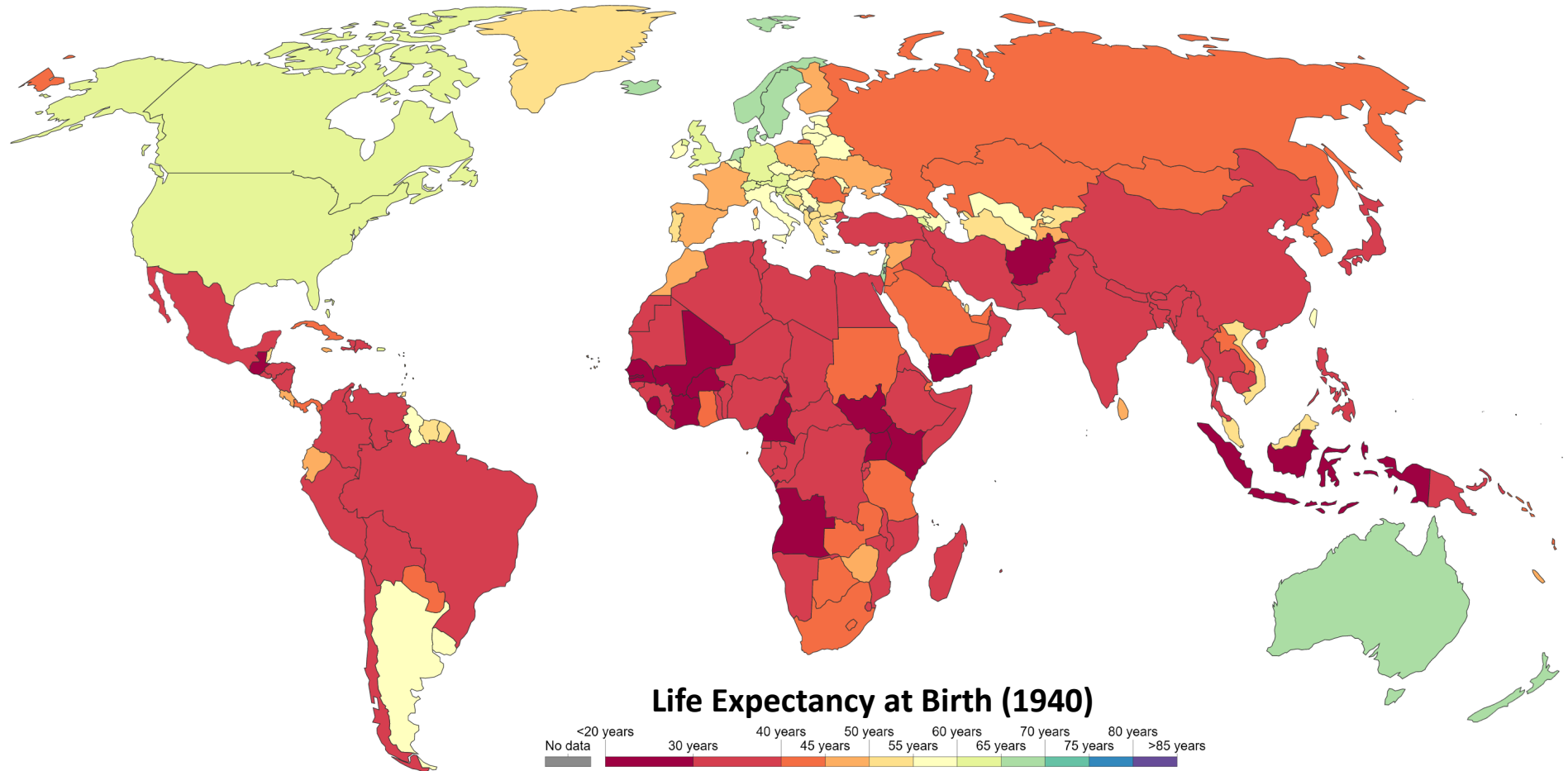


# Child Mortality



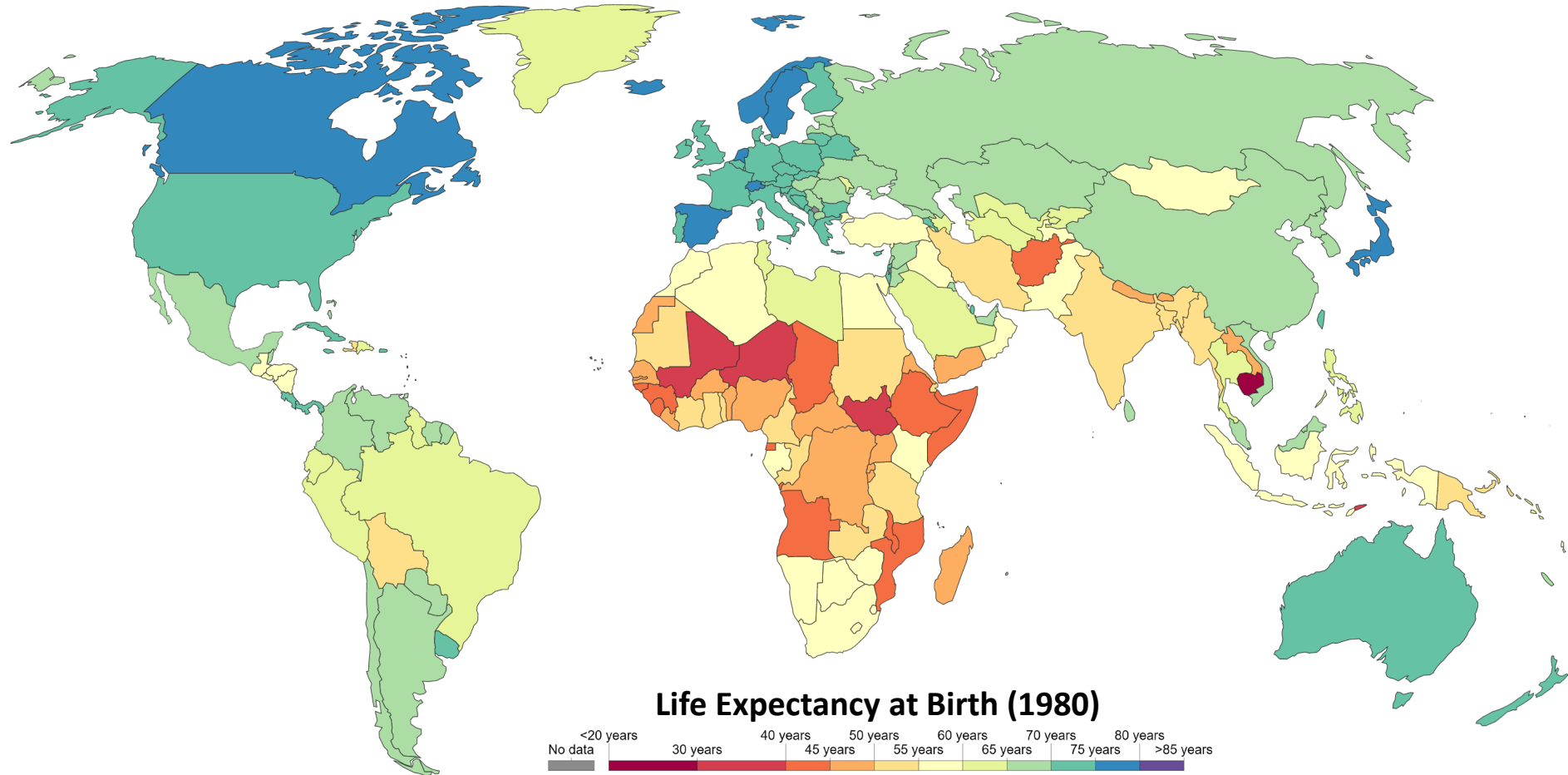
# Life Expectancy

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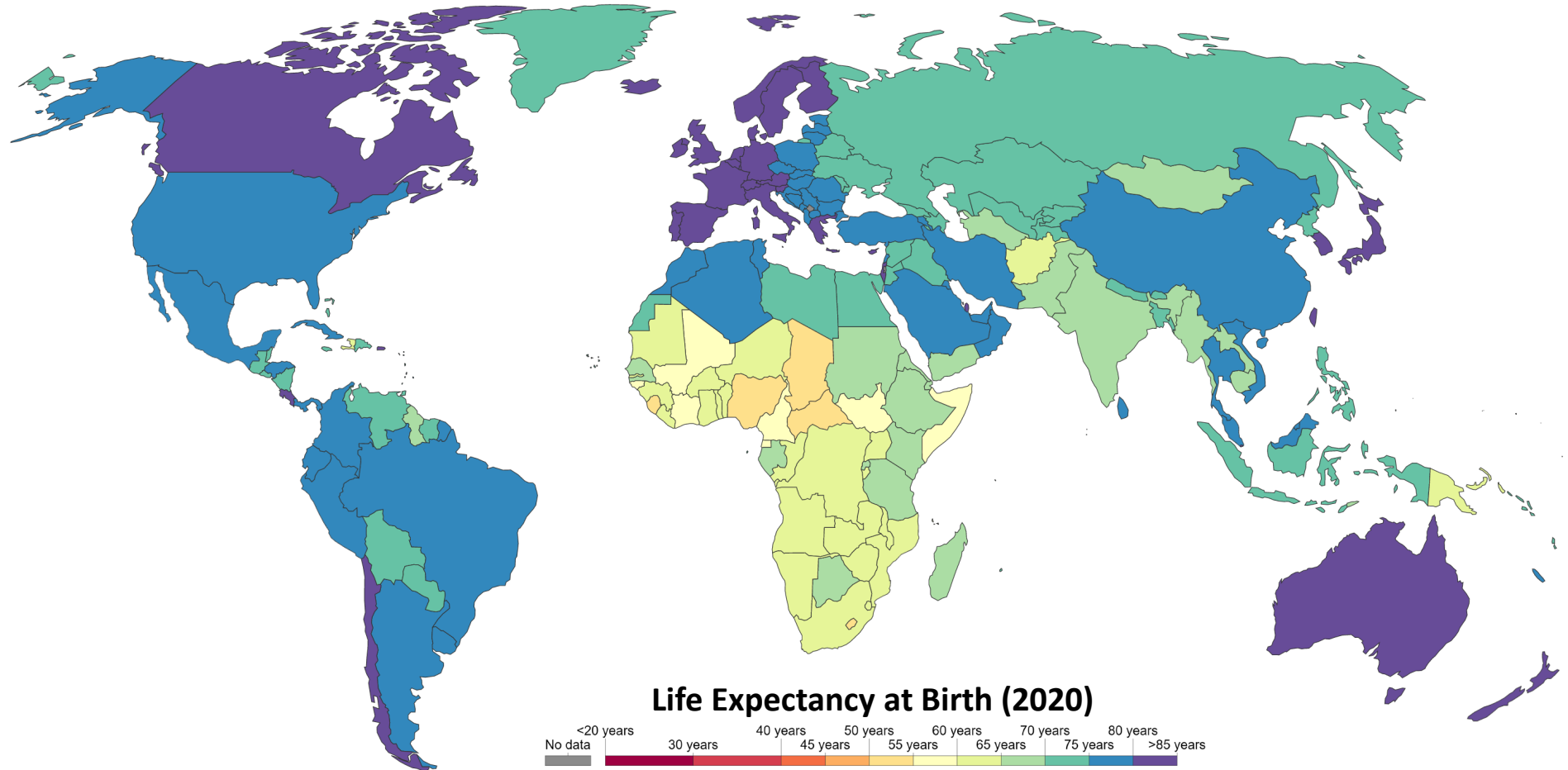
# Life Expectancy

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# Life Expectancy

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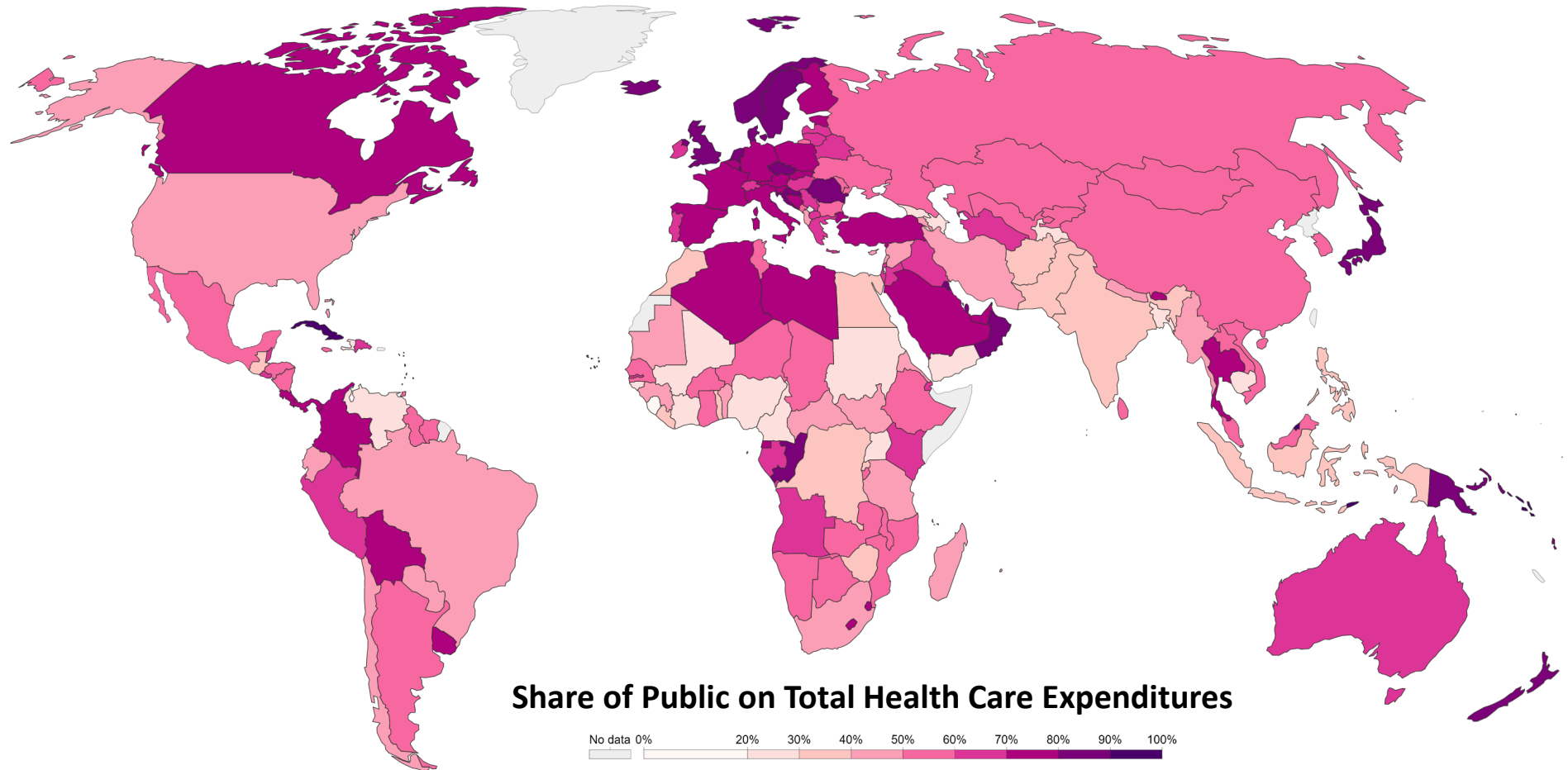




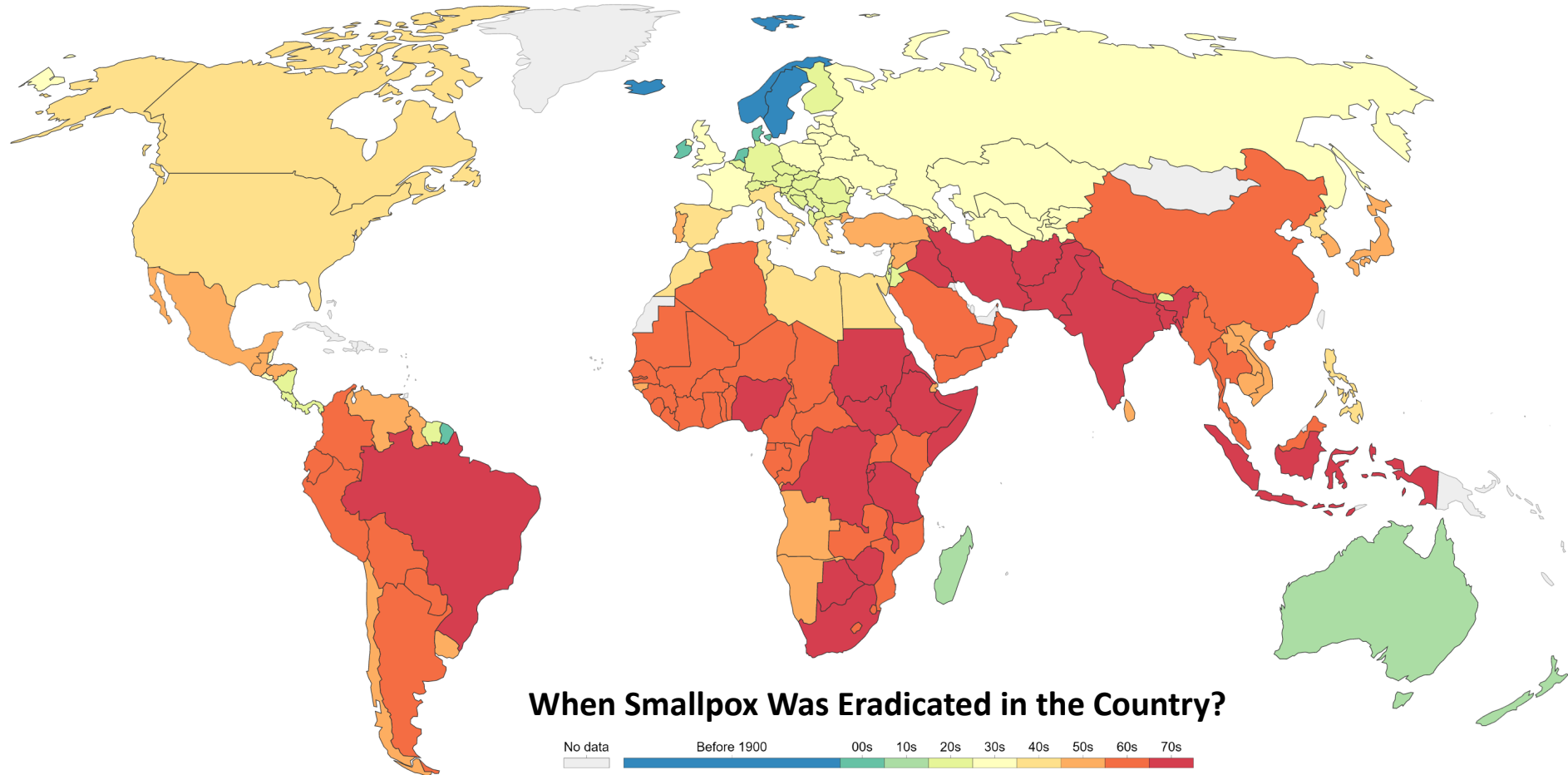


# Health Care Expenditures

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# Access to Health Care

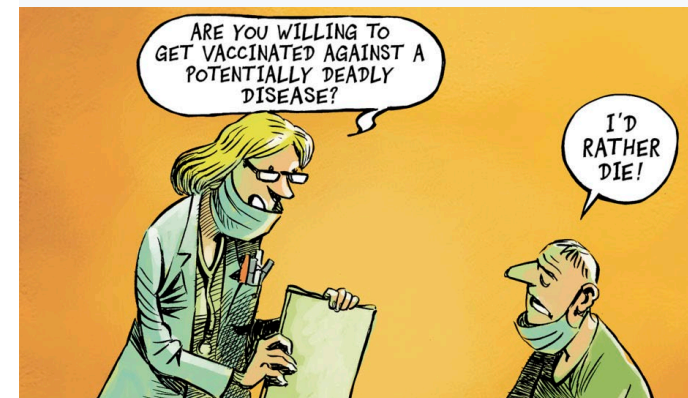
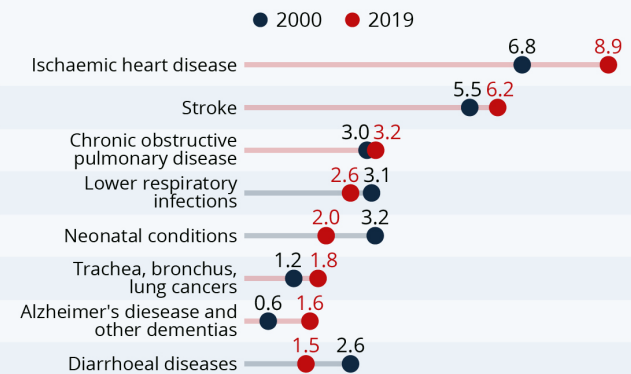


# Epidemics & Pandemics

- Cancer = 10 million victims per year
- Smoking = 7.0 million victims per year
- Covid-19 = 2.86 million victims
- Diabetes = 1.6 million victims per year
- TBC = 1.4 million victims per year
- HIV / AIDS = 0.8 million victims per year
- Malaria = 0.4 million victims per year

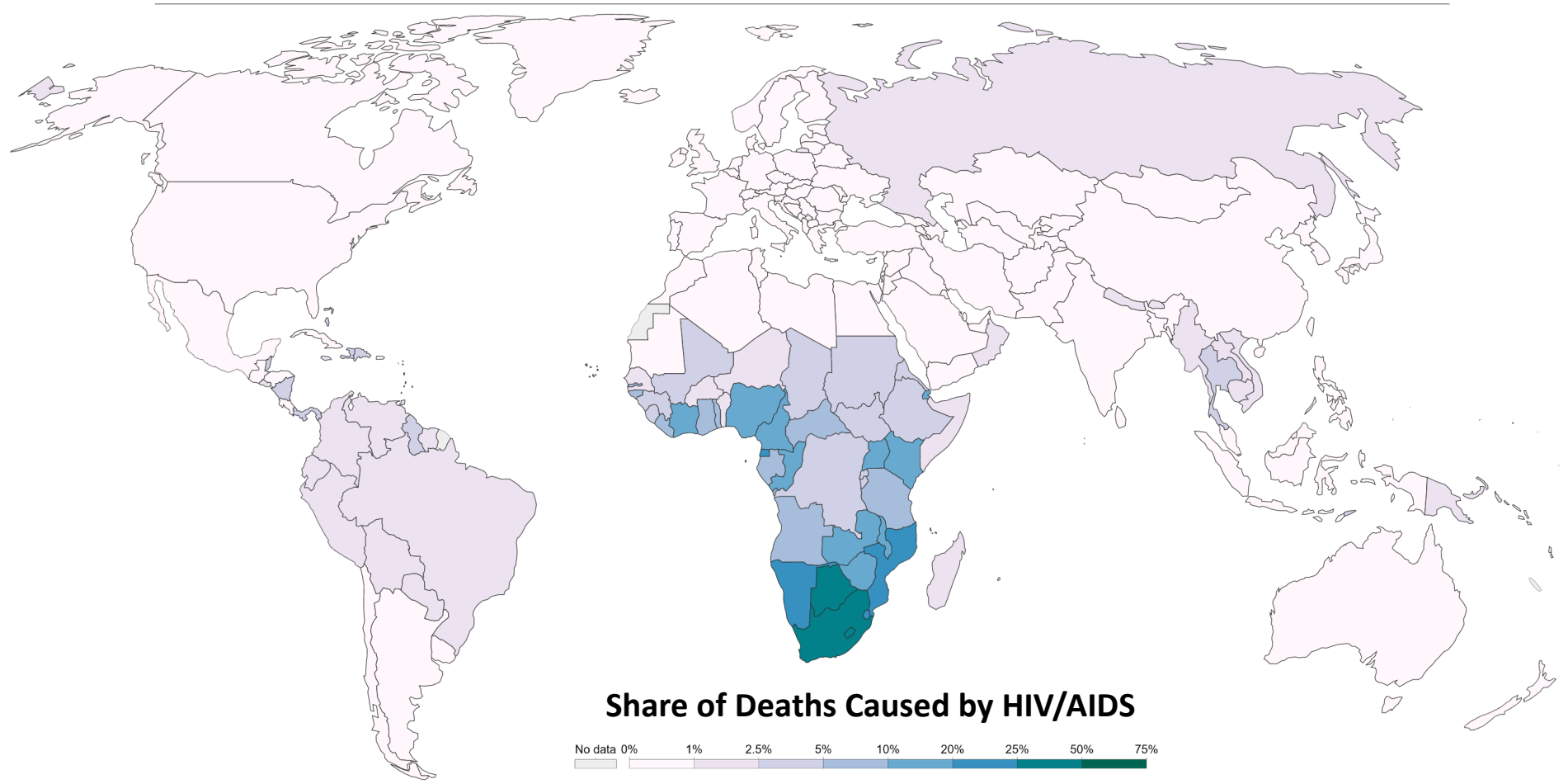
## The World's Leading Causes Of Death

Total number of people who died from the following conditions (in millions)



# HIV/AIDS

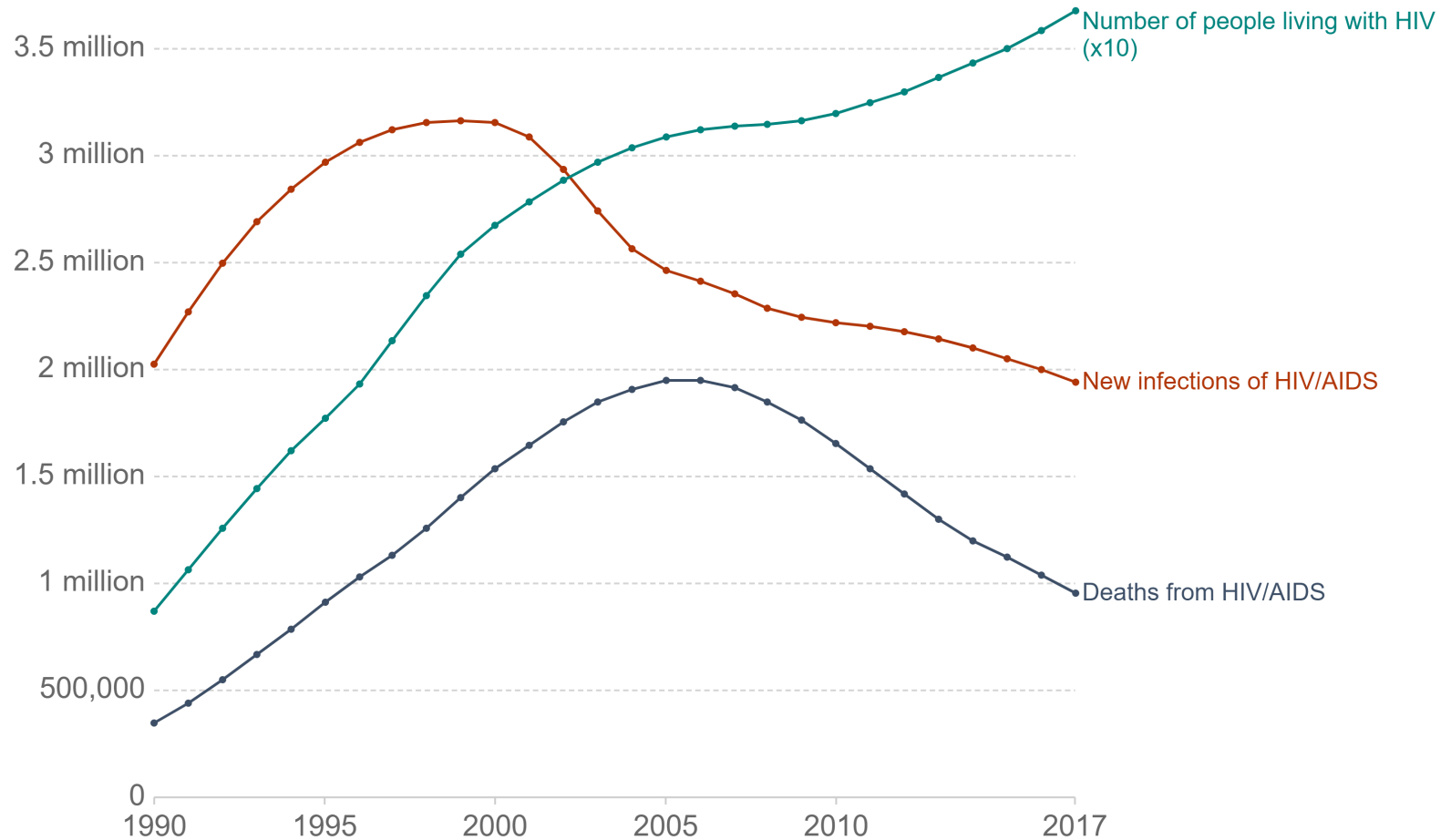
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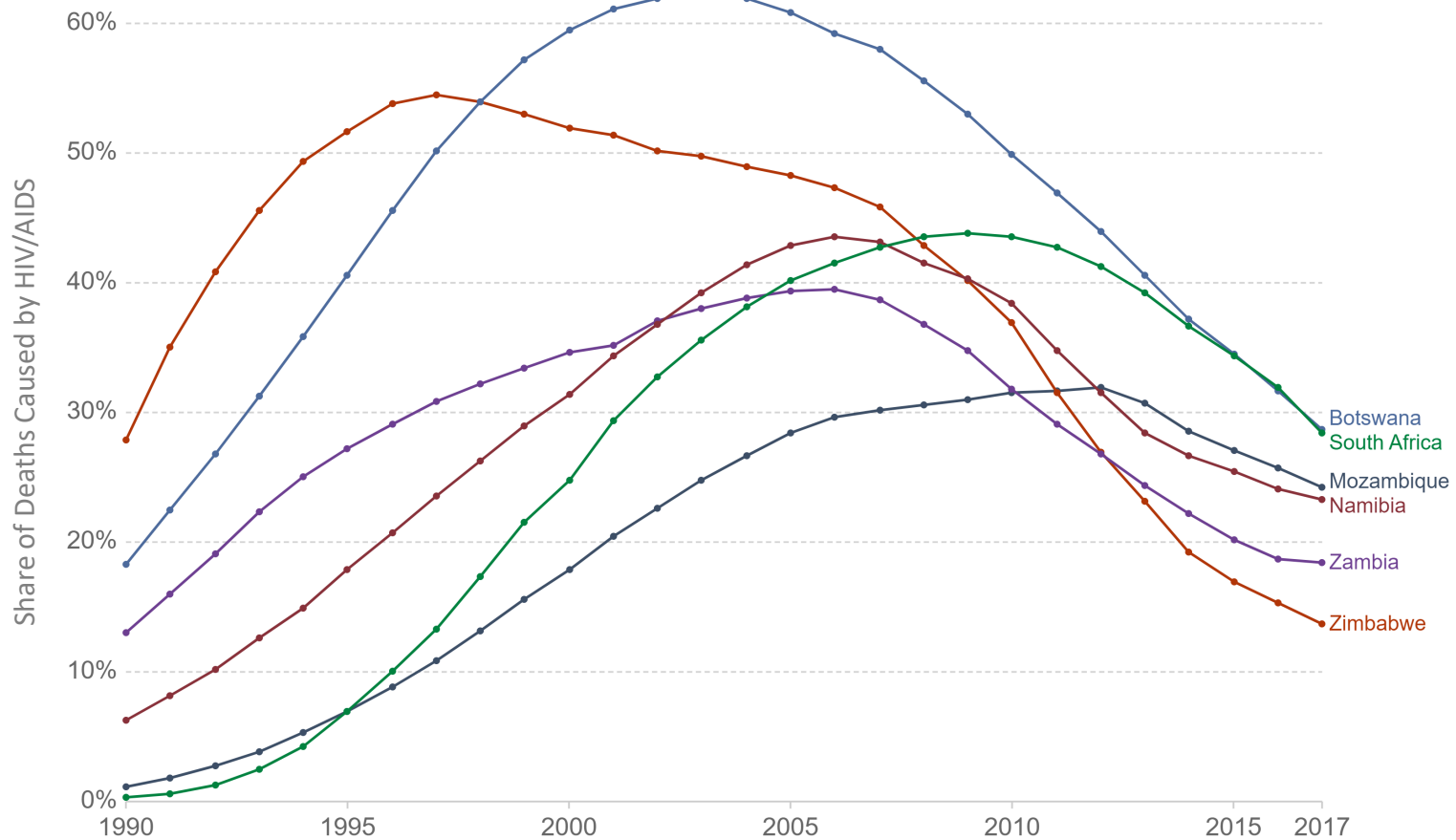
**Share of Deaths Caused by HIV/AIDS**



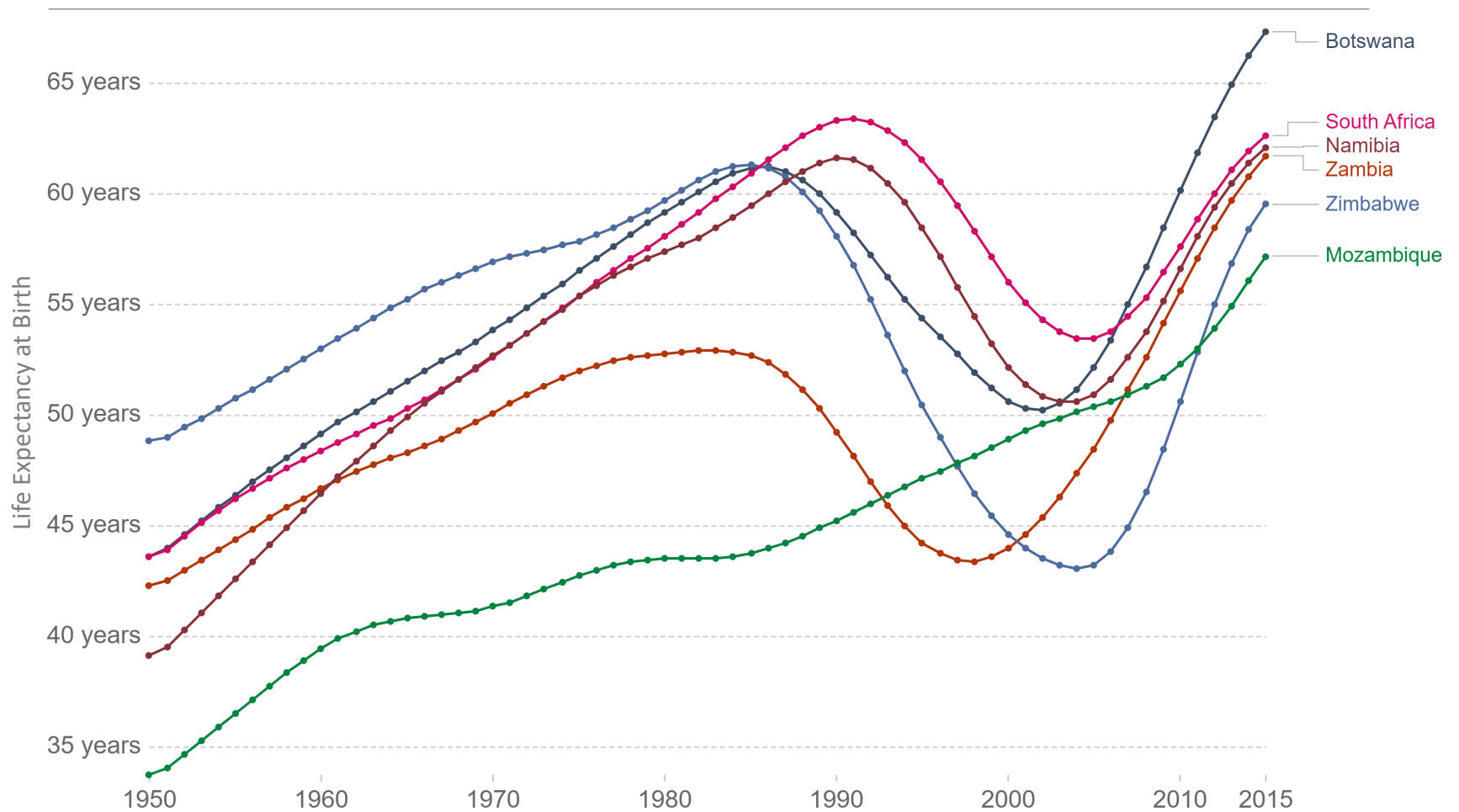
# HIV/AIDS



# HIV/AIDS



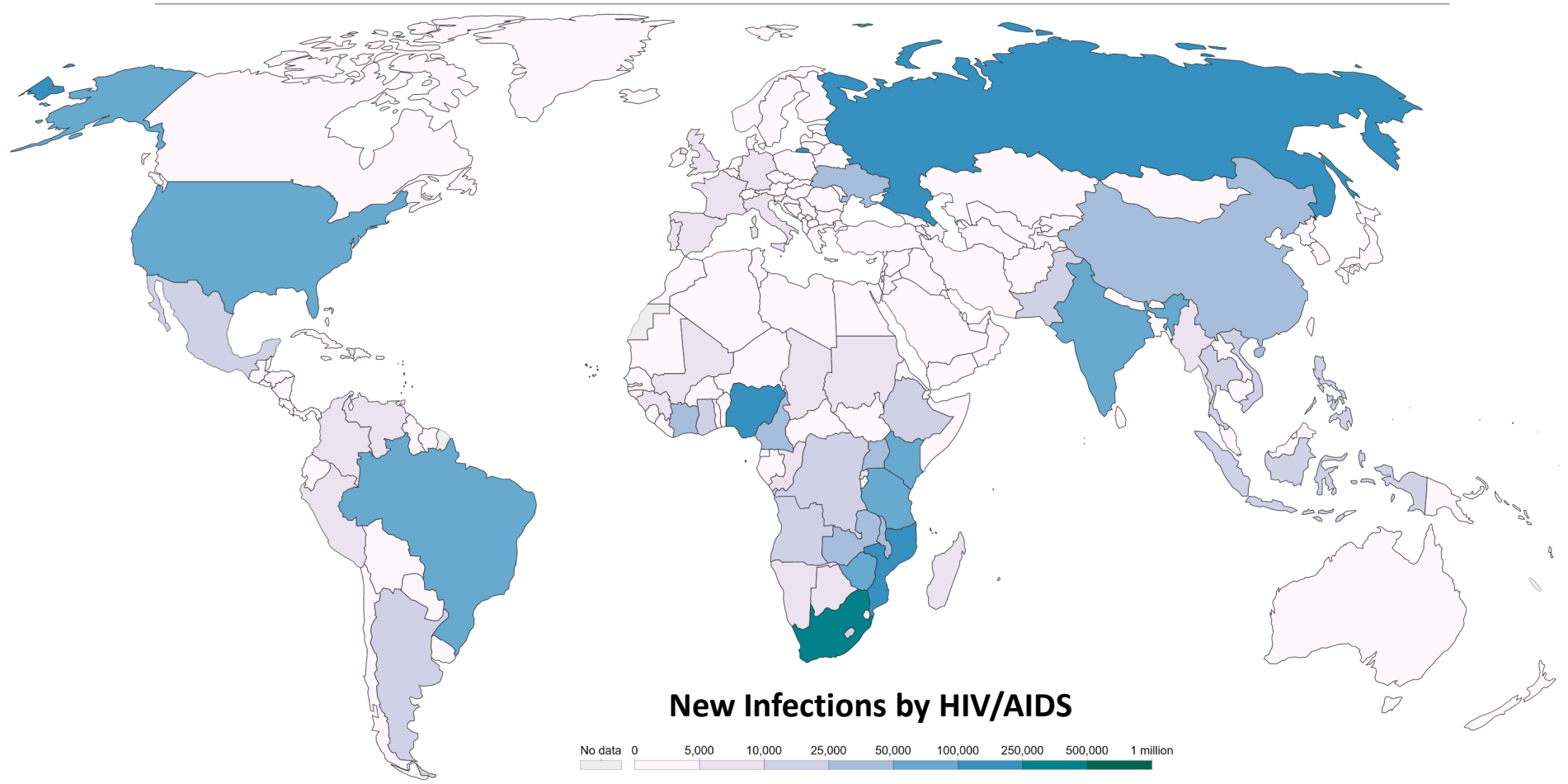
# HIV/AIDS





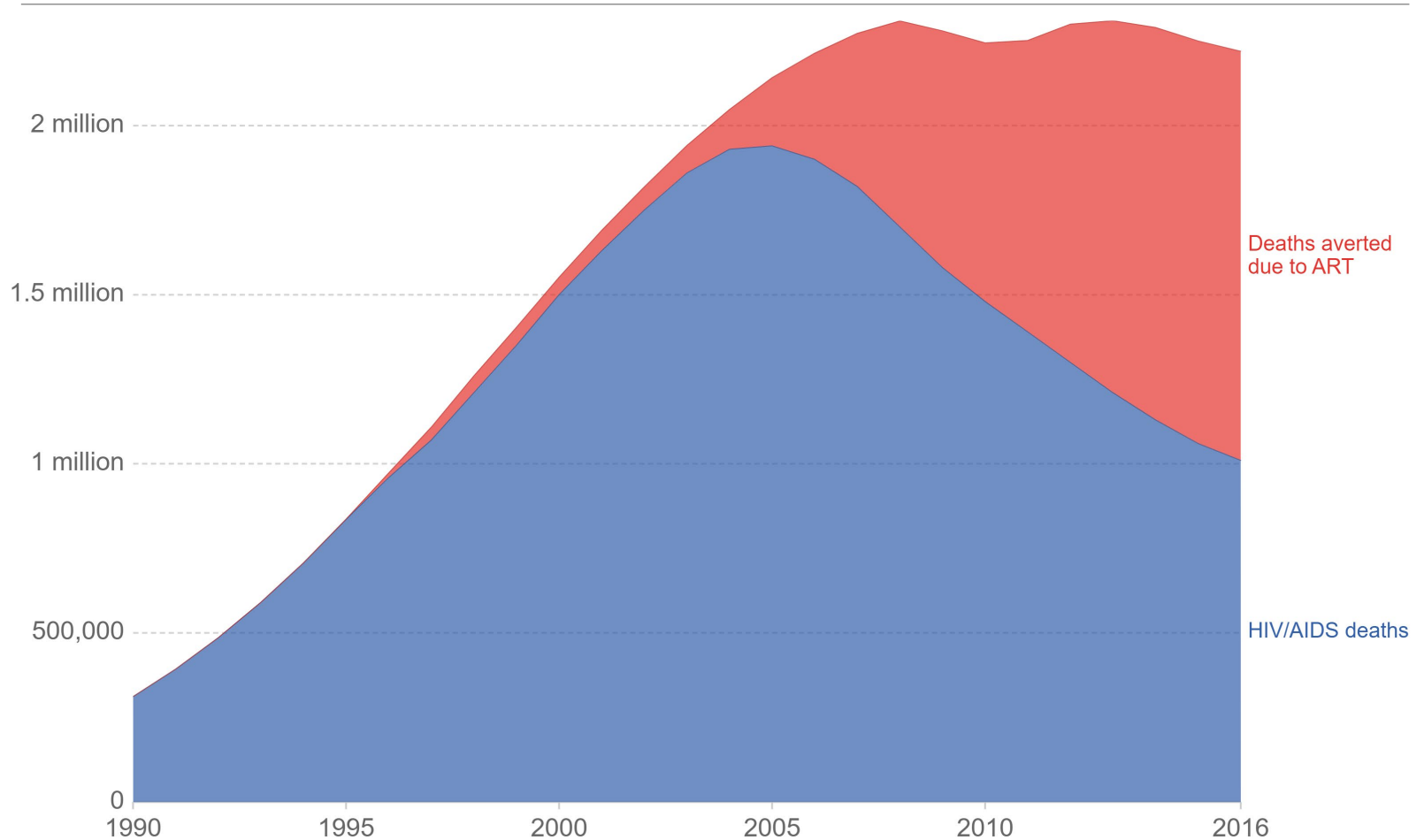
# HIV/AIDS

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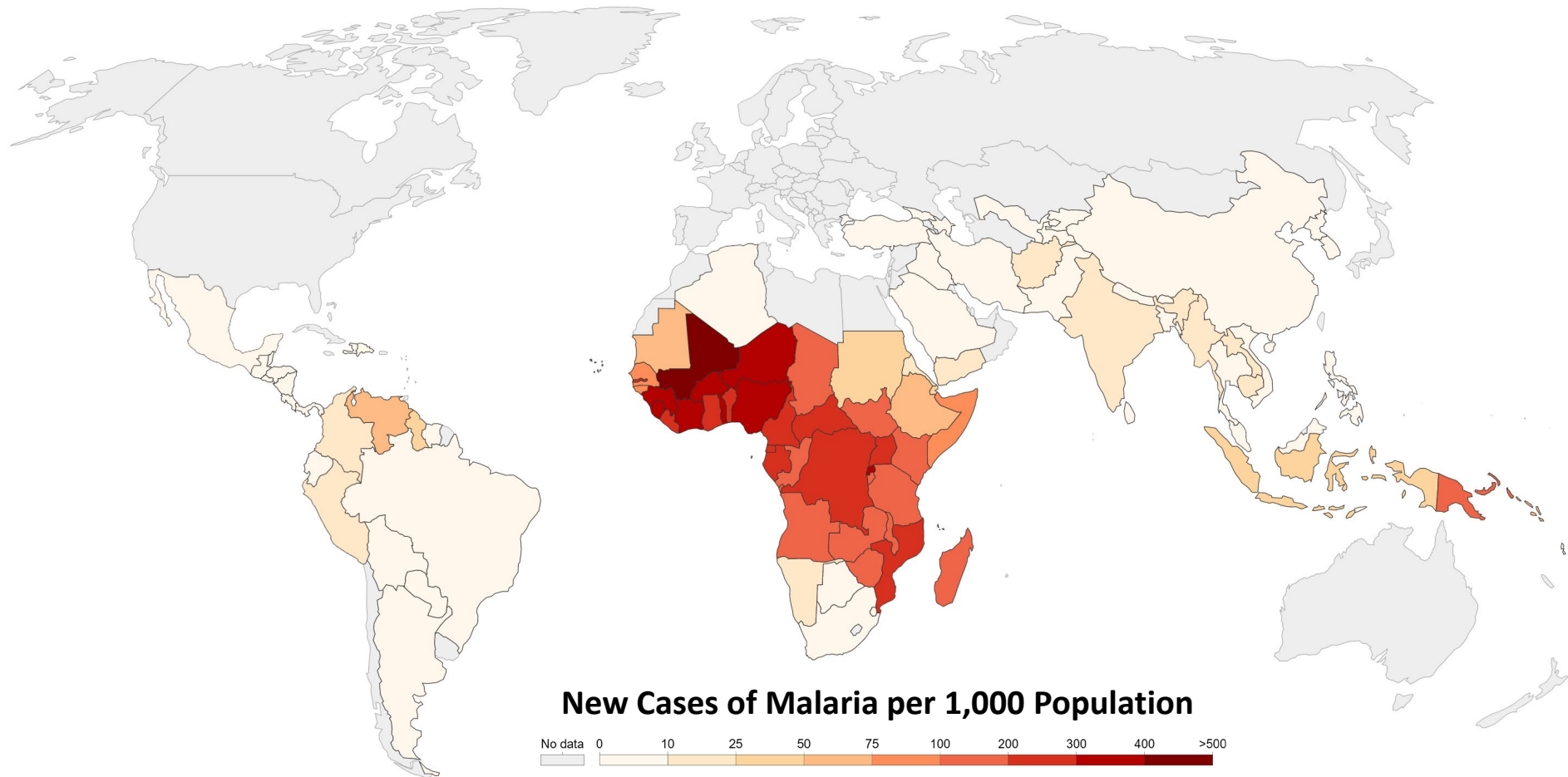
# Antiretroviral Therapy





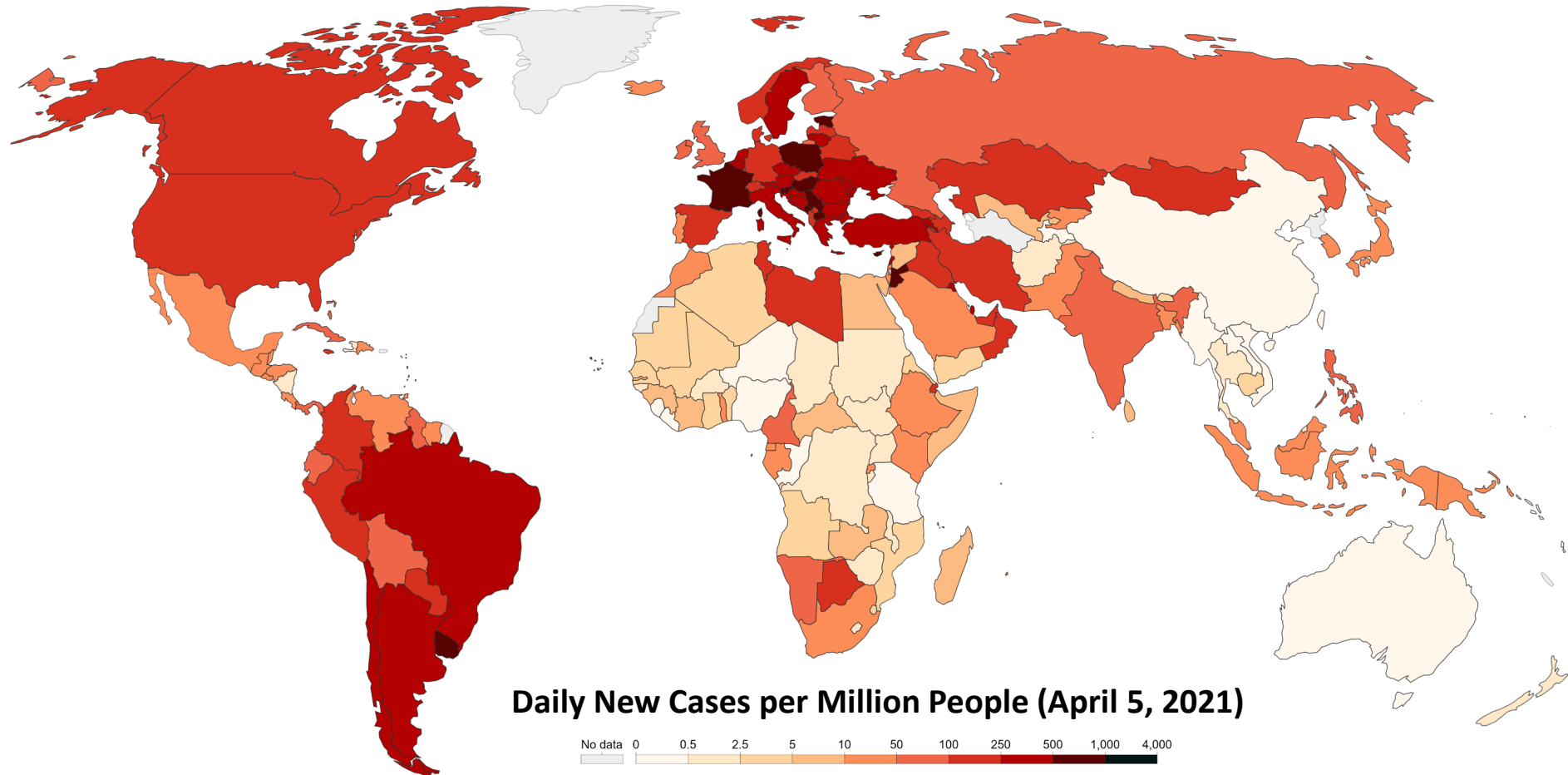
# Malaria

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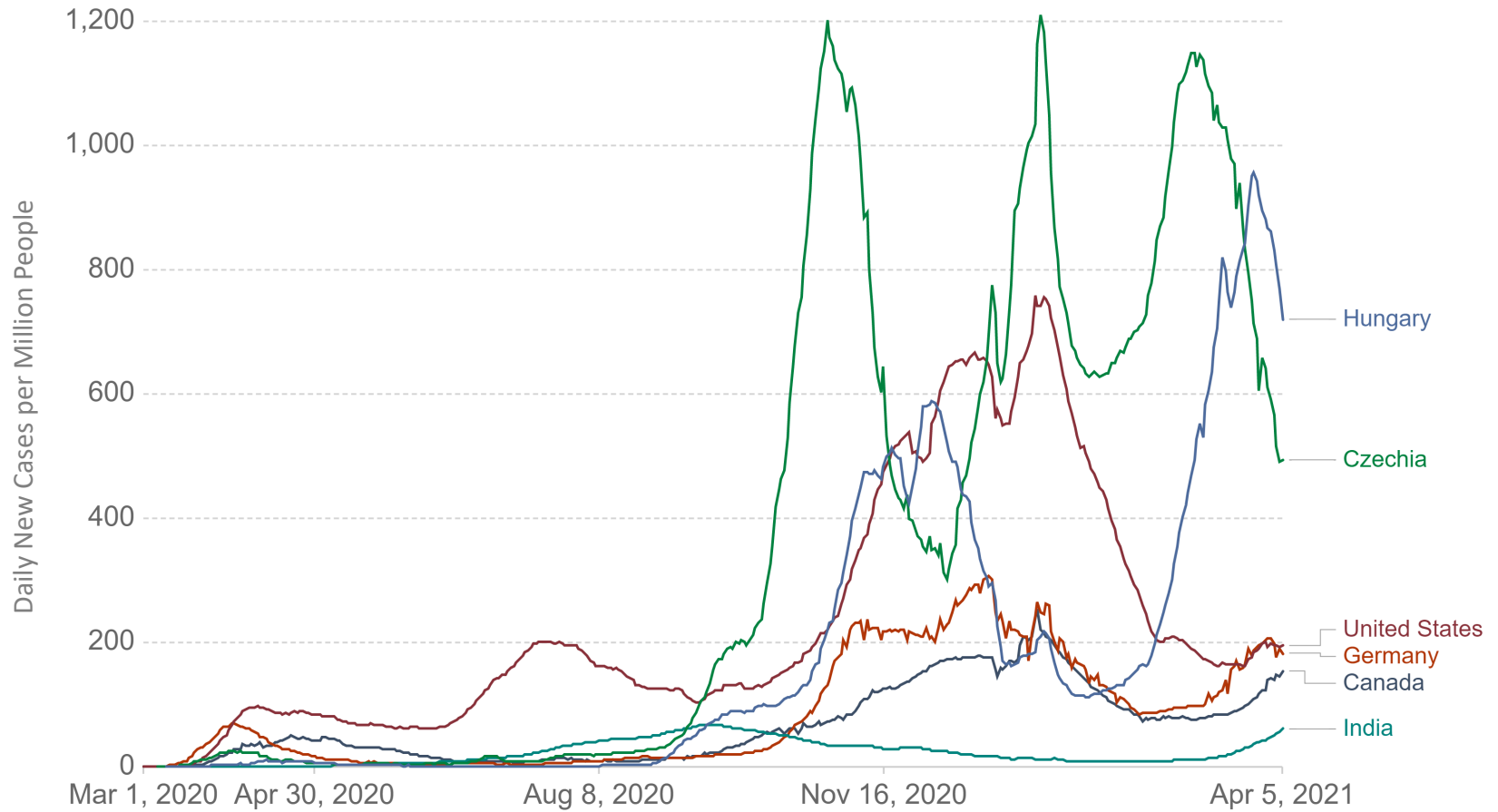


# SARS-CoV-2 (COVID-19)

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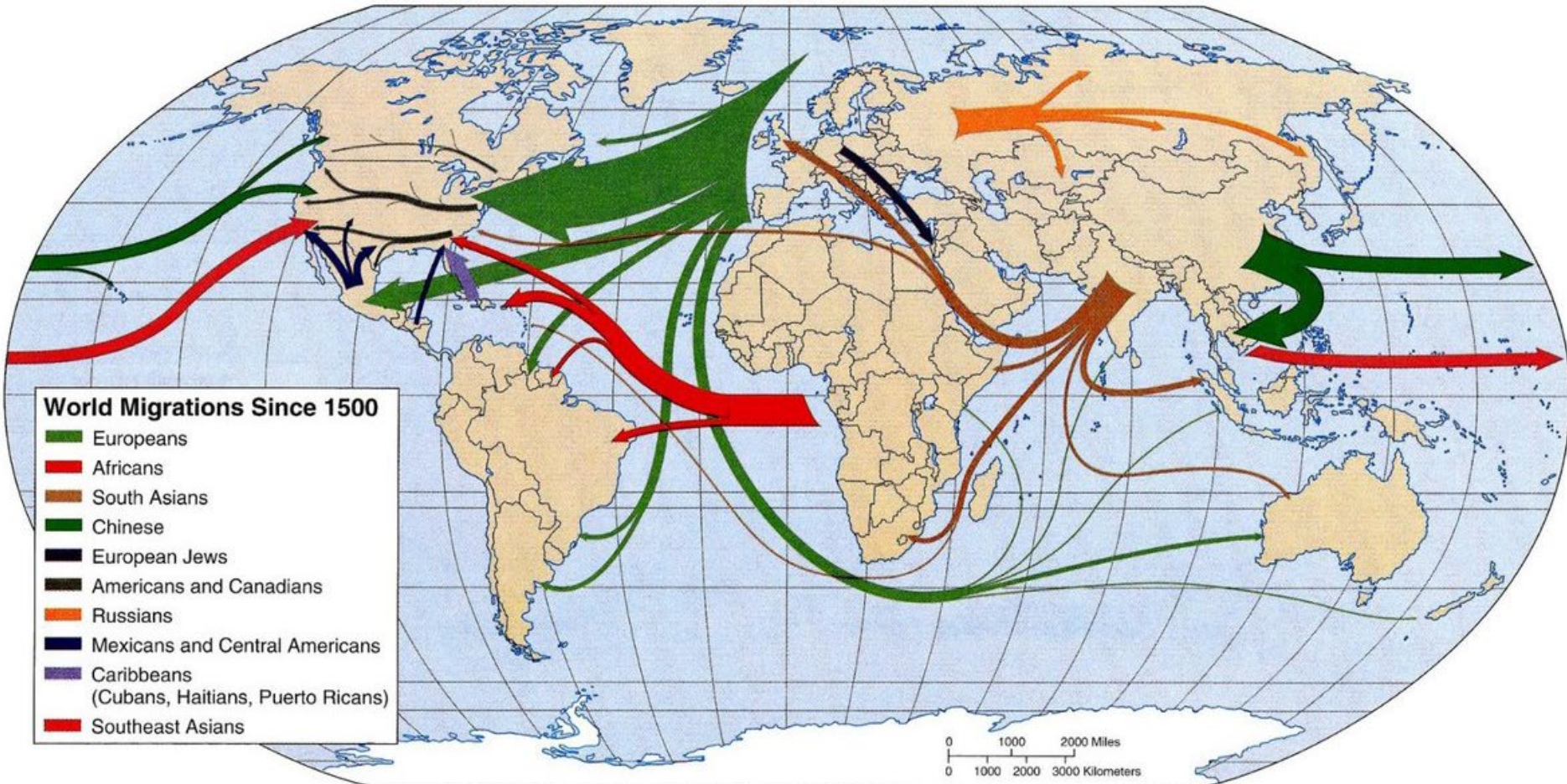


# SARS-CoV-2 (COVID-19)





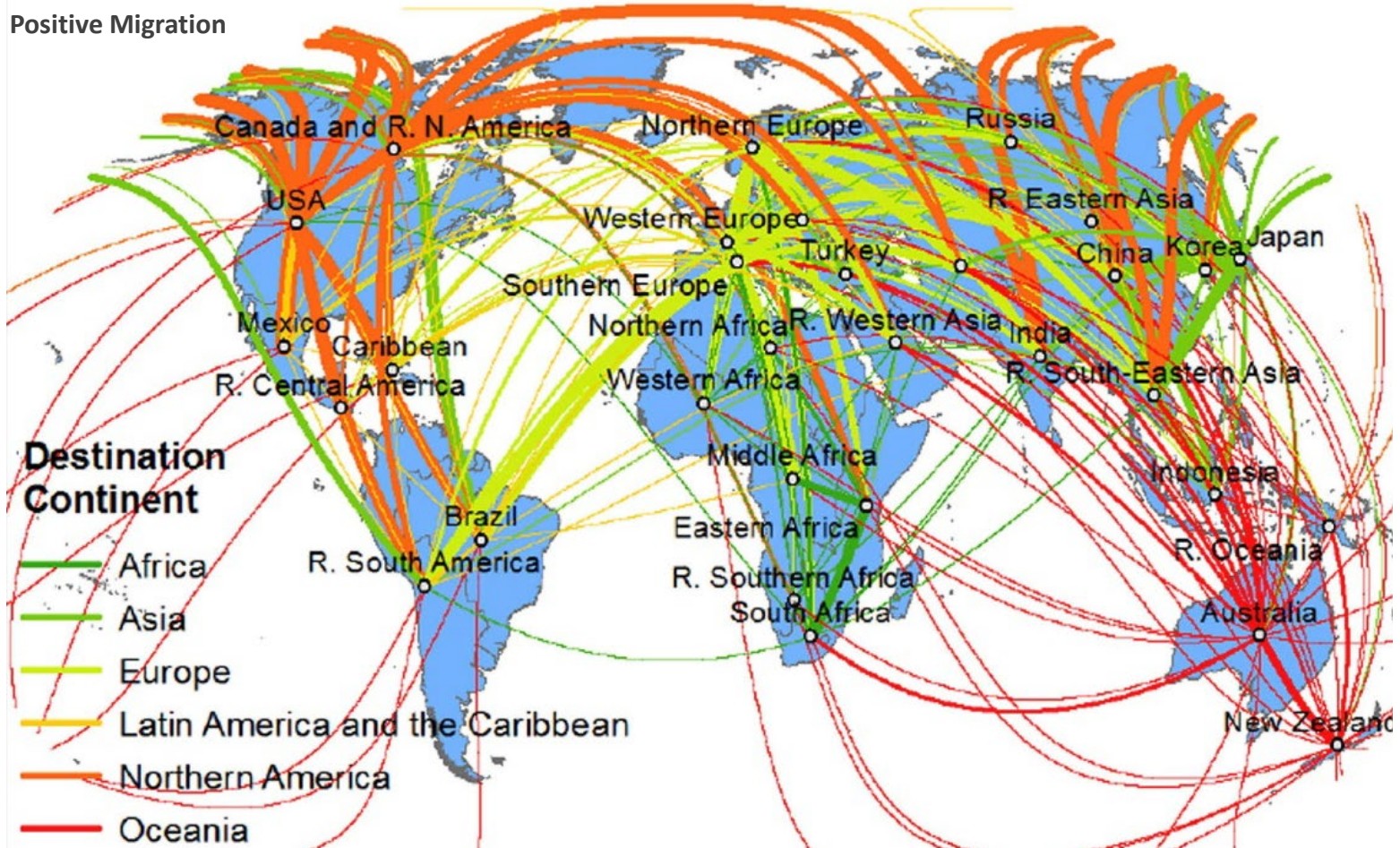
# Uncontrollable Migration





# Uncontrollable Migration

Positive Migration



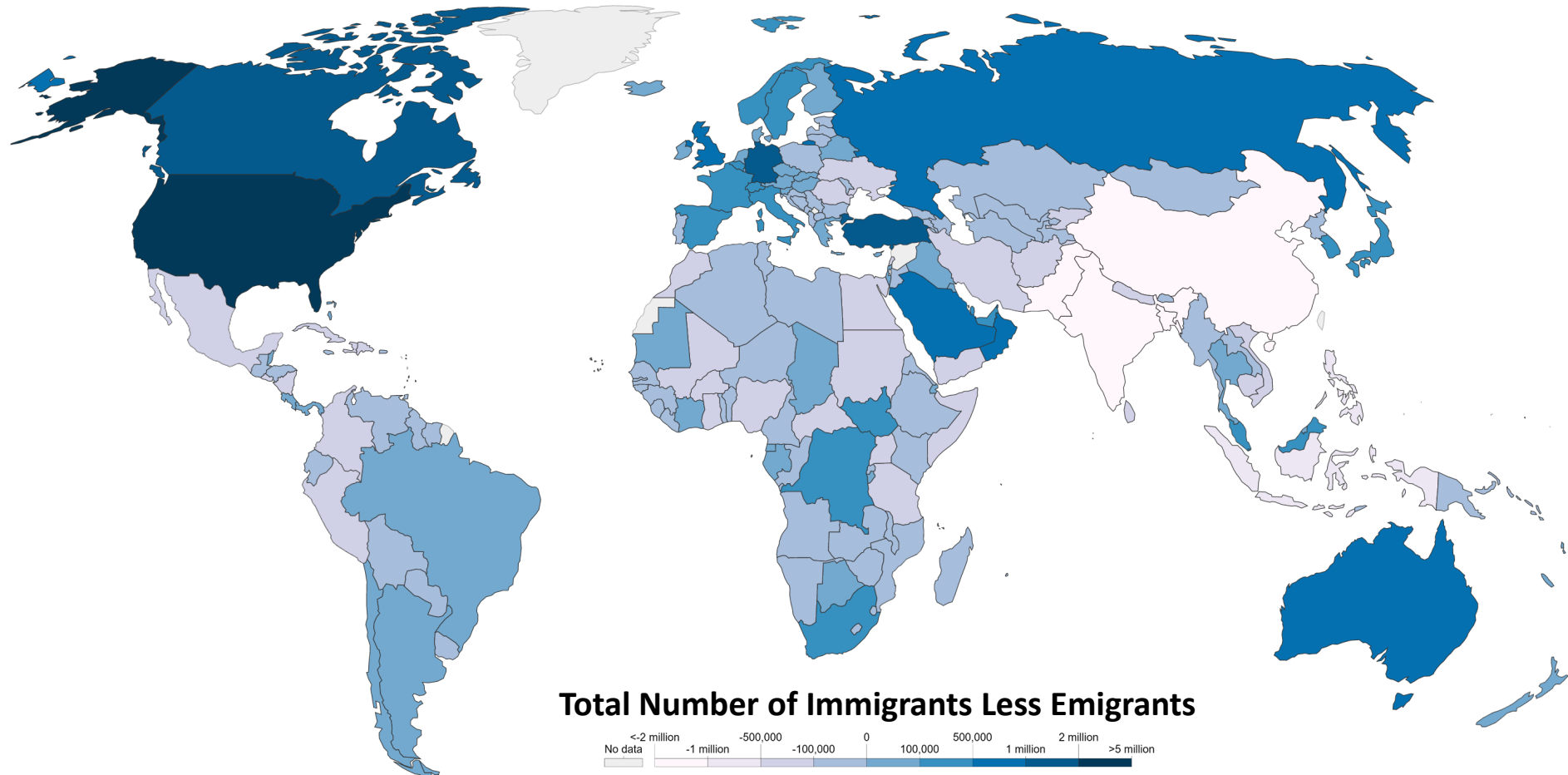
# Uncontrollable Migration

Negative Migration



# Uncontrollable Migration

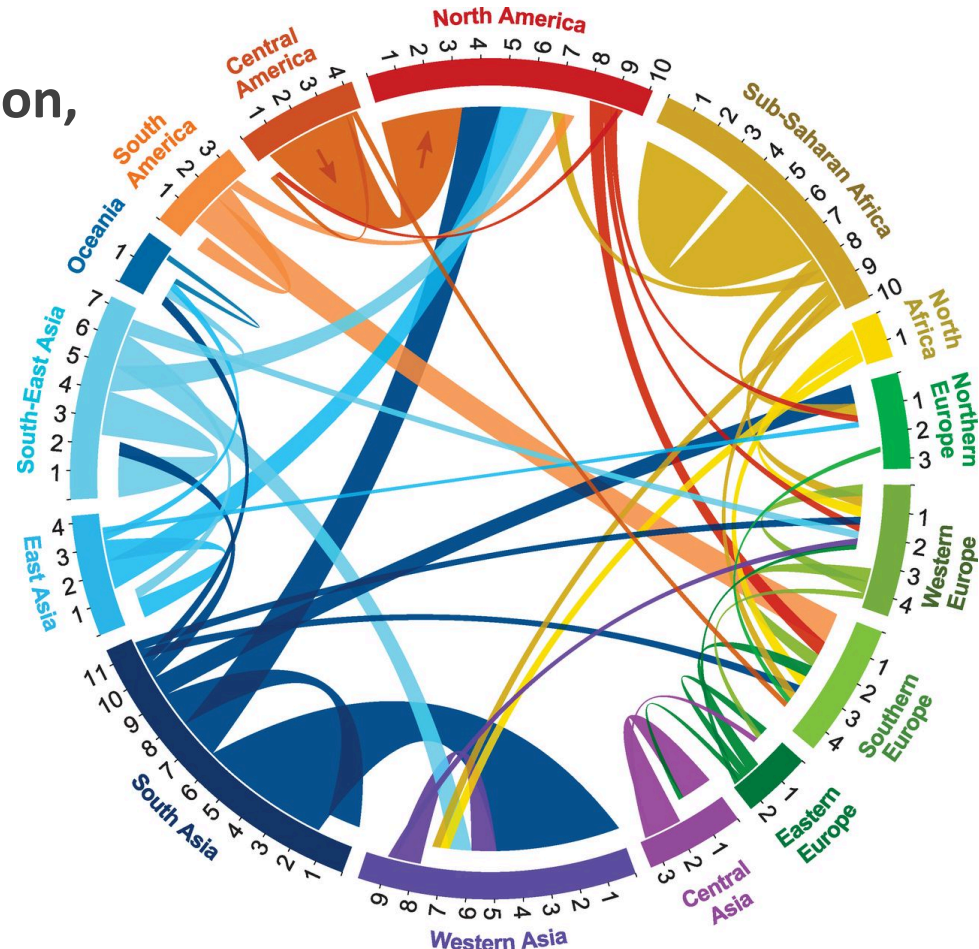
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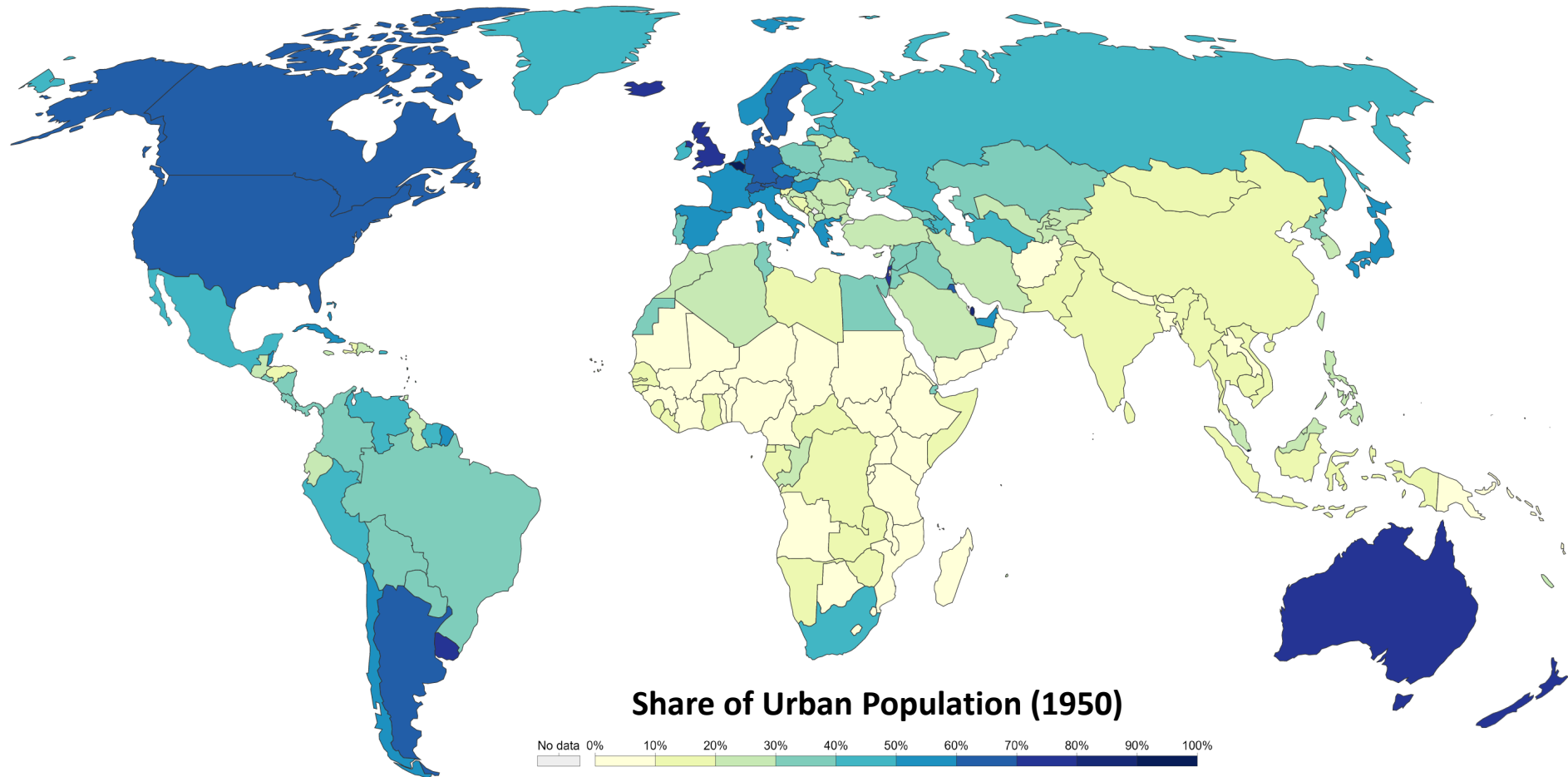
# Uncontrollable Migration

- Not only international migration, but also intrastate migration.
- Urbanization → forming slums and megacities.
- There has been no slum in the world before 1980.
- Currently, 1 billion people live in slum, with projections estimating 2 billion in 2030.



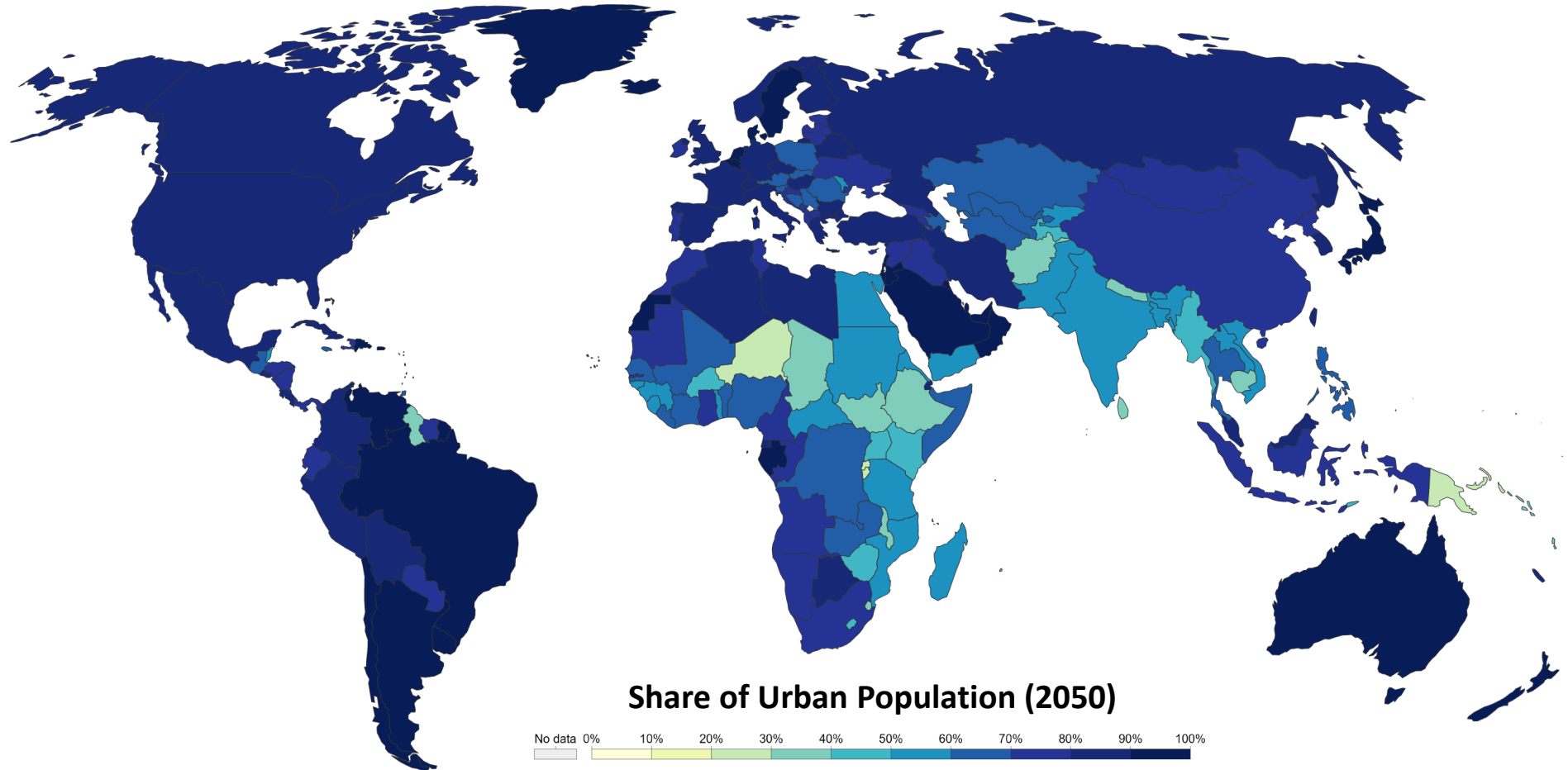
# Uncontrollable Migration

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# Uncontrollable Migration

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See **YOU** next week!

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